The Canadian Academic Accounting Association
L'Association Canadienne des Professeurs de Comptabilité

PROCEEDINGS
COMPTE RENDU

1992 ANNUAL CONFERENCE
CONGRÈS ANNUEL DE 1992

June 1992/ Juin 1992

University of Prince Edward Island
Charlottetown, P.E.I.

PROCEEDINGS OF
THE CANADIAN ACADEMIC ACCOUNTING ASSOCIATION
ANNUAL CONFERENCE

June 4 - 6, 1992

COMPTE RENDU
CONGRÈS ANNUEL DE L'ASSOCIATION
CANADIENNE DES PROFESSEURS DE COMPTABILITÉ

University of Prince Edward Island

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CONFERENCE THEME

RESEARCH, EDUCATION AND PRACTICE: BUILDING THE BRIDGES

Thursday, June 4

8:00 a.m. to 4:00 p.m. **REGISTRATION**

Location: Young Canada Games Sports Centre

9:00 a.m. to 5:00 p.m. **TEACHING WORKSHOP**

Chairperson: David Bateman
St. Mary's University

The Teaching Workshop, offered by the CAAA Education Committee, is designed to provide attendees with class-tested materials and methodologies, as well as practical advice on integrating new ideas and technologies in teaching. This workshop is organized in three sessions.

International Accounting - Zelma Rebmann - Huber, Simon Fraser University
Globalization has affected every aspect of business and business education. This session will demonstrate how to incorporate an international dimension in teaching.

Critical Accounting and Ethics - Norman Macintosh, Queen's University
Critical accounting is one of the fastest growing and most influential areas of accounting. This session will demonstrate how to use critical accounting to address ethical issues.

The Electronic Classroom - Robert Jensen, Trinity University
This session will demonstrate the latest in technologies and provide practical advice on how to use these new technologies in the classroom. Widely available accounting education software packages will be reviewed.

Location: Main Building, Room 340 (a.m.)
Atlantic Veterinary College, Room 2185 (p.m.)

Luncheon sponsored by Dryden Canada

4:00 p.m. to 6:00 p.m. **PRE-CAAA CONFERENCE SESSION FOR CURRENT AND RECENT DOCTORAL STUDENTS AND INTERESTED FACULTY**

Chairperson: Norman Betts
University of New Brunswick

Content: The objectives of the session are to enable current and recent doctoral students to become acquainted, to facilitate the exchange of ideas, and to promote interaction between students and faculty. In addition to current and recent doctoral students, faculty members who are active in research are encouraged to attend. Peter D. Chant, PhD, CA, Partner of Deloitte & Touche and the editors of Contemporary Accounting Research, William R. Scott, and The Accounting Review, A. Rashad Abdel-khalik, will attend the session as special invited guests. The session should also be of interest to accounting academics who are considering pursuing a doctorate.

Location: Main Building, Room 340

6:30 p.m. to 10:00 p.m. **CAAA WELCOME RECEPTION**

Sponsored by the Canadian Institute of Chartered Accountants

Location: Atlantic Veterinary College Cafeteria

Friday, June 5

7:00 a.m. to 8:15 a.m. **BREAKFAST**

Sponsored by Irwin Dorsey of Canada

Location: UPEI Dining Hall

8:00 a.m. to 5:00 p.m. **REGISTRATION**

Location: Young Canada Games Sports Centre

8:30 a.m. to 8:45 a.m. ***WELCOME REMARKS**

Speakers: C.W.J. Eliot, President and Vice-Chancellor
University of Prince Edward Island

Nabil Elias, CAAA President
University of Manitoba

Conference Chairpersons

Location: Duffy Science Centre, Room 121

8:45 a.m. to 10:30 a.m. ***PLENARY SESSION 1:** *Canadian Perspectives On Education Change*

Chairperson: Gordon Richardson
University of Waterloo

Content: The panel will consist of distinguished speakers with a broad experience and background in Canadian accounting education. From each of the three Canadian professional accounting bodies the speakers are: Eldon Ferguson, FCA, Chairman, IPEC, representing the CICA; Keith Scott, FCGA, Director of Education, representing CGAAC; and, Patrick Culhane, Director of Special Projects, representing the SMAC. Professor Jean-Guy Rousseau, incoming President, CAAA will represent academe; Ray Harris, FCA, Partner, Deloitte & Touche will represent practice; and, Robin Hamilton Harding, FCA, Vice President, Finance and Chief Financial Officer, Bell Canada will represent industry. Each speaker will address their perspective on education change in Canada, following which there will be a fifteen minute discussion period.

Location: Duffy Science Centre, Room 121

10:30 a.m. to 10:45 a.m. **BREAK/BOOK DISPLAYS**

Break sponsored by Deloitte & Touche

Location: Duffy Science Centre, Room 210

*Simultaneous translation will be provided for these sessions.

10:45 a.m. to 12:15 p.m. CONCURRENT SESSIONS 1A, 1B, and 1C

Session 1A: *Contemporary Issues In Tax Research*

Chairperson: Alan Macnaughton
University of Waterloo

Content: Alexander M.G. Gelardi (Simon Fraser) - "The Effect of Quantity and Order of Cues on Sequential Belief Revision in Tax Judgements". George Athanassakos (Wilfrid Laurier), Margaret Klatt (Wilfrid Laurier) - "The Impact of Recent Tax Revisions on the Lease vs. Purchase Decision: A Comparative Analysis".

Discussant: Richard Rennie
University of Regina

Alan Macnaughton
University of Waterloo

Location: Duffy Science Centre, Room 107

Session 1B: *Canadian Capital Markets Research*

Chairperson: Peter Clarkson
Simon Fraser University

Content: Lucy F. Ackert (Wilfrid Laurier), William C. Hunter (Federal Reserve Bank of Atlanta) - "Analysts' Earnings Forecasts, Rational Expectations, and Macroeconomic Shocks". Jeong-Bon Kim (Concordia), Hay Y. Chung (Kyung Hee University) - "The Use of Multiple Instruments For Measurement of Earnings Forecast Errors and Firm Size Effect: Predictive Accuracy Tests". Duane B. Kennedy (Waterloo), Wayne H. Shaw (Colorado at Boulder) - "An Examination of the Timing and Results of a Quasi-Reorganization".

Discussant: Susan G. Watts
University of British Columbia

Location: Duffy Science Centre, Room 110

*Session 1C: *Follow up Session, Canadian Education Change*

Chairperson: Tony Dimnik
Chair, CAAA Education Committee

Content: The session will be a follow-up session to Plenary Session 1, where the discussion and debate can continue. Issues other than those discussed in Plenary Session 1 will be introduced.

Location: Duffy Science Centre, Room 121

12:30 p.m. to 2:30 p.m. **CAAA AWARDS LUNCHEON**

Sponsored by the Certified General Accountants Association of Canada.

Chairperson: Nabil Elias
President, CAAA

Speaker: Gary Sundem, Incoming AAA President, on the topic of his perspectives on the U.S. Educational Change Experiment. Professor Sundem will also address the theme of "Linking Teaching and Scholarship."

Location: Alumni Gymnasium

2:45 p.m. to 4:15 p.m. **CONCURRENT SESSIONS 2A, 2B, 2C**

Session 2A: *Contemporary Issues In Auditing Research: Part I*

Chairperson: Dan Simunic
University of British Columbia

Content: Terrence O'Keefe (Oregon), Dan Simunic (British Columbia), Michael Stein (Rutgers) - "The Production of Audit Services: Evidence From A Major CPA Firm". Keith A. Moreland (Canisius College) - "An Empirical Study of The Effect of Auditor Sanctions on The Association Between Earnings and Returns of Client Firms". Sati Bandyopadhyay (Waterloo), Jere R. Francis (Iowa) - "The Economic Effect of Differing Levels of Auditor Assurance on Banker's Lending Decisions".

Discussant: Daniel Thornton
University of Calgary

Location: Duffy Science Centre, Room 107

Session 2B: *Contemporary Issues in Management Accounting*

Chairperson: Howard Armitage
University of Waterloo

Content: R. Murray Lindsay (Saskatchewan) - "The Management Control Systems of The Future". Peter J. Clarke (University College, Dublin), Eldon J. Gardner (Lethbridge) - "The Pressures for Change on Management Accounting Practice". Ronald E. Hoyt (Ottawa), Colin Lay (Ottawa), Denis H.J. Caro (Ottawa) - "The Managerial Information Content of the MIS Variance Analysis Guideline for Canadian Health Care".

Discussant: Peter Tiessen
University of Alberta

Location: Duffy Science Centre, Room 209

Session 2C: *Accounting and Society: Part I*

Chairperson: Vittoria Fortunato
University of Toronto

Content: Carol A. McKeen (Queen's), Alan J. Richardson (Queen's) - "Gender and the Accountancy Profession: An Oral History of Women Pioneers in the Canadian Accounting Profession". Jeffrey Power (Rhode Island), Maria Grammas (Rhode Island) - "The Accounting Profession In The Nineties: Is The Gender Gap Narrowing?" Dean Neu (Calgary) - "Reading the Regulatory Text: Regulation and The New Stock Issue Process".

Discussant: Sally Gunz
University of Waterloo

Location: Duffy Science Centre, Room 110

4:15 p.m. to 4:30 p.m. **BREAK/BOOK DISPLAYS**

Break sponsored by Deloitte & Touche

Location: Duffy Science Centre, Room 210

4:30 p.m. to 5:45 p.m. ***CAAA ANNUAL MEETING**

Chairperson: Nabil Elias
President, CAAA

Attending by invitation: Gary Sundem
Incoming President, AAA

Location: Duffy Science Centre, Room 121

6:30 p.m. to 10:00 p.m. **CAAA MEMBERS RECEPTION**

Sponsored by John Wiley & Sons

Location: Student Union Centre, 2nd Floor

Saturday, June 6

7:30 a.m. to 8:45 a.m. **BREAKFAST**

Sponsored by Nelson Canada

Location: UPEI Dining Hall

9:00 a.m. to 10:30 a.m. **PLENARY SESSION 2:** *Unresolved Practice Problems: Where Researchers Could Help*

Chairperson: Patricia O'Malley
Partner, KPMG Peat Marwick Thorne

Content: "Unresolved Practice Problems: Where Researchers Could Help" - A panel discussing financial reporting and auditing issues whose resolution could benefit from research findings. Panel members: A. Rashad Abdel-khalik, Editor, The Accounting Review; Peter D. Jackson, Director, Criteria of Control Projects, CICA; J. Alex Milburn, Partner, Ernst & Young, Member Accounting Standards Board; Gerald D. Trites, Partner, Peat Marwick Thorne, Chairman, CICA Research Study "Information to be Included In the Annual Report to Shareholders".

Location: Duffy Science Centre, Room 121

10:30 a.m. to 10:45 a.m. **BREAK/BOOK DISPLAYS**

Break sponsored by Deloitte & Touche

Location: Duffy Science Centre, Room 210

10:45 a.m. to 12:15 p.m. **CONCURRENT SESSIONS 3A, 3B, 3C**

Session 3A: *Positive Accounting Theory Research*

Chairperson: Daniel Coulombe
Laval University

Content: Raafat R. Roubi (Brock),Louis Culomovic (Brock) - "Leverage and Intertemporal Income Smoothing In Canada: An Empirical Study". Christine Parkinson (Bradford) - "The Performance of Target and Bidding Companies Involved in Hostile Takeover Bids". Irene M. Gordon (Simon Fraser), Lawrence A. Boland (Simon Fraser) - "On the Accounting-Economics Interface".

Discussant: Daniel Coulombe
Laval University

Location: Duffy Science Centre, Room 110

Session 3B: *Accounting and Society: Part II*

Chairperson: Alan Richardson
Queen's University

Content: Nola Buhr (Western) - "Social Responsibility, Legislation and Disclosure: The Case of Acid Rain and Falconbridge". Vaughan S. Radcliffe (Alberta) - "Governance for Government? The Construction of Government Auditing". Peter Secord (Saint Mary's), Anamitra Shome (Saint Mary's) - "Social Responsibility Disclosures In Canada: A Chief Executive Perspective".

Discussant: Leonard J. Brooks
University of Toronto

Location: Duffy Science Centre, Room 107

Session 3C: *Environmental Accounting*

Chairperson: Leonard G. Eckel
University of Waterloo

Content: Denis Cormier (UQAM), Michel Magnan (McGill), Bernard Morard (Genève) - "L'effet de la pollution sur la valeur boursière des titres: résultats empiriques". Ross Archibald (Western), David Conklin (Western) - "Financial Reporting and the Disclosure of the Economic Realities of Environmental Legislation". Leonard G. Eckel (Waterloo), Kathryn Fisher (Beak Consultants) - "The Environment, Accounting and Accountants".

Location: Duffy Science Centre, Room 209

12:30 p.m. to 2:00 p.m. **CAAA MEMBERS LUNCHEON**

Sponsored by the Society of Management Accountants of Canada

Chairperson: Nabil Elias
President, CAAA

Speaker: William H. Steeves, CMA, FCMA
Vice-President, Corporate Services and Treasurer, New Brunswick Telephone Company

Location: Alumni Gymnasium

2:15 p.m. to 3:45 p.m. **PLENARY SESSION 3:** *Teaching Ethics In The Accounting Curriculum*

Chairperson: Morley Lemon
University of Waterloo

Content: As part of work being sponsored by University of Waterloo's Centre for Accounting Ethics, the authors of three research projects will be discussing their research into developing materials for, and the teaching of ethics. The authors that will be discussing their projects are Professors Gordon Richardson (Waterloo), Jim Gaa (McMaster), Louise Martel (HEC), and Jacques Fortin (HEC).

Location: Duffy Science Centre, Room 121

3:45 p.m. to 4:00 p.m. **BREAK/BOOK DISPLAYS**

Break sponsored by Deloitte & Touche

Location: Duffy Science Centre, Room 210

4:00 p.m. to 5:30 p.m. **CONCURRENT SESSIONS 4A, 4B**

Session 4A: *Contemporary Issues In Auditing Research: Part II*

Chairperson: Dan Simunic
University of British Columbia

Content: Bryan K. Church (Wilfrid Laurier), Arnold Schneider (Georgia Institute of Technology) - "The Effect That A Superior's Suggestion Has On Auditors' Abilities To Generate Diagnostic Hypotheses". Richard D. Rennie (Regina) - "Auditors' Assessments of Probable Causes in Analytical Review: Effects of List Length, Availability and Experience".

Discussant: Claude Pilote
Laval University

Location: Duffy Science Centre, Room 209

Session 4B: *Contemporary Issues In Accounting Education*

Chairperson: David Adams
University of Prince Edward Island

Content: Curtis C. Verschoor (DePaul), Howard A. Kanter (DePaul) - "The Dilemma of Auditing Education: Can It Be Relevant Preparation For Both Practice and A Professional Examination?". Nasrollah Ahadiat (Towson State), Charles L. Martin (California State Polytechnic) - "Identification of Significant Employment Criteria: Helping To Control Turnover In Accounting".

Discussant: Howard Teall
Wilfrid Laurier University

Location: Duffy Science Centre, Room 110

Jeudi, 4 juin

De 8 h 00 à 16 h 00 **INSCRIPTION**

Lieu : Young Canada Games Sports Centre

De 9 h 00 à 17 h 00 **ATELIER SUR L'ENSEIGNEMENT**

Responsable : David Bateman
St. Mary's University

L'atelier sur l'enseignement fournira aux participants des méthodes et du matériel pédagogiques éprouvés en classe, ainsi que des conseils pratiques sur la façon d'intégrer idées et technologies nouvelles à son enseignement. L'atelier se compose de trois séances.

La comptabilité internationale - Zelma Rebmann-Huber, Simon Fraser University
La mondialisation a des répercussions sur tous les aspects du milieu et de l'enseignement des affaires. Durant cette séance, la professeure Rebmann-Huber montrera comment elle incorpore une dimension internationale à son enseignement.

La comptabilité critique et l'éthique - Norman Macintosh, Queen's University
La comptabilité critique figure parmi les domaines les plus dynamiques et les plus importants de la comptabilité. Le professeur Macintosh montrera comment utiliser la comptabilité critique pour aborder les questions d'éthique.

La salle de classe électronique - Robert Jensen, Trinity University
Le professeur Jensen présentera les technologies les plus récentes et donnera aux participants des conseils pratiques sur la façon de les utiliser en classe. Il fera également une revue des progiciels disponibles pour l'enseignement des sciences comptables.

Lieu : Salle 340 de l'édifice principal (matinée)
Salle 2185 de l'Atlantic Veterinary College (après-midi)

Le déjeuner est commandité par Dryden Canada

De 16 h 00 à 18 h 00 **SÉANCE SPÉCIALE À L'INTENTION DE TOUS LES ÉTUDIANTS DE TROISIÈME CYCLE, ANCIENS ET NOUVEAUX, ET DES PROFESSEURS INTÉRESSÉS**

Responsable : Norman Betts
Université du Nouveau-Brunswick

Contenu : Cette séance vise à permettre aux anciens et aux nouveaux étudiants de troisième cycle de se rencontrer, à faciliter les échanges d'idées et à encourager l'interaction entre étudiants et professeurs. Outre les étudiants, les professeurs qui se consacrent à la recherche sont les bienvenus. Peter D. Chant, Ph.D, c.a., associé du cabinet Deloitte & Touche et les rédacteurs en chef des revues Recherche comptable contemporaine, William R. Scott, et The Accounting Review, A. Rashad Abdel-khalik, y seront présents à titre d'invités spéciaux. La séance devrait aussi intéresser les professeurs de sciences comptables qui envisagent d'entreprendre un doctorat.

Lieu : Salle 340 de l'édifice principal

De 18 h 30 à 21 h 30 **RÉCEPTION DE BIENVENUE DE L'A.C.P.C.**

Commanditée par l'Institut Canadien des Comptables Agréés

Lieu : Cafétéria de l'Atlantic Veterinary College

Vendredi, 5 juin

De 7 h 00 à 8 h 15 **PETIT DÉJEUNER**

Commandité par Irwin Dorsey of Canada

Lieu : Salle à manger de l'UPEI

De 8 h 00 à 17 h 00 **INSCRIPTION**

Lieu : Young Canada Games Sports Centre

De 8 h 30 à 8 h 45 **MOT DE BIENVENUE**

Orateurs : C.W.J. Eliot, recteur et vice-chancellier
University of Prince Edward Island

Nabil Elias, président de l'A.C.P.C.
University of Manitoba

Responsables du Congrès

Lieu : Salle 121 du Duffy Science Centre

De 8 h 45 à 10 h 30 ***PLÉNIÈRE I :** *Perspectives canadiennes sur les changements en enseignement*

Responsable : Gordon Richardson
University of Waterloo

Contenu : Le panel se composera de conférenciers de marque possédant une vaste expérience dans le domaine de l'enseignement des sciences comptables au Canada. Provenant des trois organismes professionnels canadiens de comptabilité, ces conférenciers sont : Eldon Ferguson, f.c.a., président du Comité interprovincial de formation professionnelle, représentant l'I.C.C.A.; Keith Scott, f.c.g.a., directeur de la formation, représentant CGA Canada; et Patrick Culhane, directeur des projets spéciaux, représentant la S.C.M.C. Le professeur Jean-Guy Rousseau, président élu de l'A.C.P.C., représentera les universitaires; Ray Harris, f.c.a., associé chez Deloitte & Touche représentera les praticiens; et Robin Hamilton Harding, f.c.a., vice-président (finances) et chef des affaires financières chez Bell Canada, représentera l'industrie. Chaque conférencier partagera son point de vue sur les changements dans le domaine de la formation au Canada. Les présentations seront suivies d'une période de discussion de quinze minutes.

Lieu : Salle 121 du Duffy Science Centre

* L'interprétation simultanée sera offerte pour les séances marquées d'un astérisque.

De 10 h 30 à 10 h 45 **PAUSE et EXPOSITION DE LIVRES**

La pause est commanditée par Deloitte & Touche.

Lieu : Salle 210 du Duffy Science Centre

De 10 h 45 à 12 h 15 **SÉANCES SIMULTANÉES 1A, 1B ET 1C**

Séance 1A : *Des questions actuelles en recherche fiscale*

Responsable : Alan Macnaughton
University of Waterloo

Contenu : Alexander M.G. Gelardi (Simon Fraser) - "The Effect of Quantity and Order of Cues on Sequential Belief Revision in Tax Judgements". George Athanassakos (Wilfrid Laurier) et Margaret Klatt (Wilfrid Laurier) - "The Impact of Recent Tax Revisions on the Lease vs. Purchase Decision: A Comparative Analysis".

Intervenants : Richard Rennie
University of Regina

Alan Macnaughton
University of Waterloo

Lieu : Salle 107 du Duffy Science Centre

Séance 1B : *La recherche sur les marchés de capitaux canadiens*

Responsable : Peter Clarkson
Simon Fraser University

Contenu : Lucy F. Ackert (Wilfrid Laurier), William C. Hunter (Federal Reserve Bank of Atlanta) - "Analysts' Earnings Forecasts, Rational Expectations, and Macroeconomic Shocks". Jeong-Bon Kim (Concordia), Hay Y. Chung (Kyung Hee University) - "The Use of Multiple Instruments For Measurement of Earnings Forecast Errors and Firm Size Effect: Predictive Accuracy Tests". Duane B. Kennedy (Waterloo), Wayne H. Shaw (Colorado at Boulder) - "An Examination of the Timing and Results of A Quasi-Reorganization".

Intervenant : Susan G. Watts
University of British Columbia

Lieu : Salle 110 du Duffy Science Centre

***Séance 1C :** *Continuation de la plénière sur les changements dans le domaine de l'enseignement au Canada*

Responsable : Tony Dimnik
président du Comité sur l'enseignement de l'A.C.P.C.

Contenu : Cette séance se veut une continuation de la Plénière I, où pourront se poursuivre la discussion et le débat. On soulèvera également d'autres questions.

Lieu : Salle 121 du Duffy Science Centre

De 12 h 30 à 14 h 30 **DÉJEUNER DES PRIX DE L'A.C.P.C.**

Commandité par l'Association des comptables généraux licenciés du Canada

Responsable : Nabil Elias
Président de l'A.C.P.C.

Conférencier : Gary Sundem, président élu de l'A.A.A., partagera son point de vue sur l'expérience de changement dans le domaine de l'enseignement aux États-Unis. Le professeur Sundem abordera également la liaison de l'enseignement aux bourses d'étude.

Lieu : Gymnase des anciens

De 14 h 45 à 16 h 15 **SÉANCES SIMULTANÉES 2A, 2B ET 2C**

Séance 2A : *Des questions actuelles en recherche sur la vérification : première partie*

Responsable : Dan Simunic
University of British Columbia

Contenu : Terrence O'Keefe (Oregon), Dan Simunic (British Columbia), Michael Stein (Rutgers) - "The Production of Audit Services: Evidence From A Major CPA Firm". Keith A. Moreland (Canisius College) - "An Empirical Study of the Effect of Auditor Sanctions on The Association Between Earnings and Returns of Client Firms". Sati Bandyopadhyay (Waterloo), Jere R. Francis (Iowa) - "The Economic Effect of Differing Levels of Auditor Assurance on Banker's Lending Decisions".

Intervenant : Daniel Thornton
University of Calgary

Lieu : Salle 107 du Duffy Science Centre

Séance 2B : *Des questions actuelles en comptabilité de gestion*

Responsable : Howard Armitage
University of Waterloo

Contenu : R. Murray Lindsay (Saskatchewan) - "The Management Control Systems of The Future". Peter J. Clarke (University College, Dublin) Eldon J. Gardner (Lethbridge) - "The Pressures for Change on Management Accounting Practice". Ronald E. Hoyt (Ottawa), Colin Lay (Ottawa), Denis H.J. Caro (Ottawa) - "The Managerial Information Content of the MIS Variance Analysis Guideline for Canadian Health Care".

Intervenant : Peter Tiessen
University of Alberta

Lieu : Salle 209 du Duffy Science Centre

Séance 2C : *La comptabilité et la société : première partie*

Responsable : Vittoria Fortunato
University of Toronto

Contenu : Carol A. McKeen (Queen's), Alan J. Richardson (Queen's) - "Gender and the Accountancy Profession: An Oral History of the Women Pioneers in the Canadian Accounting Profession". Jeffrey Power (Rhode Island), Maria Grammas (Rhode Island) - "The Accounting Profession In The Nineties: Is The Gender Gap Narrowing?" Dean Neu (Calgary) - "Reading the Regulatory Text: Regulation and The New Stock Issue Process".

Intervenant : Sally Gunz
University of Waterloo

Lieu : Salle 110 du Duffy Science Centre

De 16 h 15 à 16 h30 **PAUSE et EXPOSITION DE LIVRES**

La pause est commanditée par Deloitte & Touche.

Lieu : Salle 210 du Duffy Science Centre

De 16 h 30 à 17 h 45 ***ASSEMBLÉE ANNUELLE DE L'A.C.P.C.**

Président : Nabil Elias
président de l'A.C.P.C.

Participant sur invitation : Gary Sundem
Président élu de l'A.A.A.

Lieu : Salle 121 du Duffy Science Centre

De 18 h 30 à 21 h 00 **RÉCEPTION À L'INTENTION DES MEMBRES DE L'A.C.P.C.**

Commanditée par John Wiley & Sons

Lieu : 2e étage du Student Union Centre

Samedi, 6 juin

De 7 h 30 à 8 h 45 **PETIT DÉJEUNER**

Commandité par Nelson Canada

Lieu : Salle à manger de l'UPEI

De 9 h 00 à 10 h 30 **PLÉNIÈRE II :** *Les problèmes pratiques sans solutions : là où les chercheurs peuvent aider*

Responsable : Patricia O'Malley
Associée chez KPMG Peat Marwick Thorne

Contenu : "Unresolved Practice Problems: Where Researchers Could Help" Il s'agit d'une séance au cours de laquelle des invités discuteront de questions portant sur la vérification et la présentation d'informations financières. Les invités sont A. Rashad Abdel-khalik, rédacteur en chef de la revue <u>The Accounting Review</u> ; Peter D. Jackson, directeur, Critères de contrôle, I.C.C.A.; J. Alex Milburn, associé du cabinet Ernst & Young et membre du Conseil de normalisation comptable ; Gerald A. Trites, associé du cabinet Peat Marwick Thorne et président du groupe de l'I.C.C.A. chargé de l'étude de recherche intitulée "L'information à inclure dans le rapport annuelw aux actionnaires".

Lieu : Salle 121 du Duffy Science Centre

De 10 h 30 à 10 h 45 **PAUSE et EXPOSITION DE LIVRES**

La pause est commanditée par Deloitte & Touche.

Lieu : Salle 210 du Duffy Science Centre

De 10 h 45 à 12 h 15 **SÉANCES SIMULTANÉES 3A, 3B ET 3C**

Séance 3A : *Recherche sur la théorie comptable positive*

Responsable : Daniel Coulombe
Université Laval

Contenu : Raafat R. Roubi (Brock), Louis Culomovic (Brock) - "Leverage and Intertemporal Income Smoothing In Canada: An Empirical Study". Christine Parkinson (Bradford) - "The Performance of Target and Bidding Companies Involved in Hostile Takeover Bids". Irene M. Gordon (Simon Fraser), Lawrence A. Boland (Simon Fraser) - "On the Accounting-Economics Interface".

Intervenant : Daniel Coulombe
Université Laval

Lieu : Salle 110 du Duffy Science Centre

Séance 3B : *La comptabilité et la société : deuxième partie*

Responsable : Alan Richardson
Queen's University

Contenu : Nola Buhr (Western) - "Social Responsibility, Legislation and Disclosure: The Case of Acid Rain and Falconbridge". Vaughan S. Radcliffe (Alberta) - "Governance for Government? The Construction of Government Auditing". Peter Secord (Saint Mary's), Anamitra Shome (Saint Mary's) - "Social Responsibility Disclosures In Canada: A Chief Executive Perspective".

Intervenant : Leonard J. Brooks
University of Toronto

Lieu : Salle 107 du Duffy Science Centre

Séance 3C : *La comptabilité environnementale*

Responsable : Leonard G. Eckel
University of Waterloo

Contenu : Denis Cormier (UQAM), Michel Magnan (McGill), Bernard Morard (Genève) - "L'effet de la pollution sur la valeur boursière des titres : résultats empiriques". Ross Archibald (Western), David Conklin (Western) - "Financial Reporting and the Disclosure of the Economic Realities of Environmental Legislation". Leonard G. Eckel (Waterloo), Kathryn Fisher (Beak Consultants) - "The Environment, Accounting and Accountants".

Lieu : Salle 209 du Duffy Science Centre

De 12 h 30 à 14 h 00 **DÉJEUNER DES MEMBRES DE L'A.C.P.C.**

Commandité par la Société des comptables en management du Canada

Président : Nabil Elias
président de l'A.C.P.C.

Conférencier : William H. Steeves, c.m.a., f.c.m.a.
Vice-président, Services généraux et trésorier, New Brunswick Telephone Company

Lieu : Gymnase des anciens

De 14 h 15 à 15 h 45 **PLÉNIÈRE III :** *L'enseignement de l'éthique dans les programmes de sciences comptables*

Responsable : Morley Lemon
University of Waterloo

Contenu : Les auteurs de trois rapports de recherche, parrainés par le Centre for Accounting Ethics de l'université de Waterloo, discuteront de l'enseignement de l'éthique et de leur recherche concernant l'élaboration de matériel didactique à cet effet. Il s'agit des professeurs Gordon Richardson (Waterloo), Jim Gaa (McMaster), Louise Martel (HEC), et Jacques Fortin (HEC).

Lieu : Salle 121 du Duffy Science Centre

De 15 h 45 à 16 h 00 **PAUSE et EXPOSITION DE LIVRES**

La pause est commanditée par Deloitte & Touche.

Lieu : Salle 210 du Duffy Science Centre

De 16 h 00 à 17 h 30 **SÉANCES SIMULTANÉES 4A ET 4B**

Séance 4A : *Questions actuelles sur la recherche en vérification : deuxième partie*

Responsable : Dan Simunic
University of British Columbia

Contenu : Bryan K. Church (Wilfrid Laurier), Arnold Schneider (Georgia Institute of Technology) - "The Effect That A Superior's Suggestion Has On Auditors' Abilities To Generate Diagnostic Hypotheses." Richard D. Rennie (Regina) - "Auditors' Assessments of Probable Causes in Analytical Review: Effects of List Length, Availability and Experience".

Intervenant : Claude Pilote
Université Laval

Lieu : Salle 209 du Duffy Science Centre

Séance 4B : *Questions actuelles sur l'enseignement des sciences comptables*

Responsable : David Adams
University of Prince Edward Island

Contenu : Curtis C. Verschoor (DePaul) et Howard A. Kanter (DePaul) - "The Dilemma of Auditing Education: Can It Be Relevant Preparation For Both Practice and A Professional Examination?". Nasrollah Ahadiat (Towson State) et Charles L. Martin (California State Polytechnic) - "Identification of Significant Employment Criteria: Helping To Control Turnover In Accounting".

Intervenant : Howard Teall
Wilfrid Laurier University

Lieu : Salle 110 du Duffy Science Centre

THE EFFECT OF QUANTITY AND ORDER OF CUES ON SEQUENTIAL BELIEF REVISION IN TAX JUDGMENTS

Alexander M.G. Gelardi
Simon Fraser University

SYNOPSIS: The Belief Adjustment model predicts recency effects for complex information encoded in a step-by-step process. Prior studies using the model in a tax context have examined balanced information sets of two or four cues. Generally, these studies found a recency effect. However, psychology literature indicates that the recency effect may not carry-over to long series of cues.

Some uncertainty exists whether order effects can be generalized to legal tax research. Legal tax research often entails examining several pieces of evidence. Also, it is unlikely that one would obtain a balanced information set in a legal tax research task.

This study extended prior work. First, it investigated the effect of series of four, eight, and twelve cues on tax decisions. Second, this study also examined tax judgments where a directionally unbalanced series of cues was presented.

Two laboratory type experiments were carried out. The subjects were 173 undergraduate students and 18 graduate students who were enrolled in tax courses at a major state university. The graduate students had, on average, over six years of tax experience. All the graduate students were tested in one condition only. There was no significant difference in the results of the undergraduate and the graduate students.

It was found that there was a strong overall recency order effect. However, the recency order effect seemed to be driven by the longer cue series, rather than by the shorter cue series. This is contrary to the predictions of the Belief Adjustment model.

The predicted contrast effect was not observed. A possible reason for this could be that the counter-directional cue, when following the series of cues, could have had its effect swamped by the previous cues.

The findings of this study indicate that there may be systematic biases in tax judgments. Tax advisors generally use a fairly large number of items of information in their judgments. Thus, the finding of a strong recency order effect in the longer series should be of interest to the tax profession. This would enable the firms to include counter measures in their training sessions and in the tax department procedural manuals.

CONCURRENT SESSION 1A

Friday, June 5

10:45 a.m. to 12:15 p.m.

Location: Duffy Science Centre, Room 107

The Impact of Recent Tax Revisions on the Lease vs. Purchase Decision: A Comparative Analysis

G. Athanassakos
M. Klatt
Wilfrid Laurier University

SYNOPSIS: A choice of financing open to corporations that has become popular over the last 20 years is lease financing. Corporate taxation, especially as it relates to the application of CCA in lease financing, has always been an integral part in deciding whether to lease an asset or buy it. This paper explores the recent tax revisions to lease financing arrangements, especially to the application of CCA in a lease financing, that have resulted in a change to the calculation of the lease payments from the lessor's point of view and to the Net Present Value (NPV) of a lease. The impact of the changes to the lessor and the lessee are also discussed and new formulae are presented for use in the buy vs. lease decision-making.

Until the current round of changes, as long as the arrangement constituted a lease under Income Tax Act (ITA) Regulation 1100(17) and the payments were considered payments of rent not payments for the purchase of the property, the tax position of the lessor and lessee were well-defined. The lessor deducted amounts such as insurance, financing, repairs, maintenance, and capital cost allowance (CCA), while the lessee expensed the full amount of the lease cost. The arrangement provided benefits to both sides. The lessor had the advantage of the CCA tax shield which provided an incentive to lease. The lessee obtained use of the asset and received a tax reduction which often made leasing more economically feasible than an outright purchase. A series of changes by the Department of Finance, effective April 26, 1989, have dramatically altered the taxation of certain leasing arrangements. These new rules involve capping the amount of CCA available to the lessor of "specified leasing property" (ITA

Regulation 1100(1.1) - (1.3)). In addition, other changes have affected the traditional roles of the parties to a lease. With the addition of section 16.1 of the Income Tax Act, lessees of certain leased tangible property who "elect" are deemed to have acquired the leased property and are thus eligible to deduct capital cost allowance. **As a result, both the lessor and the lessee are permitted to deduct capital cost allowance on the same asset at the same time.** These changes have increased the complexity of the tax calculation for both parties. Lessors of "specified leasing property", facing a reduced tax benefit will increase leasing charges, while lessees may now consider the merits of a CCA election. The new rules introduced restrict the amount of CCA that may be deducted by lessors. The CCA is greatly reduced, under the new rules, because for the purpose of computing CCA, the lessor is deemed to have made a loan to the lessee in an amount equal to the value of the leased property, with interest payable at the "prescribed rate". Lease payments are regarded as blended payments of principal and interest. Only the smaller of the CCA that is otherwise deductible and the theoretical return to loan principal is deductible. The effect is to postpone the deduction of CCA from earlier years to later years.

As this is not a paper on methodology, we apply Levy and Sarnat's (1979) methodology to our analysis of the purchase vs. lease decision. It is shown that, for high CCA rates, long lived assets and relatively high interest rates, the lessor will now, as compared to the previous tax regime, charge a higher lease payment and, as a result, the lessee, if he does not elect, will have a negative NPV, and hence choose to buy the asset; but if the lessee elects, then his NPV is significantly positive and the lessee will choose to lease. Moreover, it is shown that for high CCA rates, long-lived assets and relatively high interest rates, the NPV of the lessee, if he elects, is positive for a wide range of tax rates and inversely related to the differential between the tax rate of the lessor (L_r) and the tax rate of the lessee (L_e). If the lessee chooses not to elect, then the traditional positive relationship is maintained, but the NPV of the lessee is negative for all tax differentials.

While the government achieved its original objective, as a result of the tax changes, it has provided new opportunities for profitable lease arrangements. While the lessee and lessor may have no control over the depreciation rate, the after-tax cost of debt and tax rates, in general, they have some control over the following critical factors for NPV calculations. First, the lessee has the option to elect, and he will always exercise it, if his NPV is positive. Second, the lessee and lessor can negotiate a short duration lease. Third, the lessee and lessor can enter into lease agreements during very profitable years or when T_e exceeds T_r. While prior to the revisions, the lower the T_e vis-a-vis T_r the better, now the opposite is true.

CONCURRENT SESSION 1A

Friday, June 5

10:45 a.m. to 12:15 p.m.

Location: Duffy Science Centre, Room 107

Analysts' Earnings Forecasts, Rational Expectations, and Macroeconomic Shocks

Lucy F. Ackert
Wilfrid Laurier University

William C. Hunter
Federal Reserve Bank of Atlanta

SYNOPSIS: Much of the recent research examining issues related to professional analysts' earnings forecasts has been aimed at evaluating the accuracy of these forecasts relative to naive models. A much more fundamental question concerns the rationality of these forecasts. That is, to what extent do these forecasts reflect all publicly available information? In defining the variables included in the information set common to all analysts, it seems only natural that, at a minimum, analysts know the past values of the average forecasts and the associated forecast errors as well as the current and past values of various publicly available economic series.

In this paper we evaluate the rationality of earnings forecasts made by professional security analysts participating in the I/B/E/S data base. We consider unbiasedness, lack of serial correlation, and orthogonality tests. In conducting the orthogonality tests, we are careful to include only information available to analysts at the time the forecasts are made. The variables included in the set of publicly available information include: past values of forecast errors, past values of forecasted earnings per share, and quarterly percentage changes in the consumer price index, unemployment rate, oil prices, stock prices, gross national product, and corporate profits.

We discuss the effects of aggregate or macroeconomic shocks on tests of analysts' rationality. It is clear that aggregate shocks affect earnings, or in other words, there is a business cycle. We demonstrate the importance of accounting for aggregate shocks in order to avoid drawing incorrect inferences and illustrate that the failure to account for such shocks when testing for rational expectations using analysts' earnings forecasts can lead to false rejection of the hypothesis of rationality. Using a fixed time effects model, the possibility of quarterly aggregate shocks is included in the model. Although the results of our statistical tests do not support the rational expectations hypothesis without exception, we believe that, taken together, the results do provide strong support for the notion that the analysts' forecasts we examine are rational.

CONCURRENT SESSION 1B

Friday, June 5

10:45 a.m. to 12:15 p.m.

Location: Duffy Science Centre, Room 110

THE USE OF MULTIPLE INSTRUMENTS FOR MEASUREMENT OF EARNINGS FORECAST ERRORS AND FIRM SIZE EFFECT: PREDICTIVE ACCURACY TESTS

Hay Y. Chung
Kyung-Hee University

and

Jeong-Bon Kim
Concordia University

SYNOPSIS

The existence of many alternative proxies for the same underlying variable, coupled with empirical evidence that nontrivial measurement errors exist among the proxies, suggests that one can possibly purge some portions of measurement errors by combining various proxies into a composite measure. To obtain a composite measure for earnings forecast errors, we employ the instrumental variables approach under which signs of earnings forecast errors obtained from various time-series models serve as multiple instruments. These are then applied to quarterly earnings series of a sample of 1512 U.S. firms. To evaluate the effectiveness of the new approach for reducing measurement errors, we compared the distributional properties of the composite earnings forecast errors with those from individual time-series models, and performed the predictive accuracy test for the different forecast errors. We extended the investigation by partitioning firms according to size to examine whether size is a conditioning variable. We also evaluated the possible superiority of the instrumental variables model relative to financial analysts' forecasts using a reduced set of sample firms.

The following summarizes the results of this paper: First, the instrumental variables approach is effective in reducing measurement errors in the sense that it leads to more desirable distributional properties (smaller mean and dispersion of forecast errors) and smaller absolute percentage forecast errors than do individual time-series forecasting models. Second, the approach performs better for small-firm samples than for large-firm samples. Finally, analysts' forecast errors seasoned with the signs of various time-series forecast errors as well as their own outperform those without seasoning. This indicates that analysts' forecast errors can still be improved by employing the instrumental variables technique. Overall, our results indicate that the instrumental variable approach employed in this paper could be an effective tool for reducing the errors-in-variables problem especially when experimental designs require researchers to isolate the effects of earnings forecast errors from those of treatment variables such as accounting policy changes.

CONCURRENT SESSION 1B

Friday, June 5

10:45 a.m. to 12:15 p.m.

Location: Duffy Science Centre, Room 110

An Examination of the Timing and Results of a Quasi-Reorganization

Duane B. Kennedy
University of Waterloo

Wayne H. Shaw
University of Colorado at Boulder

SYNOPSIS: One foundation upon which financial statements are constructed, with few exceptions, is that assets and liabilities are maintained on an historical cost basis. Market values replace historical costs only in a few instances such as asset acquisitions. These cases, however, require an ownership change for the asset basis to be revalued.

In contrast, a firm can undertake on its own a revaluation of selected financial numbers even in the absence of an ownership change. The procedure, called a quasi-reorganization, permits the firm to eliminate a deficit in retained earnings. The firm is also permitted to write its assets and/or liabilities to market values. There are few guidelines for the firm to use in determining what adjustments are appropriate and under what circumstances should the adjustments be made. While quasi-reorganizations are often associated with the emergence of a firm from bankruptcy protection as part of a 'fresh-start' package, they are also undertaken without a bankruptcy filing.

In 1988, the American Institute of Certified Public Accountants released Issues Paper 88-1 which presented concerns over the lack of guidelines for the use of a quasi-reorganization. It summarized issues of timing and the extent to which the financial statements should be adjusted. The issues include should there be an expectation of improved future performance at the time of the quasi-reorganization? Should the firm be allowed to adjust only equity accounts or should assets and liabilities also be adjusted to market values? Also, should both increases and decreases in net asset values be allowed?

The purpose of this paper is to provide some evidence on the timing and effects of quasi-reorganizations. Several issues are examined. First, does firm financial performance deteriorate leading up to the announcement of a quasi-reorganization? Second, does the performance improve following the reorganization? Finally, do the quasi-reorganization firms differ in future performance from a sample of firms that had negative retained earnings but did not restate retained earnings.

In summary, we found that the quasi-reorganization firms generally had experienced poor financial and stock performance prior to the announcement of the quasi-reorganization as compared to a control group of similarly sized firms from the same industries. However, the firms' performance improved significantly during the period surrounding the announcement of the quasi-reorganization. This improved performance was found both in terms of financial ratios and security prices. Finally, when compared to other firms that reported negative retained earnings, we found that the quasi-reorganization firms demonstrated stronger financial and stock performance after the reorganization. This result supports a assertion that the quasi-reorganization is enacted coincident with fundamental changes in business activity.

CONCURRENT SESSION 1B

Friday, June 5

10:45 a.m. to 12:15 p.m.

Location: Duffy Science Centre, Room 110

The Production of Audit Services:

Evidence from a Major Public Accounting Firm

Terrence B. O'Keefe
University of Oregon

Dan A. Simunic
University of British Columbia

Michael T. Stein
Rutgers University

Abstract

In this paper we investigate the production of auditing services. Audit output is defined as the posterior probability that financial statements are free of material error, and we assume that a CPA firm produces a fixed audit output (i.e., posterior level of assurance) across clients. We then identify and test the relationship between client and engagement characteristics and the vector of labor inputs used in producing the audit. In particular, we examine the effects of client size, complexity, and risk; internal control quality and the extent of auditor reliance on controls; auditor learning over time; and the joint production of auditing with tax and management consulting services. Hypotheses concerning these relationships are tested using data for 249 U.S. audits performed by an international public accounting firm. We find that the cross-sectional variation in the quantity and mix of labor inputs can largely be explained by the same client size, complexity, and risk measures which have been found to be important in previous research on auditors' fees. These results are not sensitive to the choice of specific functional form for the estimation. Also, we find some evidence of fee discounting in the first two years of an audit engagement. However, we find no evidence of auditor learning over time. Finally, reliance on client controls and/or the joint production of non-audit services seem to have no systematic effects on audit labor inputs.

CONCURRENT SESSION 2A

Friday, June 5

2:45 p.m. to 4:15 p.m.

Location: Duffy Science Centre, Room 107

AN EMPIRICAL STUDY OF THE EFFECT OF AUDITOR SANCTIONS ON THE ASSOCIATION BETWEEN EARNINGS AND RETURNS OF CLIENT FIRMS

Keith A. Moreland
Canisius College

This paper reports the results of a study of the effects of sanctions issued by the Securities and Exchange Commission (SEC) against Big Eight (Six) audit firms on the associations between accounting earnings and security returns of clients of those audit firms. A sanction is modelled as new information which affects the assessed level of quality of an audit firm.

Prior research has characterized the role of auditing as credibility-increasing (Dopuch and Simunic 1982). Credibility refers to the extent to which users believe financial information to be truthful. Auditors increase credibility by detecting and correcting (or, if necessary, reporting) errors that occurred in the client accounting process.

This research extends prior research by arguing that auditing affects the precision of client earnings signals. Within the Holthausen and Verrecchia (1988) framework, factors affecting the precision (the inverse of the variance of the error term with which accounting earnings measures economic earnings) affect the security price response to an earnings signal.

The issuance of a sanction against an auditor is used as an inter-temporal change in the level of assessed auditor quality. Dopuch and Simunic (1982) and Wilson and Grimlund (1990) find that the issuance of a sanction affects the competitive position of the sanctioned audit firm. This study examines the effects of the issuance of a sanction on the information content of client firm earnings and on the association between earnings and returns of clients of that audit firm.

To study this question, ordinary least squares regression models of abnormal security returns against unexpected earnings are developed. Also, recent research has identified other determinants of earnings response coefficients (ERCs) in addition to the precision of the earnings signal. These determinants include the persistence and growth (or time series parameters) of earnings and the expected rate of return. Factors argued to be associated with these determinants of ERCs are included in multiple "reverse" regression models of earnings against returns.

The results suggest that, in general, a sanction against an audit firm does affect the security returns associated with earnings of client firms. However, this result is not consistent across sanctions. The results also confirm prior research that identifies factors associated with determinants of earnings response coefficients.

CONCURRENT SESSION 2A

Friday, June 5

2:45 p.m. to 4:15 p.m.

Location: Duffy Science Centre, Room 107

The Economic Effect of Differing Levels of
Auditor Assurance on Bankers' Lending Decisions

Sati Bandyopadhyay
University of Waterloo
Jere R. Francis
University of Iowa

SYNOPSIS: Since 1979 Statement on Standards for Accounting and Review Services No.1 allows CPAs to perform compilations, reviews, or audits for nonpublic companies. An experiment was conducted to determine if these increasing levels of auditor assurance have an economic effect on decision making by users of financial statements. A hypothetical loan application was evaluated by 67 experienced bank loan officers with the level of auditor assurance manipulated across these three levels of assurance from low (compilations) to medium (reviews) to high (audits). The argument is that increasing levels of assurance reduce information risk about the applicant and should therefore affect economic decision making. Loan officers made two decisions: whether or not to make the loan and the interest rate over prime to be charged on the loan. The results indicate that on average loans were more likely to be made and a lower interest rate charged as the level of assurance increases: specifically, the likelihood of making the loan increased from 26% with compilations, to 48% with reviews, to 62% with audits, while the interest rate premium was 2.24% for compilations, 1.96% for reviews, and 1.71% for audits. These results are consistent with higher levels of assurance reducing information risk and having an economic effect on the loan decision process.

Two types of loan security, security via debt covenants versus security via collateralized assets, were manipulated to determine whether the positive effect of increasing auditor assurance level on loan approval rates and interest rates was different across the two types of loan security. The test draws on agency theory. Security via debt covenants relies on credible accounting numbers and hence a greater concern by the lender for the underlying credibility of the financial statements whereas with collateralization the loan is directly secured via the asset lien and does not as explicitly rely on financial statement numbers. No such interaction effect was found, however.

Finally, two levels of management advisory services (MAS), high and none, were also manipulated to determine how (if at all) nonattest work may affect lending decisions. There is longstanding controversy as to whether MAS is viewed positively or negatively by users of audited financial statements. The results indicate weakly significant positive affects from MAS in which the loan approval rate goes up slightly and the interest rate premium drops. However, the magnitudes of these effects are economically insignificant.

CONCURRENT SESSION 2A

Friday, June 5

2:45 p.m. to 4:15 p.m.

Location: Duffy Science Centre, Room 107

THE MANAGEMENT CONTROL SYSTEMS OF THE FUTURE

R. Murray Lindsay
University of Saskatchewan

SYNOPSIS: This paper describes several features of the management control systems of the future that will underlie firms' continuous improvement efforts. It reflects an integration of recent literature in the area and significant observations (patterns) that left an impact on the researcher in the course of conducting a recent study (incorporating a national survey and cases) which was sponsored by the Society of Management Accountants of Canada. The purpose of the study was to examine the change in management control systems as a result of a company's move towards Just-In-Time/World Class Manufacturing.

To an increasing extent, companies are changing their organizational focus towards increasing customer satisfaction. This reorientation has led to a number of changes in the structure of organizations. Firms are moving towards: (i) network structures; (ii) the use of permanent and ephemeral teams comprised of individuals from different specialist functions; (iii) wholesale reductions in middle management and increased decentralization of decision making to lower levels; and (iv) utilizing *self-managing*, highly flexible production departments organized on a family product basis. In short, structures are becoming increasingly organic.

Commensurate with these structural transformations, information systems are also changing, and in the end these changes will be nothing short of revolutionary. There will be much more reporting (often on-line) to lower level employees to reflect the increased responsibility and authority that has been granted to them. Everyone must assume information responsibility (who depends upon me for information and upon whom do I depend) and, by implication, possess a greater understanding of the entire work process in order to think and act as a team, mindful of the performance of the whole. In order to design effective information systems, management accountants will need to become far better acquainted with operational matters and processes than they have in the past. They will also need to assist in teaching employees how money is made or lost and the role the individual employee plays in the process.

Finally, with respect to management accounting, four main observations were evident. First, we cannot continue to define the benefits of manufacturing process changes primarily in terms of reductions in labour or overhead that is arbitrarily allocated on some volume-related activity base; most improvements result in a sharp drop in *non*-direct costs. Second, time-based measures will become increasingly important: they force many aspects of the innovation process out of the shadows by highlighting non-value added activities and their costs. Third, the bulk of future cost reduction programs will be centred around reducing overhead. Lastly, there needs to be an increased recognition of accounting information's important behavioral role in motivating employees towards the continuous improvement strategies adopted by senior management.

CONCURRENT SESSION 2B

Friday, June 5

2:45 p.m. to 4:15 p.m.

Location: Duffy Science Centre, Room 209

THE PRESSURES FOR CHANGE ON MANAGEMENT ACCOUNTING PRACTICE

PETER J. CLARKE
UNIVERSITY COLLEGE
DUBLIN, IRELAND
AND
ELDON J. GARDNER
UNIVERSITY OF LETHBRIDGE

Synopsis: This article examines current management accounting practice, and the fact that it has been under pressure to change during the past several years. These pressures can be classified into two broad groups:
(1) The new manufacturing environment, with its emphasis on quality and flexibility of production, will change current practice and performance measurements.
(2) The present distortion of product costs, using current costing systems, could be eliminated by activity based costing systems.

The purpose of this paper is to explain, through a literature review, the fundamental elements of the new manufacturing environment and activity based costing system and draw some of the major implications of both for current management accounting practice.

To do this, the paper is divided into three main sections. The New Manufacturing Environment is examined in detail to observe the changes that it has brought about. Activity Based Costing is discussed, along with its impact in the New Manufacturing Environment. The accounting implications of each of these are then presented.

CONCURRENT SESSION 2B

Friday, June 5

2:45 p.m. to 4:15 p.m.

Location: Duffy Science Centre, Room 209

The Managerial Information Content of the MIS Variance Analysis Guidelines for Canadian Health Care

Ronald E. Hoyt
Colin Lay
Denis H.J.Caro
University of Ottawa

SYNOPSIS: This paper examines MIS guidelines as they relate to analysis of activity variances controllable by managers in Canadian health care institutions. These proposals are compared with traditional approaches to variance analysis found in the Accounting literature. The test of managerial responsibility serves as the primary criterion for evaluating the quality of signals produced. Additional criteria include the cost to produce variance data, their relevance to funding decisions, timeliness, and validity. The research question focuses on usefulness defined as information relevant to managers' decisions affecting operating efficiency in their own areas of responsibility.

Closer examination of the research question led to consideration of competing answers to the question of appropriate information. The current approach to variance analysis appears to be intended to replace ad hoc or inadequate variance data analysis with a formal standardized set of procedures implemented throughout the national system. Therefore, when applying the test of responsibility for decisions, the criteria of valid representation, timeliness, relevance, and cost to produce take different parameters in a prospective payment system such as a global budget which is in general use in Canada . In contrast, a retrospective reimbursement system which economic trends and government pressure seem to be indicating for the 1990's generally requires detailed cost data on individual case loads, ·illness categories, treatment protocols and capacity characteristics.

Our findings suggest that usefulness of variance data for control purposes may arguably depend on the approach and philosophy employed in funding health care entities. After careful scrutiny, the current MIS standards may be adequate for traditional funding and reporting activities but they do not allow efficient management decisions at the departmental level of responsibility in a radically changing system. The ability for management to discriminate between alternate forms of delivery so as to choose more cost effective methods may require more careful analysis of activities which drive costs and their linkage to individual services provided.

CONCURRENT SESSION 2B

Friday, June 5

2:45 p.m. to 4:15 p.m.

Location: Duffy Science Centre, Room 209

The Accounting Profession In The Nineties: Is The Gender Gap Narrowing?

Maria Grammas
Jeffrey Power
University of Rhode Island

SYNOPSIS: This paper was initiated to investigate some of the critical issues facing recent accounting graduates and to examine any potential differences between males and females. The key issues discussed are chosen career path, compensation, the influence of networking, career interruptions, work environment, and job stress. All of these topics have been discussed extensively in the literature with varying degrees of indicated association to job satisfaction and performance . It has also been suggested that these issues are of varying levels of importance to females than males.

To address this question of job related sexual differences, a survey of 300 accounting graduates was conducted . The respondents were grouped by sex, year of graduation (1976-1991), and type of degree (BS or MS). The results of the study indicate that females are: more likely to feel stress in work-family conflict situations; perceived by men as being less career oriented and less capable than men of dealing with the demands of the accounting profession; more concerned about fringe benefits and general working conditions than men, and have fewer opportunities of using office politics and networking for career advancement. These differences between the sexes were consistent for both the type of degree held and the year of graduation. While the differences between the sexes was not influenced by the year of graduation, recent graduates of both sexes perceive women to be more career oriented and more likely to advance as quickly as men than graduates prior to 1986.

Additionally, this study indicates that when experience, degree, and professional designation are equal, compensation levels are comparable between males and females. However, the retention ratio of public accounting firms, particularly the 'Big Six', is much lower for females than it is for males. Women are leaving the stress filled rigidity of public accounting for well paid, more flexible positions elsewhere.

The results from this study indicate that many differences between men and women in accounting still exist and that these differences, generally, are not changing. Of particular importance to employers of accounting graduates, women are just as likely to begin their career in public accounting and obtain the CPA certificate as men but are much more likely to opt out of this career path for the private and governmental sectors where stress is seen to be less and the potential for advancement and the work environment is perceived to be better.

CONCURRENT SESSION 2C

Friday, June 5

2:45 p.m. to 4:15 p.m.

Location: Duffy Science Centre, Room 110

Gender and the Accountancy Profession: An Oral History of Women Pioneers in the Canadian Accounting Profession.

Carol A. McKeen
Alan J. Richardson
Queen's University

SYNOPSIS: The success of the accounting profession in claiming social rewards has been attributed to strategies of "closure" (Lee, 1990) which bound its body of knowledge, provide monopoly powers over areas of practice and limit who may have access to the rewards of practice. In this paper we examine gender as a criteria for closure in the Canadian Accounting profession. We used archival and oral history materials to determine the mechanisms used to control the gender composition of the profession and to explore the subjective experiences of those women who initially breached this aspect of the closure of the profession. Our review of women's entry into the profession is divided into three areas: education, employment and professional affiliation. We assume that professional status requires sequential movement through these three stages, but that the extent and nature of discrimination in each will be independent. Our analysis of the role of gender in the closure of the accounting profession draws on feminist theories which seek to explain and understand the experience of women in male - dominated societies.

The oral history method was used to gather data on events in the living memory of women in accountancy in Canada. Our subjects were women nominated by the provincial accounting associations as their first women members. Twenty-two women agreed to participate in tape-recorded telephone interviews of approximately 60 minutes in length. In addition, a review of government documents and accounting association archives was used to assemble data on the historical availability and participation of women in accounting education.

The interviews and statistics show a pattern of exclusion based on funding for education, career guidance which streamed women into clerical positions, social expectations which limited women's aspirations, association policies and resistance by accounting firms to the hiring of women. These exclusionary processes were consistent with the domination of the public domain, power and capital by men who relegated women to the private domain. In addition, because power and privilege has traditionally been associated with men, it was believed that occupational status was negatively related to the proportion of women in the field. This belief was used to justify exclusionary practices in employment and professional membership. Finally, it was believed that women, as dependent beings, should not enjoy full citizenship rights and, thus, could not function as autonomous professionals.

Most of the formal barriers to women's entry into the profession fell in the early twentieth century as a result of liberal feminist activity. The official histories and statistics for the period after 1930 provide no systematic explanation for the lack of women in accounting until the 1970s. However, the oral history evidence indicates that during that period women were excluded from accounting primarily by the hiring policies of firms. These policies were recognized and reflected in informal educational guidance for women. It is clear that gender in hiring remained an issue as late as the 1970s.

The paper concludes with a discussion of issues faced by women after the 1970s when entry to the profession was no longer an issue. These issues are presented in a broader context of ongoing societal change in the way in which work is structured and valued.

CONCURRENT SESSION 2C

Friday, June 5

2:45 p.m. to 4:15 p.m.

Location: Duffy Science Centre, Room 110

READING THE REGULATORY TEXT: REGULATION AND THE NEW STOCK ISSUE PROCESS

Dean Neu
University of Calgary

Synopsis

Stock markets and the new stock issue process are ubiquitous. Yet, previous research has not really considered whether the new stock issue process is functional for all classes of participants. The current study adopts a different perspective. I use a case study to consider the social consequences of a stock failure in the new stock issue process. More specifically, the analysis examines *how* regulations in the new stock issue process work and *who* benefits from these regulations. It is hoped that this study of a disconfirming instance will challenge the taken-for-granted assumption that stock markets are efficient for all classes of participants.

CONCURRENT SESSION 2C

Friday, June 5

2:45 p.m. to 4:15 p.m.

Location: Duffy Science Centre, Room 110

Leverage and Intertemporal Income Smoothing in Canada:
An Empirical Study

by

Raafat R. Roubi
L. Culumovic
Brock University

SYNOPSIS: Using a sample of 65 Canadian firms included in the Financial Post data base, this study reports empirical evidence on income smoothing behavior by Canadian companies involved in raising debt capital. The likelihood that a firm issuing debt capital will smooth income significantly increases as firms' debt to equity ratio increases. Conversely, it is unlikely that a firm selling or repurchasing equity capital will be involved in income smoothing behavior.

Trueman and Titman (Journal of Accounting Research, Vol. 26 supplement, 1988, pp. 127-139) have shown that a firm manager has an incentive to smooth income if he or she wishes to obtain less costly debt financing. Their theorem is based on the following assumptions: (1) the firm's economic earnings are a normally distributed random variable with a fixed known mean (i.e. target) and variance unknown to all but the firm's manager; (2) outsiders believe with a given probability that the manager has the ability to shift income; (3) outsiders also believe with given prior probabilities what the variance of the earnings stream is; and (4) if the manager has the ability to shift income from the second period to the first, then only a fixed known proportion of the difference between the firm's first period economic income and its target can be shifted from the second period into the first. Then, based on reported income figures, outside lenders revise their beliefs and probabilities about the firm's income stream having a lower variance. As Trueman and Titman indicated, the expected mean of probability and belief in the lower variance possibility is *always greater* if the firm smooths income than if it does not. This theorem shows that, in the first income period, even if the second income figure is unknown, it is *always* advantageous to smooth income, if one is to go on the balance of probabilities, under the above assumptions.

The logistic regression model is used to test for statistically significant differences between two groups of firms (smoothers and non-smoothers) on several variables including size, sale of equity capital, repurchase of equity capital, sale of debt capital, and relative significance of debt sold to total debt and equity sold. The researchers ran the statistical analyses on the two groups by forming several portfolios. Each portfolio represents certain level of leverage based on the debt to market value of common equity as of the beginning of the period, and includes a number of smoothers and non-smoothers. Statistical tests indicate that highly-leveraged firms are more likely to smooth net income when issuing debt capital.

Possible explanations of such behavior include: (1) management's adoption of a wealth maximization behavior where existing securities holders benefit at the expense of new securities holders. This can happen if, for example, new bondholders accept a lower cost of debt. With income smoothing, earnings' volatility decreases which signals a stable income stream, and (2) management's attempt to stay within the boundaries of debt covenants while maintaining or liberalizing dividends policy and bonuses.

CONCURRENT SESSION 3A

Saturday, June 6

10:45 a.m. to 12:15 p.m.

Location: Duffy Science Centre, Room 110

THE PERFORMANCE OF TARGET AND BIDDING COMPANIES INVOLVED IN HOSTILE TAKEOVER BIDS

Christine Parkinson

Abstract: This paper aims to identify the financial characteristics of takeover targets and bidders involved in successfully defended hostile bids in the period 1975-1984. Techniques of analysis were differences of means and discriminant analysis. The results show that there are significant differences between target and bidder companies in both the pre and post bid periods thus offering support to various merger theories. Successful defence is apparently a spur to efficiency for the target companies, but failed bidders suffer a decline in performance in the two years following their defeat.

CONCURRENT SESSION 3A

Saturday, June 6

10:45 a.m. to 12:15 p.m.

Location: Duffy Science Centre, Room 110

On the Accounting-Economics Interface

Irene M. Gordon
Lawrence A. Boland
Simon Fraser University

SYNOPSIS: Many observations have been made concerning the appropriateness of a neoclassical economics paradigm for the explanation of the role of accounting in an economic organization. While few behavioural accounting theorists, especially those whose attention is directed towards management accounting, would outright reject the economics paradigm, most offer complaints that can be seen to be about the inappropriateness of the economics paradigm. Of those complaining about the appropriateness of this paradigm, many focus on the neoclassical assumption of rationality. We think the assumption of rationality, or equivalently of maximization behaviour, is not inherently a problem. If there is a problem, it is located in known weaknesses of neoclassical economic theory which limit its applicability to accounting research. In this paper we examine the limits of the neoclassical economics paradigm for the study of accounting and in particular with reference to management accounting.

The accounting-economics interface examined in this paper is divided into four sections. The first section presents the literature and argument for why criticizing economic rationality is futile. The second section relies on an argument presented in Demski (1988) which was emphasized and expanded by Boland and Gordon (1991). This argument stresses that the difficulties surrounding the use of economics-based research in accounting has more to do with the absence of an equilibrium than with the assumptions made about the motivations of the individual market participants. Complaints from two schools of management accounting are presented in the third section. The two schools are the traditional school (e.g. Johnson and Kaplan 1987) and the 'organizational sociology' school (e.g. Cooper, Hayes and Wolf 1983). In the conclusion we argue using these two schools' complaints that it is not the rationality assumption of the traditional economics model which is the problem. Instead we argue it is the applicability of the economics model to different situations which will provide the questions to generate future research.

CONCURRENT SESSION 3A

Saturday, June 6

10:45 a.m. to 12:15 p.m.

Location: Duffy Science Centre, Room 110

Social Responsibility, Legislation and Disclosure:

The Case of Acid Rain and Falconbridge

Nola Buhr
The University of Western Ontario

SYNOPSIS: What a corporation does within the realm of social responsibility, what it is required to do by government regulation and how it presents itself through the medium of annual reports are not necessarily congruent realities. Corporate disclosure can easily be utilized as a means of impression management in order to legitimize the corporation to external constituents. And, over time, socially responsible activities can become less than responsible in the face of changing social needs as articulated by changing government regulations.

This paper examines the relationship between social responsibility, legislation and disclosure in an exploratory manner using the case of Falconbridge and sulphur dioxide emissions over a period from 1950 to 1990. Two key questions are addressed: (1) How did the corporation respond to changing government regulations for sulphur dioxide abatement? and (2) How did the corporation choose to present these abatement activities in its annual reports?

Research techniques of historiography, interviews and content analysis were utilized. Relevant information was obtained from public, archival sources and in the main took the form of Falconbridge annual reports, government documents and articles from newspapers, business journals and trade publications. A total of 13 interviews were conducted with Falconbridge executive personnel at the corporate office in Toronto; Falconbridge operating and executive personnel in Sudbury; and a representative from the Ontario Ministry of the Environment.

A forty-one year period was chosen for review because it covered all efforts undertaken by the corporation to reduce sulphur dioxide emissions. The first corporate efforts took place in the early 1950's and were motivated by purely economic reasons. Efforts in the 1970's under Falconbridge's Smelter Environmental Improvement Program were initiated as a reaction to the first Government Control Order which was issued in 1969. In the 1980's, Falconbridge took a more proactive stance. In 1991, Falconbridge was able to reduce sulphur dioxide emissions below the 1994 level mandated by the most recent Government Control Order which was issued in 1985 and is known as The Countdown Acid Rain Program.

This suggests that Falconbridge has defined their version of social responsibility as anticipating and doing more that meeting government regulation. Content analysis of the annual reports for the period indicates that disclosure has remained for the most part terse and quantitative rather than voluminous, overly descriptive and thus self-serving. Hence, in the case of Falconbridge, the realities of social responsibility, legislation and disclosure are relatively closely aligned.

CONCURRENT SESSION 3B

Saturday, June 6

10:45 a.m. to 12:15 p.m.

Location: Duffy Science Centre, Room 107

The Effect Of Quantity and Order of Cues on Sequential Belief Revision in Tax Judgments

Alexander M.G. Gelardi
Simon Fraser University

Résumé : Le modèle d'ajustement des attentes prédit la présence d'effets de "l'événement le plus récent" (recency effect) dans le cas d'information complexe encodée dans une méthode progressive. Les études antérieures où le modèle a servi dans un contexte fiscal ont examiné des ensembles d'informations équilibrés de deux ou de quatre signes. En général, ces études ont trouvé un effet de "recency". Cependant, les écrits en psychologie indiquent que cet effet n'existe pas dans le cas de longues séries de signes.

On manifeste une certaine incertitude quant à la généralisation d'effets d'ordre à la recherche fiscale juridique, laquelle nécessite souvent l'examen de plusieurs éléments de preuve. Aussi, est-il peu probable que l'on puisse obtenir un ensemble équilibré d'informations dans le cadre de la recherche fiscale juridique.

La présente étude poursuit les travaux antérieurs sur deux plans. D'une part, elle examine l'effet de séries de quatre, de huit et de douze signes sur les décisions d'ordre fiscal. D'autre part, elle porte sur des jugements où on a présenté une série de signes d'une manière unidirectionnelle.

Nous avons également conduit deux expériences de type laboratoire. Comptaient parmi les sujets, 173 étudiants de premier cycle et 18 étudiants de cycle supérieur inscrits dans des cours de fiscalité dans une grande université d'État. En moyenne, les étudiants de cycle supérieur avaient plus de six années d'expérience en fiscalité et ils ont tous été testés dans une condition seulement. Il n'y avait aucune différence significative dans les résultats des deux groupes.

Les résultats dévoilent qu'il existait dans l'ensemble un effet d'ordre très marqué. Toutefois, cet effet semblait résulter des longues séries de signes plutôt que des courtes, ce qui est contraire aux prédictions du modèle d'ajustement des attentes.

Nous n'avons pas observé l'effet de contraste prévu. Il est possible que l'effet du signe contre-directionnel, à la suite d'une série de signes, ait été éliminé par les signes précédents, ce qui pourrait expliquer ce phénomène.

Les résultats de cette étude indiquent qu'il existe peut-être des biais systématiques dans les jugements relatifs à l'impôt. Les conseillers fiscaux se servent généralement d'une quantité importante d'information dans leurs jugements. Par conséquent, la présence d'un effet d'ordre marqué dans les longues séries devrait s'avérer intéressante pour les fiscalistes. Les cabinets pourraient inclure des contre-mesures dans leurs séances de formation et dans les manuels de procédures fiscales.

Vendredi, 5 juin

SÉANCE SIMULTANÉE 1A

De 10 h 45 à 12 h 15

Lieu : Salle 107 du Duffy Science Centre

The Impact of Recent Tax Revisions on the Lease vs. Purchase Decision: A Comparative Analysis

G. Athanassakos
M. Klatt
Wilfrid Laurier University

Résumé : Le crédit-bail constitue pour les sociétés un choix de financement qui est devenu populaire au cours des vingt dernières années. L'impôt sur les sociétés, surtout en ce qui a trait à l'application de l'amortissement fiscal dans le financement par crédit-bail, a depuis toujours fait partie intégrante de la décision soit de louer un actif ou de l'acquérir. La présente étude examine les dernières révisions fiscales des termes de crédit-bail, plus particulièrement l'application de l'amortissement fiscal, qui ont entraîné une modification dans le calcul des versements du point de vue du bailleur et de la valeur actualisée nette (VAN) d'un contrat de location. Cet article discute également l'incidence de ces changements pour le bailleur et le locataire, et présente de nouvelles formules qui serviront dans la prise de décision d'acquisition en regard de la location.

Jusqu'à tout récemment, en autant que l'arrangement constituait un contrat de location dans le cadre de la règle 1100(17) de la Loi de l'impôt sur le revenu et que les versements étaient considérés comme paiements du loyer et non comme des paiements relatifs à l'acquisition de la propriété, la position fiscale du bailleur et du locataire était bien définie. Le bailleur pouvait déduire les frais d'assurance, de financement, de réparation et d'entretien ainsi que l'amortissement fiscal, et le locataire déduisait le coût du bail en entier. Ainsi, les deux parties trouvaient leurs avantages. D'une part, le bailleur bénéficiait de la protection fiscale que procurait l'amortissement fiscal, ce qui l'encourageait à faire la location. D'autre part, le locataire jouissait de l'utilisation de l'actif et recevait une réduction d'impôt qui rendait souvent le crédit-bail plus faisable économiquement que l'achat direct. Or, le ministère des Finances a apporté une série de modifications, en vigueur à partir du 26 avril 1989, qui a modifié de façon considérable la taxation de certains contrats de crédit-bail. Selon les nouvelles règles, il existe un montant limite de l'amortissement fiscal que le bailleur d'un "bien de location précis" peut réclamer (règle 1100(1.1) - (1.3). Selon l'article 16.1 de la Loi de l'impôt sur le revenu, les locataires de certains biens tangibles de location qui en font le "choix" sont présumés avoir acquis le bien loué et peuvent donc demander la déduction pour amortissement. **Par conséquent, le bailleur et le locataire peuvent demander la déduction pour amortissement à l'égard d'un même bien en même temps.** Ces modifications ont rendu complexe le calcul de l'impôt des deux parties. Les bailleurs d'un "bien de location précis" se voyant réduire un avantage fiscal augmenteront les frais de location et les locataires examineront peut-être les mérites d'une déduction pour amortissement. Les nouvelles règles limitent le montant de l'amortissement fiscal que les bailleurs peuvent déduire. Ce montant est en fait réduit de façon considérable puisqu'aux fins du calcul de l'amortissment fiscal, le bailleur est réputé avoir consenti au locataire un prêt d'un montant égal à la valeur du bien loué dont l'intérêt est payable au "taux règlementaire". De l'amortissement fiscal permis et du revenu théorique à l'égard du prêt, seul le plus petit des deux montants est déductible. L'effet est de reporter la déduction pour amortissement à plus tard.

Comme la présente étude ne porte pas sur la méthodologie, nous utilisons la méthode proposée par Levy et Sarnat (1979) pour procéder à notre analyse de la décision d'acheter ou de louer. Les résultats montrent que, en présence de taux d'amortissement fiscal élevés, d'actifs à long terme et de taux d'intérêt relativement élevés, le bailleur demandera maintenant, par rapport à l'ancien régime fiscal, un loyer plus élevé et que, par conséquent, le locataire, s'il ne fait pas le choix, fera face à une VAN négative, et choisira donc d'acheter l'actif. Mais si le locataire fait le choix, sa VAN sera significativement positive et il choisira la location. De plus, dans les mêmes conditions, la VAN du locataire, s'il fait le choix, est positive pour une large fourchette de taux d'impôt et inversement liée à la différence entre le taux d'imposition du bailleur (L_r)et celui du locataire(L_e). Si le locataire choisit de ne pas choisir, on conserve alors la relation positive traditionnelle, mais la VAN du locataire est négative peu importe la différence d'imposition.

Tout en atteignant son objectif de base, grâce à ses modifications fiscales, le gouvernement a offert de nouvelles possibilités aux contrats de crédit-bail rentables. Bien que le locataire et le bailleur n'aient pas de contrôle sur le taux d'amortissement, le coût de la dette après impôt et les taux d'imposition, ils ont en général un certain contrôle sur les facteurs essentiels au calcul de la VAN. Premièrement, le locataire a la possibilité de choisir, droit qu'il exercera chaque fois que sa VAN est positive. Deuxièmement, le locataire et le bailleur peuvent négocier un bail de courte durée. Troisièmement, le locataire et le bailleur peuvent signer des contrats de location pendant les années fastes ou encore quand T_e est plus grand que T_r. Avant les changements, plus T_e était inférieur à T_r, mieux s'en trouvaient les deux parties. Désormais, le contraire est vrai.

Vendredi, 5 juin

SÉANCE SIMULTANÉE 1A

De 10 h 45 à 12 h 15

Lieu : Salle 107 du Duffy Science Centre

Analysts' Earnings Forecasts, Rational Expectations, and Macroeconomic Shocks

Lucy F. Ackert
Wilfrid Laurier University

William C. Hunter
Federal Reserve Bank of Atlanta

Résumé : La plupart des travaux récents sur les questions liées aux résultats prévus par les analystes financiers visaient à évaluer la précision de ces prévisions par rapport à celles des modèles naïfs. Une question encore plus importante toutefois concerne la rationalité de ces prévisions. En d'autres mots, dans quelle mesure celles-ci reflètent-elles toute l'information publique? Il semble bien naturel que dans la détermination des variables incluses dans l'ensemble des informations communes à tous les analystes, ces derniers connaissent, au moins, les valeurs passées des prévisions moyennes et des écarts de prévisions connexes ainsi que les valeurs actuelles et passées de diverses séries économiques connues publiquement.

Dans notre étude, nous évaluons la rationalité des résultats prévisionnels des analystes financiers qui contribuent à la base de données I/B/E/S. Nous examinons l'absence de biais et de correlation séquentielle, et conduisons des tests d'orthogonalité pour lesquels nous avons pris soins de n'inclure que l'information dont disposaient les analystes au moment de faire leurs prévisions. Les variables incluses dans l'ensemble des informations disponibles comprennent les valeurs passées des écarts prévisionnels, les valeurs passées des résultats prévisionnels par action, et les changements trimestriels de l'indice des prix à la consommation exprimés en pourcentages, le taux de chômage, les prix du pétrole, les cours boursiers, le produit national brut et les bénéfices d'entreprises.

Nous discutons aussi des effets de chocs globaux ou macroéconomiques sur les tests portant sur la rationalité des analystes. Il est clair que les chocs globaux ont une incidence sur les résultats ou, en d'autres mots, qu'il existe un cycle commercial. Nous démontrons qu'il est important de tenir compte de ces chocs afin d'éviter de tirer de mauvaises conclusions et illustrons comment une telle omission peut, au cours d'un test de la rationalité des attentes à l'aide des résultats prévisionnels des analystes, conduire à un faux rejet de l'hypothèse de rationalité. Nous avons utilisé un modèle expliquant la présence d'effets durant une période déterminée et y avons inclus la possibilité que surviennent des chocs globaux. Bien que les résultats de nos tests statistiques n'appuient pas parfaitement l'hypothèse d'attentes rationnelles, nous croyons que dans leur ensemble, ils appuient fortement la notion que les prévisions examinées sont rationnelles.

Vendredi, 5 juin

SÉANCE SIMULTANÉE 1B

De 10 h 45 à 12 h 15

Lieu : Salle 110 du Duffy Science Centre

The Use of Multiple Instruments for Measurement of Earnings Forecast Errors and Firm Size Effect: Predictive Accuracy Tests

Hay Y. Chung
Kyung-Hee University

Jeong-Bon Kim
Concordia University

Résumé : Il existe, pour une même variable sous-jacente, de nombreux substituts qui, toutefois, comme le témoigne l'expérience, accusent des écarts de mesures importants. Cet état de chose suggère qu'il serait possible d'éliminer une portion de cet écart en combinant divers substituts pour en faire une mesure hétérogène. Pour ce faire, nous nous servons de la méthode des variables instrumentales selon laquelle le signe des écarts de prévisions obtenus à partir de divers modèles chronologiques servent d'instruments multiples. Nous administrons ensuite ceux-ci à des séries de résultats trimestriels tirées d'un échantillon de 1512 entreprises américaines. Dans le but d'évaluer l'efficacité de cette nouvelle méthode de réduction des écarts, nous avons comparé les propriétés de la distribution des écarts prévisionnels hétérogènes avec celles de chacun des modèles chronologiques, pour ensuite exécuter un test de précision de prédiction à l'égard des différents écarts de prévisions. Nous avons approfondi notre étude en classant les entreprises selon la taille afin de vérifier si celle-ci constituait une variable déterminante. En outre, nous avons, à l'aide d'un ensemble réduit d'entreprises échantillons, évalué la supériorité possible du modèle des variables instrumentales par rapport aux prévisions des analystes financiers.

En bref, les résultats de notre étude sont les suivants. Premièrement, la méthode des variables instrumentales réussit à réduire les écarts puisqu'elle permet l'obtention de propriétés de distribution supérieures (moyenne moins élevée et faible dispersion des écarts prévisionnels) et de pourcentages absolus des écarts prévisionnels plus petits que ne le font les modèles chronologiques. Deuxièmement, cette méthode est plus efficace pour les échantillons de petites entreprises que pour ceux de grandes entreprises. Enfin, le rendement des écarts de prévisions des analystes, relevés du signe des écarts de diverses prévisions chronologiques de même que des leurs, s'avère supérieur à celui des écarts qui ne le sont pas. Ceci indique qu'il est encore possible de réduire les écarts de prévisions des analystes grâce à la technique des variables instrumentales. Dans l'ensemble, nos résultats révèlent que la méthode faisant l'objet de notre étude pourrait s'avérer un outil efficace quant à la réduction du problème des erreurs causées par les variables, particulièrement lorsque la structure expérimentale exige que les chercheurs séparent les effets des écarts des résultats prévisionnels et celles des variables de traitement, comme les changements de politique comptable.

Vendredi, 5 juin

SÉANCE SIMULTANÉE 1B

De 10 h 45 à 12 h 15

Lieu : Salle 110 du Duffy Science Centre

An Examination of the Timing and Results of a Quasi-Reorganization

Duane B. Kennedy
University of Waterloo

Wayne H. Shaw
University of Colorado at Boulder

Résumé : À peu d'exceptions près, les états financiers sont établis selon le principe que les éléments de l'actif et du passif sont rappportés à leur coût historique. La valeur marchande ne remplace le coût historique qu'en certaines occasions comme l'acquisition de biens. Il est nécessaire dans ces cas qu'un changement de propriétaire ait lieu pour que le bien en question soit réévalué.

Par contre, une entreprise peut procéder à la réévaluation de certains postes même en l'absence d'un changement de propriétaire. Cette procédure, la quasi-réorganisation, permet à l'entreprise d'éliminer un déficit. Dans un tel cas, l'entreprise peut également inscrire ses éléments de l'actif ou du passif à leur valeur marchande. Il existe cependant peu de directives pour guider l'entreprise dans la détermination des redressements appropriés et des circonstances propices. Bien que les quasi-réorganisations soient souvent associées à une entreprise voulant éviter la faillite et font partie d'un ensemble de "nouveau départ", elles peuvent avoir lieu dans d'autres conditions.

En 1988, l'American Institute of Certified Public Accountants publiait le document *Issues Paper 88-1* lequel présentait certaines préoccupations à l'égard du peu de directives concernant l'usage de la quasi-réorganisation. Il faisait un résumé des questions traitant de l'opportunité de la chose et de la mesure dans laquelle les états financiers devraient être redressés. Les questions soulevées sont les suivantes. Devrait-on, au moment de la quasi-réorganisation, s'attendre à un rendement futur accru? L'entreprise devrait-elle pouvoir redresser les comptes de capitaux propres seulement ou devrait-elle également rajuster les éléments de l'actif et du passif? Enfin, devrait-on permettre tant les augmentations que les baisses de la valeur liquidative?

Le but de la présente étude est de présenter de l'information sur l'opportunité et les effets de la quasi-réorganisation. Nous examinons plusieurs questions. Premièrement, est-ce que la détérioration du rendement financier d'une société mène à l'annonce de sa quasi-réorganisation? Deuxièmement, est-ce que le rendement s'améliore à la suite de la réorganisation? Finalement, est-ce que le rendement futur des sociétés quasi-réorganisées diffère de celui d'un échantillon de firmes aux prises avec un déficit mais qui n'ont pas redressé leur bilan?

Bref, nos résultats montrent que, en général, avant l'annonce de la réorganisation, les entreprises quasi-réorganisées avaient, par rapport à un groupe contrôle composé de sociétés de la même taille et appartenant aux mêmes industries, manifesté un faible rendement tant du point de vue financier que boursier. Cependant, le rendement de ces entreprises s'était grandement amélioré pendant la période entourant l'annonce. Cette amélioration touchait les ratios financiers et le cours des valeurs. Enfin, lorsque nous les avons comparées à d'autres entreprises qui avaient accusé des pertes, les sociétés quasi-réorganisées ont fait montre d'un rendement financier et boursier renforcé après la réorganisation. Ce résultat soutient l'affirmation que la quasi-réorganisation coïncide avec la mise en oeuvre de changements fondamentaux dans les activités de l'entreprise.

Vendredi, 5 juin

SÉANCE SIMULTANÉE 1B

De 10 h 45 à 12 h 15

Lieu : Salle 110 du Duffy Science Centre

The Production of Audit Services: Evidence from a Major Public Accounting Firm

Terrence B. O'Keefe
University of Oregon

Dan A. Simunic
University of British Columbia

Michael T. Stein
Rutgers University

Résumé : Le présent article se penche sur la prestation de services de vérification. Nous y définissons le résultat de la vérification comme étant la probabilité après coup que les états financiers ne comportent pas d'erreur importante et nous présumons qu'un cabinet d'expertise comptable produit le même résultat (c.-à-d. un degré de certitude postérieure) pour tous ses clients. Nous avons ensuite déterminé et testé le rapport entre les caractéristiques du client et de la mission, et le vecteur des effectifs nécessaires à la prestation de la vérification. Plus précisément, nous examinons les effets de la taille, de la complexité et du niveau de risque du client; la qualité des contrôles internes et la mesure dans laquelle le vérificateur se fie à ces contrôles; l'apprentissage du vérificateur dans le temps; et la coprestation de services de vérification et de consultation en gestion et en fiscalité. Nous testons les hypothèses concernant ces relations à l'aide de données provenant de 249 vérifications effectuées aux États-Unis par un cabinet d'expertise comptable international. Les résultats révèlent que l'écart entre les échantillons en termes de la quantité et de la composition des intrants, sur le plan du personnel, peut s'expliquer en grande partie par les mesures de la taille, de la complexité et du risque du client, c'est-à-dire les mêmes mesures qui s'étaient avérées importantes dans des travaux antérieurs portant sur les honoraires des vérificateurs. Notons que ces résultats ne sont pas sensibles au choix d'une forme fonctionnelle précise pour l'estimation. En outre, notre étude témoigne de l'existence d'une remise des honoraires pendant les deux premières années d'une mission de vérification. Cependant, rien n'est à signaler concernant l'apprentissage du vérificateur dans le temps.

Enfin, l'utilisation des contrôles du client ou la coprestation de services non liés à la vérification ne semblent pas avoir d'effets systématiques sur les intrants de vérification.

Vendredi, 5 juin

SÉANCE SIMULTANÉE 2A

De 14 h 45 à 16 h 15

Lieu : Salle 107 du Duffy Science Centre

An Empirical Study of the Effect of Auditor Sanctions on the Association Between Earnings and Returns of Client Firms

Keith A. Moreland
Canisius College

Résumé : Le présent article rend compte des résultats d'une étude sur les effets des sanctions levées par la Securities and Exchange Commission (SEC) contre les Huit (six) grands cabinets de vérification sur le rapport entre les résultats comptables et le rendement des valeurs des clients de ces cabinets. Nous incorporons la sanction à un modèle, où elle prend la forme d'une nouvelle information ayant une incidence sur le niveau prévu de la qualité du travail d'un cabinet de vérification.

Les travaux de recherche antérieurs soutiennent que la vérification sert à accroître la crédibilité d'une entreprise (Dopuch et Simunic, 1982). On entend ici par crédibilité la mesure dans laquelle les utilisateurs perçoivent l'information comme étant véridique. Les vérificateurs, donc, augmentent le degré de crédibilité puisqu'ils détectent et corrigent (ou, s'il y a lieu, rapportent) les erreurs qui se sont glissées dans le processus comptable du client.

Cet article vient compléter ces travaux en soutenant que la vérification a une incidence sur les signes permettant d'anticiper les résultats du client. Dans le cadre conceptuel de Holthausen et de Verrecchia (1988), les facteurs ayant une incidence sur la précision (l'inverse de la composante aléatoire selon laquelle les bénéfices comptables mesurent les bénéfices économiques) ont une incidence sur la réaction du cours des valeurs à un tel signe.

L'imposition d'une sanction contre un vérificateur représente ici un changement intertemporel dans le niveau de la qualité du vérificateur. Dopuch et Simunic (1982) et Wilson et Grimlund (1990) montrent que l'imposition d'une sanction a une incidence sur la position concurrentielle du cabinet subissant la sanction. Notre étude, pour sa part, examine les effets de l'imposition d'une sanction sur le contenu de l'information liée aux résultats du client et sur le lien entre les résultats et le rendement des valeurs des clients de ce cabinet de vérification.

À cette fin, nous avons élaboré des modèles de régression, selon la méthode des moindres carrés, des rendements de valeur excédentaires en fonction des bénéfices non anticipés. En outre, des travaux récents ont identifié d'autres déterminants des coefficients illustrant l'incidence des résultats sur le rendement en plus de la précision du signe permettant d'anticiper ces résultats. Comptent parmi ces déterminants, la persistance et la croissance (ou paramètres chronologiques) des bénéfices et du taux de rendement prévu. Les facteurs qu'on dit associés à ces déterminants sont compris dans nos modèles de régression multiple "inversée" des bénéfices sur les rendements.

Les résultats suggèrent que, en général, l'imposition d'une sanction contre un cabinet de vérification influence le rendement des valeurs lié aux bénéfices des entreprises des clients. Cependant, cette conclusion ne vaut pas pour toutes les sanctions. Nos résultats viennent aussi confirmer les travaux antérieurs quant à l'identification des facteurs associés aux déterminants des coefficients susmentionnés.

Vendredi, 5 juin

SÉANCE SIMULTANÉE 2A

De 14 h 45 à 16 h 15

Lieu : Salle 107 du Duffy Science Centre

The Economic Effect of Differing Levels of Auditor Assurance on Bankers' Lending Decisions

Sati Bandyopadhyay
University of Waterloo

Jere R. Francis
University of Iowa

Résumé : Depuis 1979, le Statement on Standards for Accounting and Review Services No. 1 permet aux CPA d'exécuter des missions de compilation, d'examen ou de vérification pour des sociétés autres que les sociétés ouvertes. Nous avons conduit une expérience dans le but de déterminer si l'augmentation du degré de fiabilité du vérificateur avait une incidence économique sur la prise de décision des utilisateurs d'états financiers. Pour ce faire, nous avons soumis une demande de prêt hypothétique à l'évaluation de 67 responsables des prêts chevronnés. Au cours de l'expérience, nous avons manipulé le degré de fiabilité du vérificateur selon les trois niveaux suivants : faible (compilations), moyen (examens) et élevé (vérifications). Nous soutenons que l'augmentation du degré de certitude réduit le risque de l'information concernant le candidat et devrait donc avoir un effet sur la prise de décisions économiques. Les responsables des prêts ont pris deux décisions : l'une concernant le consentement du prêt et l'autre, la détermination du taux d'intérêt par rapport au taux préférenciel. Les résultats indiquent que, en moyenne, au fur et à mesure que le degré de certitude augmente, les chances que le prêt soit consenti augmentent et la prime d'intérêt exigée diminue. Plus précisément, la probabilité qu'un prêt soit consenti est passée de 26% pour les compilations à 48 % pour les examens à 68 % pour les vérifications. En ce qui a trait à la différence du taux d'intérêt par rapport au taux préférenciel, elle était de 2,24 % pour les compilations, de 1,96 % pour les examens et de 1,71 % pour les vérifications. Ces résultats correspondent à l'hypothèse voulant que l'augmentation du degré de certitude réduise le risque de l'information et ait une incidence économique sur la décision à l'égard d'un prêt.

Afin de déterminer si l'effet positif de la hausse du degré de fiabilité du vérificateur sur les taux d'approbation de prêt et sur les taux d'intérêt variait selon le type de cautionnement en cause, soit l'utilisation de clauses restrictives ou de biens affectés en garantie, nous avons manipulé ces deux types de cautionnement. Le test se fonde sur la théorie d'agence. Dans le cas des clauses restrictives, le prêteur porte un grand intérêt à la crédibilité des états financiers puisque cette forme de cautionnement repose sur la crédibilité des chiffres comptables. Dans le cas de l'affectation de biens en garantie, comme le prêt est directement garanti par le bien en question, son consentement ne repose pas de façon explicite sur les états financiers. Les résultats ne montrent toutefois pas une telle interaction.

Enfin, nous avons également manipulé deux niveaux de services de conseils de gestion, service complet ou service absent, afin de déterminer si et comment ceux-ci peuvent influencer la décision de consentir ou non un prêt. Depuis fort longtemps, il existe une controverse concernant la perception des utilisateurs d'états financiers vérifiés à l'égard des conseils de gestion. Les résultats montrent qu'il existe un effet positif à peine significatif de la part des conseils de gestion, c'est-à-dire que le taux d'approbation de prêt augmente légèrement et que la prime d'intérêt baisse. Toutefois, la portée de ces effets n'est pas significative du point de vue économique.

Vendredi, 5 juin

SÉANCE SIMULTANÉE 2A

De 14 h 45 à 16 h 15

Lieu : Salle 107 du Duffy Science Centre

The Management Control Systems of the Future

R. Murray Lindsay
University of Saskatchewan

Résumé : Le présent article décrit plusieurs des caractéristiques des systèmes de contrôle de gestion qui sous-tendront dans l'avenir les efforts continus des sociétés dans la voie de l'amélioration. Il se veut une intégration des écrits récents dans le domaine et des observations importantes (tendances) notées par le chercheur au cours d'une étude (combinaison d'un sondage national et d'études de cas) menée récemment et commanditée par la Société des comptables en management du Canada. Le but de cette étude était d'examiner les changements à apporter aux systèmes de contrôle de gestion au fur et à mesure qu'une société se rapproche de la fabrication de classe mondiale et de type "au moment adéquat".

De plus en plus, les entreprises mettent l'accent sur l'amélioration de la safisfaction de la clientèle. Cette réorientation a entraîné un certain nombre de changements dans la structure des organisations. Les sociétés se dirigent maintenant vers i) les structures en réseau; ii) l'utilisation d'équipes permanentes et temporaires formées de spécialistes de domaines différents; iii) la réduction importante du nombre de cadres intermédiaires et la décentralisation de la prise de décision vers les niveaux inférieurs; et iv) l'utilisation de départements de production *autonomes* et très flexibles, organisés par famille de produits. Bref, les structures deviennent de plus en plus organiques.

Ces transformations structurales sont accompagnées de changements au niveau des systèmes d'information, changements qui promettent d'ailleurs d'être des plus impressionnants. Afin de refléter la responsabilité et l'autorité accrues qu'on vient de conférer aux employés des niveaux inférieurs, on établira avec eux une meilleure communication (souvent en ligne). Chacun dans l'entreprise s'acquittera de responsabilités informationnelles (qui dépend de moi pour recevoir de l'information et de qui est-ce que je dépends?) et, par le fait même, possédera une excellente compréhension de tout le processus de travail. Ainsi, tous auront le sentiment d'appartenir à une équipe et seront conscients du rendement de l'ensemble. Afin de concevoir des systèmes d'information efficaces, les comptables en gestion devront, plus qu'ils ne le faisaient auparavant, se familiariser avec les processus et questions opérationnelles. Il leur faudra également participer à la formation des employés en ce qui a trait à la façon dont l'entreprise gagne et perd de l'argent et au rôle que chacun joue dans le processus.

Enfin, en ce qui concerne la comptabilité de gestion, nous avons pu faire quatre observations majeures. Premièrement, nous ne pouvons plus continuer de définir les avantages des changements des procédés de fabrication principalement en termes de réduction de la main-d'oeuvre ou des frais généraux alloués arbitrairement selon le volume des activités; en effet, la plupart des améliorations entraînent aussi une baisse sensible des frais *non* directs. Deuxièmement, les mesures fondées sur le temps deviendront de plus en plus importantes; elles jettent la lumière sur de nombreux aspects du processus d'innovation et mettent l'accent sur les activités sans valeur ajoutée ainsi que sur les coûts inhérents. Troisièmement, la majorité des programmes de réduction de coûts à venir se concentreront sur la réduction des frais généraux. Enfin, il est nécessaire de reconnaître davantage l'important rôle béhavioriste de l'information comptable : celle-ci contribue à inciter les employés à poursuivre les stratégies d'amélioration perpétuelle adoptées par la direction générale.

Vendredi, 5 juin

SÉANCE SIMULTANÉE 2B

De 14 h 45 à 16 h 15

Lieu : Salle 209 du Duffy Science Centre

The Pressures for Change on Management Accounting Practice

Peter J. Clarke
University College
Dublin, Ireland

Eldon J. Gardner
University of Lethbridge

Résumé : Le présent article examine la pratique actuelle de la comptabilité de gestion et les pressions au changement qu'elle subit depuis plusieurs années. On peut classer ces pressions en deux groupes de base.

1) Le nouveau milieu de la fabrication, où l'on met l'accent sur la qualité et la flexibilité de la production, changera la pratique actuelle et les façons de mesurer le rendement.

2) L'altération des coûts incorporables, engendrée par les méthodes de prix de revient actuelles, pourrait disparaître grâce à l'utilisation de méthodes du prix de revient par activité élémentaire.

Cet article vise à expliquer, par le biais d'une recension des écrits sur le sujet, les éléments fondamentaux qui composent le nouveau milieu de la fabrication et la méthode du prix de revient par activité élémentaire ainsi qu'à en déterminer les implications principales pour la pratique de la comptabilité de gestion.

À cette fin, nous avons divisé l'article en trois sections. Nous examinons d'abord le nouveau milieu de la fabrication en détails afin de discerner les changements qu'il a apportés. Nous discutons ensuite de la méthode du prix de revient par activité élémentaire ainsi que de son incidence sur le nouveau milieu de la fabrication. Enfin, nous présentons les implications de chacun pour la comptabilité.

Vendredi, 5 juin

SÉANCE SIMULTANÉE 2B

De 14 h 45 à 16 h 15

Lieu : Salle 209 du Duffy Science Centre

The Management Information Content of the MIS Variance Analysis Guidelines for Canadian Health Care

Ronald E. Hoyt
Colin Lay
Denis H.J. Caro
Université d'Ottawa

Résumé : Le présent article examine la façon dont les lignes directrices concernant les SIG influencent l'analyse de variance des activités sous le contrôle des administrateurs des institutions canadiennes vouées aux soins de la santé. On compare d'abord les propositions aux méthodes traditionnelles d'analyse de variance abordées dans les écrits comptables. Le test de responsabilité de l'administration sert de critère de base dans l'évaluation de la qualité des signes produits. Comptent parmi les autres critères, le coût d'obtention des données, leur pertinence aux décisions de financement, leur opportunité, et leur validité. La recherche se concentre sur l'utilité telle qu'on la définit en termes de contenu de l'information qui se rattache aux décisions que doivent prendre les administrateurs et qui affectent l'efficacité d'exploitation du domaine de responsabilité d'un gestionnaire en particulier.

Un examen en profondeur de la question nous a mené à considérer les réponses possibles à la question de la qualité du contenu de l'information. Il semble que la méthode actuelle d'analyse des écarts vise à remplacer une analyse inappropriée ou spécialisée par une démarche normalisée mise en oeuvre à l'échelle nationale. Par conséquent, lorsqu'on applique le test de responsabilité à certaines décisions, les critères de représentation valide, d'opportunité, de pertinence et du coût de production prennent différents paramètres dans un système de paiement prospectif tel le budget global généralement utilisé au Canada. Cependant, un système de remboursement rétrospectif, comme celui que semblent favoriser les tendances économiques et le gouvernement pour les années 1990, nécessite généralement des données détaillées sur les frais liés aux différentes charges de cas, catégories de maladies, protocoles de traitements et caractéristiques à l'égard de la capacité.

Nos résultats suggèrent que les données relatives aux écarts aux fins de contrôle seront plus ou moins utiles selon la méthode et la philosophie derrière le financement des institutions de la santé. Il semble, après un examen minutieux, que les normes actuelles en termes de SIG soient appropriées en ce qui a trait au financement et à la préparation de rapports traditionnels, mais qu'elles ne permettent pas les décisions de gestion efficientes au niveau de la responsabilité départementale. Il est possible que l'habileté de la direction à faire la différence entre la présentation d'informations selon diverses méthodes dans le choix de celles qui réduiront les coûts nécessite une analyse encore plus minutieuse des activités qui font monter ces coûts et de leur lien avec les services fournis.

Vendredi, 5 juin

SÉANCE SIMULTANÉE 2B

De 14 h 45 à 16 h 15

Lieu : Salle 209 du Duffy Science Centre

Gender and the Accountancy Profession: An Oral History of Women Pioneers in the Canadian Accounting Profession.

Carol A. McKeen
Alan J. Richardson
Queen's University

Résumé : On attribue le succès de la profession comptable dans sa quête de récompenses sociales à des stratégies de "restriction" (Lee, 1990) qui resserrent la sphère de ses connaissances, lui donnent le monopole des pouvoirs sur certains domaines de la pratique et limitent le nombre des élus aux gratifications que procure la pratique. Dans le présent article, nous examinons le sexe comme critère limitant l'accès à la profession comptable au Canada. Nous nous sommes servis de documents d'archives et de récits oraux afin de déterminer les mécanismes utilisés pour contrôler la composition féminine et masculine de la profession et d'étudier les expériences personnelles de femmes qui, les premières, ont défié cet aspect restrictif de la profession. Notre revue de l'entrée des femmes dans la profession se divise en trois parties, à savoir la formation, l'emploi et la reconnaissance professionnelle. Nous présumons que l'obtention du statut professionnel requiert le passage successif à ces trois étapes, mais que l'étendue et la nature de la discrimination présente à chacune est indépendante. Notre analyse du rôle du sexe comme élément restrictif de la profession comptable se fonde sur les théories féministes qui cherchent à expliquer l'expérience des femmes dans des sociétés dominées par les hommes.

Nous avons utilisé des récits oraux pour obtenir des données sur des événements dont se souviennent certaines femmes faisant partie de la profession au Canada. Nos sujets étaient des femmes qui ont été parmi les premières à avoir été nommées membres par les associations comptables provinciales. Vingt-deux femmes ont accepté de participer à une entrevue téléphonique, enregistrée sur bande, d'une durée d'environ 60 minutes. De plus, nous avons effectué une revue de documents gouvernementaux et d'archives d'associations comptables pour rassembler de l'information sur la disponibilité et la participation des femmes au cours de l'histoire à l'enseignement de la comptabilité.

Les entrevues et les statistiques révèlent l'existence d'une tendance à exclure les femmes de diverses façons : le financement limité de l'éducation, le confinement des femmes par les orienteurs professionnels au travail de bureau, les attentes sociales qui limitaient les aspirations des femmes, les politiques des associations et des cabinets d'experts-comptables décourageaient l'embauche des femmes. Ces techniques d'exclusion coïncidaient avec la domination du domaine public, du pouvoir et du capital par les hommes, qui reléguaient les femmes au domaine privé. En outre, puisque le pouvoir et les privilèges avaient traditionnellement été associés aux hommes, on croyait que le statut d'une occupation était lié de façon négative à la proportion de femmes dans le domaine. On utilisait cette croyance pour justifier les pratiques d'exclusion tant dans l'emploi que dans l'adhésion à des associations professionnelles. Enfin, on croyait que les femmes, en tant qu'êtres dépendants, ne devraient pas jouir de pleins droits de citoyenneté et, par conséquent, ne pourraient pas fonctionner à titre de professionnels autonomes.

La plupart des barrières officielles à l'entrée des femmes dans la profession ont été anéanties au début du vingtième siècle à la suite des activités des mouvements féministes. Les histoires officielles et les statistiques pour la période suivant l'année 1930 ne fournissent aucune explication systématique concernant le peu de femmes dans le domaine de la comptabilité, et ce, jusque dans les années 1970. Cependant, les récits oraux recueillis indiquent que durant cette période, les femmes étaient exclues de la profession principalement en raison des politiques d'embauche des cabinets. Ces politiques étaient reconnues et se reflétaient dans les conseils informels prodigués aux femmes quant à leur orientation scolaire. Il est clair que le sexe est demeuré un facteur important dans les pratiques d'embauche jusqu'à aussi tard que dans les années 1970.

Pour conclure, nous abordons les défis auxquels les femmes ont fait face après les années 1970, période après laquelle l'entrée dans la profession n'était plus une préoccupation, et les présentons dans un contexte général pour tenir compte des changements continuels que subit la société quant à la façon dont le travail est structuré et évalué.

Vendredi, 5 juin

SÉANCE SIMULTANÉE 2C

De 14 h 45 à 16 h 15

Lieu : Salle 110 du Duffy Science Centre

The Accounting Profession In The Nineties: Is The Gender Gap Narrowing?

Maria Grammas
Jeffrey Power
University of Rhode Island

Résumé : Dans le présent article, nous examinons certaines des questions d'importance qui se présentent aux récents diplômés en sciences comptables et vérifions s'il existe sur ces sujets des différences entre les hommes et les femmes. Nous abordons le cheminement professionnel choisi, la rémunération, l'influence des contacts, les interruptions de carrière, le milieu de travail et le stress au travail. Tous ces sujets ont déjà fait l'objet de nombreux écrits qui ont révélé des degrés variés de correlation entre la satisfaction au travail et le rendement. On a également suggéré que l'intérêt suscité par ces questions varie selon qu'il s'agisse de femmes ou d'hommes.

Pour traiter la question des différences au travail selon le sexe, nous avons conduit un sondage auprès de 300 diplômés en comptabilité. Nous avons groupé les répondants selon le sexe, l'année d'obtention du diplôme (1976-1991), et le genre de diplôme (B.Sc. ou M.Sc.). Les résultats de l'étude indiquent que les femmes sont plus susceptibles que les hommes de subir le stress lié aux situations de conflit entre la famille et le travail; qu'elles sont perçues par les hommes comme n'accordant pas autant qu'eux de l'importance à la carrière et comme étant moins aptes qu'eux à affronter les demandes de la profession de comptable; qu'elles sont plus que les hommes préoccupées par les avantages sociaux et les conditions de travail; qu'elles ont moins d'occasions que les hommes d'utiliser les politiques du bureau et les contacts aux fins d'avancement professionnel. Ces différences entre les hommes et les femmes sont les mêmes, peu importe le type de diplôme obtenu ou l'année d'obtention. Bien que l'année d'obtention du diplôme n'influence pas les différences entre les hommes et les femmes, les diplômés récents des deux sexes pensent que la femme accorde plus d'importance à la carrière et qu'elle a plus de chance d'avancer aussi rapidement que l'homme que ne le pensaient les diplômés des années précédant 1986.

Par surcroît, cette étude révèle que lorsque les hommes et les femmes possèdent la même expérience, le même diplôme, et le même titre professionnel, ils reçoivent une rémunération comparable. Cependant, le ratio de roulement des cabinets d'expertise comptable, particulièrement dans les cas des Six grands cabinets, est plus élevé pour les femmes que pour les hommes. Les femmes préfèrent quitter le stress et la rigidité de l'exercice en cabinet pour obtenir un poste bien rémunéré et plus flexible ailleurs.

Les résultats de cette étude montrent également qu'il existe encore de nombreuses différences entre les hommes et les femmes comptables et que ces différences, en général, ne changent pas. Fait intéressant pour les futurs employeurs, les femmes commenceront tout aussi probablement que les hommes leur carrière par l'exercice en cabinet et obtiendront leur certificat de c.p.a.; toutefois, elles opteront plus vraisemblablement pour un changement de voie et choisiront le secteur privé ou public, où le stress semble moindre et où les chances d'avancement et le milieu de travail semblent meilleurs.

Vendredi, 5 juin

SÉANCE SIMULTANÉE 2C

De 14 h 45 à 16 h 15

Lieu : Salle 110 du Duffy Science Centre

Reading the Regulatory Text: Regulation and the New Stock Issue Process

Dean Neu
University of Calgary

Résumé : Les marchés boursiers et le procédé d'émission de nouvelles valeurs sont omniprésents. Cependant, la recherche effectuée jusqu'à ce jour n'a jamais vraiment examiné si oui ou non le procédé d'émission de nouvelles valeurs est fonctionnel pour toutes les catégories de participants. La présente étude épouse une perspective différente. Nous nous servons d'une étude de cas pour examiner les conséquences sociales d'une émission ratée (stock failure). Plus précisément, l'analyse examine *comment* fonctionne la réglementation régissant l'émission des valeurs et qui bénéficie de cette réglementation. Nous espérons que cette étude, de par sa nature, remettra en question l'hypothèse sans conteste que les marchés boursiers sont efficaces pour toutes les catégories de participants.

Vendredi, 5 juin

SÉANCE SIMULTANÉE 2C

De 14 h 45 à 16 h 15

Lieu : Salle 110 du Duffy Science Centre

Leverage and Intertemporal Income Smoothing in Canada: An Empirical Study

Raafat R. Roubi
L. Culumovic
Brock University

Résumé : À l'aide d'un échantillon de 65 firmes canadiennes incluses dans la base de données du Financial Post, la présente étude rapporte des éléments empiriques qui témoignent des activités de nivellement des bénéfices de sociétés canadiennes qui tentent d'obtenir du capital par emprunt. La probabilité qu'une société émettant des titres obligataires nivelle ses bénéfices augmente de façon significative au fur et à mesure que le ratio d'endettement de la firme prend de l'ampleur. Inversement, il est peu probable qu'une société qui vende ou rachète des capitaux propres s'adonne à cette pratique.

Trueman et Titman (Journal of Accounting Research, Vol. 26 supplement, 1988, pp. 127-139) ont montré qu'un dirigeant d'entreprise est poussé à niveler les bénéfices réalisés s'il souhaite financer ses opérations à un coût moindre. Leur théorème se fonde sur deux hypothèses : 1) les bénéfices économiques de l'entreprise sont une variable aléatoire dont la distribution est normale et la moyenne, fixe et connue (c.-à-d. une cible) et dont l'écart est inconnu de tous sauf du gestionnaire; 2) les non initiés croient selon une probabilité donnée que le gestionnaire peut transférer les bénéfices; 3) les non initiés croient également, étant données les probabilités antérieures, que l'écart du flot des bénéfices est ce qu'il est; et 4) si le gestionnaire peut transférer les bénéfices de la deuxième période à la première, seulement une proportion fixe connue de la différence entre le bénéfice économique de la firme pour la première période et sa cible peut être transférée de la deuxième période à la première. Alors, selon les résultats présentés, les prêteurs réviseront leurs attentes et les probabilités à propos de l'écart réduit du flot des bénéfices de la firme. Comme Trueman et Titman l'ont indiqué, la moyenne prévue de la probabilité et de l'attente à l'égard de la possibilité d'un écart réduit est toujours *plus élevée* si la firme nivelle ses bénéfices que si elle ne le fait pas. Ce théorême montre que, même si les résultats de la deuxième période sont inconnus, il est *toujours* avantageux de niveler les bénéfices de la première période si on se fie à l'équilibre des probabilités, d'après les hypothèses susmentionnées.

Nous utilisons le modèle de régression logistique pour tester la présence de différences significatives entre les deux groupes d'entreprises (celles qui nivellent et celles qui ne nivellent pas) à l'égard de plusieurs variables à savoir la taille, la vente de capitaux propres, le rachat de capitaux propres, la vente de titres obligataires, et la valeur relative des titres vendus par rapport à la dette totale et aux capitaux propres vendus. Après avoir formé plusieurs portefeuilles, nous avons fait des analyses statistiques pour les deux groupes. Chaque portefeuille comportait un certain degré d'endettement, selon le ratio de la dette sur la valeur marchande des capitaux propres ordinaires, au début de la période, et comptait un certain nombre de sociétés des deux types. Les tests révèlent que les firmes dont l'endettement est élevé sont plus susceptibles de niveler le bénéfice net au moment d'émettre des titres obligataires.

Il existe deux explications possibles. D'une part, la direction a adopté un comportement visant la maximisation de la richesse qui permet aux détenteurs de valeurs actuelles de bénéficier au détriment des détenteurs des valeurs nouvelles. Ce phénomène peut se produire si, par exemple, de nouveaux détenteurs d'obligations accepte un rendement moindre. Grâce au nivellement, les fluctuations des bénéfices diminuent, ce qui traduit la présence d'un flot de revenu stable. D'autre part, la direction tente de respecter les limites des clauses restrictives tout en maintenant ou en libéralisant ses politiques de distribution des dividendes et ses primes.

Samedi, 6 juin

SÉANCE SIMULTANÉE 3A

De 10 h 45 à 12 h 15

Lieu : Salle 110 du Duffy Science Centre

The Performance of Target and Bidding Companies Involved in Hostile Takeover Bids

Christine Parkinson
Bradford University

Résumé : Le présent article vise à déterminer les caractéristiques financières d'entreprises qui ont fait l'objet d'une prise de contrôle et des acquéreurs éventuels dans le cadre d'offres d'achat hostiles sans succès pendant la période 1975-1984. Pour ce faire, nous avons examiné les différences de moyennes et procédé à des analyses discriminantes. Les résultats montrent qu'il existe des différences importantes entre les sociétés cibles et les acquéreurs éventuels dans les périodes précédant et suivant la période où les offres d'achat sont effectuées, ce qui vient soutenir les diverses théories de fusion. En effet, la victoire semble pousser les sociétés cibles à améliorer leur efficience. Quant aux perdants, ils accusent une baisse de rendement au cours des deux années suivant leur défaite.

Samedi, 6 juin

SÉANCE SIMULTANÉE 3A

De 10 h 45 à 12 h 15

Lieu : Salle 110 du Duffy Science Centre

On the Accounting-Economics Interface

Irene M. Gordon
Lawrence A. Boland
Simon Fraser University

Résumé : On a fait de nombreuses observations concernant la pertinence d'un paradigme économique néoclassique pour expliquer le rôle de la comptabilité dans une organisation économique. Bien que peu de théoriciens comptables béhavioristes, particulièrement ceux qui se concentrent sur la comptabilité de gestion, rejetteraient d'emblée ce paradigme, la plupart soulève des plaintes qui semblent porter sur la non-pertinence de ce même paradigme. De ceux qui se plaignent de sa pertinence, beaucoup mettent l'accent sur l'hypothèse néoclassique de rationalité. Nous croyons que l'hypothèse de rationalité, ou encore du comportement de maximisation, n'est pas un problème en soi. S'il en existe un cependant, il se situe au niveau des lacunes connues de la théorie économique néoclassique qui en limite l'applicabilité en recherche comptable. Le présent article examine les limites du paradigme économique néoclassique en ce qui a trait à l'étude de la comptabilité et plus particulièrement de la comptabilité de gestion.

À cette fin, nous avons divisé notre étude en quatre sections. La première section présente les écrits et l'argument selon lequel il est futile de critiquer la rationalité économique. La deuxième section se fonde sur un argument présenté par Demski (1988) et plus tard souligné et élaboré par Boland et Gordon (1991). Cet argument insiste sur le fait que les difficultés entourant l'utilisation de la recherche fondée sur l'économie en comptabilité relèvent plus de l'absence d'un certain équilibre que des hypothèses posées à propos des motivations des personnes prenant part au marché. Dans la troisième section, nous présentons les plaintes portées par deux écoles de comptabilité de gestion. Il s'agit de l'école traditionnelle (Johnson et Kaplan, 1987) et de l'école de "sociologie organisationnelle" (Cooper, Hayes et Wolf, 1983). Pour conclure, nous nous servons des plaintes portées par ces deux écoles pour soutenir que le problème ne touche pas l'hypothèse de rationalité du modèle économique traditionnel, mais plutôt l'applicabilité du modèle à différentes situations. C'est donc sur ce point que devront se pencher les chercheurs dans l'avenir.

Samedi, 6 juin

SÉANCE SIMULTANÉE 3A

De 10 h 45 à 12 h 15

Lieu : Salle 110 du Duffy Science Centre

Social Responsibility, Legislation and Disclosure: The Case of Acid Rain and Falconbridge

Nola Buhr
The University of Western Ontario

Résumé : Ce qu'une entreprise accomplit en termes de responsabilité sociale, ce qu'elle doit faire conformément aux règlements imposés par le gouvernement et la façon dont elle se présente par le biais de ses rapports annuels ne reflètent pas nécessairement les mêmes réalités. L'information fournie par une entreprise peut très bien ne servir qu'à impressionner la cour afin de justifier ses actes auprès de ses mandants. En outre, avec le temps, des activités perçues comme étant acceptables par la société peuvent devenir moins acceptables au fur et à mesure que les besoins sociaux changent et forcent le gouvernement à apporter des modifications à la réglementation.

Le présent article examine le rapport entre la responsabilité sociale, la législation et la présentation d'informations, à l'aide du cas de Falconbridge et les émissions d'anhydride sulfureux pendant la période allant de 1950 à 1990. Nous avons abordé deux questions importantes. 1) Comment l'entreprise a-t-elle réagi aux modifications de la réglementation à l'égard de la réduction des émissions d'anhydride sulfureux? 2) Comment l'entreprise a-t-elle choisi de présenter, dans ses rapports annuels, ses activités visant la réduction des émissions?

Pour ce faire nous avons utilisé l'historiographie, des entrevues et avons conduit des analyses de contenu. Nous avons obtenu l'information pertinente de sources publiques et d'archives; il s'agissait surtout de rapports annuels de Falconbridge, de documents gouvernementaux et d'articles de journaux, de revues d'affaires et spécialisées. Nous avons mené 13 entrevues avec des membres du personnel de la direction au siège social de la firme à Toronto; avec des membres du personnel de la direction et de l'exploitation à Sudbury; et avec un représentant du ministère de l'environnement de l'Ontario.

Nous avons choisi d'examiner une période de quarante et un ans puisqu'il serait ainsi possible de couvrir tous les efforts déployés par la firme en vue de réduire ses émissions d'anhydride sulfureux. Falconbridge a réagi pour la première fois au début des années 1950, purement pour des raisons économiques. Toutefois dans les années 1970, la firme a mis sur pied un programme d'amélioration environnementale à la suite de l'émission du premier arrêté d'intervention du gouvernement, en 1969. Dans les années 1980 Falconbridge a adopté une position plus proactive. En 1991, elle a réussi à réduire ses émissions d'anhydride sulfureux en-deça des niveaux permis prévus pour 1994, lesquels ont été régis par le plus récent arrêté du gouvernement, émis en 1985. C'était dans le cadre du programme "les pluies acides, un compte à rebours".

Ces faits suggèrent que Falconbridge a défini sa notion de responsabilité sociale comme étant la nécessité d'anticiper et de surpasser les exigences gouvernementales. L'analyse du contenu des rapports annuels publiés au cours de la période étudiée montre que les informations présentées étaient pour la plupart concises et quantitatives et non, volumineuses ou trop descriptives, ce qui n'aurait servi que l'intérêt de la firme. Par conséquent, dans le cas de Falconbridge, responsabilité sociale, législation et présentation de l'information sont des notions qui se rapprochent de façon relativement considérable.

Samedi, 6 juin

SÉANCE SIMULTANÉE 3B

De 10 h 45 à 12 h 15

Lieu : Salle 107 du Duffy Science Centre

Governance for Government? The Construction of Government Auditing

Vaughan S. Radcliffe
University of Alberta

Résumé : Le présent article examine le développement et l'établissement de la comptabilité publique moderne dans les provinces du Canada et traite plus particulièrement de l'Alberta. Le développement de la vérification d'efficience, d'efficacité et d'optimisation des ressources s'avère un grand pas dans la pratique comptable.

Nous voulons présenter une structure théorique pour faciliter la compréhension de la comptabilité publique. Nous reconnaissons d'abord le potentiel de la comptabilité comme outil permettant au gouvernement d'agir et comme moyen de contrôler ces actions; nous faisons par la suite une synthèse des théories de Weber et de Foucault sur la bureaucratie et le gouvernementalisme respectivement. Ces théories tentent d'expliquer les raisons pour lesquelles nous sommes tous convaincus de la valeur de notions comme l'économie et l'efficience mais que nos opinions se partagent quant à la façon de mettre ces notions en oeuvre. Elles serviront grandement à quiconque veut comprendre la comptabilité publique dans les provinces canadiennes. Un examen de la législation en place révèle des écarts sensibles.

Nous procédons ensuite à une analyse des dispositions de la législation de toutes les provinces, puis nous attardons plus particulièrement sur celle de l'Alberta. Cette province semble occuper une position modérée plutôt intéressante. En effet, elle prévoit la vérification du processus comptable et des systèmes de contrôle de la gestion conçus pour assurer l'efficience à ce niveau, mais il s'agit de la seule province où cette exigence n'est pas accompagnée d'une disposition à l'égard de la vérification des activités du gouvernement en termes d'économie et d'efficience. Les conditions uniques renfermées dans la Loi de l'Alberta font du débat qui ont entouré son passage un événement qui peut-être mettra en lumière les buts et les idées qui sous-tendent la vérification d'optimisation des ressources.

Nous avons analysé l'établissement de la comptabilité publique en Alberta au cours de l'histoire. Pendant les années 1970, contrairement à la plupart des juridictions qui ont réformé la vérification publique, la province se démarque par une croissance sensationnelle des recettes et des dépenses. Curieusement, les débats législatifs ne semblaient pas correspondre aux conditions de la loi. Des propositions antérieures concernant l'introduction de la vérification de l'efficience des activités n'apparaissaient pas la loi; toutefois les ministres affirmaient qu'elle comprenait des dispositions à cet effet. Les conditions de la loi permettent la présentation exhaustive d'informations privées. Bien que le trésorier provincial de l'époque ait acclamé la création du bureau du vérificateur général, moyen de tenir le gouvernement responsable auprès des Albertains, huit ans plus tard, ces derniers n'ont toujours pas vu de rapport sur l'efficience des systèmes de gestion du gouvernement.

Notre article vient nous aider à comprendre que la vérification publique fait partie de la logique de la société moderne, dans laquelle on s'attend à ce que l'exercice du pouvoir soit rationnel et pensé. C'est grâce à cette gouvernementalisation ou bureaucratisation de la vie moderne que tous peuvent s'entendre sur la valeur de l'administration efficace et rationnelle des ressources. Ces programmes nécessitent tout de même, pour prendre vie, une technologie quelconque. C'est à l'interface entre les programmes et les technologies que la dissension se fait sentir et que les rôles de la comptabilité sont établis. Je me pencherai donc, dans des travaux ultérieurs, sur ces dimensions afin d'explorer les façons dont des notions élargies de vérification pourront redéfinir la pratique de la vérification, la position des comptables (publics et privés), et les conceptions quant à la gestion la meilleure.

Samedi, 6 juin

SÉANCE SIMULTANÉE 3B

De 10 h 45 à 12 h 15

Lieu : Salle 107 du Duffy Science Centre

Social Responsibilitiy Disclosures in Canada: A Chief Executive Perspective

Peter Secord
Anamitra Shome
St. Mary's University

Résumé : La présente étude fait état, pour un échantillon de 300 firmes figurant au TSE, des résultats d'une analyse de contenu et d'un questionnaire quant à la présentation volontaire d'informations concernant la responsabilité sociale d'une entreprise. Nous avons administré un questionnaire aux directeurs généraux de ces firmes afin de déterminer leur attitude envers la responsabilité sociale et la présentation des informations inhérentes dans leurs rapports annuels.

Nous avons effectué des tests statistiques où nous avons d'abord regroupé les rapports annuels avec le directeur général concerné, puis déterminé le rapport entre les réponses au questionnaire et la quantité d'informations présentées. Nous avons décelé des corrélations importantes pour un certain nombre de questions, ce qui indique que les attitudes des directeurs généraux pourraient avoir une influence sur les quantités d'informations volontaires et probablement sur le degré de responsabilité sociale de la firme.

Samedi, 6 juin

SÉANCE SIMULTANÉE 3B

De 10 h 45 à 12 h 15

Lieu : Salle 107 du Duffy Science Centre

L'effet de la pollution sur la valeur boursière des titres : résultats empiriques

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Michel Magnan
Université McGill

Bernard Morard
Université de Genève

Résumé : Dans cette recherche, nous testons la relation entre la valeur boursière des titres et leur performance sociale telle que mesurée par leur niveau de pollution. Nous posons l'hypothèse que les firmes ayant une bonne (mauvaise) performance environnementale devraient être récompensées par le marché (bénéficier d'une prime). Cette relation se situe dans le cadre d'une préoccupation de plus en plus grande du public en ce qui a trait aux conséquences néfastes de certaines activités des entreprises sur la société en général, d'où la présence d'investisseurs "moraux" et la présence d'investisseurs qui tiennent compte des coûts, pour la firme, reliés aux dommages causés à l'environnement.

Deux nouveautés sont introduites dans cette recherche. Premièrement, nous calculons pour chaque firme un indice de pollution à l'aide de données gouvernementales. Deuxièmement, nous évaluons l'impact de l'information sociale pour l'investisseur en utilisant l'équation comptable fondamentale.

Les résultats montrent l'existence d'une prime (escompte) à la valeur boursière pour les firmes qui respectent (ne respectent pas) les normes de pollution, montrant ainsi la présence d'investisseurs "moraux". Ces résultats nous amènent à souhaiter la publication d'information sociale vérifiée, de manière à mieux renseigner le marché.

Samedi, 6 juin

SÉANCE SIMULTANÉE 3C

De 10 h 45 à 12 h 15

Lieu : Salle 209 du Duffy Science Centre

Financial Reporting and the Disclosure of the Economic Realities of Environmental Legislation

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School of Business Administration
University of Western Ontario

David Conklin, Ph.D., Directeur,
University of Western Ontario Office
The Institute for Research on Public Public Policy

Résumé : Au moment même où le Canada se trouve en pleine bataille économique en vue de mettre un terme à une dure récession, l'introduction de nouvelles lois, comme la Loi sur les mines de l'Ontario, et l'addition du chapitre 3060 sur les immobilisations au Manuel de l'Institut Canadien des Comptables Agréés (I.C.C.A.) nous forcent à réfléchir sérieusement à leur incidence sur la préparation d'états financiers. D'une certaine manière, le paragraphe 3060.39 du Manuel sur les frais futurs d'enlèvement d'une immobilisation et de restoration des lieux a semé un vent de panique dans les milieux financiers du pays.

Afin de situer l'importante nature de ces événements dans un contexte général, nous examinons d'abord les nouvelles réalités économiques, ainsi que leur nouvelles exigences en matière de préparation des états financiers, qui verraient le jour dans le cadre de l'accord de libre-échange proposé entre le Canada, le Mexique et les États-Unis. Précisons que ni le Financial Accounting Standards Board (FASB) aux États-Unis ni les organismes de normalisation du Mexique ne disposent d'obligations d'information semblables à celles du paragraphe 3060.39.

Il faut également prendre en considération le fait que les industries les plus marquées par ces nouvelles normes, notamment les industries minérale, minière, forestière et chimique, vendent leurs produits à un prix établi à l'échelle mondiale. Par conséquent, en raison des lois environnementales strictes et coûteuses du Canada de même que de la présentation complète et immédiate des frais constatés et de l'information pertinente, les sociétés canadiennes se trouveront probablement désavantagées par rapport à leur concurrents mondiaux. Cette réalité ne dérange peut-être pas les tenants de l'efficience du marché, mais même la bourse des valeurs de New York, dans toute sa puissance, s'ajuste difficilement en l'absence d'informations.

Notre article examine en profondeur les questions susmentionnées et quelques autres.

Samedi, 6 juin

SÉANCE SIMULTANÉE 3C

De 10 h 45 à 12 h 15

Lieu : Salle 209 du Duffy Science Centre

The Environment, Accounting and Accountants

Leonard G. Eckel
University of Waterloo

Kathryn Fisher
Beak Consultants

Résumé: La préoccupation manifestée par tous les segments de la société à l'égard de la dégradation de l'environnement a engendré une certaine sensibilisation à la protection de l'environnement et a placé celle-ci parmi les défis les plus importants auxquels font face l'industrie, le gouvernement et le grand public. Résultat : un nouveau contrat social vient définir la responsabilité environnementale d'une entreprise et établir des contraintes à l'égard de ses activités. Les comptables contribueront à la réalisation de ce contrat social puisqu'ils satisferont les besoins d'information de dépositaires d'enjeux qui se font de plus en plus nombreux. Ils n'établiront pas pour ainsi dire l'agenda social de l'entreprise ou les exigences en matière d'information; leur rôle consistera plutôt à satisfaire les besoins de l'entreprise en termes des exigences de la société et à fournir l'information requise, sans biais, une information dont les qualités la rende crédible et utile à ceux qui s'en serviront. Il existe actuellement chez les entreprises toute une échelle de performance environnementale et d'objectifs à cet égard qui vont du laxisme au respect des normes établies jusqu'au développement durable. La plupart des firmes responsables se situent au niveau du respect des normes, mais la tendance est à la hausse, vers la position durable. Les comptables doivent suivre le pas et satisfaire des demandes croissantes d'informations de plus en plus complexes.

Nous examinons les implications des conditions de base : les effets du coût de nettoyage global sur la richesse, la structure révisée des coûts en vue d'une exploitation saine du point de vue de l'environnement, le besoin de penser au développement avant d'en envisager la durabilité, et l'incidence tentaculaire de l'humanité sur l'environnement. Les comptables doivent, pour respecter le nouveau contrat social, tenir compte de ces conditions élémentaires; ils jouent le rôle neutre et sans biais de distributeur d'informations dans la réalisation de cet objectif sociétal progressif; les normes comptables doivent être neutres (mais il est possible que les efforts actuels ne le soient pas); les comptables doivent élaborer des mesures de rendement efficaces (mesure de l'extrant) et des méthodes de détermination des coûts précises; ils doivent considérer les besoins d'une vaste gamme de dépositaires d'enjeux, communiquer avec des personnes dont le degré de compétence et d'intérêt varie grandement et travailler de façon régulière avec des gens dont l'expérience n'est pas liée aux affaires, même dépendre de ces personnes; ils doivent élaborer des techniques qui permettront de mesurer et de présenter la performance environnementale de l'entreprise; ils doivent comprendre les concepts de gestion du risque, de risque, d'incertitude et de prévision; ils doivent comprendre les facteurs externes, les évaluations autres que les évaluations marchandes, et les biens de consommation. La fonction de vérification a maintenant un sens très large. Il faudra donc aux responsables de la formation s'assurer que les comptables soient prêts à répondre à toutes ces exigences.

Samedi, 6 juin

SÉANCE SIMULTANÉE 3C

De 10 h 45 à 12 h 15

Lieu : Salle 209 du Duffy Science Centre

The Effect That A Superior's Suggestion Has On Auditors' Abilities to Generate Diagnostic Hypotheses

Bryan K. Church
Wilfrid Laurier University

Arnold Schneider
Georgia Institute of Technology

Résumé : La présente étude examine les effets de la suggestion d'un supérieur sur l'habilité d'un vérificateur à générer des hypothèses additionnelles à partir d'éléments emmagasinés dans sa mémoire à long terme. Plus particulièrement, nous voulons voir si l'héritage d'un élément aura un effet sur le classement d'éléments additionnels tirés de la mémoire à long terme. Nous nous sommes appuyés sur la recherche en psychologie cognitive pour prédire que le fait de recevoir la suggestion d'un supérieur à l'égard d'un cycle d'opération aurait un effet négatif sur l'habilité du vérificateur à générer des hypothèses additionnelles concernant ce même cycle. Nous avons mené deux expériences en vue d'examiner la présence d'un tel phénomène au sein d'une catégorie. Dans la première expérience, nous avons examiné les effets de la présence d'une erreur qui se produit souvent et avons trouvé que celle-ci limitait les capacités du vérificateur à extraire d'autres hypothèses concernant le cycle d'opération en question. De plus, nous avons noté que cet effet entrait en jeu très rapidement. La première hypothèse que posaient les sujets qui avaient hérité d'une hypothèse au départ, était liée à un cycle d'opération autre que celui auquel appartenait la suggestion du supérieur.

Dans la deuxième expérience, nous avons examiné les effets de la présence d'une erreur qui ne se produit pas souvent. Les résultats se sont avérés semblables à ceux de la première expérience à une exception près. En effet, la première hypothèse posée par les sujets qui avaient hérité de l'erreur n'avait pas tendance à provenir d'un cycle d'opération différent de celui auquel appartenait la suggestion du supérieur. Par conséquent, bien que l'effet d'interférence se soit manifesté dans les deux expériences, la nature de la suggestion du supérieur semble avoir influencé la vitesse à laquelle cet effet est entré en jeu.

Samedi, 6 juin

SÉANCE SIMULTANÉE 4A

De 16 h 00 à 17 h 30

Lieu : Salle 209 du Duffy Science Centre

Auditors' Assessments of Probable Causes in Analytical Review: Effects of List Length, Availability and Experience

Richard D. Rennie
University of Regina

Résumé : Dans le présent article, nous examinons l'opinion de 121 vérificateurs, novices et expérimentés, concernant les causes probables (selon des listes longues ou abrégées) de la fluctuation de ratios financiers. La recherche antérieure en psychologie a montré que les experts sont souvent incapables de déterminer avec certitude les éléments manquant d'une liste incomplète de causes possibles d'erreurs et qu'ils sous-estiment la fréquence relative des éléments omis sur une liste. La plupart des études antérieures ont attribué cet effet à l'absence des causes omises bien qu'on ait jamais testé cette explication. Les travaux plus récents indiquent que, dans certains domaines, la longueur de la liste n'influence pas les évaluations des gens lorsque ceux-ci possèdent une représentation mentale bien définie des possibilités quant aux éléments ne figurant pas à la liste, et une bonne connaissance des probabilités pertinentes.

Les résultats de notre étude révèlent, pour leur part, que la longueur de la liste a un effet considérable tant chez les vérificateurs chevronnés que chez les novices; les deux groupes ont sous-estimé la probabilité que des causes n'apparaissent pas sur la liste des causes possibles. Cet effet de la longueur de la liste (ou réduction) ne semble pas s'expliquer par l'absence de causes comme le spéculaient les écrits. Les résultats montrent aussi que cet effet s'avère beaucoup moins important chez les vérificateurs et les gestionnaires chevronnés que chez les nouveaux vérificateurs. En outre, les vérificateurs d'expérience ont exprimé des opinions très poussées concernant le probabilité des causes possibles. Nos résultats correspondent à la notion selon laquelle les vérificateurs expérimentés possèdent une meilleure connaissance des fréquences sous-jacentes aux événements entourant une vérification. Par conséquent, notre étude éclaire notre compréhension des jugements de vérification en démontrant le rôle que joue l'expérience dans la détermination de causes possibles pendant un examen analytique.

Samedi, 6 juin

SÉANCE SIMULTANÉE 4A

De 16 h 00 à 17 h 30

Lieu : Salle 209 du Duffy Science Centre

The Dilemma of Auditing Education: Can It Be Relevant Preparation For Both Practice and a Professional Examination?

Dr. Curtis C. Verschoor
Dr. Howard A. Kanter
School of Accountancy
DePaul University, Chicago

Résumé : Bien que l'ensemble des connaissances concernant la comptabilité financière soit bien défini et que l'on s'entende en général sur les méthodes d'enseignement les plus appropriées, il semble qu'il n'en soit pas de même pour la vérification. Les enseignants et les praticiens ne semblent pas s'entendre en ce qui a trait à la quantité des sujets couverts, aux méthodes d'enseignement et à l'approche générale des cours universitaires en vérification.

La présente étude comporte trois volets. En premier lieu, nous avons obtenu de l'information de la part de vérificateurs dont l'expérience dans le domaine de l'exercice en cabinet variait, concernant l'importance pour les vérificateurs dont il s'agit de la première année d'expérience de connaître les dix domaines particuliers de la vérification. En deuxième lieu, nous avons vérifié si les vérificateurs croyaient que l'enseignement devrait aborder les différents domaines selon une approche théorique ou pratique. Enfin, nous avons déterminé le degré de satisfaction des vérificateurs à l'égard de leur formation en vérification comme préparation à leur première année en cabinet et à la portion de l'examen d'agrément professionnel portant sur la vérification.

Les résultats indiquent que les praticiens dans l'ensemble préfèrent une approche pratique quant à l'enseignement de quatre des six domaines qu'ils considèrent les plus importants pour les vérificateurs de première année. De même, ils préfèrent une approche théorique quant aux deux des quatre domaines qu'ils considèrent de moindre importance. En outre, nos résultats viennent appuyer les études antérieures qui indiquent que les praticiens ne sont pas très satisfaits de leur formation en tant que préparation en vue de leur carrière ou de l'examen d'agrément.

Cela signifie que les enseignants en vérification devraient prendre les résultats susmentionnés en considération dans la préparation des cours de vérification. De même, les auteurs de manuels sur la vérification devraient en tenir compte dans la planification du matériel couvert dans leurs manuels. Ces recommandations sont particulièrement pertinentes aujourd'hui, à l'heure où la satifsaction du client est la clé du succès.

Samedi, 6 juin

SÉANCE SIMULTANÉE 4B

De 16 h 00 à 17 h 30

Lieu : Salle 110 du Duffy Science Centre

Identification of Significant Employment Criteria: Helping to Control Turnover in Accounting

Nasrollah Ahadiat
California State Polytechnique University

Charles L. Martin
Towson State University

Résumé : Chaque année, de nombreux étudiants choisissent la comptabilité comme leur domaine principal d'éducation à l'université en vue de se préparer à une carrière en expertise comptable. Déçus par leurs tâches et les attentes de leurs employeurs, chaque année beaucoup de ces diplômés universitaires quittent le cabinet où ils exerçaient leur profession pour chercher un autre emploi. Bien que ce phénomène puisse s'expliquer de bien des façons et qu'un certain roulement puisse être désirable, ceux qui quittent trouvent l'exercice en cabinet ennuyeux et sans place pour la créativité (Benke et Argualo, 1982). De plus, certains auteurs indiquent que les diplômés en comptabilité sous-estiment l'aridité de la pratique de la comptabilité et mentionnent l'écart entre les attentes du personnel et des associés comme l'une des raisons de l'insatisfaction (Sorenson, Rhode, et Lawler, 1973). Nous croyons que la connaissance préalable de ces attentes peut contribuer à réduire cet écart, ce qui augmenterait la satisfaction au travail et diminuerait le roulement dans les cabinets d'experts-comptables.

Nous avons envoyé un questionnaire au directeur du recrutement de cabinets en exercice aux États-Unis à l'échelle nationale ou non dans le but de déterminer les attentes des employeurs en ce qui a trait aux comptables débutants et de discerner les critères d'emploi jugés importants, desquels on tient compte dans la sélection et la rétention des diplômés en comptabilité. Nous avons d'abord entrepris une comparaison des réponses données par les deux groupes de répondants. Nous n'avons détecté aucune différence importante. Par la suite, nous avons évalué les résultats en vue de discerner les critères jugés importants par chaque groupe, par catégorie. Les catégories de critères jugés importants par les deux groupes sont les suivantes : l'apparence, la personnalité, le rendement et la formation. Les cabinets nationaux considéraient l'assurance et la maîtrise de soi comme les qualités les plus importantes, alors que les autres cabinets jugeaient que la confiance inspirée était très importante. L'article présente aussi d'autres résultats intéressants.

À notre avis, les changements dans l'enseignement des sciences comptables devraient inclure la participation intense des professeurs et des praticiens à titre de conseillers en carrière. Ainsi, dès leurs premières années à l'université, les étudiants bien conseillés pourront choisir les domaines de spécialisation qui correspondent le mieux à leur personnalité et à leur potentiel. Cette coopération est nécessaire à l'excellence de la profession car elle permettra l'utilisation de ressources humaines qui jouissent d'une formation de première classe, qui manifestent de l'enthousiasme à l'égard de leur travail et en possèdent une bonne maîtrise.

Samedi, 6 juin

SÉANCE SIMULTANÉE 4B

De 16 h 00 à 17 h 30

Lieu : Salle 110 du Duffy Science Centre

The Effect Of Quantity and Order of Cues on Sequential Belief Revision in Tax Judgments

Alexander M.G. Gelardi
Simon Fraser University

Résumé : Le modèle d'ajustement des attentes prédit la présence d'effets de "l'événement le plus récent" (recency effect) dans le cas d'information complexe encodée dans une méthode progressive. Les études antérieures où le modèle a servi dans un contexte fiscal ont examiné des ensembles d'informations équilibrés de deux ou de quatre signes. En général, ces études ont trouvé un effet de "recency". Cependant, les écrits en psychologie indiquent que cet effet n'existe pas dans le cas de longues séries de signes.

On manifeste une certaine incertitude quant à la généralisation d'effets d'ordre à la recherche fiscale juridique, laquelle nécessite souvent l'examen de plusieurs éléments de preuve. Aussi, est-il peu probable que l'on puisse obtenir un ensemble équilibré d'informations dans le cadre de la recherche fiscale juridique.

La présente étude poursuit les travaux antérieurs sur deux plans. D'une part, elle examine l'effet de séries de quatre, de huit et de douze signes sur les décisions d'ordre fiscal. D'autre part, elle porte sur des jugements où on a présenté une série de signes d'une manière unidirectionnelle.

Nous avons également conduit deux expériences de type laboratoire. Comptaient parmi les sujets, 173 étudiants de premier cycle et 18 étudiants de cycle supérieur inscrits dans des cours de fiscalité dans une grande université d'État. En moyenne, les étudiants de cycle supérieur avaient plus de six années d'expérience en fiscalité et ils ont tous été testés dans une condition seulement. Il n'y avait aucune différence significative dans les résultats des deux groupes.

Les résultats dévoilent qu'il existait dans l'ensemble un effet d'ordre très marqué. Toutefois, cet effet semblait résulter des longues séries de signes plutôt que des courtes, ce qui est contraire aux prédictions du modèle d'ajustement des attentes.

Nous n'avons pas observé l'effet de contraste prévu. Il est possible que l'effet du signe contre-directionnel, à la suite d'une série de signes, ait été éliminé par les signes précédents, ce qui pourrait expliquer ce phénomène.

Les résultats de cette étude indiquent qu'il existe peut-être des biais systématiques dans les jugements relatifs à l'impôt. Les conseillers fiscaux se servent généralement d'une quantité importante d'information dans leurs jugements. Par conséquent, la présence d'un effet d'ordre marqué dans les longues séries devrait s'avérer intéressante pour les fiscalistes. Les cabinets pourraient inclure des contre-mesures dans leurs séances de formation et dans les manuels de procédures fiscales.

Vendredi, 5 juin

SÉANCE SIMULTANÉE 1A

De 10 h 45 à 12 h 15

Lieu : Salle 107 du Duffy Science Centre

The Impact of Recent Tax Revisions on the Lease vs. Purchase Decision: A Comparative Analysis

G. Athanassakos
M. Klatt
Wilfrid Laurier University

Résumé : Le crédit-bail constitue pour les sociétés un choix de financement qui est devenu populaire au cours des vingt dernières années. L'impôt sur les sociétés, surtout en ce qui a trait à l'application de l'amortissement fiscal dans le financement par crédit-bail, a depuis toujours fait partie intégrante de la décision soit de louer un actif ou de l'acquérir. La présente étude examine les dernières révisions fiscales des termes de crédit-bail, plus particulièrement l'application de l'amortissement fiscal, qui ont entraîné une modification dans le calcul des versements du point de vue du bailleur et de la valeur actualisée nette (VAN) d'un contrat de location. Cet article discute également l'incidence de ces changements pour le bailleur et le locataire, et présente de nouvelles formules qui serviront dans la prise de décision d'acquisition en regard de la location.

Jusqu'à tout récemment, en autant que l'arrangement constituait un contrat de location dans le cadre de la règle 1100(17) de la Loi de l'impôt sur le revenu et que les versements étaient considérés comme paiements du loyer et non comme des paiements relatifs à l'acquisition de la propriété, la position fiscale du bailleur et du locataire était bien définie. Le bailleur pouvait déduire les frais d'assurance, de financement, de réparation et d'entretien ainsi que l'amortissement fiscal, et le locataire déduisait le coût du bail en entier. Ainsi, les deux parties trouvaient leurs avantages. D'une part, le bailleur bénéficiait de la protection fiscale que procurait l'amortissement fiscal, ce qui l'encourageait à faire la location. D'autre part, le locataire jouissait de l'utilisation de l'actif et recevait une réduction d'impôt qui rendait souvent le crédit-bail plus faisable économiquement que l'achat direct. Or, le ministère des Finances a apporté une série de modifications, en vigueur à partir du 26 avril 1989, qui a modifié de façon considérable la taxation de certains contrats de crédit-bail. Selon les nouvelles règles, il existe un montant limite de l'amortissement fiscal que le bailleur d'un "bien de location précis" peut réclamer (règle 1100(1.1) - (1.3). Selon l'article 16.1 de la Loi de l'impôt sur le revenu, les locataires de certains biens tangibles de location qui en font le "choix" sont présumés avoir acquis le bien loué et peuvent donc demander la déduction pour amortissement. **Par conséquent, le bailleur et le locataire peuvent demander la déduction pour amortissement à l'égard d'un même bien en même temps.** Ces modifications ont rendu complexe le calcul de l'impôt des deux parties. Les bailleurs d'un "bien de location précis" se voyant réduire un avantage fiscal augmenteront les frais de location et les locataires examineront peut-être les mérites d'une déduction pour amortissement. Les nouvelles règles limitent le montant de l'amortissement fiscal que les bailleurs peuvent déduire. Ce montant est en fait réduit de façon considérable puisqu'aux fins du calcul de l'amortissment fiscal, le bailleur est réputé avoir consenti au locataire un prêt d'un montant égal à la valeur du bien loué dont l'intérêt est payable au "taux règlementaire". De l'amortissement fiscal permis et du revenu théorique à l'égard du prêt, seul le plus petit des deux montants est déductible. L'effet est de reporter la déduction pour amortissement à plus tard.

Comme la présente étude ne porte pas sur la méthodologie, nous utilisons la méthode proposée par Levy et Sarnat (1979) pour procéder à notre analyse de la décision d'acheter ou de louer. Les résultats montrent que, en présence de taux d'amortissement fiscal élevés, d'actifs à long terme et de taux d'intérêt relativement élevés, le bailleur demandera maintenant, par rapport à l'ancien régime fiscal, un loyer plus élevé et que, par conséquent, le locataire, s'il ne fait pas le choix, fera face à une VAN négative, et choisira donc d'acheter l'actif. Mais si le locataire fait le choix, sa VAN sera significativement positive et il choisira la location. De plus, dans les mêmes conditions, la VAN du locataire, s'il fait le choix, est positive pour une large fourchette de taux d'impôt et inversement liée à la différence entre le taux d'imposition du bailleur (L_r)et celui du locataire(L_e). Si le locataire choisit de ne pas choisir, on conserve alors la relation positive traditionnelle, mais la VAN du locataire est négative peu importe la différence d'imposition.

Tout en atteignant son objectif de base, grâce à ses modifications fiscales, le gouvernement a offert de nouvelles possibilités aux contrats de crédit-bail rentables. Bien que le locataire et le bailleur n'aient pas de contrôle sur le taux d'amortissement, le coût de la dette après impôt et les taux d'imposition, ils ont en général un certain contrôle sur les facteurs essentiels au calcul de la VAN. Premièrement, le locataire a la possibilité de choisir, droit qu'il exercera chaque fois que sa VAN est positive. Deuxièmement, le locataire et le bailleur peuvent négocier un bail de courte durée. Troisièmement, le locataire et le bailleur peuvent signer des contrats de location pendant les années fastes ou encore quand T_e est plus grand que T_r. Avant les changements, plus T_e était inférieur à T_r, mieux s'en trouvaient les deux parties. Désormais, le contraire est vrai.

Vendredi, 5 juin

SÉANCE SIMULTANÉE 1A

De 10 h 45 à 12 h 15

Lieu : Salle 107 du Duffy Science Centre

Analysts' Earnings Forecasts, Rational Expectations, and Macroeconomic Shocks

Lucy F. Ackert
Wilfrid Laurier University

William C. Hunter
Federal Reserve Bank of Atlanta

Résumé : La plupart des travaux récents sur les questions liées aux résultats prévus par les analystes financiers visaient à évaluer la précision de ces prévisions par rapport à celles des modèles naïfs. Une question encore plus importante toutefois concerne la rationalité de ces prévisions. En d'autres mots, dans quelle mesure celles-ci reflètent-elles toute l'information publique? Il semble bien naturel que dans la détermination des variables incluses dans l'ensemble des informations communes à tous les analystes, ces derniers connaissent, au moins, les valeurs passées des prévisions moyennes et des écarts de prévisions connexes ainsi que les valeurs actuelles et passées de diverses séries économiques connues publiquement.

Dans notre étude, nous évaluons la rationalité des résultats prévisionnels des analystes financiers qui contribuent à la base de données I/B/E/S. Nous examinons l'absence de biais et de correlation séquentielle, et conduisons des tests d'orthogonalité pour lesquels nous avons pris soins de n'inclure que l'information dont disposaient les analystes au moment de faire leurs prévisions. Les variables incluses dans l'ensemble des informations disponibles comprennent les valeurs passées des écarts prévisionnels, les valeurs passées des résultats prévisionnels par action, et les changements trimestriels de l'indice des prix à la consommation exprimés en pourcentages, le taux de chômage, les prix du pétrole, les cours boursiers, le produit national brut et les bénéfices d'entreprises.

Nous discutons aussi des effets de chocs globaux ou macroéconomiques sur les tests portant sur la rationalité des analystes. Il est clair que les chocs globaux ont une incidence sur les résultats ou, en d'autres mots, qu'il existe un cycle commercial. Nous démontrons qu'il est important de tenir compte de ces chocs afin d'éviter de tirer de mauvaises conclusions et illustrons comment une telle omission peut, au cours d'un test de la rationalité des attentes à l'aide des résultats prévisionnels des analystes, conduire à un faux rejet de l'hypothèse de rationalité. Nous avons utilisé un modèle expliquant la présence d'effets durant une période déterminée et y avons inclus la possibilité que surviennent des chocs globaux. Bien que les résultats de nos tests statistiques n'appuient pas parfaitement l'hypothèse d'attentes rationnelles, nous croyons que dans leur ensemble, ils appuient fortement la notion que les prévisions examinées sont rationnelles.

Vendredi, 5 juin

SÉANCE SIMULTANÉE 1B

De 10 h 45 à 12 h 15

Lieu : Salle 110 du Duffy Science Centre

The Use of Multiple Instruments for Measurement of Earnings Forecast Errors and Firm Size Effect: Predictive Accuracy Tests

Hay Y. Chung
Kyung-Hee University

Jeong-Bon Kim
Concordia University

Résumé : Il existe, pour une même variable sous-jacente, de nombreux substituts qui, toutefois, comme le témoigne l'expérience, accusent des écarts de mesures importants. Cet état de chose suggère qu'il serait possible d'éliminer une portion de cet écart en combinant divers substituts pour en faire une mesure hétérogène. Pour ce faire, nous nous servons de la méthode des variables instrumentales selon laquelle le signe des écarts de prévisions obtenus à partir de divers modèles chronologiques servent d'instruments multiples. Nous administrons ensuite ceux-ci à des séries de résultats trimestriels tirées d'un échantillon de 1512 entreprises américaines. Dans le but d'évaluer l'efficacité de cette nouvelle méthode de réduction des écarts, nous avons comparé les propriétés de la distribution des écarts prévisionnels hétérogènes avec celles de chacun des modèles chronologiques, pour ensuite exécuter un test de précision de prédiction à l'égard des différents écarts de prévisions. Nous avons approfondi notre étude en classant les entreprises selon la taille afin de vérifier si celle-ci constituait une variable déterminante. En outre, nous avons, à l'aide d'un ensemble réduit d'entreprises échantillons, évalué la supériorité possible du modèle des variables instrumentales par rapport aux prévisions des analystes financiers.

En bref, les résultats de notre étude sont les suivants. Premièrement, la méthode des variables instrumentales réussit à réduire les écarts puisqu'elle permet l'obtention de propriétés de distribution supérieures (moyenne moins élevée et faible dispersion des écarts prévisionnels) et de pourcentages absolus des écarts prévisionnels plus petits que ne le font les modèles chronologiques. Deuxièmement, cette méthode est plus efficace pour les échantillons de petites entreprises que pour ceux de grandes entreprises. Enfin, le rendement des écarts de prévisions des analystes, relevés du signe des écarts de diverses prévisions chronologiques de même que des leurs, s'avère supérieur à celui des écarts qui ne le sont pas. Ceci indique qu'il est encore possible de réduire les écarts de prévisions des analystes grâce à la technique des variables instrumentales. Dans l'ensemble, nos résultats révèlent que la méthode faisant l'objet de notre étude pourrait s'avérer un outil efficace quant à la réduction du problème des erreurs causées par les variables, particulièrement lorsque la structure expérimentale exige que les chercheurs séparent les effets des écarts des résultats prévisionnels et celles des variables de traitement, comme les changements de politique comptable.

Vendredi, 5 juin

SÉANCE SIMULTANÉE 1B

De 10 h 45 à 12 h 15

Lieu : Salle 110 du Duffy Science Centre

An Examination of the Timing and Results of a Quasi-Reorganization

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University of Waterloo

Wayne H. Shaw
University of Colorado at Boulder

Résumé : À peu d'exceptions près, les états financiers sont établis selon le principe que les éléments de l'actif et du passif sont rappportés à leur coût historique. La valeur marchande ne remplace le coût historique qu'en certaines occasions comme l'acquisition de biens. Il est nécessaire dans ces cas qu'un changement de propriétaire ait lieu pour que le bien en question soit réévalué.

Par contre, une entreprise peut procéder à la réévaluation de certains postes même en l'absence d'un changement de propriétaire. Cette procédure, la quasi-réorganisation, permet à l'entreprise d'éliminer un déficit. Dans un tel cas, l'entreprise peut également inscrire ses éléments de l'actif ou du passif à leur valeur marchande. Il existe cependant peu de directives pour guider l'entreprise dans la détermination des redressements appropriés et des circonstances propices. Bien que les quasi-réorganisations soient souvent associées à une entreprise voulant éviter la faillite et font partie d'un ensemble de "nouveau départ", elles peuvent avoir lieu dans d'autres conditions.

En 1988, l'American Institute of Certified Public Accountants publiait le document *Issues Paper 88-1* lequel présentait certaines préoccupations à l'égard du peu de directives concernant l'usage de la quasi-réorganisation. Il faisait un résumé des questions traitant de l'opportunité de la chose et de la mesure dans laquelle les états financiers devraient être redressés. Les questions soulevées sont les suivantes. Devrait-on, au moment de la quasi-réorganisation, s'attendre à un rendement futur accru? L'entreprise devrait-elle pouvoir redresser les comptes de capitaux propres seulement ou devrait-elle également rajuster les éléments de l'actif et du passif? Enfin, devrait-on permettre tant les augmentations que les baisses de la valeur liquidative?

Le but de la présente étude est de présenter de l'information sur l'opportunité et les effets de la quasi-réorganisation. Nous examinons plusieurs questions. Premièrement, est-ce que la détérioration du rendement financier d'une société mène à l'annonce de sa quasi-réorganisation? Deuxièmement, est-ce que le rendement s'améliore à la suite de la réorganisation? Finalement, est-ce que le rendement futur des sociétés quasi-réorganisées diffère de celui d'un échantillon de firmes aux prises avec un déficit mais qui n'ont pas redressé leur bilan?

Bref, nos résultats montrent que, en général, avant l'annonce de la réorganisation, les entreprises quasi-réorganisées avaient, par rapport à un groupe contrôle composé de sociétés de la même taille et appartenant aux mêmes industries, manifesté un faible rendement tant du point de vue financier que boursier. Cependant, le rendement de ces entreprises s'était grandement amélioré pendant la période entourant l'annonce. Cette amélioration touchait les ratios financiers et le cours des valeurs. Enfin, lorsque nous les avons comparées à d'autres entreprises qui avaient accusé des pertes, les sociétés quasi-réorganisées ont fait montre d'un rendement financier et boursier renforcé après la réorganisation. Ce résultat soutient l'affirmation que la quasi-réorganisation coïncide avec la mise en oeuvre de changements fondamentaux dans les activités de l'entreprise.

Vendredi, 5 juin

SÉANCE SIMULTANÉE 1B

De 10 h 45 à 12 h 15

Lieu : Salle 110 du Duffy Science Centre

The Production of Audit Services: Evidence from a Major Public Accounting Firm

Terrence B. O'Keefe
University of Oregon

Dan A. Simunic
University of British Columbia

Michael T. Stein
Rutgers University

Résumé : Le présent article se penche sur la prestation de services de vérification. Nous y définissons le résultat de la vérification comme étant la probabilité après coup que les états financiers ne comportent pas d'erreur importante et nous présumons qu'un cabinet d'expertise comptable produit le même résultat (c.-à-d. un degré de certitude postérieure) pour tous ses clients. Nous avons ensuite déterminé et testé le rapport entre les caractéristiques du client et de la mission, et le vecteur des effectifs nécessaires à la prestation de la vérification. Plus précisément, nous examinons les effets de la taille, de la complexité et du niveau de risque du client; la qualité des contrôles internes et la mesure dans laquelle le vérificateur se fie à ces contrôles; l'apprentissage du vérificateur dans le temps; et la coprestation de services de vérification et de consultation en gestion et en fiscalité. Nous testons les hypothèses concernant ces relations à l'aide de données provenant de 249 vérifications effectuées aux États-Unis par un cabinet d'expertise comptable international. Les résultats révèlent que l'écart entre les échantillons en termes de la quantité et de la composition des intrants, sur le plan du personnel, peut s'expliquer en grande partie par les mesures de la taille, de la complexité et du risque du client, c'est-à-dire les mêmes mesures qui s'étaient avérées importantes dans des travaux antérieurs portant sur les honoraires des vérificateurs. Notons que ces résultats ne sont pas sensibles au choix d'une forme fonctionnelle précise pour l'estimation. En outre, notre étude témoigne de l'existence d'une remise des honoraires pendant les deux premières années d'une mission de vérification. Cependant, rien n'est à signaler concernant l'apprentissage du vérificateur dans le temps.

Enfin, l'utilisation des contrôles du client ou la coprestation de services non liés à la vérification ne semblent pas avoir d'effets systématiques sur les intrants de vérification.

Vendredi, 5 juin

SÉANCE SIMULTANÉE 2A

De 14 h 45 à 16 h 15

Lieu : Salle 107 du Duffy Science Centre

An Empirical Study of the Effect of Auditor Sanctions on the Association Between Earnings and Returns of Client Firms

Keith A. Moreland
Canisius College

Résumé : Le présent article rend compte des résultats d'une étude sur les effets des sanctions levées par la Securities and Exchange Commission (SEC) contre les Huit (six) grands cabinets de vérification sur le rapport entre les résultats comptables et le rendement des valeurs des clients de ces cabinets. Nous incorporons la sanction à un modèle, où elle prend la forme d'une nouvelle information ayant une incidence sur le niveau prévu de la qualité du travail d'un cabinet de vérification.

Les travaux de recherche antérieurs soutiennent que la vérification sert à accroître la crédibilité d'une entreprise (Dopuch et Simunic, 1982). On entend ici par crédibilité la mesure dans laquelle les utilisateurs perçoivent l'information comme étant véridique. Les vérificateurs, donc, augmentent le degré de crédibilité puisqu'ils détectent et corrigent (ou, s'il y a lieu, rapportent) les erreurs qui se sont glissées dans le processus comptable du client.

Cet article vient compléter ces travaux en soutenant que la vérification a une incidence sur les signes permettant d'anticiper les résultats du client. Dans le cadre conceptuel de Holthausen et de Verrecchia (1988), les facteurs ayant une incidence sur la précision (l'inverse de la composante aléatoire selon laquelle les bénéfices comptables mesurent les bénéfices économiques) ont une incidence sur la réaction du cours des valeurs à un tel signe.

L'imposition d'une sanction contre un vérificateur représente ici un changement intertemporel dans le niveau de la qualité du vérificateur. Dopuch et Simunic (1982) et Wilson et Grimlund (1990) montrent que l'imposition d'une sanction a une incidence sur la position concurrentielle du cabinet subissant la sanction. Notre étude, pour sa part, examine les effets de l'imposition d'une sanction sur le contenu de l'information liée aux résultats du client et sur le lien entre les résultats et le rendement des valeurs des clients de ce cabinet de vérification.

À cette fin, nous avons élaboré des modèles de régression, selon la méthode des moindres carrés, des rendements de valeur excédentaires en fonction des bénéfices non anticipés. En outre, des travaux récents ont identifié d'autres déterminants des coefficients illustrant l'incidence des résultats sur le rendement en plus de la précision du signe permettant d'anticiper ces résultats. Comptent parmi ces déterminants, la persistance et la croissance (ou paramètres chronologiques) des bénéfices et du taux de rendement prévu. Les facteurs qu'on dit associés à ces déterminants sont compris dans nos modèles de régression multiple "inversée" des bénéfices sur les rendements.

Les résultats suggèrent que, en général, l'imposition d'une sanction contre un cabinet de vérification influence le rendement des valeurs lié aux bénéfices des entreprises des clients. Cependant, cette conclusion ne vaut pas pour toutes les sanctions. Nos résultats viennent aussi confirmer les travaux antérieurs quant à l'identification des facteurs associés aux déterminants des coefficients susmentionnés.

Vendredi, 5 juin

SÉANCE SIMULTANÉE 2A

De 14 h 45 à 16 h 15

Lieu : Salle 107 du Duffy Science Centre

The Economic Effect of Differing Levels of Auditor Assurance on Bankers' Lending Decisions

Sati Bandyopadhyay
University of Waterloo

Jere R. Francis
University of Iowa

Résumé : Depuis 1979, le Statement on Standards for Accounting and Review Services No. 1 permet aux CPA d'exécuter des missions de compilation, d'examen ou de vérification pour des sociétés autres que les sociétés ouvertes. Nous avons conduit une expérience dans le but de déterminer si l'augmentation du degré de fiabilité du vérificateur avait une incidence économique sur la prise de décision des utilisateurs d'états financiers. Pour ce faire, nous avons soumis une demande de prêt hypothétique à l'évaluation de 67 responsables des prêts chevronnés. Au cours de l'expérience, nous avons manipulé le degré de fiabilité du vérificateur selon les trois niveaux suivants : faible (compilations), moyen (examens) et élevé (vérifications). Nous soutenons que l'augmentation du degré de certitude réduit le risque de l'information concernant le candidat et devrait donc avoir un effet sur la prise de décisions économiques. Les responsables des prêts ont pris deux décisions : l'une concernant le consentement du prêt et l'autre, la détermination du taux d'intérêt par rapport au taux préférenciel. Les résultats indiquent que, en moyenne, au fur et à mesure que le degré de certitude augmente, les chances que le prêt soit consenti augmentent et la prime d'intérêt exigée diminue. Plus précisément, la probabilité qu'un prêt soit consenti est passée de 26% pour les compilations à 48 % pour les examens à 68 % pour les vérifications. En ce qui a trait à la différence du taux d'intérêt par rapport au taux préférenciel, elle était de 2,24 % pour les compilations, de 1,96 % pour les examens et de 1,71 % pour les vérifications. Ces résultats correspondent à l'hypothèse voulant que l'augmentation du degré de certitude réduise le risque de l'information et ait une incidence économique sur la décision à l'égard d'un prêt.

Afin de déterminer si l'effet positif de la hausse du degré de fiabilité du vérificateur sur les taux d'approbation de prêt et sur les taux d'intérêt variait selon le type de cautionnement en cause, soit l'utilisation de clauses restrictives ou de biens affectés en garantie, nous avons manipulé ces deux types de cautionnement. Le test se fonde sur la théorie d'agence. Dans le cas des clauses restrictives, le prêteur porte un grand intérêt à la crédibilité des états financiers puisque cette forme de cautionnement repose sur la crédibilité des chiffres comptables. Dans le cas de l'affectation de biens en garantie, comme le prêt est directement garanti par le bien en question, son consentement ne repose pas de façon explicite sur les états financiers. Les résultats ne montrent toutefois pas une telle interaction.

Enfin, nous avons également manipulé deux niveaux de services de conseils de gestion, service complet ou service absent, afin de déterminer si et comment ceux-ci peuvent influencer la décision de consentir ou non un prêt. Depuis fort longtemps, il existe une controverse concernant la perception des utilisateurs d'états financiers vérifiés à l'égard des conseils de gestion. Les résultats montrent qu'il existe un effet positif à peine significatif de la part des conseils de gestion, c'est-à-dire que le taux d'approbation de prêt augmente légèrement et que la prime d'intérêt baisse. Toutefois, la portée de ces effets n'est pas significative du point de vue économique.

Vendredi, 5 juin

SÉANCE SIMULTANÉE 2A

De 14 h 45 à 16 h 15

Lieu : Salle 107 du Duffy Science Centre

The Management Control Systems of the Future

R. Murray Lindsay
University of Saskatchewan

Résumé : Le présent article décrit plusieurs des caractéristiques des systèmes de contrôle de gestion qui sous-tendront dans l'avenir les efforts continus des sociétés dans la voie de l'amélioration. Il se veut une intégration des écrits récents dans le domaine et des observations importantes (tendances) notées par le chercheur au cours d'une étude (combinaison d'un sondage national et d'études de cas) menée récemment et commanditée par la Société des comptables en management du Canada. Le but de cette étude était d'examiner les changements à apporter aux systèmes de contrôle de gestion au fur et à mesure qu'une société se rapproche de la fabrication de classe mondiale et de type "au moment adéquat".

De plus en plus, les entreprises mettent l'accent sur l'amélioration de la safisfaction de la clientèle. Cette réorientation a entraîné un certain nombre de changements dans la structure des organisations. Les sociétés se dirigent maintenant vers i) les structures en réseau; ii) l'utilisation d'équipes permanentes et temporaires formées de spécialistes de domaines différents; iii) la réduction importante du nombre de cadres intermédiaires et la décentralisation de la prise de décision vers les niveaux inférieurs; et iv) l'utilisation de départements de production *autonomes* et très flexibles, organisés par famille de produits. Bref, les structures deviennent de plus en plus organiques.

Ces transformations structurales sont accompagnées de changements au niveau des systèmes d'information, changements qui promettent d'ailleurs d'être des plus impressionnants. Afin de refléter la responsabilité et l'autorité accrues qu'on vient de conférer aux employés des niveaux inférieurs, on établira avec eux une meilleure communication (souvent en ligne). Chacun dans l'entreprise s'acquittera de responsabilités informationnelles (qui dépend de moi pour recevoir de l'information et de qui est-ce que je dépends?) et, par le fait même, possédera une excellente compréhension de tout le processus de travail. Ainsi, tous auront le sentiment d'appartenir à une équipe et seront conscients du rendement de l'ensemble. Afin de concevoir des systèmes d'information efficaces, les comptables en gestion devront, plus qu'ils ne le faisaient auparavant, se familiariser avec les processus et questions opérationnelles. Il leur faudra également participer à la formation des employés en ce qui a trait à la façon dont l'entreprise gagne et perd de l'argent et au rôle que chacun joue dans le processus.

Enfin, en ce qui concerne la comptabilité de gestion, nous avons pu faire quatre observations majeures. Premièrement, nous ne pouvons plus continuer de définir les avantages des changements des procédés de fabrication principalement en termes de réduction de la main-d'oeuvre ou des frais généraux alloués arbitrairement selon le volume des activités; en effet, la plupart des améliorations entraînent aussi une baisse sensible des frais *non* directs. Deuxièmement, les mesures fondées sur le temps deviendront de plus en plus importantes; elles jettent la lumière sur de nombreux aspects du processus d'innovation et mettent l'accent sur les activités sans valeur ajoutée ainsi que sur les coûts inhérents. Troisièmement, la majorité des programmes de réduction de coûts à venir se concentreront sur la réduction des frais généraux. Enfin, il est nécessaire de reconnaître davantage l'important rôle béhavioriste de l'information comptable : celle-ci contribue à inciter les employés à poursuivre les stratégies d'amélioration perpétuelle adoptées par la direction générale.

Vendredi, 5 juin

SÉANCE SIMULTANÉE 2B

De 14 h 45 à 16 h 15

Lieu : Salle 209 du Duffy Science Centre

The Pressures for Change on Management Accounting Practice

Peter J. Clarke
University College
Dublin, Ireland

Eldon J. Gardner
University of Lethbridge

Résumé : Le présent article examine la pratique actuelle de la comptabilité de gestion et les pressions au changement qu'elle subit depuis plusieurs années. On peut classer ces pressions en deux groupes de base.

1) Le nouveau milieu de la fabrication, où l'on met l'accent sur la qualité et la flexibilité de la production, changera la pratique actuelle et les façons de mesurer le rendement.

2) L'altération des coûts incorporables, engendrée par les méthodes de prix de revient actuelles, pourrait disparaître grâce à l'utilisation de méthodes du prix de revient par activité élémentaire.

Cet article vise à expliquer, par le biais d'une recension des écrits sur le sujet, les éléments fondamentaux qui composent le nouveau milieu de la fabrication et la méthode du prix de revient par activité élémentaire ainsi qu'à en déterminer les implications principales pour la pratique de la comptabilité de gestion.

À cette fin, nous avons divisé l'article en trois sections. Nous examinons d'abord le nouveau milieu de la fabrication en détails afin de discerner les changements qu'il a apportés. Nous discutons ensuite de la méthode du prix de revient par activité élémentaire ainsi que de son incidence sur le nouveau milieu de la fabrication. Enfin, nous présentons les implications de chacun pour la comptabilité.

Vendredi, 5 juin

SÉANCE SIMULTANÉE 2B

De 14 h 45 à 16 h 15

Lieu : Salle 209 du Duffy Science Centre

The Management Information Content of the MIS Variance Analysis Guidelines for Canadian Health Care

Ronald E. Hoyt
Colin Lay
Denis H.J. Caro
Université d'Ottawa

Résumé : Le présent article examine la façon dont les lignes directrices concernant les SIG influencent l'analyse de variance des activités sous le contrôle des administrateurs des institutions canadiennes vouées aux soins de la santé. On compare d'abord les propositions aux méthodes traditionnelles d'analyse de variance abordées dans les écrits comptables. Le test de responsabilité de l'administration sert de critère de base dans l'évaluation de la qualité des signes produits. Comptent parmi les autres critères, le coût d'obtention des données, leur pertinence aux décisions de financement, leur opportunité, et leur validité. La recherche se concentre sur l'utilité telle qu'on la définit en termes de contenu de l'information qui se rattache aux décisions que doivent prendre les administrateurs et qui affectent l'efficacité d'exploitation du domaine de responsabilité d'un gestionnaire en particulier.

Un examen en profondeur de la question nous a mené à considérer les réponses possibles à la question de la qualité du contenu de l'information. Il semble que la méthode actuelle d'analyse des écarts vise à remplacer une analyse inappropriée ou spécialisée par une démarche normalisée mise en oeuvre à l'échelle nationale. Par conséquent, lorsqu'on applique le test de responsabilité à certaines décisions, les critères de représentation valide, d'opportunité, de pertinence et du coût de production prennent différents paramètres dans un système de paiement prospectif tel le budget global généralement utilisé au Canada. Cependant, un système de remboursement rétrospectif, comme celui que semblent favoriser les tendances économiques et le gouvernement pour les années 1990, nécessite généralement des données détaillées sur les frais liés aux différentes charges de cas, catégories de maladies, protocoles de traitements et caractéristiques à l'égard de la capacité.

Nos résultats suggèrent que les données relatives aux écarts aux fins de contrôle seront plus ou moins utiles selon la méthode et la philosophie derrière le financement des institutions de la santé. Il semble, après un examen minutieux, que les normes actuelles en termes de SIG soient appropriées en ce qui a trait au financement et à la préparation de rapports traditionnels, mais qu'elles ne permettent pas les décisions de gestion efficientes au niveau de la responsabilité départementale. Il est possible que l'habileté de la direction à faire la différence entre la présentation d'informations selon diverses méthodes dans le choix de celles qui réduiront les coûts nécessite une analyse encore plus minutieuse des activités qui font monter ces coûts et de leur lien avec les services fournis.

Vendredi, 5 juin

SÉANCE SIMULTANÉE 2B

De 14 h 45 à 16 h 15

Lieu : Salle 209 du Duffy Science Centre

Gender and the Accountancy Profession: An Oral History of Women Pioneers in the Canadian Accounting Profession.

Carol A. McKeen
Alan J. Richardson
Queen's University

Résumé : On attribue le succès de la profession comptable dans sa quête de récompenses sociales à des stratégies de "restriction" (Lee, 1990) qui resserrent la sphère de ses connaissances, lui donnent le monopole des pouvoirs sur certains domaines de la pratique et limitent le nombre des élus aux gratifications que procure la pratique. Dans le présent article, nous examinons le sexe comme critère limitant l'accès à la profession comptable au Canada. Nous nous sommes servis de documents d'archives et de récits oraux afin de déterminer les mécanismes utilisés pour contrôler la composition féminine et masculine de la profession et d'étudier les expériences personnelles de femmes qui, les premières, ont défié cet aspect restrictif de la profession. Notre revue de l'entrée des femmes dans la profession se divise en trois parties, à savoir la formation, l'emploi et la reconnaissance professionnelle. Nous présumons que l'obtention du statut professionnel requiert le passage successif à ces trois étapes, mais que l'étendue et la nature de la discrimination présente à chacune est indépendante. Notre analyse du rôle du sexe comme élément restrictif de la profession comptable se fonde sur les théories féministes qui cherchent à expliquer l'expérience des femmes dans des sociétés dominées par les hommes.

Nous avons utilisé des récits oraux pour obtenir des données sur des événements dont se souviennent certaines femmes faisant partie de la profession au Canada. Nos sujets étaient des femmes qui ont été parmi les premières à avoir été nommées membres par les associations comptables provinciales. Vingt-deux femmes ont accepté de participer à une entrevue téléphonique, enregistrée sur bande, d'une durée d'environ 60 minutes. De plus, nous avons effectué une revue de documents gouvernementaux et d'archives d'associations comptables pour rassembler de l'information sur la disponibilité et la participation des femmes au cours de l'histoire à l'enseignement de la comptabilité.

Les entrevues et les statistiques révèlent l'existence d'une tendance à exclure les femmes de diverses façons : le financement limité de l'éducation, le confinement des femmes par les orienteurs professionnels au travail de bureau, les attentes sociales qui limitaient les aspirations des femmes, les politiques des associations et des cabinets d'experts-comptables décourageaient l'embauche des femmes. Ces techniques d'exclusion coïncidaient avec la domination du domaine public, du pouvoir et du capital par les hommes, qui relégaient les femmes au domaine privé. En outre, puisque le pouvoir et les privilèges avaient traditionnellement été associés aux hommes, on croyait que le statut d'une occupation était lié de façon négative à la proportion de femmes dans le domaine. On utilisait cette croyance pour justifier les pratiques d'exclusion tant dans l'emploi que dans l'adhésion à des associations professionnelles. Enfin, on croyait que les femmes, en tant qu'êtres dépendants, ne devraient pas jouir de pleins droits de citoyenneté et, par conséquent, ne pourraient pas fonctionner à titre de professionnels autonomes.

La plupart des barrières officielles à l'entrée des femmes dans la profession ont été anéanties au début du vingtième siècle à la suite des activités des mouvements féministes. Les histoires officielles et les statistiques pour la période suivant l'année 1930 ne fournissent aucune explication systématique concernant le peu de femmes dans le domaine de la comptabilité, et ce, jusque dans les années 1970. Cependant, les récits oraux recueillis indiquent que durant cette période, les femmes étaient exclues de la profession principalement en raison des politiques d'embauche des cabinets. Ces politiques étaient reconnues et se reflétaient dans les conseils informels prodigués aux femmes quant à leur orientation scolaire. Il est clair que le sexe est demeuré un facteur important dans les pratiques d'embauche jusqu'à aussi tard que dans les années 1970.

Pour conclure, nous abordons les défis auxquels les femmes ont fait face après les années 1970, période après laquelle l'entrée dans la profession n'était plus une préoccupation, et les présentons dans un contexte général pour tenir compte des changements continuels que subit la société quant à la façon dont le travail est structuré et évalué.

Vendredi, 5 juin

SÉANCE SIMULTANÉE 2C

De 14 h 45 à 16 h 15

Lieu : Salle 110 du Duffy Science Centre

The Accounting Profession In The Nineties: Is The Gender Gap Narrowing?

Maria Grammas
Jeffrey Power
University of Rhode Island

Résumé : Dans le présent article, nous examinons certaines des questions d'importance qui se présentent aux récents diplômés en sciences comptables et vérifions s'il existe sur ces sujets des différences entre les hommes et les femmes. Nous abordons le cheminement professionnel choisi, la rémunération, l'influence des contacts, les interruptions de carrière, le milieu de travail et le stress au travail. Tous ces sujets ont déjà fait l'objet de nombreux écrits qui ont révélé des degrés variés de correlation entre la satisfaction au travail et le rendement. On a également suggéré que l'intérêt suscité par ces questions varie selon qu'il s'agisse de femmes ou d'hommes.

Pour traiter la question des différences au travail selon le sexe, nous avons conduit un sondage auprès de 300 diplômés en comptabilité. Nous avons groupé les répondants selon le sexe, l'année d'obtention du diplôme (1976-1991), et le genre de diplôme (B.Sc. ou M.Sc.). Les résultats de l'étude indiquent que les femmes sont plus susceptibles que les hommes de subir le stress lié aux situations de conflit entre la famille et le travail; qu'elles sont perçues par les hommes comme n'accordant pas autant qu'eux de l'importance à la carrière et comme étant moins aptes qu'eux à affronter les demandes de la profession de comptable; qu'elles sont plus que les hommes préoccupées par les avantages sociaux et les conditions de travail; qu'elles ont moins d'occasions que les hommes d'utiliser les politiques du bureau et les contacts aux fins d'avancement professionnel. Ces différences entre les hommes et les femmes sont les mêmes, peu importe le type de diplôme obtenu ou l'année d'obtention. Bien que l'année d'obtention du diplôme n'influence pas les différences entre les hommes et les femmes, les diplômés récents des deux sexes pensent que la femme accorde plus d'importance à la carrière et qu'elle a plus de chance d'avancer aussi rapidement que l'homme que ne le pensaient les diplômés des années précédant 1986.

Par surcroît, cette étude révèle que lorsque les hommes et les femmes possèdent la même expérience, le même diplôme, et le même titre professionnel, ils reçoivent une rémunération comparable. Cependant, le ratio de roulement des cabinets d'expertise comptable, particulièrement dans les cas des Six grands cabinets, est plus élevé pour les femmes que pour les hommes. Les femmes préfèrent quitter le stress et la rigidité de l'exercice en cabinet pour obtenir un poste bien rémunéré et plus flexible ailleurs.

Les résultats de cette étude montrent également qu'il existe encore de nombreuses différences entre les hommes et les femmes comptables et que ces différences, en général, ne changent pas. Fait intéressant pour les futurs employeurs, les femmes commenceront tout aussi probablement que les hommes leur carrière par l'exercice en cabinet et obtiendront leur certificat de c.p.a.; toutefois, elles opteront plus vraisemblablement pour un changement de voie et choisiront le secteur privé ou public, où le stress semble moindre et où les chances d'avancement et le milieu de travail semblent meilleurs.

Vendredi, 5 juin

SÉANCE SIMULTANÉE 2C

De 14 h 45 à 16 h 15

Lieu : Salle 110 du Duffy Science Centre

Reading the Regulatory Text: Regulation and the New Stock Issue Process

Dean Neu
University of Calgary

Résumé : Les marchés boursiers et le procédé d'émission de nouvelles valeurs sont omniprésents. Cependant, la recherche effectuée jusqu'à ce jour n'a jamais vraiment examiné si oui ou non le procédé d'émission de nouvelles valeurs est fonctionnel pour toutes les catégories de participants. La présente étude épouse une perspective différente. Nous nous servons d'une étude de cas pour examiner les conséquences sociales d'une émission ratée (stock failure). Plus précisément, l'analyse examine *comment* fonctionne la réglementation régissant l'émission des valeurs et qui bénéficie de cette réglementation. Nous espérons que cette étude, de par sa nature, remettra en question l'hypothèse sans conteste que les marchés boursiers sont efficaces pour toutes les catégories de participants.

Vendredi, 5 juin

SÉANCE SIMULTANÉE 2C

De 14 h 45 à 16 h 15

Lieu : Salle 110 du Duffy Science Centre

Leverage and Intertemporal Income Smoothing in Canada: An Empirical Study

Raafat R. Roubi
L. Culumovic
Brock University

Résumé : À l'aide d'un échantillon de 65 firmes canadiennes incluses dans la base de données du Financial Post, la présente étude rapporte des éléments empiriques qui témoignent des activités de nivellement des bénéfices de sociétés canadiennes qui tentent d'obtenir du capital par emprunt. La probabilité qu'une société émettant des titres obligataires nivelle ses bénéfices augmente de façon significative au fur et à mesure que le ratio d'endettement de la firme prend de l'ampleur. Inversement, il est peu probable qu'une société qui vende ou rachète des capitaux propres s'adonne à cette pratique.

Trueman et Titman (Journal of Accounting Research, Vol. 26 supplement, 1988, pp. 127-139) ont montré qu'un dirigeant d'entreprise est poussé à niveler les bénéfices réalisés s'il souhaite financer ses opérations à un coût moindre. Leur théorême se fonde sur deux hypothèses : 1) les bénéfices économiques de l'entreprise sont une variable aléatoire dont la distribution est normale et la moyenne, fixe et connue (c.-à-d. une cible) et dont l'écart est inconnu de tous sauf du gestionnaire; 2) les non initiés croient selon une probabilité donnée que le gestionnaire peut transférer les bénéfices; 3) les non initiés croient également, étant données les probabilités antérieures, que l'écart du flot des bénéfices est ce qu'il est; et 4) si le gestionnaire peut transférer les bénéfices de la deuxième période à la première, seulement une proportion fixe connue de la différence entre le bénéfice économique de la firme pour la première période et sa cible peut être transférée de la deuxième période à la première. Alors, selon les résultats présentés, les prêteurs réviseront leurs attentes et les probabilités à propos de l'écart réduit du flot des bénéfices de la firme. Comme Trueman et Titman l'ont indiqué, la moyenne prévue de la probabilité et de l'attente à l'égard de la possibilité d'un écart réduit est toujours *plus élevée* si la firme nivelle ses bénéfices que si elle ne le fait pas. Ce théorème montre que, même si les résultats de la deuxième période sont inconnus, il est *toujours* avantageux de niveler les bénéfices de la première période si on se fie à l'équilibre des probabilités, d'après les hypothèses susmentionnées.

Nous utilisons le modèle de régression logistique pour tester la présence de différences significatives entre les deux groupes d'entreprises (celles qui nivellent et celles qui ne nivellent pas) à l'égard de plusieurs variables à savoir la taille, la vente de capitaux propres, le rachat de capitaux propres, la vente de titres obligataires, et la valeur relative des titres vendus par rapport à la dette totale et aux capitaux propres vendus. Après avoir formé plusieurs portefeuilles, nous avons fait des analyses statistiques pour les deux groupes. Chaque portefeuille comportait un certain degré d'endettement, selon le ratio de la dette sur la valeur marchande des capitaux propres ordinaires, au début de la période, et comptait un certain nombre de sociétés des deux types. Les tests révèlent que les firmes dont l'endettement est élevé sont plus susceptibles de niveler le bénéfice net au moment d'émettre des titres obligataires.

Il existe deux explications possibles. D'une part, la direction a adopté un comportement visant la maximisation de la richesse qui permet aux détenteurs de valeurs actuelles de bénéficier au détriment des détenteurs des valeurs nouvelles. Ce phénomène peut se produire si, par exemple, de nouveaux détenteurs d'obligations accepte un rendement moindre. Grâce au nivellement, les fluctuations des bénéfices diminuent, ce qui traduit la présence d'un flot de revenu stable. D'autre part, la direction tente de respecter les limites des clauses restrictives tout en maintenant ou en libéralisant ses politiques de distribution des dividendes et ses primes.

Samedi, 6 juin

SÉANCE SIMULTANÉE 3A

De 10 h 45 à 12 h 15

Lieu : Salle 110 du Duffy Science Centre

The Performance of Target and Bidding Companies Involved in Hostile Takeover Bids

Christine Parkinson
Bradford University

Résumé : Le présent article vise à déterminer les caractéristiques financières d'entreprises qui ont fait l'objet d'une prise de contrôle et des acquéreurs éventuels dans le cadre d'offres d'achat hostiles sans succès pendant la période 1975-1984. Pour ce faire, nous avons examiné les différences de moyennes et procédé à des analyses discriminantes. Les résultats montrent qu'il existe des différences importantes entre les sociétés cibles et les acquéreurs éventuels dans les périodes précédant et suivant la période où les offres d'achat sont effectuées, ce qui vient soutenir les diverses théories de fusion. En effet, la victoire semble pousser les sociétés cibles à améliorer leur efficience. Quant aux perdants, ils accusent une baisse de rendement au cours des deux années suivant leur défaite.

Samedi, 6 juin

SÉANCE SIMULTANÉE 3A

De 10 h 45 à 12 h 15

Lieu : Salle 110 du Duffy Science Centre

On the Accounting-Economics Interface

Irene M. Gordon
Lawrence A. Boland
Simon Fraser University

Résumé : On a fait de nombreuses observations concernant la pertinence d'un paradigme économique néoclassique pour expliquer le rôle de la comptabilité dans une organisation économique. Bien que peu de théoriciens comptables béhavioristes, particulièrement ceux qui se concentrent sur la comptabilité de gestion, rejetteraient d'emblée ce paradigme, la plupart soulève des plaintes qui semblent porter sur la non-pertinence de ce même paradigme. De ceux qui se plaignent de sa pertinence, beaucoup mettent l'accent sur l'hypothèse néoclassique de rationalité. Nous croyons que l'hypothèse de rationalité, ou encore du comportement de maximisation, n'est pas un problème en soi. S'il en existe un cependant, il se situe au niveau des lacunes connues de la théorie économique néoclassique qui en limite l'applicabilité en recherche comptable. Le présent article examine les limites du paradigme économique néoclassique en ce qui a trait à l'étude de la comptabilité et plus particulièrement de la comptabilité de gestion.

À cette fin, nous avons divisé notre étude en quatre sections. La première section présente les écrits et l'argument selon lequel il est futile de critiquer la rationalité économique. La deuxième section se fonde sur un argument présenté par Demski (1988) et plus tard souligné et élaboré par Boland et Gordon (1991). Cet argument insiste sur le fait que les difficultés entourant l'utilisation de la recherche fondée sur l'économie en comptabilité relèvent plus de l'absence d'un certain équilibre que des hypothèses posées à propos des motivations des personnes prenant part au marché. Dans la troisième section, nous présentons les plaintes portées par deux écoles de comptabilité de gestion. Il s'agit de l'école traditionnelle (Johnson et Kaplan, 1987) et de l'école de "sociologie organisationnelle" (Cooper, Hayes et Wolf, 1983). Pour conclure, nous nous servons des plaintes portées par ces deux écoles pour soutenir que le problème ne touche pas l'hypothèse de rationalité du modèle économique traditionnel, mais plutôt l'applicabilité du modèle à différentes situations. C'est donc sur ce point que devront se pencher les chercheurs dans l'avenir.

Samedi, 6 juin

SÉANCE SIMULTANÉE 3A

De 10 h 45 à 12 h 15

Lieu : Salle 110 du Duffy Science Centre

Social Responsibility, Legislation and Disclosure: The Case of Acid Rain and Falconbridge

Nola Buhr
The University of Western Ontario

Résumé : Ce qu'une entreprise accomplit en termes de responsabilité sociale, ce qu'elle doit faire conformément aux règlements imposés par le gouvernement et la façon dont elle se présente par le biais de ses rapports annuels ne reflètent pas nécessairement les mêmes réalités. L'information fournie par une entreprise peut très bien ne servir qu'à impressionner la cour afin de justifier ses actes auprès de ses mandants. En outre, avec le temps, des activités perçues comme étant acceptables par la société peuvent devenir moins acceptables au fur et à mesure que les besoins sociaux changent et forcent le gouvernement à apporter des modifications à la réglementation.

Le présent article examine le rapport entre la responsabilité sociale, la législation et la présentation d'informations, à l'aide du cas de Falconbridge et les émissions d'anhydride sulfureux pendant la période allant de 1950 à 1990. Nous avons abordé deux questions importantes. 1) Comment l'entreprise a-t-elle réagi aux modifications de la réglementation à l'égard de la réduction des émissions d'anhydride sulfureux? 2) Comment l'entreprise a-t-elle choisi de présenter, dans ses rapports annuels, ses activités visant la réduction des émissions?

Pour ce faire nous avons utilisé l'historiographie, des entrevues et avons conduit des analyses de contenu. Nous avons obtenu l'information pertinente de sources publiques et d'archives; il s'agissait surtout de rapports annuels de Falconbridge, de documents gouvernementaux et d'articles de journaux, de revues d'affaires et spécialisées. Nous avons mené 13 entrevues avec des membres du personnel de la direction au siège social de la firme à Toronto; avec des membres du personnel de la direction et de l'exploitation à Sudbury; et avec un représentant du ministère de l'environnement de l'Ontario.

Nous avons choisi d'examiner une période de quarante et un ans puisqu'il serait ainsi possible de couvrir tous les efforts déployés par la firme en vue de réduire ses émissions d'anhydride sulfureux. Falconbridge a réagi pour la première fois au début des années 1950, purement pour des raisons économiques. Toutefois dans les années 1970, la firme a mis sur pied un programme d'amélioration environnementale à la suite de l'émission du premier arrêté d'intervention du gouvernement, en 1969. Dans les années 1980 Falconbridge a adopté une position plus proactive. En 1991, elle a réussi à réduire ses émissions d'anhydride sulfureux en-deça des niveaux permis prévus pour 1994, lesquels ont été régis par le plus récent arrêté du gouvernement, émis en 1985. C'était dans le cadre du programme "les pluies acides, un compte à rebours".

Ces faits suggèrent que Falconbridge a défini sa notion de responsabilité sociale comme étant la nécessité d'anticiper et de surpasser les exigences gouvernementales. L'analyse du contenu des rapports annuels publiés au cours de la période étudiée montre que les informations présentées étaient pour la plupart concises et quantitatives et non, volumineuses ou trop descriptives, ce qui n'aurait servi que l'intérêt de la firme. Par conséquent, dans le cas de Falconbridge, responsabilité sociale, législation et présentation de l'information sont des notions qui se rapprochent de façon relativement considérable.

Samedi, 6 juin

SÉANCE SIMULTANÉE 3B

De 10 h 45 à 12 h 15

Lieu : Salle 107 du Duffy Science Centre

Governance for Government? The Construction of Government Auditing

Vaughan S. Radcliffe
University of Alberta

Résumé : Le présent article examine le développement et l'établissement de la comptabilité publique moderne dans les provinces du Canada et traite plus particulièrement de l'Alberta. Le développement de la vérification d'efficience, d'efficacité et d'optimisation des ressources s'avère un grand pas dans la pratique comptable.

Nous voulons présenter une structure théorique pour faciliter la compréhension de la comptabilité publique. Nous reconnaissons d'abord le potentiel de la comptabilité comme outil permettant au gouvernement d'agir et comme moyen de contrôler ces actions; nous faisons par la suite une synthèse des théories de Weber et de Foucault sur la bureaucratie et le gouvernementalisme respectivement. Ces théories tentent d'expliquer les raisons pour lesquelles nous sommes tous convaincus de la valeur de notions comme l'économie et l'efficience mais que nos opinions se partagent quant à la façon de mettre ces notions en oeuvre. Elles serviront grandement à quiconque veut comprendre la comptabilité publique dans les provinces canadiennes. Un examen de la législation en place révèle des écarts sensibles.

Nous procédons ensuite à une analyse des dispositions de la législation de toutes les provinces, puis nous attardons plus particulièrement sur celle de l'Alberta. Cette province semble occuper une position modérée plutôt intéressante. En effet, elle prévoit la vérification du processus comptable et des systèmes de contrôle de la gestion conçus pour assurer l'efficience à ce niveau, mais il s'agit de la seule province où cette exigence n'est pas accompagnée d'une disposition à l'égard de la vérification des activités du gouvernement en termes d'économie et d'efficience. Les conditions uniques renfermées dans la Loi de l'Alberta font du débat qui ont entouré son passage un événement qui peut-être mettra en lumière les buts et les idées qui sous-tendent la vérification d'optimisation des ressources.

Nous avons analysé l'établissement de la comptabilité publique en Alberta au cours de l'histoire. Pendant les années 1970, contrairement à la plupart des juridictions qui ont réformé la vérification publique, la province se démarque par une croissance sensationnelle des recettes et des dépenses. Curieusement, les débats législatifs ne semblaient pas correspondre aux conditions de la loi. Des propositions antérieures concernant l'introduction de la vérification de l'efficience des activités n'apparaissaient pas la loi; toutefois les ministres affirmaient qu'elle comprenait des dispositions à cet effet. Les conditions de la loi permettent la présentation exhaustive d'informations privées. Bien que le trésorier provincial de l'époque ait acclamé la création du bureau du vérificateur général, moyen de tenir le gouvernement responsable auprès des Albertains, huit ans plus tard, ces derniers n'ont toujours pas vu de rapport sur l'efficience des systèmes de gestion du gouvernement.

Notre article vient nous aider à comprendre que la vérification publique fait partie de la logique de la société moderne, dans laquelle on s'attend à ce que l'exercice du pouvoir soit rationnel et pensé. C'est grâce à cette gouvernementalisation ou bureaucratisation de la vie moderne que tous peuvent s'entendre sur la valeur de l'administration efficace et rationnelle des ressources. Ces programmes nécessitent tout de même, pour prendre vie, une technologie quelconque. C'est à l'interface entre les programmes et les technologies que la dissension se fait sentir et que les rôles de la comptabilité sont établis. Je me pencherai donc, dans des travaux ultérieurs, sur ces dimensions afin d'explorer les façons dont des notions élargies de vérification pourront redéfinir la pratique de la vérification, la position des comptables (publics et privés), et les conceptions quant à la gestion la meilleure.

Samedi, 6 juin

SÉANCE SIMULTANÉE 3B

De 10 h 45 à 12 h 15

Lieu : Salle 107 du Duffy Science Centre

Social Responsibilitiy Disclosures in Canada: A Chief Executive Perspective

Peter Secord
Anamitra Shome
St. Mary's University

Résumé : La présente étude fait état, pour un échantillon de 300 firmes figurant au TSE, des résultats d'une analyse de contenu et d'un questionnaire quant à la présentation volontaire d'informations concernant la responsabilité sociale d'une entreprise. Nous avons administré un questionnaire aux directeurs généraux de ces firmes afin de déterminer leur attitude envers la responsabilité sociale et la présentation des informations inhérentes dans leurs rapports annuels.

Nous avons effectué des tests statistiques où nous avons d'abord regroupé les rapports annuels avec le directeur général concerné, puis déterminé le rapport entre les réponses au questionnaire et la quantité d'informations présentées. Nous avons décelé des corrélations importantes pour un certain nombre de questions, ce qui indique que les attitudes des directeurs généraux pourraient avoir une influence sur les quantités d'informations volontaires et probablement sur le degré de responsabilité sociale de la firme.

Samedi, 6 juin

SÉANCE SIMULTANÉE 3B

De 10 h 45 à 12 h 15

Lieu : Salle 107 du Duffy Science Centre

L'effet de la pollution sur la valeur boursière des titres : résultats empiriques

Denis Cormier
Université du Québec à Montréal

Michel Magnan
Université McGill

Bernard Morard
Université de Genève

Résumé : Dans cette recherche, nous testons la relation entre la valeur boursière des titres et leur performance sociale telle que mesurée par leur niveau de pollution. Nous posons l'hypothèse que les firmes ayant une bonne (mauvaise) performance environnementale devraient être récompensées par le marché (bénéficier d'une prime). Cette relation se situe dans le cadre d'une préoccupation de plus en plus grande du public en ce qui a trait aux conséquences néfastes de certaines activités des entreprises sur la société en général, d'où la présence d'investisseurs "moraux" et la présence d'investisseurs qui tiennent compte des coûts, pour la firme, reliés aux dommages causés à l'environnement.

Deux nouveautés sont introduites dans cette recherche. Premièrement, nous calculons pour chaque firme un indice de pollution à l'aide de données gouvernementales. Deuxièmement, nous évaluons l'impact de l'information sociale pour l'investisseur en utilisant l'équation comptable fondamentale.

Les résultats montrent l'existence d'une prime (escompte) à la valeur boursière pour les firmes qui respectent (ne respectent pas) les normes de pollution, montrant ainsi la présence d'investisseurs "moraux". Ces résultats nous amènent à souhaiter la publication d'information sociale vérifiée, de manière à mieux renseigner le marché.

Samedi, 6 juin

SÉANCE SIMULTANÉE 3C

De 10 h 45 à 12 h 15

Lieu : Salle 209 du Duffy Science Centre

Financial Reporting and the Disclosure of the Economic Realities of Environmental Legislation

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School of Business Administration
University of Western Ontario

David Conklin, Ph.D., Directeur,
University of Western Ontario Office
The Institute for Research on Public Public Policy

Résumé : Au moment même où le Canada se trouve en pleine bataille économique en vue de mettre un terme à une dure récession, l'introduction de nouvelles lois, comme la Loi sur les mines de l'Ontario, et l'addition du chapitre 3060 sur les immobilisations au Manuel de l'Institut Canadien des Comptables Agréés (I.C.C.A.) nous forcent à réfléchir sérieusement à leur incidence sur la préparation d'états financiers. D'une certaine manière, le paragraphe 3060.39 du Manuel sur les frais futurs d'enlèvement d'une immobilisation et de restoration des lieux a semé un vent de panique dans les milieux financiers du pays.

Afin de situer l'importante nature de ces événements dans un contexte général, nous examinons d'abord les nouvelles réalités économiques, ainsi que leur nouvelles exigences en matière de préparation des états financiers, qui verraient le jour dans le cadre de l'accord de libre-échange proposé entre le Canada, le Mexique et les États-Unis. Précisons que ni le Financial Accounting Standards Board (FASB) aux États-Unis ni les organismes de normalisation du Mexique ne disposent d'obligations d'information semblables à celles du paragraphe 3060.39.

Il faut également prendre en considération le fait que les industries les plus marquées par ces nouvelles normes, notamment les industries minérale, minière, forestière et chimique, vendent leurs produits à un prix établi à l'échelle mondiale. Par conséquent, en raison des lois environnementales strictes et coûteuses du Canada de même que de la présentation complète et immédiate des frais constatés et de l'information pertinente, les sociétés canadiennes se trouveront probablement désavantagées par rapport à leur concurrents mondiaux. Cette réalité ne dérange peut-être pas les tenants de l'efficience du marché, mais même la bourse des valeurs de New York, dans toute sa puissance, s'ajuste difficilement en l'absence d'informations.

Notre article examine en profondeur les questions susmentionnées et quelques autres.

Samedi, 6 juin

SÉANCE SIMULTANÉE 3C

De 10 h 45 à 12 h 15

Lieu : Salle 209 du Duffy Science Centre

The Environment, Accounting and Accountants

Leonard G. Eckel
University of Waterloo

Kathryn Fisher
Beak Consultants

Résumé: La préoccupation manifestée par tous les segments de la société à l'égard de la dégradation de l'environnement a engendré une certaine sensibilisation à la protection de l'environnement et a placé celle-ci parmi les défis les plus importants auxquels font face l'industrie, le gouvernement et le grand public. Résultat : un nouveau contrat social vient définir la responsabilité environnementale d'une entreprise et établir des contraintes à l'égard de ses activités. Les comptables contribueront à la réalisation de ce contrat social puisqu'ils satisferont les besoins d'information de dépositaires d'enjeux qui se font de plus en plus nombreux. Ils n'établiront pas pour ainsi dire l'agenda social de l'entreprise ou les exigences en matière d'information; leur rôle consistera plutôt à satisfaire les besoins de l'entreprise en termes des exigences de la société et à fournir l'information requise, sans biais, une information dont les qualités la rende crédible et utile à ceux qui s'en serviront. Il existe actuellement chez les entreprises toute une échelle de performance environnementale et d'objectifs à cet égard qui vont du laxisme au respect des normes établies jusqu'au développement durable. La plupart des firmes responsables se situent au niveau du respect des normes, mais la tendance est à la hausse, vers la position durable. Les comptables doivent suivre le pas et satisfaire des demandes croissantes d'informations de plus en plus complexes.

Nous examinons les implications des conditions de base : les effets du coût de nettoyage global sur la richesse, la structure révisée des coûts en vue d'une exploitation saine du point de vue de l'environnement, le besoin de penser au développement avant d'en envisager la durabilité, et l'incidence tentaculaire de l'humanité sur l'environnement. Les comptables doivent, pour respecter le nouveau contrat social, tenir compte de ces conditions élémentaires; ils jouent le rôle neutre et sans biais de distributeur d'informations dans la réalisation de cet objectif sociétal progressif; les normes comptables doivent être neutres (mais il est possible que les efforts actuels ne le soient pas); les comptables doivent élaborer des mesures de rendement efficaces (mesure de l'extrant) et des méthodes de détermination des coûts précises; ils doivent considérer les besoins d'une vaste gamme de dépositaires d'enjeux, communiquer avec des personnes dont le degré de compétence et d'intérêt varie grandement et travailler de façon régulière avec des gens dont l'expérience n'est pas liée aux affaires, même dépendre de ces personnes; ils doivent élaborer des techniques qui permettront de mesurer et de présenter la performance environnementale de l'entreprise; ils doivent comprendre les concepts de gestion du risque, de risque, d'incertitude et de prévision; ils doivent comprendre les facteurs externes, les évaluations autres que les évaluations marchandes, et les biens de consommation. La fonction de vérification a maintenant un sens très large. Il faudra donc aux responsables de la formation s'assurer que les comptables soient prêts à répondre à toutes ces exigences.

Samedi, 6 juin

SÉANCE SIMULTANÉE 3C

De 10 h 45 à 12 h 15

Lieu : Salle 209 du Duffy Science Centre

The Effect That A Superior's Suggestion Has On Auditors' Abilities to Generate Diagnostic Hypotheses

Bryan K. Church
Wilfrid Laurier University

Arnold Schneider
Georgia Institute of Technology

Résumé : La présente étude examine les effets de la suggestion d'un supérieur sur l'habilité d'un vérificateur à générer des hypothèses additionnelles à partir d'éléments emmagasinés dans sa mémoire à long terme. Plus particulièrement, nous voulons voir si l'héritage d'un élément aura un effet sur le classement d'éléments additionnels tirés de la mémoire à long terme. Nous nous sommes appuyés sur la recherche en psychologie cognitive pour prédire que le fait de recevoir la suggestion d'un supérieur à l'égard d'un cycle d'opération aurait un effet négatif sur l'habilité du vérificateur à générer des hypothèses additionnelles concernant ce même cycle. Nous avons mené deux expériences en vue d'examiner la présence d'un tel phénomène au sein d'une catégorie. Dans la première expérience, nous avons examiné les effets de la présence d'une erreur qui se produit souvent et avons trouvé que celle-ci limitait les capacités du vérificateur à extraire d'autres hypothèses concernant le cycle d'opération en question. De plus, nous avons noté que cet effet entrait en jeu très rapidement. La première hypothèse que posaient les sujets qui avaient hérité d'une hypothèse au départ, était liée à un cycle d'opération autre que celui auquel appartenait la suggestion du supérieur.

Dans la deuxième expérience, nous avons examiné les effets de la présence d'une erreur qui ne se produit pas souvent. Les résultats se sont avérés semblables à ceux de la première expérience à une exception près. En effet, la première hypothèse posée par les sujets qui avaient hérité de l'erreur n'avait pas tendance à provenir d'un cycle d'opération différent de celui auquel appartenait la suggestion du supérieur. Par conséquent, bien que l'effet d'interférence se soit manifesté dans les deux expériences, la nature de la suggestion du supérieur semble avoir influencé la vitesse à laquelle cet effet est entré en jeu.

Samedi, 6 juin

SÉANCE SIMULTANÉE 4A

De 16 h 00 à 17 h 30

Lieu : Salle 209 du Duffy Science Centre

Auditors' Assessments of Probable Causes in Analytical Review: Effects of List Length, Availability and Experience

Richard D. Rennie
University of Regina

Résumé : Dans le présent article, nous examinons l'opinion de 121 vérificateurs, novices et expérimentés, concernant les causes probables (selon des listes longues ou abrégées) de la fluctuation de ratios financiers. La recherche antérieure en psychologie a montré que les experts sont souvent incapables de déterminer avec certitude les éléments manquant d'une liste incomplète de causes possibles d'erreurs et qu'ils sous-estiment la fréquence relative des éléments omis sur une liste. La plupart des études antérieures ont attribué cet effet à l'absence des causes omises bien qu'on ait jamais testé cette explication. Les travaux plus récents indiquent que, dans certains domaines, la longueur de la liste n'influence pas les évaluations des gens lorsque ceux-ci possèdent une représentation mentale bien définie des possibilités quant aux éléments ne figurant pas à la liste, et une bonne connaissance des probabilités pertinentes.

Les résultats de notre étude révèlent, pour leur part, que la longueur de la liste a un effet considérable tant chez les vérificateurs chevronnés que chez les novices; les deux groupes ont sous-estimé la probabilité que des causes n'apparaissent pas sur la liste des causes possibles. Cet effet de la longueur de la liste (ou réduction) ne semble pas s'expliquer par l'absence de causes comme le spéculaient les écrits. Les résultats montrent aussi que cet effet s'avère beaucoup moins important chez les vérificateurs et les gestionnaires chevronnés que chez les nouveaux vérificateurs. En outre, les vérificateurs d'expérience ont exprimé des opinions très poussées concernant le probabilité des causes possibles. Nos résultats correspondent à la notion selon laquelle les vérificateurs expérimentés possèdent une meilleure connaissance des fréquences sous-jacentes aux événements entourant une vérification. Par conséquent, notre étude éclaire notre compréhension des jugements de vérification en démontrant le rôle que joue l'expérience dans la détermination de causes possibles pendant un examen analytique.

Samedi, 6 juin

SÉANCE SIMULTANÉE 4A

De 16 h 00 à 17 h 30

Lieu : Salle 209 du Duffy Science Centre

The Dilemma of Auditing Education: Can It Be Relevant Preparation For Both Practice and a Professional Examination?

Dr. Curtis C. Verschoor
Dr. Howard A. Kanter
School of Accountancy
DePaul University, Chicago

Résumé : Bien que l'ensemble des connaissances concernant la comptabilité financière soit bien défini et que l'on s'entende en général sur les méthodes d'enseignement les plus appropriées, il semble qu'il n'en soit pas de même pour la vérification. Les enseignants et les praticiens ne semblent pas s'entendre en ce qui a trait à la quantité des sujets couverts, aux méthodes d'enseignement et à l'approche générale des cours universitaires en vérification.

La présente étude comporte trois volets. En premier lieu, nous avons obtenu de l'information de la part de vérificateurs dont l'expérience dans le domaine de l'exercice en cabinet variait, concernant l'importance pour les vérificateurs dont il s'agit de la première année d'expérience de connaître les dix domaines particuliers de la vérification. En deuxième lieu, nous avons vérifié si les vérificateurs croyaient que l'enseignement devrait aborder les différents domaines selon une approche théorique ou pratique. Enfin, nous avons déterminé le degré de satisfaction des vérificateurs à l'égard de leur formation en vérification comme préparation à leur première année en cabinet et à la portion de l'examen d'agrément professionnel portant sur la vérification.

Les résultats indiquent que les praticiens dans l'ensemble préfèrent une approche pratique quant à l'enseignement de quatre des six domaines qu'ils considèrent les plus importants pour les vérificateurs de première année. De même, ils préfèrent une approche théorique quant aux deux des quatre domaines qu'ils considèrent de moindre importance. En outre, nos résultats viennent appuyer les études antérieures qui indiquent que les praticiens ne sont pas très satisfaits de leur formation en tant que préparation en vue de leur carrière ou de l'examen d'agrément.

Cela signifie que les enseignants en vérification devraient prendre les résultats susmentionnés en considération dans la préparation des cours de vérification. De même, les auteurs de manuels sur la vérification devraient en tenir compte dans la planification du matériel couvert dans leurs manuels. Ces recommandations sont particulièrement pertinentes aujourd'hui, à l'heure où la satifsaction du client est la clé du succès.

Samedi, 6 juin

SÉANCE SIMULTANÉE 4B

De 16 h 00 à 17 h 30

Lieu : Salle 110 du Duffy Science Centre

Identification of Significant Employment Criteria: Helping to Control Turnover in Accounting

Nasrollah Ahadiat
California State Polytechnique University

Charles L. Martin
Towson State University

Résumé : Chaque année, de nombreux étudiants choisissent la comptabilité comme leur domaine principal d'éducation à l'université en vue de se préparer à une carrière en expertise comptable. Déçus par leurs tâches et les attentes de leurs employeurs, chaque année beaucoup de ces diplômés universitaires quittent le cabinet où ils exerçaient leur profession pour chercher un autre emploi. Bien que ce phénomène puisse s'expliquer de bien des façons et qu'un certain roulement puisse être désirable, ceux qui quittent trouvent l'exercice en cabinet ennuyeux et sans place pour la créativité (Benke et Argualo, 1982). De plus, certains auteurs indiquent que les diplômés en comptabilité sous-estiment l'aridité de la pratique de la comptabilité et mentionnent l'écart entre les attentes du personnel et des associés comme l'une des raisons de l'insatisfaction (Sorenson, Rhode, et Lawler, 1973). Nous croyons que la connaissance préalable de ces attentes peut contribuer à réduire cet écart, ce qui augmenterait la satisfaction au travail et diminuerait le roulement dans les cabinets d'experts-comptables.

Nous avons envoyé un questionnaire au directeur du recrutement de cabinets en exercice aux États-Unis à l'échelle nationale ou non dans le but de déterminer les attentes des employeurs en ce qui a trait aux comptables débutants et de discerner les critères d'emploi jugés importants, desquels on tient compte dans la sélection et la rétention des diplômés en comptabilité. Nous avons d'abord entrepris une comparaison des réponses données par les deux groupes de répondants. Nous n'avons détecté aucune différence importante. Par la suite, nous avons évalué les résultats en vue de discerner les critères jugés importants par chaque groupe, par catégorie. Les catégories de critères jugés importants par les deux groupes sont les suivantes : l'apparance, la personnalité, le rendement et la formation. Les cabinets nationaux considéraient l'assurance et la maîtrise de soi comme les qualités les plus importantes, alors que les autres cabinets jugeaient que la confiance inspirée était très importante. L'article présente aussi d'autres résultats intéressants.

À notre avis, les changements dans l'enseignement des sciences comptables devraient inclure la participation intense des professeurs et des praticiens à titre de conseillers en carrière. Ainsi, dès leurs premières années à l'université, les étudiants bien conseillés pourront choisir les domaines de spécialisation qui correspondent le mieux à leur personnalité et à leur potentiel. Cette coopération est nécessaire à l'excellence de la profession car elle permettra l'utilisation de ressources humaines qui jouissent d'une formation de première classe, qui manifestent de l'enthousiasme à l'égard de leur travail et en possèdent une bonne maîtrise.

Samedi, 6 juin

SÉANCE SIMULTANÉE 4B

De 16 h 00 à 17 h 30

Lieu : Salle 110 du Duffy Science Centre

Teaching, Research, and the Changing Environment of Accounting Practice and Education

Canadian Academic Accounting Association

June 5, 1992

Professor Gary L. Sundem

University of Washington

President-Elect, American Accounting Association

CAAA 6/5/92

CHANGE: Focus of the 90s

Practice:

- Continuation of the 80s
- Prosperity is at stake
- Possibly even survival

Education:

- Catch up with practice
- Pressures from the marketplace
- Redefining role of education

CAAA 6/5/92

Overview of Changes in Accounting

- Changes in the accounting profession
- Changes in infrastructure of accounting education - redefining scholarship
- Implementing changes in accounting education
- Attracting the best and the brightest
- Practitioner/Educator partnership into the twenty-first century

CAAA 6/5/92

Changes in the Accounting Profession: Public Accounting

- Use of professionals, paraprofessionals, technicians, etc.
- Structural changes - declining role of audit
- Scope of services - attest function versus client consulting
- Competition versus regulation
- Impact of changes on education - so far, education has lagged behind

CAAA 6/5/92

Russell Edgerton, President
Am. Assn. for Higher Ed.

"The problem, the author argues, is not simply one of "balance" -- of adjusting the weights we attach to teaching, research, and service -- but of reclaiming the common ground of scholarship that underlies all these activities."

CAAA 6/5/92

NEW SCHOLARSHIP IN ACCOUNTING

- Broad definition of scholarship
  - * Scholarship of Discovery
  - * Scholarship of Integration
  - * Scholarship of Application
  - * Scholarship of Teaching
- Scholarly activities based on mission
- Portfolio of scholarly activities

CAAA 6/5/92

Implementing Changes

- Grant schools as prototypes
- Motivation for change - internal and external
- Educational materials, e.g. textbooks
- Unified profession
- 150-Hour requirement - help or hindrance

CAAA 6/5/92

AAA Role in Implementing Change

- Important issue for AAA (and CAAA)
- Publishing and speaking activities insufficient
- Workshops
  * Teaching methods
  * Curriculum change
- Evaluation methods
  * Faculty
  * Programs

CAAA 6/5/92

Attracting the Best and the Brightest

- Image of accounting
  - * AICPA survey
  - * *Wall Street Journal* articles
- Problems within practice
  - * Job content
  - * Compensation
- Problems within education
  - * High school accounting (e.g. bookkeeping)
  - * Introductory accounting (also bookkeeping?)
  - * General curriculum

CAAA 6/5/92

Change is a Two-Way Street: Practitioner/Educator Cooperation

- Academe & practice have been drifting apart for 30+ years
- Educators deserve much (but not all) of the blame
  - * Focus on acceptance on campus
  - * Rigor replaced relevance in scholarship
- Practitioners share blame
  - * Lack of "scholars" in practice
  - * Interest in product, not process, of education

CAAA 6/5/92

The Future: Optimism

- More commonalty of interest
  - * Concern with sterility of scholarship in accounting
  - * Concern with broadly educated graduates
- Common threats
  - * Threat of obsolescence
  - * Global competition
- Cooperation is in everyone's best interest

CAAA 6/5/92

Challenge to Accounting Faculty

- Changes in the classroom
  - Individual courses
  - Overall curriculum
- Setting appropriate school missions
  - "Know your customer"
- Role of accounting in a changing business school curriculum
- Evaluation of faculty to motivate:
  - Continuous improvement in "products" and processes
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- Competition versus regulation
- Impact of changes on education - so far, education has lagged behind

CAAA 6/5/92

Changes in the Accounting Profession: Industry & Government

- Accountants as business advisors, not technicians
- Less "stove-piping"
- Global competition
- Declining relevance of "accounting model"
- Impact of changes on education - produce "accounting managers" not narrow specialists

AECC Progress to Date

- Set objectives: "Objectives of Education for Accountants
- Models for change: Grant projects
- Infrastructure for change: "Priority for Teaching in Higher Eduction"
- Implementing change

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Future of AECC and Accounting Education Change in General

- Infrastructure to motivate continuous improvement
  - *AAA and CAAA must provide leadership
- How to implement change
  - * Main AECC goal for next 3 years
  - * What and how to teach
  - * Process of change
  - * Continuation beyond AECC's life

CAAA 6/5/92

Infrastructure Change

Recommended Reading:

Ernest L. Boyer, **Scholarship Reconsidered: Priorities of the Professoriate**, The Carnegie Foundation for the Advancement of Teaching, Princeton University Press, 1990.

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CAAA 6/5/92

Exhibit II

Comparison of CMA Program to Bedford Recommendations

CMA Program	Bedford Recommendations
1. General Education and Business Education	1. General Education at College/University
2. Specialized Professional Education	2. General Professional Accounting Education
3. General Professional Education	3. Specialized Professional Education
4. Research department that is active and proactive in developing new products. Doctoral Support Program	4. Research and Doctoral Education
5. Professional Development	5. Continuing Education

CMA Exhibit III

YEAR 1 TOPICS

- Management Accounting: Past and Present
- Current Developments in Operations Management
- Current Developments in Management Accounting Practice
- Evaluating the Emerging Management Accounting Tools
- New Organizational Environment
- Environment of Management Accounting
- The Process of Analysis

YEAR 2 TOPICS

- Business - Government Relationships
- Ethics and the CMA
- Interpersonal Competence and Interpersonal Communications
- Decision Making and Problem Solving
- Leadership
- Performance Management
- Managing Change
- Management Simulation

provide people with real authority for making decisions. Flattening the organization helps dramatically. Finally innovation requires *everyone's* involvement.

To be really innovative, however, requires a new organizational structure. Specifically, it requires destroying the barriers of the past--both horizontally (from function to function) and vertically (from worker to management) by adopting an organic structure which eschews formality; where what counts has more to do with a person's knowledge than with their position. Information must flow flexibly and informally on a timely basis wherever it must. But most important of all is the focus on horizontal or multi-disciplinary teams. And to the extent that such teams incorporate suppliers and customers, so much the better.

As is evident, the changes that have already swept organizations are nothing short of revolutionary. The study of the evolution of management control practices as they unfold promises to be both fascinating and highly rewarding for those undertaking such research.

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- Grant schools as prototypes
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- Unified profession
- 150-Hour requirement - help or hindrance

AAA Role in Implementing Change

- Important issue for AAA (and CAAA)
- Publishing and speaking activities insufficient
- Workshops
  - * Teaching methods
  - * Curriculum change
- Evaluation methods
  - * Faculty
  - * Programs

AAA Focus for 1992-93

- Broadening Scholarship
- Professional Development
- AAA Relations with 2-Year College Faculty
- AAA Structure

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Attracting the Best and the Brightest

- Image of accounting
  - * AICPA survey
  - * *Wall Street Journal* articles
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  - * Job content
  - * Compensation
- Problems within education
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PRESENTATION NOTES

Canadian Perspectives on Education Change Panel
CAAA - June 5, 1992

Patrick Culhane, CMA
The Society of Management Accountants of Canada

Panel Moderator, Gordon Richardson, asked us to reflect upon changes in accounting education in Canada as a result of the Accounting Education Change Commission in the United States. I will start by quoting from the Bedford Committee Report which initiated the change process.

- All professions change over time.
- All professions adapt to transformations in human values and needs.
- Frequently most of the institutions responsible for educating professionals fail to evolve as rapidly as professional practice itself.
- The accounting profession - in government, corporate, and public practice - is in a state of flux, reflecting massive changes taking place in technology and in social values, as well as in social, government, and business institutions.
- Characteristics of the expanding profession are still developing and are, in some areas, difficult to discern.
- There is little doubt that the current content of professional accounting education, which has remained substantially the same over the past 50 years, is generally inadequate for the future accounting professional.
- A growing gap exists between what accountants do and what accounting educators teach.
- The gap will not be closed by efforts to update random aspects of accounting education.
- A complete reorientation of accounting education is needed.

The above points were made in 1986. I ask you how much progress have we made in accounting education?

Change in the Society

The Society of Management Accountants of Canada, as a result of its Strategic Plan and market research, has made a massive change in its business and consequently in its education process.

For much of the last seventy years, The Society of Management Accountants and its operations focused on student education concluding with accreditation. It had a professional membership that was smaller than the student membership. Over time, however, more universities and colleges offered business education programs and more CMAs were completing accreditation. In the last five years the Society's strategic direction has moved from education delivery and now concentrates on being a professionally-based organization.

This change is a result of a number of factors:

- research indicated employers wanted more management expertise

- professional members have become the largest group in the Society's membership.

As part of our strategic planning process, we reviewed operations and researched where we would like to position ourselves for the future.

The Society used to offer a complete management accounting education program - 18 courses in five levels from Introductory Accounting through to the three Final Accreditation Examinations on Management Accounting, Financial Accounting and a Comprehensive. Previously known as the Society's syllabus, the content was similar to a university business degree with an accounting major. In addition to accounting, core business courses such as economics, statistics and organizational behavior were covered. This material is now known as the Society's Pre-Professional Syllabus. The Final Accreditation Examinations have now been replaced by an Entrance Examination, a two year professional program and a Final Examination to complete the accreditation process. (Slides in Exhibit I).

Accounting Education Change

Most of us who have been attending these meetings are familiar with the Accounting Education Change Commission (AECC). For those who are not, the Commission was established in 1989 as a committee of the American Accounting Association (AAA) to promote changes in accounting education. It is funded by the six major accounting firms in the United States and is based on the earlier Bedford Committee report. (AAA established a Committee on the Future Structure, Content and Scope of Accounting Education in 1984 and it was chaired by Norton Bedford.)

The Bedford Committee recommendations are the cornerstone of the Accounting Education Change Commission which is in the process of changing the content and delivery of accounting education. The Bedford Committee concluded that over the last 50 years accounting education had not changed and was not keeping pace with the technological and social changes. It has set a target of the year 2000 to change accounting education. In addition to accounting skills it stated that a comprehensive professional accounting education program must develop in students:

- an understanding of the nature and skills of logical reasoning;
- a capacity for creative thinking and problem-solving;
- an appreciation of ethical standards and conduct;
- a facility with the methods of effective communication and interpersonal relations;

The Committee felt that only through the development of these expansive skills will the accountant be equipped for lifelong learning.

A comparison of the Bedford Committee's recommendations to the Society's new program is shown in Exhibit II.

The AECC serves as a catalyst for improving the academic preparation of accountants so that entrants to the profession possess the skills, knowledge, and attitudes required for success in accounting careers.

In the case of the Society, we developed our program changes independently of the AECC. We believe the Society's changes in accreditation stem from the same forces, the economy and the customer, that drove the recommendations which created the Change Commission. We see the AECC as a welcome independent endorsement of the change in direction by the Society and feel the recommendations have implications for further changes in accounting education in Canada.

Another important issue for the Society was that current management accounting theory and practice was not being taught to our students. Much of what is taught in university programs concentrates on financial accounting and standard costing. The Society's leading edge education and accreditation program alleviates this situation.

In most of the affiliate provinces and territories, the Society is not offering the previous 18-course syllabus and is depending on existing post secondary institutions for general business education. The Professional Program we have developed is quite a different process than what we or other professional accounting groups have done in the past.

The topics covered in the Society's new program are consistent with the suggestions of the Accounting Education Change Commission providing general and specialized professional accounting education (Exhibit III).

In year one of the program, management accounting topics are covered such as:

- current developments in operations management
- current developments in management accounting practice
- evaluating the emerging management accounting tools.

The topics for professional education in year two are:

- Business - Government Relations
- Ethics and the CMA
- Interpersonal Competence and Communication
- Decision-Making and Problem-Solving
- Leadership
- Performance Management

These are consistent with the Bedford recommendations (Exhibit IV) on the need for both a general and specialist professional accounting education. The Committee's recommendations state that general professional education should cover design and use of information systems, communications, and problem-solving, as well as, ethical and professional responsibilities that develop skills such as creative thinking and leadership. Then, specialist professional education is taught.

The Society in its education-related activities including research, is making a concerted effort in the five major areas covered by the Bedford Committee Report. There have been many comments about the need for change in educational institutions. We, as a professional organization, recognize that we have to assist with the fostering, development, and communication of new management accounting practices and processes.

The profession has to take a more proactive role and provide more opportunities for the communication and development of management accounting practice. A recent innovation along these lines is the publication of a new product line for the Society-Issues Papers. They are to be descriptive and are designed to spark interest, debate and encourage input from within the accounting community. The first two - Accounting for the Environment and Electronic Data Interchange and the Management Accountant - have just been published.

Conclusion

The Society has changed its educational process based on its strategic direction and market research. We are pleased with the transition from our former education system. With 2,000 people writing the Entrance Exam at the end of June, our projections for the future look good.

The Society of Management Accountants of Canada

A New Education and Accreditation Program

Why Change

- Society should add to a post-secondary degree or diploma
- Employers value management skills and expertise

Why Change

- New role of CMAs
- Society's present education and accreditation processes require updating

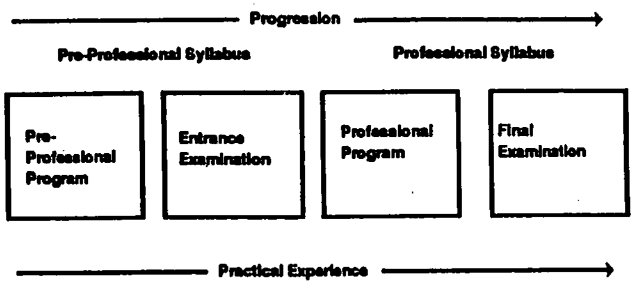
Tomorrow's CMA

- Accounting skills
- Systems design capabilities
- Effective interpersonal communication
- General business understanding
- Decision support and analytical skills
- Organizational dynamics and design principles
- Strategy and policy formulation

Components of the New Accreditation Program

- The Pre-Professional Program
- Entrance Examination
- Professional Syllabus
- Practical Experience
- Final Examination

The New Accreditation Program



The Pre-Professional Program

- Management Accounting
- Financial Accounting
- The Process of Management
- Computers, Systems, and Quantitative Methods
- Legal Dimension of Accounting

Entrance Examination Subject Coverage

- 50 - 60 % Management Accounting
- 20 - 30% Financial Accounting
- 15 -25% Management Studies

Exhibit I (cont'd)

Exhibit I (cont'd)

The Professional Program Components

- Independent study - 11 assignments
- Group sessions - 5 in number
- Residential session - total of 3
- Practical Experience
- Final Examination

Professional Program Evaluation Components

The Society believes that all components of the professional program are significant to the development of a professional management accountant. The different components of the program are therefore weighed as follows:

Independent Study	20%
Group Session	10%
Residential Session	25%
Final Examination	45%

Independent Study

- Centrally developed integrated assignments
- Assigned reading to support the cases
- 50 -60 hours study for most assignments
- All assignments are mandatory and part of the candidate's final mark

The Five Group Sessions

- Will review and reinforce material
- Will utilize videos and group discussions
- Session readings and preparation will be required
- Are mandatory and candidates will be graded on their participation

Exhibit I (cont'd)

The Three Residential Sessions

- Will allow review and integration of material
- Candidates will participate in case analysis and presentations
- Management simulation will be utilized

Practical Experience

- 24 months
- All experience acquired while a member of the Society
- Experience would be pre-approved and monitored
- Experience to be satisfied prior to writing Final Examination

Professional Program Timetable
Year 1

- June — Entrance Examination
- August — Examination Results
- September — Program Registration Deadline
- October — RS-1 Management Accounting Past, Present and Future
- Oct - Nov — IS-1 Current Developments in Operations Mgmt
- Nov - Jan — IS-2 Current Developments in Mgmt Accounting Practices
- January — GS-1 Evaluating the Emerging Mgmt Accounting Tools
- Jan - Mar — IS-3 New Organizational; Environment
- Mar - Apr — IS-4 Environment of Management Accounting
- April — GS-2 The Case Study Method + Mgmt Accounting Topics
- May - June — IS-5 The Process of Analysis
- June — RS-2 Review of Material Covered to Date + Looking Ahead

Professional Program Timetable
Year 2

- Sept-Oct — IS-6 Business - Government Relationships
- November — GS-3 Ethics and CMA
- Nov-Dec — IS-7 Interpersonal Competence + Interpersonal Communications
- Dec-Jan — IS-8 Decision Making + Problem Solving
- Jan-Feb — IS-9 Leadership
- March — GS-4 Review + Discussion of Interpersonal Competence, Interpersonal Communications, Decision Making and Leadership
- Mar-Apr — IS-10 Performance Management
- Apr-May — IS-11 Managing Change
- May — GS-5 Review + Discussion of Perf. Mgmt + Managing Change
- June — RS-3 Management Simulation
- June — Final Examination

Final Examination

- Purpose - to test the professional syllabus
- Comprehensive
- Offered once per year
- A case examination

THE CHALLENGE IS
MANAGING THE CHANGE

Exhibit I

Exhibit II

Comparison of CMA Program to Bedford Recommendations

CMA Program	Bedford Recommendations
1. General Education and Business Education	1. General Education at College/University
2. Specialized Professional Education	2. General Professional Accounting Education
3. General Professional Education	3. Specialized Professional Education
4. Research department that is active and proactive in developing new products. Doctoral Support Program	4. Research and Doctoral Education
5. Professional Development	5. Continuing Education

CMA Exhibit III

YEAR 1 TOPICS

- Management Accounting: Past and Present
- Current Developments in Operations Management
- Current Developments in Management Accounting Practice
- Evaluating the Emerging Management Accounting Tools
- New Organizational Environment
- Environment of Management Accounting
- The Process of Analysis

YEAR 2 TOPICS

- Business - Government Relationships
- Ethics and the CMA
- Interpersonal Competence and Interpersonal Communications
- Decision Making and Problem Solving
- Leadership
- Performance Management
- Managing Change
- Management Simulation

Exhibit IV

BEDFORD RECOMMENDATIONS

General Professional Accounting Education

- design and use information systems
- communication
- decision-making, problem-solving
- financial information and public reporting
- knowledge of accounting profession
- ethical and professional responsibilities
- creative thinking
- logical reasoning
- leadership

Specialized Professional Education

- certain specializations have developed sufficient bodies of knowledge to be recognized as functional areas with accounting:
    - Taxation
    - Information Systems
    - Auditing

    - Management Accounting (our addition)

CAAA Members Luncheon
University of Prince Edward Island
June 6, 1992

Bill Steeves, FCMA
The Society of Management Accountants of Canada

I would like to take this opportunity, on behalf of The Society of Management Accountants of Canada, to thank you for attending today's session and to extend our appreciation to the Canadian Academic Accounting Association for our work together over the years. As a Maritimer, I would also like to add my welcome on your visit to our part of the world. I hope you have been able to mix a bit of pleasure with your attendance at the Learned Societies' Conference.

As the host of today's luncheon, we have taken the opportunity to speak to you on management accounting.

As we put our thoughts together for today's address, a number of potential topics came to mind such as "Is Cost Accounting Dead" or "Current Trends in Management Accounting"; or "Management Accounting - Evolution or Revolution". However, while all of those make for interesting discussion topics, we decided that highlighting some recent management accounting research would be most beneficial for both yourselves and the Society.

Two and a half years ago, as the President of The Society of Management Accountants of Canada, I had the pleasure to speak at the Confederation of Asian and Pacific Accountants conference in Seoul, South Korea. My subject was current and emerging trends in management accounting.

At that time I said the shrinking global economy is driving all companies to achieve long term competitive advantage and that having effective and timely decision-making information available is important to this objective. I also stated that management accounting was not sufficiently meeting decision makers needs in that regard. Since that conference, I believe management accounting has taken on a somewhat firmer shape and direction, and I would like to give you a flavor of that today. In doing so, however, I will also touch on some shortcomings in today's practice of management accounting.

The term "management accounting" means different things to different people. To many, management accounting is simply cost accounting restated, to others it is the standard costing model and related variance analysis that grew out of the industrial revolution and which was developed on the factory floor. To some it is a public relations label to make cost accounting less boring. To yet others it is the new systems being developed to provide strategic information and to use that information in a participative way in management decision-making. Even among the three major management accounting bodies; The Chartered Institute of Management Accountants (CIMA - U.K.), The Institute of Management Accounting (IMA - U.S.) and The Society of Management Accountants of

Canada (SMAC) there is not total consistency. It is our belief that to date our Society has made the most progress in defining and developing the new management accounting theory.

Long before Johnson & Kaplan's landmark book "Relevance Lost - The Rise and Fall of Management Accounting" there had been a growing recognition and resignation in the business community that the information produced by management accounting systems did not provide increased value and even detracted from good business decision making. However, Johnson/Kaplan book was a landmark because it put the white light on this problem.

As was stated in the book "Today's management accounting information, driven by the procedures and cycle of the organization's financial reporting system, is too late, too aggregated, and too distorted to be relevant for managers' planning and control decisions."

The foundation for these assertions has been borne out by even more recent research by the Society.

Our organization has collaborated on two recently published pieces of research and one soon to be published, which support the need for change in management accounting practice and also illustrate how, in a number of instances, management accounting systems have been restructured for the good of the organization. I would like to summarize these for you today and draw some conclusions from the findings.

The first publication, produced in collaboration with the Harvard Business School Press, is "The Information Mosaic: How Management Uses Information". The research carried out by Professors Sharon M. McKinnon and William J. Bruns, Jr. was aimed at identifying the kinds of information essential to the effective management of an organization and how this type of information is being used by managers. What they found was strong evidence that the accounting information provided by current systems is not particularly relevant for most managers and therefore many don't even use it. Some of the other findings of the Information Mosaic included:

- Traditional management accounting systems only provided the information that was required on a periodic basis and covered longer time periods.

- The types of information required for the daily operations of the organization were not provided by traditional management accounting systems.

- The absence of relevant and timely management accounting reports can seriously inhibit managers from implementing appropriate courses of action.

- The most effective management accounting systems of the future will be constructed to meet the daily information needs of managers.

- Organizations in which managers' information needs are met through timely and effective reporting systems are better able to face the challenges of increased competition and globalization.

- Middle and upper management rely heavily on personal observations, verbal communications and informal reports to provide them with the information they require for the daily operation of the organization.

Our conclusion from this research is that the Society must support the integral role that CMAs can play in improving performance measurement and reporting systems.

To this end, not only do we have to speed up the development of leading edge management accounting practice, but we also have to work harder at communicating, implementing and teaching, such practice.

The second publication entitled "Cost Management for Tomorrow - Seeking the Competitive Edge" published by the Financial Executives Research Foundation, is more positive because it moves away from the typical accounting model of looking back at what was and provides evidence of companies that changed their management accounting systems as part of revolutionizing the way they do business. The highlights edition of this research published by the Society in collaboration with the Foundation is entitled **"From Direct Labor to Team Player."**

The highlights edition is a summary of case studies of nine major companies which have responded to external competitive pressures and internal operational changes in part by modifying managerial accounting and control practices.

The following excerpt I thought was particularly relevant. It states: "In a *competitive team*, financial executives must be able to help create value in the marketplace, not just keep track of the value created by other members of the organization. They have dual responsibilities - to be accountable to the business units for financial analysis, and accountable at the corporate level for maintaining the integrity of the financial system."

Three steps were suggested for making industry more competitive:

- re-configure the manufacturing process; change factory flow away from old functional designs to work cells supplied by JIT delivery, (for example - Western Zirconium changed its factory layout and reduced the distance work-in-progress must travel from 2 miles to 1,300 feet)

- change the accounting system so it better reflects manufacturing activities - from old accounting systems based on direct labor, efficiency and related overhead absorption to activity-based accounting systems that identify unnecessary non-value added costs

- develop a non-financial performance measurement system to track product quality, on-time delivery, and other customer satisfaction points

John Shank, one of the authors, made the following assertions which help us to summarize the thrusts of the study:

Standard costing and accounting as we know it does not add value. He asserts:

15% of the current accounting model is regulatory
20% is ongoing
65% is bookkeeping with little value (bank reconciliation, accounts payable reconciliations etc.)

Strategic cost management is the future. We have to work toward target costing:

- where a target price is set to generate revenue (what the market will bear)
- a target cost is established and if met
- a target profit is generated.

With respect to accounting for the '90s he states, "Clean out the deadwood, make time for value-added activities. Don't improve what you do. See if what you are doing adds value, (65% of accounting activities don't), and if they don't throw them out."

According to Mr. Shank, some of the key tools to be investigated, taught and used are:

- value chain analysis
- activity-based costing
- strategic cost driver analysis
- lifecycle costing
- cost of quality analysis
- competitor cost analysis
- strategic control systems
- economic value analysis

There is a multitude of information and ideas in this study, and in the book, that must be evaluated and acted upon by management accountants.

I would also like to take this opportunity to advise you of a preliminary Canadian study by Tony Atkinson and Grant Russell that supports the need for change in management accounting practice, to be published this summer.

Entitled "Opportunities for Improving Operating Performance" it provides observations on the extent to which management accounting supports the process of organization change. It asserts that to be successful, organizations must adapt quickly and effectively to continuously changing competitive environments.

The study concentrates on management accounting which is designed to serve information needs of decision makers not on cost accounting or on controllership or on financial accounting to support the process of external reporting.

Five major companies were examined - Canpar, IBM, McNeil Consumer Products, Allen Bradley Canada Limited, and Manufacturers Life Insurance Company.

Three key recommendations emanating from the study are:

1. Management accounting must expand beyond financial accounting and provide key performance indicators that focus on key success factors.

2. Management accounting must become adaptive and use different tools to support decision making.

3. Management accounting should orient its focus from top-down control to consistent self-control.

Atkinson and Russell assert that the roles of management accounting are to:

- help identify the organization's key success factors

- develop a system of coordination that communicates these key success factors to all organization members

- help the organization's members develop key performance measures

- support the process of self-control by providing information of the form and type that decision makers find useful

They suggest some implications for management accounting practice are:

- conventional management accounting assumes needs and goals of shareholders are predominant and uses systems of accountability that meet shareholders needs not customer goals

- conventional management accounting practice seldom uses measures designed to assess the organization's ability to identify and satisfy its key success factors

- conventional management accounting practice is poorly prepared to meet the challenges of adaptive organizations

- since competition has created the need for organizations to be adaptive, the traditional perspectives of management accounting must change

- management accountants must understand the nature and characteristics of organic organizations so that they can contribute to the design and maintenance of the control systems

- management accounting practice must adapt to the needs of the organic organization or, like all mechanistic systems ignore required change, and as a result face increasing irrelevance and extinction

If I could summarize, it seems clear from these three pieces of research that management accounting, as practiced in many organizations, was and is simply traditional standard costing to support the financial accounting function. To develop competitive industries in a global economy we have to develop and support leading-edge management processes and practices. The urgent goal of the Society of Management Accountants is to further the development of management accounting practice. As a personal observation, it appears at this juncture from the recent research work that evolutionary change may take too long and that revolutionary change is required.

As the key educators for the accounting profession, I hope you will take the time to peruse the highlights of these and all of our management accounting publications which are available from the Society of Management Accountants of Canada, 120 King St. W., P.O. Box 176, Hamilton, Ontario, L8N 3C3. I also urge you to become more aware of the current changes in management accounting, and as well, become catalysts for further change. We need your support. Good management accounting is foundational to the survival of many North American businesses. I thank you for your time today and I wish you a successful conference and a good time in the Maritimes.

William H. Steeves, FCMA is Vice-President, Corporate Services and Treasurer with the New Brunswick Telephone Company. He was President of the Society of Management Accountants of Canada in 1989-90 and has spoken on management accounting issues at national and international conferences.

THE MANAGEMENT CONTROL SYSTEMS OF THE FUTURE

by
R. Murray Lindsay, University of Saskatchewan

Introduction

Today the customer is truly king. In what was dreamt about only a short time ago, customers are not only obtaining value priced products, they are of high quality, matched increasingly to the their specifications or needs, and accompanied with higher levels of service. "Satisfying the customer" has become the management orientation of the 1990s.

The driving force behind this change is that we must simply do better. The new manufacturing environment is characterized by global competition, deregulation and the rapid advance of technology. To survive, firms must increasingly be able to produce world class products and service, and this will require world class manufacturing systems, characterized by innovativeness and flexibility. The hallmark of the new organization will be continuous improvement: today's performance will become unacceptable tomorrow--the competition will see to that.

The challenge facing manufacturers is therefore how to design instability and flexibility into their production functions--an environment which traditionally has sought standardization as the way towards achieving efficiency (Levitt 1988; Bell and Burnham 1989).

The purpose of this paper is to summarize the various features of the management control systems of the future that will underlie firms' continuous improvement efforts. It reflects an integration of recent literature in the area and significant observations (patterns) that left an impact on the researcher in the course of conducting a recent study (incorporating a national survey and two cases studies, Acme and Victor) which was sponsored by the Society of Management Accountants of Canada (see Lindsay and Kalagnanam, forthcoming). The purpose of the study was to examine the change in management control systems as a result of a company's move towards Just-In-Time/World Class Manufacturing.

The balance of the paper is organized as follows. The next section provides a brief description of the traditional approach to control which will serve as a backdrop to examine the changes that are taking place. Following this, the paper describes some of the predominant changes in the management control models of innovative companies. This discussion begins with outlining the new organizational focus providing organizations with their overall focus and direction. Next, the changes in structure which have followed from this reorientation in focus are discussed. Finally, the changes and implications for information systems and, in particular, management accounting are presented.

The Traditional Approach to Control

The traditional approach to control in manufacturing companies is based on the premise of eliminating perturbations in the environment by introducing stabilizing forces (e.g., inventory, rules, procedures) to provide for predictable performance and, in so doing, efficiency. The primary control and coordination mechanism is formalization of behaviour through standardization, leaving people with highly specialized jobs or tasks (based on a sharp division of labour) and little discretion (Mintzberg 1979). The "smoothly running machine" is often used as an analogy of this type of organization.

This emphasis on standardization extends to communication and reporting relationships. Communication is largely formalized, and the primary relationships between people are vertical. Decisions, rewards and punishments flow down. Information, often in the form of exceptions, flows back up. Top management, with the assistance of staff or external experts, makes most of the resource allocation and nonroutine decisions. In their view, the role of line management is simply to operate the established facilities, systems, and personnel according to senior management's rules, regulations and pre-determined targets (Hayes and Jaikumar 1988).

The final element in the traditional command and control organization is the performance measurement system. Traditional performance measurement systems operate on the premise that responsibility centres have little interdependence between them. Coordination simply requires the regulation of performance through quantitative output measures of efficiency. From this orientation follows "responsibility accounting," whereby individuals should not be held responsible for events they do not control. This, along with the structural barriers impeding lateral and cross-functional communication, often encourages the pursuit of narrow functionalism. In operating independently, subgroups (functions) simply can not make dramatic improvements.

The tension between the prescription for world class manufacturing--innovation and flexibility--and the rigidity imposed by highly formalized and standardized control mechanisms is thus evident. The stabilizing forces which seek to routinize the work in order to increase efficiency are at odds with the need to innovate and to be flexible. Thus we return to the vexed question alluded to earlier: how do manufacturing organizations introduce innovativeness and flexibility in an operating environment that traditionally has discouraged change and instability through their obsession with standardization and formalization?

Observations on The New (Revolutionary) Approach to Management Control

Clearly, the required changes are going to be revolutionary in nature. Although the truly innovative manufacturing organization at this time rests largely as an ideal, the results of the author's research and the research of others provide considerable insight as to the form of the new order of management control systems. In the discussion that follows, three areas of change have been identified: organizational focus, organizational structure, and the information systems necessary to support this new control orientation.

1. The New Organizational Focus -- Increasing Customer Satisfaction

The primacy of focusing on the bottom line is now behind us. Increasing customer satisfaction through the creation of new value to the customer is the glue that will bind the successful organization of tomorrow.

"Customertropy" will not only provide individuals with their overall focus and direction, it will also serve to reduce the inter-functional barriers that in the past have so often hampered the introduction of innovation.[1] It will become the ultimate arbitrator in resolving jurisdictional and power struggles. This new *raison d'être* will unite the organization and provide it with its rallying cry. As Paul Allaire, CEO of Xerox Corporation, states in a recent *Fortune* interview:

> You can't get people to focus on only the bottom line. You have to give them an objective like 'satisfying the customer' that everyone can relate to. It's the only way to break down those barriers and get people from different functions working together (June 17, 1991).

Customertropy is not without precedent. Heiko (1991) argues that Japanese firms have long adopted customer satisfaction as their primary objective. To quote from Rodney Clark's (1979) *The Japanese Company*:

> Service to society and the nation is laudable, but profit as an end in itself is suspect if not despicable. As an official of Matsushita (one of the most profitable of all Japanese companies) put it: "Service, not profit, is the objective. Profit is not what we can earn--it is given to Matsushita in appreciation of its services. If the company fails to make its profit, it has committed a social blunder or sin, according to our philosophy. The society to which Matsushita belongs entrusts it with capital and manpower for Matsushita to get results. Profit is the appreciation of society, the reward to Matsushita for what it has done!."

Although Heiko argues for the generalization that North American companies have traditionally placed a primacy on meeting financial objectives, Peters and Waterman (1982, p.284) made the observation a decade ago that good companies have always recognized that profit obtains only through customer satisfaction.

[1]The term "customertropy" was coined by Heiko (1991) to reflect the Japanese orientation of focusing or "turning towards the customer" in giving customer concerns the highest priority.

In conclusion, the focus on satisfying the customer, together with the mandate for continuous improvement, has lead to the new organizational focus: increasing customer satisfaction. This reorientation in organizational focus has played no small role in changing the orientation and various facets of management control systems. Some of these changes will now be discussed.

2. Organizational Structure

Organizational structures must change. As Bell and Burnham (1989) explain, structure creates patterns of activity, patterns of behaviour, and patterns of commitment. Such patterns play an important mechanism in either producing or inhibiting innovation and therefore world class performance. Four related patterns were observed in the organizational structures of the two case studies.

The adoption of a network pattern of communications is the predominant change that was observed. The *Collins Dictionary* defines network as "an interconnected group or system." In both organizations there was a conscious attempt to eschew the formalized, vertical communication patterns underlying the traditional, mechanistic organizational structure to an organic structure that permits and encourages widespread communication, often of an informal nature, throughout the firm. Communication flows were both horizontal and diagonal as well as vertical; additionally, they were much more of an consultative, information-sharing and advice-giving nature as opposed to the command and control orientation which is typical of the traditional, pyramid structure.

In a JIT/WCM system the focus is on increasing customer satisfaction. Meeting the customer's on-time delivery requirements requires a quick exchange of information and mutual adjustment that must necessarily transcend functional boundaries. In particular, the reduction in buffer stocks of inventory increases the interdependence among organizational subgroups (Duimering and Safayeni 1991)--a feature that invalidates responsibility accounting's primary assumption. This, along with the reduced lead times required by customers, demands that information and communications flow flexibly and informally, wherever and whenever they must, in order to provide for timely coordination and control of operations, as well as fast responses to problems or changes in customer requirements.

A network pattern of communications allows decisions to be made faster and based on information that is more accurate (one operational specialist talking to another). In this regard, Peter Drucker's (1988, p.46) comments are significant. He writes "that whole layers of [middle] management neither make decisions or lead. Instead, their main, if not their only, function is to serve as 'relays'--human boosters for the faint, unfocused signals that pass for communications in the traditional ... organization."

The second major change that was evident is the extensive use of both permanent and ephemeral project teams consisting of individuals of different specialist functions. The latter groups were typically formed to deal with problems or to implement projects and were disbanded upon task completion. The composition and leadership of the teams was typically decided upon on a case by case basis, depending upon the nature of the problem or task. Knowledge, rather than rank, was the key determinant of the structure of the teams. These groups were typically empowered to make decisions, with a minimum of bureaucracy. For example, management at Victor saw their daily production meetings (consisting of various functional representatives) as being necessary for obtaining timely feedback (control) and coordinating the plant's activities. As well, in both firms there was increased recognition that it is necessary to combine effort (manufacturing) with intelligence (engineering) and make them more interactive in order to be able to continuously improve. To take another example, designing for manufacturability has become increasingly stressed with the recognition that product life cycles are decreasing and that the primary factors influencing product cost are incurred *prior* to entering production. This, along with the need to introduce products more quickly, has lead to the use of teams composed of specialists from various functions working together and away from the traditional sequence of research, development, manufacturing and marketing.

A key benefit arising from the team-based approach is that decision making tends to reflect overall organization objectives rather than the traditional focus on maximizing departmental self-interest. In effect, work teams facilitate the removal of functional boundaries. Additionally, the multi-disciplinary composition of teams allows individuals to become aware of developments occurring throughout the organization, as well as appreciating the different perspectives on issues that inevitably exist. Finally, the speed of decisions (e.g., for introducing a new product or design change) is greatly increased as the needs and requirements of the various functional interests are considered in a timely manner and bureaucracy (e.g., waiting for approval) is kept to minimum.

Such team work is also being extended to relationships existing outside the organization. Instead of the once common adversarial approach (where my gain is your loss), partnerships are now being formed between organizations and their suppliers. These "partnerships" involve the sharing of information, managerial expertise, control systems, and working together in removing the hurdles impeding a smoothly functioning delivery system of a high quality product. However, at this stage in the evolution of the "meta firm" (see Ross 1990), only two firm partnering was being observed. Little or no attempt was being made to integrate the entire chain (from initial supplier to customer).

The third main change to the structure and control of organizations is the wholesale reductions in middle management, decentralization of decision making to lower levels, and the increased involvement of shop floor personnel. Previously, when markets were slower, leaders had time to absorb and assimilate information obtained from people located in various operational units. Today, markets and technologies are changing so quickly that operational specialists must make many decisions themselves. In this regard, JIT delivery accentuates the speed at which decisions must be made.

In addition, these changes reflect that senior management is increasingly recognizing that people at lower levels play a vital role in continuous improvement activities. Innovation requires granting more responsibility and control to the workers or doers: those who know the work best and confront, often on a daily basis, the problems and/or opportunities for making improvements. People are turned on by using their heads and expanding their skills. Traditional hierarchies have usually turned people off. To quote Paul Allaire, Xerox's CEO: "When people know some order or memo is eventually going to come down from above and demand something different than what they want to do, it's easy to say, 'Hell, I've been burned enough times. I'm not going to do anything until I'm told to do it'" (*Fortune*, June 17, 1991). Once the flattening of organizational structures begins through the elimination of middle management, people automatically receive more responsibility--as well as the authority to make changes--with less meddling from their superiors.

Finally, closely related to these developments in decentralization is the beginning of a tendency to utilize self-managing, highly flexible production departments organized on a family product basis (Duimering and Safayeni 1991). The long run objective is to develop production units that are focused factories within a factory that will be highly responsive to their customers' evolving needs and requirements. The experimental production line at Victor provides a good example of this development. The line was organizationally flat, with the foreman being responsible for budgeting, staffing, purchasing and meeting customers needs.

3. Information Systems

General Features. As noted above, continuous improvement cannot take place without the involvement of all people in the organization, especially those located on the shop floor. Thus the traditional distinction between the thinkers (typically management and support staff) and the doers (factory personnel) must be eliminated. The former are simply too far removed from the factory floor and the problems encountered to make any dramatic improvements. To become involved, however, people must be provided with the skills to allow them to undertake new responsibilities and to be able to enact changes (problem solving skills). Moreover, and this is the key point, they must be provided with information so that they can monitor their performance, determine the causes of their problems, learn about the efficacy of their changes, and receive the satisfaction that comes with the recognition of making improvements. Empowerment alone is therefore not enough; frequent feedback is also necessary.

In this regard, considerable information was reported to operators at the plants visited to co-exist with the increased responsibility and authority that has been granted to them. Extensive statistical process control (SPC) charting was performed by the operators. Pareto charting was utilized; also, graphs reporting trends from month to month for scrap and pieces per man hour were prominently displayed at each production line. Moreover, if Victor's experimental line (treating it as a separate business unit) is successful, every foreman at Victor will, at a minimum, be preparing their own budgets and receiving feedback (variance) reports on their performance.

The second general feature is that everyone must assume information responsibility and, by implication, possess a fuller understanding of the entire process in order to think and act as team members, mindful of the performance of the whole. As Drucker (1988, p.49) put it, everyone must ask: "Who in this organization depends on me for what information? And on whom do I depend?" In addition, we must consider: "Who is affected by my actions and decisions?" This list will not only include superiors and subordinates, but also colleagues in other departments with whom coordination must occur. This requirement will become increasingly necessary as more and more middle management jobs are withdrawn. To some extent, the extensive use of project teams facilitates learning about other people's responsibilities and concerns.

However, this increase in information responsibility must also include consciously assessing one's own information requirements. With rapidly changing job requirements and responsibilities, as well as ever changing external environments, one cannot necessarily expect people far removed from the firing line to know the kind of information that is required to effectively perform one's duties. To quote Drucker (1988, p.50) once again: "Information specialists are tool makers. They can tell us what tool to use to hammer upholstery nails into a chair. We need to decide whether we should be upholstering a chair at all."

Focusing on management accountants in particular, they will need to become far better acquainted with operational matters and processes than they have in the past in order to be able to recognize and appreciate the kind of information that operational people need to do their job well and to develop strategic performance measures. Also, they must communicate the information possibilities that exist with the adoption of new computer systems and software; furthermore, they must train people in their use. Finally, every employee needs to understand how money is made or lost in the company and the specific role they play in this process. It is surprising how few people fully understand the link between their behaviour and key organizational outcomes. Detailed information must be made available on a timely basis so that everyone can exercise self-control. Only then can people begin to understand how they (or better yet their team) influences the whole (Peters 1991, p.13). These are the types of considerations that Victor's accountant took as being central to his function.

Clearly, this transformation in perspective will require harmonious--rather than the traditional adversarial--relationships between accountants and operational specialists. The days of the stereotyped cold, callous accountant pointing his finger at a missed target must end. Instead, a partnership needs to be forged, whereby the accountant is seen as an important source of help in achieving the common objective: serving the customer better. The measurement and rewarding of a management accountant's contribution will need to be overhauled to reflect this new reality.

Management Accounting. Undertaking the case studies provided the author with the opportunity to more fully appreciate the fallacies of current management accounting practices that have been widely reported in the accounting literature over the last five years or so.

First, the case studies brought to light the folly in the widespread practice of defining the benefits of manufacturing process changes primarily in terms of labour cost savings or other costs that are arbitrarily allocated on some volume-related activity base (e.g., direct labour). Most improvements in simplifying the process lead to a sharp drop in *non*-direct labour as compared to direct labour. For example, the implementation of JIT leads to reduced inspectors, maintenance personnel, planners and expediters, as well as material handlers. Moreover, such improvements often translate into less space being required, less downtime (or wasted activity) through increased quality levels and faster setups, and greater capacity by decreasing throughput time, e.g., less moving and storing, less rework due to scrap, etc. Unless our accounting systems more appropriately attempt to capture the *full* consequences of process and technological changes and employee skill upgrading, the accounting function will actually impede progress rather than facilitate it.

Related to the above is the second point that traditional accounting systems only focus on the costs of producing; they virtually ignore the costs of non-producing, whether they result from downtime (e.g., machine failure, maintenance, setting-up) or from poor quality that requires rework or scrapping. Within a given mix, most production costs are fixed within the short run; that is, they remain the same whether you are producing or not, e.g., wages[2], salaries, heat and light, and the implicit carrying (interest) cost on buildings, equipment, and inventories. Therefore, the key concept that our accounting systems must focus upon is throughput or cycle time. The time a given process takes is, as Drucker (1990) explains, the only thing that is both variable and controllable. Moreover, time *is* an important source of competitive advantage in the market place (Stalk 1988; Peters 1990).

The goal of JIT manufacturing is to produce the "smallest possible quantity at the latest possible time and the elimination of inventory" (Hay 1988, p.26). In other words, the goal is to minimize total manufacturing lead time (the time between the customer order and the delivery of the finished product to the customer) without relying on inventory (a form of waste) as the means to such minimization. In doing so, non-value added activities (e.g., setup time, move time, wait time, inspection time) are inherently being reduced. Therefore, time-based measures, as McNair *et al.* (1989, p.87) suggest, must become as important as those based on cost in a JIT organization. Others go even further. In their book *Competing Against Time*, Tom Hout and George Stalk argue that time consumption should be the most widely discussed, measured, rewarded, and punished variable in a firm's information system.

[2]Most collective agreements stipulate that workers be paid a certain number of hours regardless if they are sent home during a period of downtime.

The reason is simple: "measures that spotlight time *per se* force many aspects of the innovation issue out of the shadows" (Peters 1990, p.19).

Considerable attention has been placed on the observation that direct labour costs pale in comparison to direct material or overhead costs and that firms spend too much time and effort in tracking them. The cost structure in both case studies confirm the former. In both cases considerable attention is still placed on tracking the activities of direct labourers. At Acme, the operations manager indicated that tracking direct labourers' time allows him to measure the proportion of non-value added time incurred by the labourers, to identify the wasteful activities and their magnitudes, and to determine the products that are associated with them. Based on this perspective, he felt the activity was worthwhile.

Notwithstanding, the critical observation is the trend or priority that can be expected in future cost reduction programs. In the short run much remains to be accomplished in reducing material costs by solving quality problems, partnering with suppliers, and designing products for ease of manufacturability; however, in the long run there is only so much room to manoeuvre in this area. Also, for many firms, direct labour costs are roughly 5 to 15 percent of total product cost. Although reducing direct labour can still be an important element in a cost reduction program (Hiromoto 1988), particularly in efforts aimed at reducing scrap, it cannot be expected to continue as being the primary focus. Instead, the major cost reduction focus in many organizations will be centred around reducing overhead.

Finally, the often cited behavioral affects of accounting performance measures must be more fully appreciated and capitalized upon. A major purpose of producing accounting information is to *influence* the behaviour of people. Continuous improvement is the ultimate measure of world class manufacturers. In linking these two points, Hiromoto (1991) argues that management accountants must therefore work hard to design measurement and control systems for the purpose of *motivating* all employees toward the continuous improvement strategies adopted by senior management. In addition, continuous improvement requires inter-functional cooperation and commitment. Consequently, performance measures must engender inter-functionality and informal cooperation.

In this regard, the organizations participating in the case studies have a considerable way to go in developing world class performance measurement systems. It is remarkable that so few firms fully understand the maxim that "you get what you measure." Promoting and developing such systems will be one of the challenges for management accountants in the 1990s.

Conclusion

To become world class people need to think world class: continuous improvement in satisfying the customer must become part of the culture of the organization--a way of life, a matter of hygiene. To motivate such an attitude, performance measures should be linked to the continuous improvement strategies of the firm chosen by senior management. Also, provide people with real authority for making decisions. Flattening the organization helps dramatically. Finally innovation requires *everyone's* involvement.

To be really innovative, however, requires a new organizational structure. Specifically, it requires destroying the barriers of the past--both horizontally (from function to function) and vertically (from worker to management) by adopting an organic structure which eschews formality; where what counts has more to do with a person's knowledge than with their position. Information must flow flexibly and informally on a timely basis wherever it must. But most important of all is the focus on horizontal or multi-disciplinary teams. And to the extent that such teams incorporate suppliers and customers, so much the better.

As is evident, the changes that have already swept organizations are nothing short of revolutionary. The study of the evolution of management control practices as they unfold promises to be both fascinating and highly rewarding for those undertaking such research.

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THE NEED FOR RELEVANCE IN MANAGEMENT ACCOUNTING

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INTRODUCTION

Most current readers of management accounting journals must be aware of the avalanche of criticism concerning the state of cost/management accounting [Ferrara, 1990]. To some the nature of the criticism may come as a surprise; after all, the subject of management accounting has developed into a broad and academically legitimate discipline. Increasingly, business organizations were perceived as socio-political systems, and psychological and sociological perspectives were brought to bear on management accounting [Lovell, 1988]. There was a greater awareness and acceptance of the behavioural dimension of internal accounting systems [Clarke, 1982]. As Ferrara notes, "our literature and our textbooks seemed loaded with meaningful materials on management accounting for planning, control and decision making .... Then, seemingly almost overnight, the criticism started" [Ferrara, 1990]. To some, the profession of management accounting is currently facing a crisis of relevance [Atkinson, 1987].

For convenience, it is useful to group the many criticisms of management accounting into two broad areas:

(1) its failure to adapt to the needs of today's high technology environment;
(2) the distortion of product costs in multi-product companies caused by using simplistic methods of cost allocation and absorption.

The new technology environment

Johnson and Kaplan [1987] argue that management accounting today is virtually unchanged from management accounting as it was practiced in the 1920s. Few concepts are discussed in contemporary management accounting texts that were unknown to practitioners at least 60 years ago. Thus, management accounting stagnation is highlighted in the context of the new manufacturing environment, with its increased emphasis on cost and on quality and flexibility of production.

Distortion of product costs

The second major criticism concerns the traditional approach of assigning overheads to products via departmental overhead recovery rates based on direct labour. Such product costing systems may have been appropriate for the factory organized on traditional job order flow basis, where there is substantial labour content in the manufacturing process. In the new manufacturing environment, the factory is likely to be characterized by sophisticated and flexible manufacturing systems in which products have a very low direct labour content, and in which the use of simplistic labour-based overhead rates will likely lead to severe distortions in product costing. One remedy is the adoption of Activity Based Costing (ABC) where costs are grouped into "pools" according to the specific activities, and in turn assigned to products by reference to "cost drivers" (e.g. number of purchase orders, or other activity factor that causes the cost).

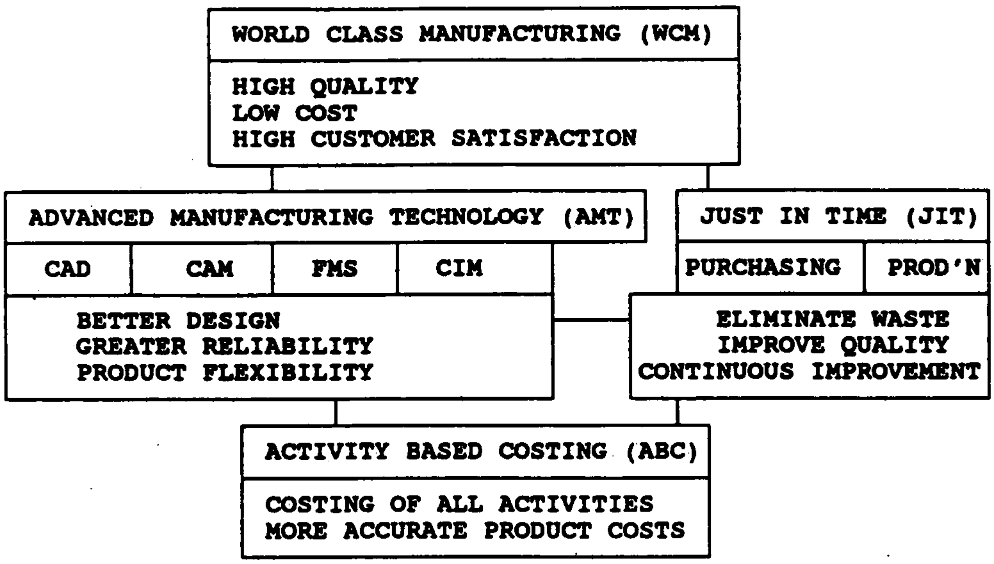
Our purpose is to survey existing literature for the management accounting implications of both the new manufacturing environment and ABC.

1. THE NEW MANUFACTURING ENVIRONMENT

The new manufacturing environment consists of three major and interrelated elements, namely World Class Manufacturing (WCM), Advanced Manufacturing Technology (AMT) and Just-in-Time (JIT) systems. A relationship among these three elements is shown in Figure 1.

The term "World Class Manufacturing" (WCM), used by Schonberger [1986] as the title of his book, is a convenient label to describe the manufacture of higher quality products reaching customers more quickly, at a lower cost, and providing higher customer satisfaction. It is an approach to survival in today's competitive manufacturing environment [Krause and Keller, 1988], and a competitive weapon in worldwide markets [Drury, 1990a].

FIGURE 1
INTERRELATIONSHIPS AMONG WCM, AMT, JIT AND ABC AND SPECIFIC CHARATERISTICS OF EACH



The pace at which companies adopt WCM practices is expected to accelerate during the next few years. By 1993, about half of U.S. manufacturers will have moved toward continuous improvement programmes [Coopers and Lybrand, 1988], and many will continue to adopt continuous improvement programmes because they present an enormous opportunity for improving their competitive position [Johansson, 1990].

Professional service firms can also learn from the emphasis on world class manufacturing [Whitt and Whitt, 1988]. Quality provides an important competitive advantage, and it is also a vital defence against litigation!

Advanced Manfacturing Technology (AMT) is "any substantially relevant and new technique the adoption of which is likely to lead to changes within a firm in manufacturing practices, management systems and approaches to design and production engineering of the product" [Pike et al, 1989]. Advanced manufacturing technologies include, computer-aided design (CAD), computer-aided manufacturing (CAM), flexible manufacturing systems (FMS) and computer integrated manufacturing (CIM). Just-in-time (JIT) systems also fit into this category.

Just-in-Time (JIT)

Simply stated, JIT is a philosophy that focuses on undertaking activities immediately as needed and firms only produce as demand dictates. This differs from the traditional production scheduling, which provides inventory in anticipation of demand and includes the maintenance of safety stock, designed to buffer unanticipated fluctuations in demand. The JIT concept represents two related but separate issues: just-in-time purchasing systems, which attempt to co-ordinate the receipt of materials so closely with their usage that raw material stocks are driven down towards zero; and just-in-time production systems, whose aim is to ensure that production is demand driven and that, in the absence of demand, no production takes place [Moyes, 1988].

However, it is a little artificial to separate JIT from the other changes taking place. McNair and Mosconi [1987] note "JIT is just one step in a migration path of technologies leading toward manufacturing excellence." Kaplan [1988] points out that organizations should first improve their quality, simplify and then automate. In moving to JIT, the chances for automation become more obvious.

JIT also has the basic objective of eliminating waste. Waste is considered anything other than the minimum amount of equipment, materials, parts, space and employees' time that is absolutely essential to add value to a product. The key operational phrase thus becomes "adding value". JIT strives to identify - and eliminate - activities that do not add value [Johansson, 1990].

Some of the JIT elements are not new. Henry Ford, in 1924, wrote, "...if transportation were perfect and an even flow of materials could be assured, it would not be necessary to carry any stock whatsoever." Auto manufacturer, Walter Chrysler, subsequently wrote in 1935, "The entire output of the plant is made only to order from the dealers ... cars on hand at one time are rarely more than one day's production." The social bottom line, however, was that staff were laid off in periods of inadequate demand in order to match production with sales. The large scale adoption of JIT systems could pose considerable "demand management" problems for the economy as a whole due to the multiplier effect [Moyes, 1988]. Another danger of JIT is that industrial concentration multiplies. The power of the workforce must be acknowledged since JIT systems are easily disrupted.

The benefits of JIT systems are impressive. One European manufacturing plant reduced its raw material by more than £70m ($140 million) with overall inventories being reduced from three months usage to less than one month. Another company reduced its inventories by more than 50 per cent in five months, saving the company more than £6m ($12 million). These reductions also freed 30 per cent more floor space which enabled the launch of a new product line without needing to buy additional factory space [Maskell, 1986a]. Mortimer [1987] indicates that the Colorado plant of Hewlett-Packard reduced its inventory from 2.8 months to 1.3 months, reduced labour cost by 30 per cent and registered a production increase of 100 per cent.

2. ACTIVITY BASED COSTING (ABC)

The recent intense interest in ABC has been stimulated by the work of Cooper, Johnson and Kaplan, especially by Johnson and Kaplan's landmark 1987 book, "Relevance Lost - The Rise and Fall of Management Accounting". They argue that management accounting practice has stagnated and that, as businesses grow, they often become more complex and so-called "fixed" costs increase **NOT** with the volume of units produced **BUT** with their range, diversity and complexity. Many costs fall into this category; examples include procurement expenses, set-up costs and quality control, none of which is volume related. Traditional "fixed" and "variable" costs are often unrealistic as is the method of absorbing overheads into units of output. Hence the product costing system may be distorted [Kaplan, 1988]. Yet, no other information exists on product costs other than in the accounting system. If the system seriously distorts product costs, no one knows about it; where are the checks and balances?

Johnson and Kaplan recommend Activity Based Costing (ABC) whereby overheads are traced to units of output through the various activities that generate costs. Costs are grouped into "pools" according to specific activities. In turn, these costs are assigned to individual products or groups of products using "cost drivers". A cost driver is defined by Bromwich and Bhimani [1989] as "an activity or factor which generates costs." The cost-driver:
(a) has a strong causal relationship with the activity cost, and
(b) can be related to specific product lines.

ABC acknowledges that products or services do not directly use up resources - they use up activities [Cooper, 1990a]. Thus, the major contrast between the traditional product costing systems and ABC concerns the way in which non-volume related costs are treated. The traditional costing system traces costs to products via cost centres, primarily through direct labour incurred therein; ABC traces costs to activities. If production scheduling cost is driven by the number of machine set-ups then that number would represent the cost driver for the cost of production scheduling. Cost drivers represent the allocation bases used by an ABC system. Some examples of cost pools and applicable cost drivers used in the UK are given by Innes and Mitchell [1990] as:

Activity (Cost Pool)	**Cost Drivers**
(1) Storing of Raw Materials	(1) Volume of material receipts
(2) Distribution warehousing	(2) Cubic feet of merchandise throughput
(3) Customer servicing	(3) Number of customers

The concept of ABC is not new and writers such as Solomons [1968] and Staubus [1970] referred to the significance of relating activities to cost incurrence. Indeed, Staubus [1991] recently states that "cost driver is not a better term...only a more colourful term for causal bases of allocation." The fact that these ideas were expressed over twenty years ago indicates that ABC is simply attaching greater significance to an idea that is well known and well understood.

ABC extends conventional theory rather than challenging or overturning it [Dugdale, 1990]. Cooper [1990a] accepts the fact that ABC can be considered an evolutionary extension of the two-stage allocation procedure that underlies most modern cost accounting systems. According to Holzer and Norreklit [1991] "nobody would claim that the allocation ideas and concepts in activity costing are new to anyone familiar with cost accounting. What is perhaps new is the increased interest of practitioners in more precise cost accounting." Furthermore Bromwich and Bhimani [1989] argue that an evolution of management accounting is required, not a revolution. The emphasis is on assigning production, marketing and even administrative costs to products so as to calculate a "true product cost".

ABC should be viewed as much more than a mechanism for tracing overheads to products. The idea is to identify the costs of performing significant activities of the business. Activities are repetitive tasks performed within an organization by groups as they perform their functional tasks [Campi, 1989]. Thus, engineering, purchasing, production, planning, warehousing, shipping and even accounting activities can be analyzed. Once activity identification has been accomplished, the defined activities should provide visibility to "non-value added" activities, and provide better understanding of the cause-and-effect relationships between the factors of production and the manufacturing process.

Because ABC focuses attention on the activities and their associated costs, it allows managers to perform an activity more efficiently by changing the production process or by acquiring new technologies, or to perform an activity less frequently by changing product design, or customer or product mix. When action is taken to reduce the cause of the activities that consume resources, a lasting reduction in costs will take place [Ostrenga, 1990]. As Cooper [1990b] explains "ABC is a model of resource consumption, not a model of spending."

Material handling costs may be driven by the number of separate parts which need to be stored and issued. Under an ABC system, they would be charged to products on the basis of number of parts required. If the number of parts per product is reduced, product costs are reduced. Designers are then motivated to simplify product designs and material handling costs, and product costs, will be reduced.

Limitations of ABC

ABC is not without its limitations and critics. ABC does not eliminate the arbitrary apportionment problem in cost accounting [Roth and Borthick, 1989]. For example, building occupancy costs represent several different types of cost (e.g. rent, utilities, property taxes, etc.). Finding a specific activity, which causes each of these costs to be incurred, may not be practical. Additionally, there are problems with commonality of activities; e.g., a single purchase order may contain items used on several different products. Kaplan [1988] accepts the fact that there are some jointness effects and commonalities that cannot be split accurately. He argues that these inaccuracies are relatively small in comparison with the distortions that exist in the costing system. Further evidence to support his claim is needed before it can be accepted at face value.

The numbers of different actions performed in a business are typically vast, and many actions must be aggregated into each activity. Unfortunately, as more and more actions are aggregated into an activity, the ability of a cost driver to accurately trace the resources consumed decreases. Likewise a decision has to be made on what kind of cost drivers to use. Recent preliminary examination of this problem has led some academics and practitioners to the conclusion that many of the same activities are being used as cost drivers as were used as activity bases for overhead allocation before ABC; only the name has changed.

Little is known about the potential behavioral and organizational consequences of ABC [Innes and Mitchell, 1990]. ABC will have considerable potential for influencing managerial behaviour and an understanding of its consequences is necessary for a full evaluation. The behavioral dimension is important since it requires a fundamental redirection in thinking together with the willingness of employees to accept new ideas [Krause and Keller, 1988]. One other factor is the impact of cultural differences on the implementation of ABC: clearly what works in Japan or Germany will not necessarily work in the United States or Canada.

3. THE ACCOUNTING IMPLICATIONS OF WCM AND ABC

Cost accounting in the new manufacturing environment needs to change. The factory of the future will see an increase in high-technology production methods using machines rather than human labour. Not only does this equipment reduce labour cost but it also contributes to the objectives of high quality, product reliability, fast and flexible manufacturing and lower inventories [Howell and Soucy, 1987].

Employee involvement in data collection

One change will be that personal observation by production-line workers will play an increasing role in cost control. Drury [1990b] found two main reasons:

(1) The dramatic reductions in production cycle time due to small batches mean that weekly/monthly cost control reports arrive too late to be of value in controlling production operations except as a guide to identify trends that are not apparent on the spot [Maskell, 1986b].

(2) Production workers directly observe non-financial variables such as quality on the factory floor. These non-financial variables are intuitive, easily understood and more relevant to factory personnel.

Greater emphasis will be placed on in-process control mechanisms which require operating personnel to isolate a quality problem, stop production, and remedy the situation, before it results in significant scrap, rework or other effects of poor quality. The failure of in-process checks results in customer complaints and warranty claims that should also be monitored [Sheridan, 1989]; there are also non-value added costs incurred, costs which WCM and ABC can avoid.

Changes in cost patterns

The shift from labour to machines changes both the proportion and characteristics of manufacturing costs. Labour and variable costs decrease; overhead and fixed costs increase. Based on a recent UK survey, the cost components in companies products were [Murphy and Braund, 1990]:

Components of Cost in Companies' Products (Mean %)

	In last 5 years	Currently	In next 5 years
Direct materials	47%	50%	54%
Direct labour	18%	18%	15%
Overhead	36%	34%	32%

In many manufacturing companies direct labour is lower than 10 per cent of all costs. Hewlett-Packard estimates that, in many electronic products, direct labour comprises only 3 to 5 percent of product costs; it is treated as a sub-part of overhead [Hunt et al, 1988]. In some companies the term "direct labour" has little relevance especially in a plant which uses robots extensively. In such circumstances labour accounting will not require source documents, reducing significantly the costs of accounting for labour.

An important issue in the change in direct material costs is the possibility that more direct material will be received in partially finished form. This could be a result of outsourcing. It is possible that less internal manufacturing shows up as an increase in direct materials costs from outside sources.

The assignment of cost to product also changes. Coupled with the decline in direct labour costs has been an increase in overhead costs resulting from expensive machines and skilled indirect labour. Most overhead costs will be fixed, but companies plan to control these costs and to reduce their impact.

With the new technology, variable costs may virtually disappear except for raw materials and the energy needed to operate equipment [Cotton, 1987]. The impact of this explosion of overhead costs has been described as follows: "As America's factories step up the pace of automation, they find that they are being hit twice: first overhead grows in percentage terms as direct labour costs fall and second, overheads grow in real terms because of the increased support costs associated with maintaining and running automated equipment" [Miller and Vollman, 1985].

It is interesting to note that Alexander Church [1908] was not an advocate of assigning overhead on the basis of direct labour cost. If overhead was 125 percent or more of direct wages then, he argued, overhead should command even closer attention than direct wages!

A new definition of product cost?
Product cost determination is another area where changes need to take place [Lovell, 1988]. The very definition of what constitutes a product cost is elusive [Chalos and Bader, 1986]. Financial reporting requires only production expenses be absorbed into product cost. Yet, if a firm is in business to produce and sell products, then all costs are really product costs. Thus marketing, general management, and research and development costs also relate to products.

Reduced inventory and inventory accounting
Since inventories are minimized under JIT, the need for detailed accounting for all inventories is reduced. If a high degree of trust has developed between the customer and supplier, inspection in the goods receiving process is eliminated. If payment for goods is made when they were received, then the accounts payable ledger would be virtualy eliminated! Furthermore, if completed goods are shipped immediately to customers, there is no need for finished goods inventory records [Cotton, 1987]. Finally inventory valuation becomes a less important issue.

Cost Behaviour and Control
In today's manufacturing environment only raw materials, power, sales commission and sub-contract labour are likely to be variable costs in the short term. The switch towards automation inevitably leads to a higher proportion of fixed costs. Yet because of the shortening of product lifecycles they can be almost totally variable in the context of a few years [Sheridan, 1989]. Costs will be determined in advance and greater emphasis will be placed on the control of costs at the planning stage [Sheridan, 1989]. By the time a product reaches the production stage, it is too late to control costs. Budgets will have an important role in planning, but control reports are less important when most of the costs are committed in planning [Drury, 1990b].

Marginal costing
According to Cotton [1987], the increase in the ratio of fixed to variable costs suggests little usefulness to traditional variable costing methods for product costing and pricing decisions. Since variable costs are mainly raw materials, marginal costing loses much of its meaning, and the use of variable costs as a surrogate for marginal cost in pricing decisions and in product line analyses must be re-examined. Kaplan [1987] argues that product strategy decisions are long-term; they have implications over 3-5 years and over this period many fixed costs become variable. As a result, when making long run decisions, all costs,

both manufacturing and non-manufacturing costs, are relevant to individual units.

Consider also the consequences for mathematical models, e.g. cost-volume-profit analysis and linear programming, which focus on unit contribution and treat fixed costs as irrelevant lump sums. In automated production environments, such costs cannot be overlooked in deciding different machine configurations and in looking at products in different stages of their lives.

Standard costing and variance reporting

Standard costs for planning and authorization purposes will still be important, but their use for control will lessen. The new technology facilitates the production of non-homogeneous units, leading to greater difficulty in setting the standards, calling into question the notion of variance analysis for performance evaluation [Chalos and Bader, 1986]. Indeed, if the manufacturing process is of high quality, actual costs incurred should approximate the standard costs estimated for planning purposes. Variances should be small and unnecessary to track, and the delayed nature of variance information renders it of little use.

The movement away from standard costing systems is already in evidence in Japan. Firms no longer supply a stable product range to a stable market. Rather, today's vast array of products is subject to rapid obsolescence [Morgan and Weerakoon, 1989]. As standard cost systems cannot be revised quickly enough, the usefulness of variance reports is open to question.

Material and labour cost variances

JIT methods and improved technology will lead to fewer defects and less spoilage, lessening the importance of traditional *usage* variances. Kaplan [1988] argues that the *price* variance is not important since the keys are supplier reliability and component quality. To judge performance using price variance generates inappropriate behaviour, focusing attention *away* from quality and reliability.

Since direct labour cost becomes increasingly fixed and less important, labour variances will become less significant. Labour efficiency variances are likely to be meaningless because labour utilization varies with each new batch produced. A variance in this environment may reflect the current machine process rather than employee efficiency [Cotton, 1987]. It is important to remember that JIT takes a non-traditional approach to labour efficiency. Under JIT it is better for a person to be idle than to be producing goods which are not immediately required [Maskell, 1986b]. Indeed variable overhead efficiency variances may also become meaningless.

Non-financial measures of performance

The introduction of WCM has brought into focus the inadequacy of traditional management accounting information for performance measurement and control. Manufacturing strategy within a WCM company should concentrate on *non-financial* measures of performance such as quality, delivery, reliability, short lead-times, innovation, flexibility and customer satisfaction [Maskell, 1989], as well as financial measures such as profitability. None of these non-financial elements are directly measured by traditional management accounting reports. The greater emphasis on non-financial measures of performance is understandable. The people in the factory are concentrating on the issue of production rates, on-time deliveries, reject rates and schedule changes.

The importance of non-financial measures of performance is well stated by Hall [1987], who argues that "over time, financially orientated management should be weaned from thinking that detailed financial goals stimulate operating improvement." He argues that companies migrating toward JIT/TQM should abandon traditional measures like budget variances and labour efficiency. It is possible, however, that cost may be simply an element of quality rather than a separate item; thus, quality considerations will include costs, as opposed to Hall's view that quality considerations will cause cost reductions.

According to McNair and Mosconi [1987], the four critical success factors that need to be measured at every level of activity are quality, delivery, people and cost. Lovell [1988] cites such areas as quality control statistics, scrap rates, warranty claims, absenteeism figures, labour turnover, set-up-times, machine down-time per product group, efficiency levels of different work patterns, and capacity utilization.

The focus of quality (which can include cost as a component), rather than cost alone, is stressed in all literature on the new manufacturing environment. Companies are emphasizing quality in a number of ways [Drury, 1990b]. They are building quality into products at the design stage rather than focusing on quality at the inspection stage; quality has to be built in, not inspected in [Sheridan, 1989]. This means the end of the concept of normal spoilage. In Japanese practice, the acceptable level of scrap is zero [Kaplan, 1988].

Companies are working closely with suppliers in order to ensure that high-quality components are received into the factory. A CAM-I survey [1988] indicates that materials are the single largest cost category. It is important that steps are taken to ensure that any value added along with the material itself is not lost as a result of inferior quality material.

The aim of world class manufacturing is to provide a quick service with 100 per cent on time delivery. Time becomes critically important and increasing emphasis will be placed on various time consuming activities such as, set-up, processing, inspection, delivery, and machine breakdown. The focus is on activities which are most time consuming and which do not add value to the product [Drury, 1990b].

An interesting survey of successful companies in Europe, America and Japan produced performance measurement as shown in Table 1 [Miller et al, 1988]. The companies included in the survey are not "typical" companies; they are all companies with a consistent record of success in terms of sales, profits, innovation and market acceptance.

TABLE 1
Performance Measures listed in order of importance

	EUROPE	**UNITED STATES**	**JAPAN**
1.	Outgoing quality	Incoming quality	Manufacturing leadtimes
2.	Unit manufacturing costs	Inventory accuracy	Direct labour productivity
3.	Unit material cost	Direct labour productivity	WIP turnover
4.	Overhead costs	Manufacturing leadtimes	Incoming quality
5.	On-time deliveries	Vendor leadtime	Vendor leadtime
6.	Incoming quality	Set-up times	Indirect productivity
7.	Direct labour productivity	WIP turnover	Material yield
8.	Material yield	Material yield	Finished goods inventory turnover
9.	Unit labour cost	Outgoing quality	Inventory accurancy
10.	Forecast accuracy	Indirect labour productivity	Absenteeism

Capital investment decisions
The expenditure on AMT is likely to be substantial. Maskell [1989] notes the traditional methods of evaluating capital projects can impede the introduction of WCM since an individual project must be cost-justified over a predetermined period. It is difficult to quantify advantages such as improved quality, and the life of the equipment can be longer than that of the products made on it.

The financial appraisal of investment for the new manufacturing environment should be abandoned and the investment decision be based solely on strategic considerations [Drury, 1990a]. He refers to a recent (but unnamed) U.K. survey which reports that 37 per cent of the firms investing in new technology used no formal method of investment appraisal and that firms were more in favour of subjective judgments, abandoning formal investment appraisal altogether. Some attempt should be made to quantify the intangible benefits from investing in the new manufacturing technology. One solution is *not* to attempt to place a value on those benefits which are difficult to quantify. The process is reversed by estimating how large the intangible benefits must be in order to justify the proposed investment, or how small the costs must be to make the project viable.

CONCLUSION

In order to be successful in today's worldwide competitive environment firms must be producing low cost products of high quality and be responsive to the needs of customers. The management accounting system should monitor progress towards the goals of low cost, high quality and responsiveness to customer needs, and the definition of product cost may well have to change, using ABC. ABC has its limitations, but they are less severe than the limitations of current systems.

Typical control systems, in the new manufacturing environment, will need more up-to-date and in-process control information. This will involve employees being assigned greater responsibility for their efforts and for quality. Sophisticated cost accounting systems will not be implemented unless the perceived benefits outweigh the additional cost. Cooper [1991] argues that the costs of redesigning a new cost system along the lines of ABC could create a significant barrier to introduction. Yet as noted by Holzer and Norreklit [1991], an increase in the competitive climate will make decision errors due to poor cost information more probable and more costly. The arrival of the computer has made the operation of a sophisticated cost system less costly than it was some years ago.

Finally, the research opportunities associated with WCM and ABC are immense. A vast array of conceptual and empirical work already exists in the literature in relation to other countries and is available for examination. One of the most important opportunities lies in research into the implementation of employee involvement in quality control. Another important research opportunity lies in examining how to provide the unique characteristics demanded in products, without increasing the costs substantially. Finally, performance measurement must be revamped to actually measure the right variables.

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THE INFORMATION CONTENT OF COST VARIANCE ANALYSIS UNDER MIS GROUP GUIDELINES FOR CANADIAN HEALTH CARE INSTITUTIONS

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Introduction

During the fiscal restraint that increasingly characterizes the 1990's, Canada's health care institutions are under pressure to limit expenditures, maintain or increase productivity, and assimilate new technology. For a variety of reasons including the budgeting environment emanating from the national health legislation of 1958, cost systems were not retained or developed (Nestman, 1989, p. 271). The ability to accurately measure costs incurred on behalf of patients, to evaluate the cost impact of planned program changes and to control costs in areas of operational responsibility are issues addressed by the new Canadian Management Information System Guidelines for health care.

To assist administrators of health care institutions in dealing with a gap in health care information systems in Canada, the Management Information Systems Group is developing a set of guidelines for cost analysis and reporting. The guidelines in their present form have been adopted by the ministries of health in most Canadian provinces, in order to facilitate equitable funding of health care facilities. Ten hospitals in Canada are implementing the guidelines during a testing phase prior to revision and more general implementation. The guidelines seek to set standards linking responsibility for resource use to services provided. At the patient level, this covers a medical episode from diagnosis to recovery, including but not limited to the in-patient/out-patient treatment phase (MIS, 1991).

The purpose of this paper is to examine the information content of the current MIS approach to variance analysis by comparing it to traditional and theoretical methods proposed by Shank and Churchill, 1977; Cleverley, 1987; and Broyles and Lay, 1982.

Statement of the Problem

Kaplan (1975) has pointed out that as many variances can be calculated as there are cost objects in an organization. By the late 1960's, a variety of important publications proposed various mathematical techniques that could be employed to identify variances which should be investigated (authors included Ijiri (1963), Churchill (1964), and Livingstone (1969). Critical questions addressed were the cost/benefit relationship of correcting or not correcting a system which was out of control, the decision rules for identifying significant variances, i.e., determining that the system was behaving abnormally, and the definition of controllable costs.

Of three main problems inherent in these discussions, one has been partially resolved by the general access to computers which provide advanced mathematical models in user-friendly software. The other problems are related to interpretation of variance data. As a general proposition, a variance provides a mathematical assessment of a cost behaviour which is often inscrutable, even to the managers responsible for its existence. Its existence, if material, indicates a deviation from values normally encountered or expected. On the other hand, an external party can quickly determine the variance's impact (positive or negative) on profit (or total costs). Beyond that point, further information may be required to isolate the activity which caused the variance. Moreover, a larger system view may reveal that what appeared negative for one activity actually contributes to realizing a net benefit, if considered together with other interdependent activities. A common example of the interdependency feature is the combination of a negative price variance for labour (i.e., higher wages than usual), offset by greater productivity represented by a favourable efficiency variance (which can result from superior output per unit of time of more highly skilled personnel). The opposite may occur in an industrial setting. For example, the purchasing department may acquire substandard raw materials at a cheaper than usual price, which produces a favourable price variance. This "savings" may be offset by an unfavourable usage variance if a large proportion of the raw materials spoil before they can be put into production or if their poor quality causes a substantial quantity of the production to be rejected as below competitive standards. Similar spoilage may occur in a hospital if the quantity and usage frequency of certain inventories are incorrectly forecasted.

A second interpretative aspect of information is the behavioral dimension (Baiman, 1985). The key purpose of producing variances is to influence managerial behaviour to control and modify costs in line with budgeted objectives. Consequently, the choice of variances calculated or reported and the organizational criteria employed in determining significant deviations will focus managerial attention on perceived priorities and induce actions by managers to control inappropriate cost behaviour.

Direct conflict may arise if, as is often potentially the case, variances are separate with respect to responsibility but interdependent in their impact on a dynamic system. What may occur as a consequence of interdependencies is the shifting of variances from one responsibility centre to another. For example, the purchasing department may bring material cost variances down to an outdated or unrealistic standard by purchasing marginal raw materials. This action, while serving as control in one responsibility centre, may create a large unfavourable variance in production for the reasons discussed above. Hiring minimally qualified applicants to reduce wage rates can shift training and productivity costs to other departments which are responsible for remedying the substandard quality of the units in production. The variance data in this context have produced a sub-optimizing situation which is detrimental to overall system efficiency.

A fundamental technical problem in variance analysis is determining the standard by which to judge if an observed behaviour is "normal". Cooper (Fall 1988) describes one aspect of this problem as fuzzy circles around a central point. The target's bull's eye represents "true costs" and one of the zones shown by a concentric circle represents cost approximations produced by the cost accounting system. His conclusion is that the system itself may be off-target, i.e., producing cost figures that already contain considerable error introduced by poor measurement techniques or inappropriate allocation procedures. In this case, part of the variance reported may be produced by the cost accounting system rather than the actual behaviour of cost drivers. This situation is consistent with our analysis of the MIS Guidelines' approach to variance reporting.

Methodology

The detection of meaningful variance information is dependent on using units of comparison that can act as a common denominator with our measurement system. Normally these are referred to as standard costs which can be constructed using a build-up or an allocation approach (American Hospital Association, 1990, p. 97). Without some established criteria for performance and cost, the analysis of variance may lack informative value. Misleading numbers may lead to harmful behaviour which reduces the effective use of scarce resources. An example of this situation is the use of variances calculated from differences in budgets of different time periods. Comparing units of output such as full-time equivalents (FTE's) per patient day in two different time periods can be meaningless "unless a patient day of care in 1986 is identical to a patient day of care in 1983", Cleverley (1987, p. 298) has pointed out.

To analyze more fully the informational content of variance signals produced by the MIS Guidelines, the following general relationship proposed by Cleverley (1986, p. 28) is used:

$$\textit{Total Costs} = P.\frac{I}{X}.\frac{X}{Q}.Q \tag{1}$$

where:

P	=	Price
I	=	Units of Resource Input
X	=	Services Provided
Q	=	Output
I/X	=	Units of Input/Services per Unit of Output
X/Q	=	Services per Unit of Output/Output Level

An operational version of this model developed independently by Broyles and Lay (1982, p. 603) allows comparison between actual costs and budgeted (standard) costs. Total cost variance is defined as the difference between the products of actual and standard costs in the health care unit or activity.

$$Var(Cost) = (pRUm) - (p^*R^*U^*m^*) \tag{2}$$

Var (Cost) = Price x Resource per Service Unit x Service Unit per Patient x Disease Category

An illustration of the Basic Cost Component model is shown in Annex 2. By using matrix algebra to capture all cost categories in the system or unit under investigation, differences between corresponding elements in the vectors or matrices provide specific cost variance information at the level of detail that matches the level of responsibility. Information may be generated on the effects of planned changes by substituting expected values and obtaining in the solution a measure of the full system impact as well as more specific effects of changes (real or expected) on the category levels: factor price, resource inputs, treatments provided, and patient mix. The same model generates aggregate effects by department e.g., nursing, surgical daycare, pediatrics or by specific unit of analysis such as type of disease treated, category of treatment, patient, and physician.

Results and Discussion

Figure 1 shows a summary of MIS Sample Report No. 14, published in the Guidelines, Chapter 4, p. 225, 1991. Our analysis which follows reformulates the same data using more traditional variance nomenclature and reconciles amounts produced by the MIS model with general practice. Figure 2 recasts Sample Report No. 15 (Chapter 4, p. 227, 1991) into the form proposed by Broyles and Lay to identify missing variables in the MIS version and illustrate the importance of their inclusion in the analysis. The following discussion deals in summary fashion with the main problems observed with the MIS model.

From Figure 1 it can be seen that the basic analysis developed by the MIS Guidelines calculates a "Volume" variance from direct variable costs that is equal to the difference between a flexible and static budget for the components evaluated. Secondly a "cost" variance shows the combined amount of efficiency and price differences as defined by traditional methods of variance

Figure 1

MIS Sample Report No. 14*

Description	Budget	Actual	Variance
Total Number of cases	181	191	-10
Total Number of units	1,002,740	1,125,950	(123,210)
Units utilized per case	5,540	5,895	(355)
Cost per case	8,736	9,276	(539)
Cost per unit	1.577	1.573	0.0035
Total Cost	$1,581,288	$1,771,650	($190,362)

"Two Way Analysis of Variance"

Volume	-10	x	8736.4		($87,364)
Cost per Case	-539.25	x	191		($102,998)
Total Variance					($190,362)

"Three Way Analysis of Variance"

Volume	-10	x	5540.00	x	1.576967	($87,364)
Utilization	-355.03	x	191	x	1.576967	($106,934)
Cost per unit	0.003496	x	191	x	5895.026	$3,936
Total Variance						($190,362)

Traditional Analysis of Variance

	UNIT	CASE	TOTAL
Budgeted cost	1.5770	$8,736.40	$1,581,288
Actual cost	1.5735	$9,275.65	$1,771,650
Difference	0.0035	($539.25)	($190,362)

Price variance = Actual quantity x difference in price		$3,936	($ .003496 x 191 x 5,895)
Efficiency variance = Budgeted price x difference in quantity		($106,934)	($1.576967 x 67810)
	Total	($102,998)	

Reconciliation	MIS	($190,362)
	Traditional	($102,998)
	"Volume"	($87,364)
	(-10 x 5540 x $1.576967)	

*MIS Guidelines, Chapter 4, p.225

analysis. A breakdown of efficiency and price is also shown under the caption of "three-way analysis of variance"

An initial problem with the MIS approach is confusion introduced by the use of sign (+/-). Various illustrations show both signs to designate a favourable variance. While the authors acknowledge that the use of sign is arbitrary in theory, for informational purposes it is important to be consistent. Moreover, the convention generally followed is to equate favourable (+) with cost reductions of similar positive effects on the entity's profitability. The fact that both signs are used to designate a favourable impact on operations probably originates from two divergent theoretical frameworks consulted by those who formulated the Guidelines.

On the one hand, the approach of governmental accounting and the American Hospital Association views maximizing expenditures as a proxy for maximizing services. In Canada, a fairly consistent view has been that spending more on services represents positive social good. From this premise, it is assumed that spending in excess of budget is favourable, at least for the clientele. Both in terms of services provided and because government reimbursement practices covered deficit positions, greater revenues were generated for the entity by deficit spending.

During the current crisis in funding, this approach has been questioned or redefined by placing caps on funding in Ontario amounting to a policy that costs be maintained at or below budgeted figures. By contrast, the variances shown in sources such as Cleverley and a popular Hospital Management Information System produced by Transition Systems Inc. reverse the sign and show over budget costs as unfavourable. The latter appears to be more consistent with the intent of the MIS guidelines and should be used consistently in their documentation.

A second serious difficulty with the MIS framework for variance interpretation is the presentation of a "volume" variance for direct costs. This amount is actually the difference between static and flexible budget figures. In most traditional treatments, this amount is excluded from reports by the use of a flexible budget. If there is a reason for reporting this figure in the non-profit sector, it may somehow be useful at the policy level in discussions between the government and the entity. It is not useful at the managerial level of cost control where the numbers cannot lead to meaningful actions. In arguing for the static budget as an index of "true" cost of service, one simply ignores volume changes brought about by the random occurrence of disease and injury requiring treatment. The "volume" variance is best left uncalculated or at least unreported.

The third area which requires considerable attention is the relationship of inputs to outputs. Traditional variance analysis does not capture the absence of a key variable required for proper analysis of health care productivity because the present MIS model fails to capture the intermediate output variable either in its description or by illustration. The authors of the Guidelines, sensing its importance, include a line for analysis of this output, but fail to include supporting examples or describe a method for its calculation.

Figure 2 illustrates the redundancy of information created by the incorrect formulation of the model. It shows the impact of changes in the service and patient mix variables by providing additional data for the Utilization and Mix variables and solving the system with the Basic Cost Component Model. The intervening "service" variable represents the conversion of factor inputs to patient treatments and measures the transformation process in a health care unit. Plotting these data would show the production possibility frontier for health care in a unit or aggregate of units. The variability of these data indicate internal productivity features of an institution, sector, or other aggregate. For effective cost control, analysis of the service variable provides a set of measures most

Figure 2

Sample Report No. 15*

Description	Standard	Actual	Difference	
Factor price p'	1.5770	1.6221	-0.0452	price
Resource R	83,100	84,950	(1,850)	efficiency
Utilization U	5,540	5,663	(123)	service
Diagnostic Mix m	15	15	0	volume

Analysis:

Price variance =	($3,753)	
Efficiency variance =	($2,917)	
Service variance =	($2,917)	redundant

Description	Standard	Actual	Difference	Variance
Factor price p'	1.5770	1.6221	-0.0452	($3,753)
Resource R	83.1	85.0	-1.850	($2,917)
Utilization U	66.7	66.7	0.000	$0
Diagnostic Mix m	15.0	15.0	0.000	$0
Interactive (price)				($84)
Total	$131,046	$137,800	($6,754)	($6,754)

Analysis:

Price p' = ($.0452 x 83100)	($3,753)
Interactive price = ($.0452 x 83,100 - 84,950)	($84)
Traditional price variance =	($3,837)

Description	Standard	Actual	Difference	Variance
Factor price p'	1.5770	1.6221	-0.0452	($3,753)
Resource R	83.1	85.0	(1.85)	($4,697)
Utilization U	66.7	70.0	(3.33)	($10,047)
Diagnostic Mix m	15.0	23.0	(8.00)	($69,891)
Interactive(price)				($2,424)
Totals	$131,046	$221,858		($90,812)

Analysis:

Resource efficiency (actual) =	($4,697)
Efficiency at standard =	($2,917)
Volume effect	($1,780)

*MIS Guidelines, Chapter 4, p.227

directly identified with the particular operating unit without external influences of suppliers or clientele, thus being the most directly controllable by managers.

It is perhaps instructive to observe in Figure 2 that a small modification of the Utilization value (70) and Mix (23) produce a system impact that resulted in a variance between 13 and 14 times greater than the original variance. Consequently, their absence from the MIS model in its current form severely limits its usefulness as a source of management information in controlling costs.

The absence of standards by which to measure operating activities is a major hinderance to providing a complete tool for analysis. With on-line systems, the usefulness of even a weighted or moving average to provide frequent benchmarks of critical processes seems self-evident. Without these benchmarks, the factor of time that has elapsed between planning and evaluating the actual results may allow significant noise to be introduced into the system and with it confusion about the meaning of the variance signals produced.

Conclusions and Recommendations

Modifications to the MIS Guidelines which are recommended by the foregoing analysis are to drop entirely the "this year/ last year" approach to generating variance numbers because it will confuse rather than inform managers. A budget versus actual comparison, preferably using standards, is recommended. To be meaningful, the budget figures need to be adjusted to actual volume using a flexible budget approach. The use of a flexible budget will cause the "volume" calculation for direct variable costs to disappear, thereby reducing confusion in variance interpretation. The use of sign and the underlying concept of a favourable and unfavourable variance should be consistent throughout the Guidelines treatment of variances, with the preferred definition of unfavourable being an excess of actual cost relative to budgeted costs.

Finally, the conceptual model must be modified to include a variable for service units (thought of as a treatment vector by patient category) so that the conversion process and production function of the unit of analysis may be evaluated and managed effectively. For indirect costs an approach linking cost pools to cost drivers is readily derived from the same model to capture cost functions more accurately than allocation techniques which make arbitrary attributions of overhead costs. Modifications in the Guidelines for the analysis of indirect costs parallel the recommendations proposed above for direct operating costs and are an area of further research.

Annex 1

Price (P)

The price paid for resource inputs including materials, labour, services and a portion of fixed costs for building, equipment, and other properties.

Normally these prices are determined by arm's-length agreements with parties outside the organization. These prices are called input prices in the sense that they are resources required to provide health care services which are intermediate outputs. (Final outputs are, by definition, treated patients.)

Units of Resource Input (I)

The physical quantities of labour hours, floor space, beds, electricity, equipment, laboratory facilities and so on used in providing care required by the patient.

Services Provided (X)

Input resources are combined by the organizational production function to provide services required in the treatment process, including nursing care, laboratory tests, accommodation and meals.

Output (Q)

The final products may be some measure of patient days, such as the adjusted patient day (APD). Alternatively, the output may be defined along more specific product lines by diagnostic-related groups (DRG/CMG).

To evaluate productivity and service intensity for intermediate products (services), the following ratios are defined as well:

Units of input/services per unit of output (I/X)

A measure of efficiency in using physical units of resources to provide services. For example: 3.25 labour hours per 3 hours' nursing care.

Services per unit of output/output level (X/Q)

A measure of the service units employed on average for a specified unit of output. Service intensity evaluates production efficiency in processes using intermediate services. For example: 3 hours' nursing care per patient day in an intensive care unit.

ANNEX 2 - BASIC COST COMPONENT MODEL

BUDGET

m	# Diagnoses
D1	1,000
D2	1,750
D3	2,000
D4	1,100
D5	500

Service per Patient Type

U	D1	D2	D3	D4	D5
S1	1	2	5	3	0
S2	4	3	2	0	1
S3	0	7	3	4	6

Um	
	17,800
	13,750
	25,650

Resource per Service

R	S1	S2	S3
R1	2	3	7
R2	3	0	4

RU	D1	D2	D3	D4	D5
R1	14	62	37	34	45
R2	3	34	27	23	24

RUm	
	256,400
	156,000

Factor Prices

p'	R1	R2
$	10	12

p'R	S1	S2	S3
	56	30	118

p'RU	D1	D2	D3	D4	D5
	176	1028	694	640	738

p'RUm	
	4,436,000

Actual

m*	*# Diagnoses*
D1	1,200
D2	1,500
D3	2,800
D4	300
D5	700

U*	D1	D2	D3	D4	D5
S1	1	2	4	2	0.3
S2	4.5	3	1	1	2
S3	0	8	2	5	5

Um*	
	16,210
	14,400
	22,600

R*	S1	S2	S3
R1	2.5	3.5	12
R2	2.8	0.2	5

RU*	D1	D2	D3	D4	D5
R1	18.25	111.5	37.5	68.5	67.75
R2	3.7	46.2	21.4	30.8	26.24

RUm*	
	362,125
	161,268

p'*	R1	R2
$	11.35	15

p'R*	S1	S2	S3
	70.375	42.725	211.2

p'RU*	D1	D2	D3	D4	D5
	262.64	1958.53	746.63	1239.48	1162.56

p'RUm*	
	6,529,139

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The Accounting Profession In The 90's:

Is The Gender Gap Narrowing?

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INTRODUCTION

To say that times have changed is probably the understatement of the century. The past 20 years have witnessed changes in the family structure, dual-career families, increased levels of stress and a greater concern for the quality of work life. Directly paralleling these changes has been an increase in the number of women entering the business world. In particular, women have been drawn towards the accounting profession. In fact, the AICPA now estimates that over 50% of the new graduates entering the profession are women.

Several factors have brought women into the business world. First, is the dramatic change in family structure. Yesterday's family generally consisted of a two-parent family with a mother at home and a working father. Today's family varies significantly. High divorce rates, low birth rates, and alternative lifestyles have given way to many one-parent families, many childless couples, same sex couples, as well as 'single person' families. Increasingly, the traditional nuclear family is becoming the exception rather than the rule.

While the breakup of the traditional nuclear family is one factor driving women into the workforce, economic necessity is another. Whether the sole supporter or the member of a working couple, it is now often economically necessary for women to work to support the basic needs of their families.

Thirdly, the growth in the number of women in the professions has been aided by a recognition of the wealth of expertise available from this relatively untapped pool. Increased global competitiveness requires that all available resources need to be tapped. To overlook this talent pool would be to ignore a significant competitive resource.

Finally, many women work for the same reason that men have for centuries, they want to. They have been equally educated and have just as much psychological need to demonstrate their abilities.

Accordingly, the breakup of the nuclear family, economic necessity, competitiveness and the psychological need have brought women into the business world. Consequently, the impact upon the business world has been significant. Accounting is no exception. Some of the basic operating framework upon which Accounting once thrived is facing serious resistance. The societal changes have impacted the needs and demands of its members. This requires a close and hard look at the Accounting Profession---What are the differences between men and women in accounting and how can their needs be met? How have the evolving societal factors affected the Accounting Profession and how can the profession service these changes?
The purpose of this study is to investigate some of the issues which have been identified in the literature as potential factors leading to job satisfaction and performance and to determine if

there are differences between men and women in terms of their attitudes toward these influences.

THE ISSUES

Research has shown that women represent 50% of graduating classes from university accounting programs.[1] Furthermore, by the year 2000, it is estimated women will constitute 50% of the workforce compared to 39% in 1983.[2] Some would say the increasing presence is a positive factor for women in accounting. For example, Michael Cook, chairman and chief executive officer of Deloitte, Haskins and Sells, remarked that as women begin to increase in numbers in the Accounting Profession, the current issues are more manageable than in previous years and will have a positive impact on the profession. He states that today's issues include, "dual careers, family management, personal mobility, child care and issues of that type" as compared to issues of focus in the past which included "discrimination and a lack of equal opportunity."[3]

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[1] Linda W. Heaney, "A Small Firm's Perspective on Women in Accounting" The CPA Journal May 1988: p8.

[2] Carl R. Borgia, "Promoting Women CPAs" The CPA Journal June 1989: p44.

[3] Michael J. Cook, "Outlook For the Profession" The Women CPA Jan. 1983: p3.

Certainly, one could consider this refocus promising, but studies in public accounting have shown that progress for women has been limited to lower and middle management. According to Karen L. Hooks and Shirley J. Cheramy, "The top jobs (partners or principals) are still bastions of male authority."[4] Ann Baldwin of Grant Thorton echoed similar sentiments in her discussion of the male/female mix at Grant Thorton.[5] At the entry level, a balance exists between males and females. However, the numbers of females dwindle as one reaches the Senior and Manager levels. At the partner level the number of females is generally negligible. Certainly, the presence of equal opportunity legislation has helped to mask discrimination in the work force but its existence is still evident.[6]

Differences between men and women are also evident in non public accounting organizations. In a study conducted by Le Thi Cao and Phillip G. Buchanan of 1500 members of the National Association of

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[4]Karen L. Hooks and Shirley J. Cheramy, "Coping With Women's Expanding Role in Public Accounting" Journal of Accountancy Feb. 1989: p66.

[5]Ann Baldwin, "Where Have All the Women Gone? A View From Britain" News & Values June 1988: p13.

[6]Borgia p42.

Accountants (NAA) the following results were obtained which focused on management accountants.[7]

1) The educational and professional background of female management accountants is equal to male colleagues.

2) Females cluster at the lower levels of organizations rarely reaching upper echelons.

3) A compensation gap does exist between male and females favoring males.

Another study by J. Olson and I. Frieze was cited by Piccoli, Emig and Hiltebeitel.[8] The results showed that women tended to start at the same income level as men, but in succeeding years the compensation gap became significant. Furthermore, in the same survey, women expressed concern over unfair promotions and job discrimination.

Another difference between males and females in accounting is the phenomena of the lack of a mentor and the inability, both within and outside of the organization to "network". Women generally have less ability to identify a mentor and receive less direction from

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[7] Le Thi Cao and Phillip G. Buchanan, "The Gender Gap in Accounting: Salary Disparity Among Management Accountants" Akron Business and Economic Review 18 (Winter, 1987): p41-42.

[8] Linda Piccoli, James R. Emig and Kenneth M. Hiltebeitel, "Why is Public Accounting Stressful?" The Women CPA July 1988: p10.

superiors in their strides for advancement.[9] The difficulty in business development through "networking" continues to be a concern for women. Linda W. Heaney reports, "By tradition, men have a built-in 'old-boy' constituency. They have greater access to the males who presently hold more than 99% of the high-level executive positions and 97% of the seats on the boards of the 1,000 largest companies."[10] For women, trying to work within these established networks is difficult at best.

In another study, women were surveyed on what they believed was the best avenue to take in reaching the top. In response, many of the female accountants referred to "a specialized field of expertise."[11] This would support the understanding that women believe technical ability should be the biggest factor in career success. Furthermore, the study found that "relatively few women cited the ability to bring in business through personal contacts as one of their strengths, even though this is perhaps the most familiar road to a partnership among their male counterparts."[12] Since the art of networking is a key success factor, it will continue to hinder the career advancement of women if they are

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[9]Borgia p42.

[10]Heaney p8.

[11]Hooks and Cheramy p68.

[12]Hooks and Cheramy p68.

inhibited from developing these skills in addition to technical ability in a specialized field.

In line with less emphasis on networking, women still do not participate as actively as men in professional associations. Although their presence has improved, as evidenced by the AICPA Committee report indicating the number of leadership positions held by women having increased from 40 to 102 since 1980, the level of participation still does not meet that of men.[13] It would appear that women have not yet fully recognized, or have been given the opportunity, of taking an active roll in such associations as a means of developing individual contacts, and a way to network within the profession.

A significant difference in the professional development of men and women is that women have more "family raising" career interruptions. Although certainly most would argue that men have increased their level of responsibility, the majority of career breaks for family are undertaken by women. Baldwin points out that the profession is losing some of the best and brightest women just because they choose to have children.[14] As long as women in the

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[13]Borgia p43-44.

[14]Baldwin p13.

profession remain childless they have similar careers to men.[15] Accordingly as stated by Borgia "...while marriage and family are considered a social asset for a man, they constitute a major disadvantage for a women and may hinder her advancement."[16] Thus for many women in Accounting, the decision between career advancement and family is seen as an exclusive choice.

It has been argued that women are not as career oriented as their male colleagues. Increasingly, this idea is being dispelled. Alma S. Baron conducted a survey in 1988 of 1700 executives. Of particular interest was the response regarding career orientation. Eighty four percent of the women responded that they were as career oriented as men, contradicting the "Mommy Track" perception.[17] While this is not conclusive evidence of long term career choice, it certainly indicates a strongly felt conviction on the part of the respondents.

Clearly, the problem is not that women are less career-oriented, but that the prevailing corporate culture, particularly in public accounting, is relatively inflexible. In some respects today's

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[15] Rosalie Silverstone, "Women in Accountancy: Ten Years On" Accountancy (UK), Sept. 1990: p70-73.

[16] Borgia p42.

[17] Alma S. Baron, "What Men Are Saying About Women In Business: A Decade Later", Business Horizons, July-Aug. 1989 p51.

corporate world refuses to accommodate the needs of a woman in her career pattern. "The career pattern in the profession is still geared to the 'work until you retire' male lifestyle. There is little encouragement to women to take a longer view of their career, to include child rearing and a later return to work at a senior level."[18]

Stress is another factor prevalent in the Accounting profession. It has been argued that women experience more stress than men in Accounting because women still feel the pressures from "family responsibilities and management, cultural prejudice, and the perception that to succeed a women's performance must exceed that of her male colleagues."[19] Women were found to face greater stress in the office in a study performed by the National Society of Public Accountants.[20] Women felt they were under constant scrutiny and had to perform better than male colleagues. Many believe stress is a main factor contributing to the exodus of women from accounting particular as they begin to reach the upper echelons.

The purpose of this study is to investigate these issues of career path, compensation, networking, career interruptions, work

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[18]Baldwin p13.

[19]Borgia p42,

[20]Borgia p40.

environment, and job stress for recent and past accounting graduates. By examining the responses of these graduates it is hoped that any recent changes in the role that women play in the profession may be identified.

THE STUDY

A mail survey was developed and sent to 300 graduates of the University of Rhode Island. All 150 graduates of the MS in Accounting program, for which the alumni office had current addresses, from the years 1976 to 1991 were contacted and an equal number of BS in Accounting graduates were randomly selected from the same years. Eleven surveys were returned as undeliverable, and of the remaining 289, responses were received from 131 for a 45.3% response rate.[21] Of these, 62 were male and 69 were female. Since the alumni office does not maintain records of the graduating students' sex, it is impossible to assess if the response rate was different between males and females but an informal analysis of typical male and female first names of the alumni indicate an approximately equal number of each sex. This may indicate a slightly higher response rate from females than males.

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[21] Responses included 55 graduate alumni and 76 undergraduate alumni.

A summary of some of the demographic and background data of the respondents, segregated by sex, is contained in Table 1. These results are similar to other studies and point toward significantly lower income levels, fewer professional designations and a lower rate of full time employment for females than males. This data also helps to confirm prior discussion of the increase in the number of women entering the accounting field. A much higher percentage of the female respondents graduated within the most recent five year period (53.6% vs 22.6% for males). While an indication of the greater number of women entering the work force in the accounting profession, it may also indicate a response bias to this type of survey questionnaire. This bias also is likely to influence other experience and age related variables such as income levels, professional certification etc. Results attempting to adjust for this potential bias will be discussed later.

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Insert Table 1 here

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Respondents were asked to rank on a scale of one to five their level of agreement with a series of fourteen statements that related to the issues previously discussed.[22] Using both a t-test

[22] A copy of the survey instrument is available from the authors upon request.

and a chi-square methodology, some responses were statistically different, at the 0.05 level, between men and women:

- Women were more inclined to believe stress arose from work-family conflicts.

- Women were more likely to accept the role of primary care giver for any children.

- Women were more inclined to agree that both short-term and long-term career interruptions due to such things as child rearing, could hinder achievement of long-term career goals.

- Men were more likely to believe women have lower career aspirations than men.

- Women are less likely, on average, to accept relocation, extensive travel, or significant amounts of overtime.

- Women are more aware of, and concerned with, employer benefits relating to work flexibility such as flex-time, job sharing, and leave of absences.

- While both males and females (92% and 90% respectively) believe networking and office politics are a factor in career advancement, the female respondents were more inclined to believe that it is easier for men than women to take advantage of networking opportunities.

Essentially all of these differences are generally supportive of the previous findings discussed earlier.

Many similarities between the two groups were also identified. With regard to professional accomplishment, in the sense of the likelihood of attempting and passing the CPA and CMA exams, there were no statistical differences between the sexes when adjusted for years of experience. Also, when describing either themselves or the accounting profession the responses were no different between males and females. Each listed their two most descriptive characteristics as hardworking and ambitious and each listed the two most necessary characteristics for success in accounting as intelligence and ambition.

The sample was grouped by year of graduation to try and determine if more recent graduates showed any differences in attitudes to the issues being discussed. The differences between men and women discussed earlier, though sometimes not as significant, were consistant for both the most recent five year group as well as for the older graduates.[23] Attitudes in general, when males and females were combined, also were not significantly different between the two time frame groups except in two cases. Recent graduates of both sexes perceive women to be more "career oriented", and more likely "to advance as quickly as men" than graduates prior to 1986.

[23]The slight reduction in level of significance is at least partly due to the smaller sample size of the subsamples and therefore no conclutions on shifts in attitudes over time would be prudent.

As mentioned earlier, a disproportionate number of the female respondents were recent graduates. To examine more closely the differences, if any, between equally qualified male and female respondents a separate analysis was done on a subsample of the respondents. The subsample consists only of those who have passed the CPA exam, have been graduated for at least 5 years, and are currently working full time. Table 2 summarizes the background and demographics for this group.

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Insert Table 2 here

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As one can see from this table, the income disparity is no longer significant. This is particularly interesting since the males in this subsample, as was the case in the full sample, are more likely to hold a graduate degree and are still slightly more experienced. What is most striking about this group, however, is that despite being more likely to start their careers in a "Big Six" firm, females are much more likely to move on to other smaller public accounting firms, to industry, or to self employment. In fact, only 1 of 20 female respondents in the subsample indicated that they are still with their first employer since graduation.[24] This

[24] There was one non response to this question.

contrasts with 7 of the 31 (22.6%) males still with their first employer. The responses of this subsample to the attitudinal questions was quite similar to those of the full sample discussed above. It would appear that the "Big Six" are experiencing a much higher degree of turnover of their female hires due to the firms' inability to respond to female employee desires for more flexibility, less work related stress, and a greater emphasis on technical capability rather than networking capability.

CONCLUSION:

With females entering the accounting profession in much greater numbers, organizations will have to look to accommodate their unique needs and demands. Very hopeful is the fact that many firms have established task forces to investigate the feasibility of such factors as flextime, parental benefits and maternity leave. Simply stated "flexibility seems to be the key ingredient."[25] The recognition in the Accounting profession of these issues represents a very important step forward for the industry. Many support the belief that the needs of its members has changed and to keep its members requires a different focus.

After surveying only the women partners and principals of the nine largest CPA firms one study pointed out "This flexibility is not

[25]Hooks and Cheramy, p68.

limited to partners, to the public accounting profession, or to women accountants. This change in cultural and social life-style has affected the entire world."[26] Again, one can see that the current issues affect all levels of the profession and are not just limited to the very highest positions.

Clearly, Accounting represents a profession in which its members are truly working to achieve opportunities for both men and women. Whether it be the mother or father as primary caretaker of the family this individual requires special attention to adequately serve the needs of family and profession without jeopardizing either. We would argue that flexibility is at least part of the answer. The societal changes bringing women into the workforce are most definitely permanent changes. To maintain equal numbers of talented men and women in Accounting requires a refocus of the work mentality. In time, this will reverse the negative impact of job interruptions on salary and career advancement. Indeed, a new focus can help to slow down turnover rates in Accounting which can certainly help to minimize the high expense associated with training.

The results from this study indicate that many attitudinal differences between men and women in accounting still exist and

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[26]Karen L. Hooks and Shirley J. Cheramy, "Women Accountants - Current Status and Future Prospects" p27.

that these differences, generally, are not changing. Of particular importance to employers of accounting graduates, women are at least as likely to begin their career in public accounting and obtain the CPA certificate as men, showing their technical competance and ambition. However, they are more likely to opt out of this career path, particularly the Big Six, for the private and governmental sectors where stress is seen to be less and the potential for work flexibility and career advancement is perceived to be better. In addition, compensation appears to be at least comparable. Public accounting firms may be losing many significant contributors to their future by not adjusting to the expectations of the their female employees.

TABLE 1

Summary statistics of the sample

	Males	Females	Total
Total responses in sample	62	69	131
BS grads in sample	33	43	76
MS grads in sample	29	26	55
Mean age	35.7	31.5	33.5**
Mean years since graduation	9.3	6.0	7.5**
Recent 5 year responses	14	37	51
Hold CPA certificate (%)	64.5	59.4	61.8
Income > $50,000 (%)	51.7	22.7	35.1**
Income between 30K and 50K (%)	33.9	39.1	36.6
Income < 30K (%)	14.4	38.2	21.3**
Working part-time (%)	3.3	9.0	6.3**
First job in public acc.(%)	63.3	66.2	64.8
Current job in public acc.(%)	40.0	44.8	42.5
First job in Big Six (%)	33.3	43.1	38.4*
Current job in Big Six (%)	16.7	16.4	16.5
% of grads attempting CPA exam	79.3	83.7	81.3
% who eventually pass	84.8	85.4	85.1

** Difference between groups is significant at the 0.01 level

* Difference between groups is significant at the 0.05 level

TABLE 2

Summary statistics of a subsample of respondents

(Hold CPA certificate, 5 years experience, currently working full time)

	Males	Females	Total
Total responses in subsample	31	21	52
BS grads in subsample	16	13	29
MS grads in subsample	15	8	23
Mean age	35.3	35.4	35.3
Mean years since graduation	9.5	8.5	9.1
Income > $50,000 (%)	73.3	65.0	70.0
Income < $50,000 (%)	26.7	35.0	30.0
First job in public acc.(%)	77.4	78.9	78.0
Current job in public acc.(%)	50.0	36.8	44.9*
First job in Big Six (%)	48.4	63.2	54.0*
Current job in Big Six (%)	20.0	10.5	16.3**
Current job in non Big Six (%)	30.0	26.3	28.8

** Difference between groups is significant at the 0.01 level

* Difference between groups is significant at the 0.05 level

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Leverage and Intertemporal Income Smoothing in Canada: An Empirical Study

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INTRODUCTION

Using a sample of 65 Canadian firms included in the Financial Post data base, this study reports empirical evidence on income smoothing behavior by Canadian companies involved in raising debt capital. The likelihood that a firm will smooth income significantly increases as firms' debt to equity ratio increases. Conversely, the results of the statistical analysis reveal that it is unlikely that a firm's management will be involved in income smoothing behavior in the case of a sale or repurchase of equity capital.

Possible explanations of such behavior include: (1) management's alliance with shareholders to transfer wealth from bondholders to shareholders because of a lower cost of debt. With income smoothing, earnings' volatility decreases which signals a stable income stream. As a result, bondholders may place the firm at a lower risk category and accept a lower interest rate. Current shareholders can also benefit if an existing debt is retired at a cheaper cost due to risk increase associated with less smoothing behavior, and (2) management's attempt to stay within the boundaries of debt covenants[1] while maintaining or liberalizing[2] dividends policy and bonuses.

SURVEY OF INCOME SMOOTHING LITERATURE

A body of empirical research suggests that management, in reporting on its own performance, tends to smooth income; that is, to bring reported income figures closer to predetermined (targeted) income levels. See, for example, Barefield and Comiskey [1972]; Barnea and Ronen [1976]; Beidleman [1973]; Copeland and Licastro [1968]; Copeland and Wojdak [1969]; Cushing [1969]; Dascher and Malcolm [1970]; Gonedes [1972]; Hepworth [1967]; Kamin and Ronen [1978]; Koch [1981]; Ronen and Sadan [1981]; and Smith [1976].

Theoretical research, however, provides general assertions or hypotheses as to why management involves itself in smoothing behavior. For example, Monsen and Downs [1965], Smith [1976], and Koch [1981] a priori believe that separation between ownership (principal or shareholders) and control (agent or management) may lead to management smoothing income. Management's satisficing behavior, limited job market, and dependence on income-based bonuses are the most often cited explanations for smoothing income, according to this school of thought. As such, smoothing behavior is a function of conflict of interest between principals and agents.

In their seminal work on income smoothing, Ronen and Sadan [1981] attribute smoothing behavior to two main factors: (1) management's compensations are income-based, and (2) management's desire to signal firm's expected future cash flows to intended users (i.e., shareholders, investors, and creditors). Income smoothing, according to Ronen and Sadan, thus,

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[1] This study utilizes the debt to equity ratio as basis for classifying firms into different risk classes. Other measures of financial stress are also available (See, for example, El-Gazzar and Pastena, 1991) but not used in the current study.

[2] F. Black and M. Scholes (May/June 1973) indicate that dividends liberalization can be accomplished by selling subordinate debt or common stock then use the proceeds to pay higher dividends. Such a scenario may not be in the stockholders' best interest. Selling long term investments in financial instruments, land or a division may be a more appropriate course of action from stockholders' point of view.

partially plays a positive role in signalling changes in expected future cash flows within the framework of existing generally accepted accounting principles (GAAP). This school of thought, thus, offers a partial cooperative relationship (signalling) between principals and agents to explain the smoothing phenomenon.

In 1988, Trueman and Titman portray a more cooperative relationship between management and shareholders. According to Trueman and Titman, income smoothing behavior is justifiable on the basis that it may result in a possible transfer of wealth from debt holders to shareholders through a possible reduction in the cost of debt. By portraying a more stable or a smooth income stream, management may be able to persuade prospective bondholders to accept lower interest rates. The cost of debt savings as well as the benefits of financial leverage accrue to existing shareholders of the firm. Income smoothing is also desirable in the case of equity sale because existing shareholders eventually reap all the benefits of higher than otherwise expected cash proceeds from new stock issues. In such a case, management benefits existing shareholders at the expense of new shareholders through possible reduction in the cost of raising new equity. Trueman and Titman, however, pointed out that management may boost income levels prior to a sale of a new issue. As such, this paper finds that the relationship between smoothing behavior and equity sale is not as clear as the case with raising debt capital. The following section discusses the theoretical basis for the current paper.

THEORETICAL SUPPORT AND MODEL FOR INCOME SMOOTHING BEHAVIOUR

If a firm has an income stream which has a small variance, then its income stream is considered less volatile and investment in the firm is considered less risky, and so investors are willing to lend to the firm at a smaller rate of interest. The firm's manager thus has an incentive to smooth income if he or she wishes to obtain less costly debt financing.

However, there are a number of factors which can complicate such a straight-forward analysis. First of all, not all firms are in a position to smooth income with discretionary actions, and those that are may only be able to smooth part of their income. Thus the outside investor has to form his or her judgment as to whether the firm is smoothing income. The analysis is further complicated by the fact that the manager of a firm, positioned at a given year in time, and having the option to bring the current year's income closer to its target for the current year by, say, bringing part of next year's income into this year by a discretionary action, may nevertheless have to take a risk that his or her action this year may make next year's income even more different from next year's target income than it would have been had income not been smoothed in this discretionary manner. Such an action may then risk increasing earnings' perceived volatility and thus increase debt cost.

It is true that the firm may have an idea of next year's income, but then this is not known with certainty. What then is the best course of action for the firm's manager if he or she is to maximize the firm's wealth, based on the best balance of probabilities? Trueman and Titman (1988, pp. 127-139) have shown that: If: (1) the firm's economic earnings are a normally distributed random variable with a fixed known mean (i.e. target) and variance unknown to all but the firm's manager; (2) outsiders believe with a given probability that the manager has the ability to shift income; (3) outsiders also believe with given prior probabilities what the variance of the earnings stream is; and (4) if the manager has the ability to shift income from the second period to the first, then only a fixed known proportion of the difference between the firm's first period economic income and its target can be shifted from the second period into the first. Then, Trueman and Titman show that, based on reported income figures, outside lenders revise their beliefs and probabilities about the firm's income stream having a lower variance. As Trueman and Titman (1988) indicated, the statistical expectation of probability and belief in the lower variance possibility is *always greater* if the firm smooths income than if it does not. This theorem shows that, in the first income period, even if the second income figure is unknown, it is *always* advantageous to smooth income, if one is to go on the balance of probabilities, under the above assumptions.

PURPOSE OF THE STUDY AND RESEARCH QUESTION

This study examines the relationship between debt sale and income smoothing behavior. As the previous section indicated, it is advantageous for management to exercise its discretion to smooth income where it issues debt. The basic research question examined in this paper can stated as follows: are firms issuing debt more likely to be involved in intertemporal[3] income smoothing activities?

METHODOLOGY

Smoothing Object and Tool.

The researchers made the decision to test the possibility of smoothing the bottom line net income. Two reasons can be cited to support such a choice. First, unlike operating income, bottom line net income is widely acceptable as a basis for calculating the widely observed earnings per share ratios. Empirical research provides evidence on personal fixation regarding users' reliance on that figure in decision making (Abdel-Khalik and Keller, 1979). Net income represents the new addition to the dividends' pool. Dividend payment levels is one of the key issues influencing management, shareholder and bondholder behavior. As a result, stability of net income levels is expected to significantly influence the process of negotiating the sale of new debt capital. Second, the researchers have selected extraordinary gains and losses and unusual items whose timing can be considered discretionary (i.e., item 71 of the Financial Post data base) as the smoothing tool. Management of Canadian firms have the timing discretion to include some extraordinary and unusual items in the income statement. Examples of these include (1) gains (losses) on retirement of debt, (2) gains (losses) on dispositions of property, plant and equipment, and (3) income tax adjustments. Testing for intertemporal smoothing is not possible had the researchers selected operating income as the smoothing object. This is true because prior to December 31, 1989, Canadian companies had the discretion of classifying a transaction as unusual (i.e., included in the calculation of operating income) or as extraordinary (i.e., excluded from the calculation of operating income).

Sampling.

A final sample of 65 firms were selected for analysis based on the following screening criteria:

1. Relevant data available on the Financial Post data base throughout the period 1976-1989.
2. Each firm has shown a material discretionary extraordinary gains (loss) and/or unusual items for the study year 1988. The researchers, relying on accounting literature and practice, decided that 10% is an appropriate threshold for measuring how material extraordinary gains (losses) are relative to net income before extraordinary items and

[3] In this study, intertemporal smoothing refers to management's ability to influence the timing of income recognition. With the use of discretionary extraordinary gains (losses) available for Canadian management prior to December 31, 1989, net income figures can be manipulated to fit a predetermined or projected target levels. For more details on the concept, refer to J. Ronen and S. Sedan (1981).

minority interest.

3. Each firm should have a positive debt to equity ratio (DE ≥ 0) to exclude companies with negative equities who might be subject to abnormal financial or business risks or be closer to receivership or bankruptcy.

Classifying Firms Into Smoothers and Nonsmoothers.

For the purpose of accomplishing the objectives of this study, the researchers selected the 1988 fiscal year as the study year. To classify firms into smoothers and nonsmoothers, the researchers completed the following procedures for each firm individually:

1) changes in reported net income for the period 1976-1987 were used to fit an autoregressive first difference ARIMA model:

$$W_t = \phi W_{t-1} + \delta + \epsilon_t \qquad (1)$$

where W_t is the first difference or the change in reported net income for period t

W_{t-1} is the change in reported net income for the period t-1

ϕ is the autoregressive coefficient (AR1)

δ is a constant or a drift in reported net income

ϵ is the error term

The purpose of this procedure is to predict the change in net income for the study year 1988. This objective is accomplished by adding model (1) prediction to actual 1987 reported net income. Predicted 1988 net income (PNI_{88}) is, thus, calculated as follows:

$$PNI_{88} = RNI_{87} \pm \Delta NI_{88} \text{ from Model (1)} \qquad (2)$$

where PNI_{88} is the predicted net income for the study year 1988

RNI_{87} is the reported net income for 1987

ΔNI_{88} is the predicted change in net income for the study year 1988.

2) a firm is classified as a smoother if it meets the following criterion:

$$\left| RNI_{88} - PNI_{88} \right| \leq K \left| NIBEOI_{88} - PNI_{88} \right| \qquad (3)$$

where RNI_{88} is the reported net income for the study year 1988

PNI_{88} is the predicted net income for the study year 1988

$NIBEOI_{88}$ is the reported income before extraordinary items for the study year 1988

K is a constant which in our case we choose to equal 1.

If K is less than 1, it becomes more difficult to classify a firm as a smoother and will lead to a drastically reduced sample size of smoothers.

By applying the above criterion, a firm is classified as a smoother if the absolute difference between its reported and predicted net income is equal to or less than the difference between reported net income before extraordinary items and predicted net income. That is a sign that management has used its discretion to close the gap between actual and predicted net income figures.

As a result of applying the criterion specified in model (3), 22 firms are classified as smoothers, and 43 firms are classified as non-smoothers.

Variables and Measurement.

1) Smoothing (S)- a dichotomous variable coded (1) for smoothers and (0) otherwise. The classification is based on the information obtained from the previous section.

2) Net SALES (NS)- a measure of size based on the reported 1988 net sales figures. Net sales information is obtained from the Financial Post data base (item 28).

3) Debt Reduction (DR)- a measure of the actual amount of debt retired during 1988. Debt reduction amounts are obtained from the Financial Post data base (item 95: funds used to retire long-term debt and capital lease obligations as reported in the statement of changes in financial position).

4) Equity Reduction (QTYR)- a measure of the actual amount of equity shares retired during 1988. Equity reduction amounts are obtained from the Financial Post data base (item 97: funds used to repurchase of shares as reported in the statement of changes in financial position).

5) Debt/Equity Ratio (DE)- a measure of leverage or financial risk at the beginning of 1988. The amounts used to calculate the ratio are obtained from the Financial Post data base (item 18; long term debt, and item 25; common equity adjusted for market values and preferred redemption premium).

6) Equity Sale (QTYS)- a measure of actual amount of equity issued during 1988. The data is obtained from the Financial Post data base (item 93; funds resulting from sale of shares reported in the statement of changes in financial position).

7) Debt Sale (DS)- a measure of the amount of funds resulting from debt issue. The data is obtained from the Financial Post data base (item 92 appearing on the statement of changes in financial position).

8) Debt Sold to Total Debt and Equity sale (DS/DS+QTYS)- a measure of significance of debt issued in 1988 relative to equity level in 1988. The data is obtained from the Financial Post data base (item 92; debt sold, and item 25; common equity adjusted for market values and preferred redemption premium).

Statistical Analysis and Results.

The logistic regression technique is used to fit the following model:

$$Z = \alpha + B_1\ (NS) \pm B_2\ (QTYR) \pm B_3\ (QTYS) + B_4\ (DS) + B_5\ (DS/(DS+QTYS)) + B_6\ (DR) + e \qquad (4)$$

where NS, QTYR, QTYS, DS, D/(D+QTYS), DR are as defined above,

α is a constant

B_1, B_2, B_3, B_4, B_5, B_6 are logistic coefficients measuring the odds of an event occurring, and

e is an error term.

The logit model (4) specifies the expected direction of the association between the independent variable (smoothing classification) and the explanatory variables. The signs included in the model indicate the expected direction of the relationships between smoothing and the explanatory variables. The variable debt reduction (DR), however, may cause a circular argument problem since this paper is trying to associate 1988 debt reduction and 1988 smoothing behavior using a 1988 EOI and unusual items reported amounts. The circularity may arise because debt reduction may result in EOI gains (losses) or unusual item that may throw net income off track and eventually lead to misclassifying a firm. To guard against such a circularity, the researchers have tested for a correlation between the absolute 1988 EOI and unusual items dollar amount and the 1988 debt reduction dollar amount. The correlation (63.33%) between the two variables is found to be statistically significant at the .001 level. As a result, that variable is excluded from the model since its inclusion will force significant results. The remaining explanatory variables pose no such a threat. As a result, the revised model is stated as follows:

$$Z = \alpha + B_1\ (NS) \pm B_2\ (QTYR) \pm B_3\ (QTYS) + B_4\ (DS) + B_5\ (DS/(DS+QTYS)) + e \qquad (5)$$

where NS, QTYR, QTYS, DS, D/(D+QTYS), DR are as defined above,

α is a constant

B_1, B_2, B_3, B_4, B_5, B_6 are logistic coefficients measuring the odds of an event occurring, and

e is an error term.

As for equity sale, based on Trueman and Titman's work, the direction of the association is not a priori determinable. Conversely, for both debt sale and the relative importance of debt sold (debt to total debt and equity sold), this paper predicts a positive association; that is, the likelihood of smoothing increases as either or both variables increase in magnitude.

The empirical results from solving (4) are presented in Table 1 below. The data in Table 1 reveal that the logit coefficients of both equity sale and equity reduction variables are significant and negatively related to the dependent variable in all the subcategories tested. Also, the logit coefficient of the debt sale variable is positive and significant for all tested categories.

Table 1

The data in Table 2 examines smoothing behavior of highly leveraged firms (i.e., debt to equity ratio of 75% or more as well as 50% or more). The empirical results reported in this table indicate that management of highly leveraged firms are more likely to get involved in smoothing activities. As indicated in the table, firms with 75% or higher and 50% or higher debt to equity ratio are more likely to use EOI to smooth income when selling debt. As for equity sale and equity repurchase, these highly leveraged firms are less likely to use EOI to smooth income.

Table 2

CONCLUSIONS

The empirical evidence provided in the current study corroborate Trueman and Titman's assertion that smoothing income is a desirable managerial behavior associated with the sale of debt capital. As indicated by empirical testing, management of some sample firms utilizes EOI and unusual adjustments when timing is considered discretionary to smooth income (i.e., brings reported income closer to expected income). Empirical results show that such an activity is significantly associated with the sale of debt capital. Such a behavior is more likely to be encountered with highly leveraged firms. Less smoothing is significantly associated with equity sale and repurchase. The empirical results also indicate that when existing accounting rules (GAAP) allow certain amount of flexibility, management will be inclined to use such a timing flexibility to maximize the existing shareholders' wealth at the expense of bondholders.

The results obtained in this study should interpreted within the constraints imposed by several factors including: (1) small sample size, (2) testing of smoothing behavior is limited to 1988, (3) smoothing tool, (4) net income prediction model, and (5) statistical models used.

Future research should extend the study to test for smoothing behavior in other years using other smoothing tools. The use of other statistical analysis techniques may reveal a different pattern of behavior.

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Table 1

Logit Coefficients (Significance Level)

Debt to Equity (Begin. of 1988)	α	NS	QTYR	QTYS	DS	DS/ (DS+QTYS)	Model χ^2	% of Correct Classification (No. of firms[4])
≥ 00 %	.1750 (.6927)	-2.2E-06 (.0286)	-.0001 (.0191)	-4.5E-05 (.0740)	2.25E-05 (.0257)	.0130 (.9488)	20.50 (.0010)	76% (63)
≥ 10 %	.4837 (.3158)	-2.4E-06 (.0217)	-.0002 (.0166)	-5.0E-05 (.0569)	2.37E-05 (.0221)	-.2663 (.4459)	20.36 (.0011)	78% (59)
≥ 20 %	.9552 (.1063)	-5.2E-06 (.0087)	-.0003 (.0067)	-.0001 (.0246)	5.08E-05 (.0104)	-.5608 (.1513)	27.76 (.0000)	77% (52)
≥ 30 %	1.0589 (.0853)	-5.2E-06 (.0090)	-.0003 (.0067)	-.0001 (.0231)	5.01E-05 (.0110)	-.6719 (.1147)	27.22 (.0001)	79% (48)
≥ 40 %	.7113 (.2741)	-6.7E-06 (.0087)	-.0004 (.0061)	-.0002 (.0111)	6.24E-05 (.0108)	4.5079 (.0784)	29.23 (.0000)	84% (43)
≥ 50 %	.4887 (.4630)	-5.2E-06 (.0328)	-.0003 (.0328)	-.0001 (.0764)	4.82E-05 (.0394)	2.1423 (.5550)	17.70 (.0033)	82% (34)
≥ 60 %	.1769 (.8147)	-5.7E-06 (.0411)	-.0003 (.0394)	-.0001 (.0803)	5.39E-05 (.0470)	3.1746 (.4013)	16.92 (.0047)	90% (31)
≥ 70 %	-.1674 (.8389)	-5.7E-06 (.0605)	-.0003 (.0571)	-.0001 (.1058)	5.53E-05 (.0674)	3.7356 (.3496)	14.96 (.0105)	96% (28)
≥ 80 %	.4043 (.7321)	-1.1E-05 (.0416)	-.0001 (.2231)	-.0002 (.0719)	.0001 (.0465)	5.3657 (.4074)	18.07 (.0029)	96% (23)
≥ 90 %	.4043 (.7321)	-1.1E-05 (.0416)	-.0001 (.2231)	-.0002 (.0719)	.0001 (.0465)	5.3657 (.4074)	18.07 (.0029)	96% (23)[5]

[4] Total number of firms tested at debt/equity ratio ≥ 00% is only 63; 3 firms less than the total number of firms with debt/equity ratio ≥ 00%. This discrepancy is due to missing values.

[5] The number of firms in the ≥ 90% category has not changed. As a result, the logit coefficients and their significant levels remained unchanged from those reported under the ≥ 80% category.

Table 2

Logit Coefficients (Significance Level)

Debt to Equity (Begin. of 1988)	α	NS	QTYR	QTYS	DS	DS/ (DS+QTYS)	Model χ^2	% of Correct Classification (No. of firms[6])
≥ 75 %	.4017 (.7338)	-1.1E-05 (.0394)	-.0001 (.2221)	-.0003 (.0689)	.0001 (.0440)	5.3994 (.4032)	19.44 (.0016)	96% (25)
< 75 %	-.4486 (.3989)	-2.5E-07 (.8089)	-.0003 (.0945)	-2.0E-05 (.7964)	4.26E-05 (.1120)	-.1291 (.6229)	11.97 (.0352)	76% (38)
≥ 50 %	.4887 (.4630)	-5.2E-06 (.0328)	-.0003 (.0328)	-.0001 (.0764)	4.82E-05 (.0394)	2.1423 (.5550)	17.70 (.0033)	82% (34)
< 50 %	-.5096 (.4020)	-4.2E-07 (.7223)	-4.8E-06 (.8565)	-5.1E-5 (.4733)	1.51E-05 (.3058)	.0503 (.8403)	4.91 (.4274)	66% (29)

[6] Total number of firms tested at debt/equity ratio ≥ 00% is only 63; 3 firms less than the total number of firms with debt/equity ratio ≥ 00%. This discrepancy is due to missing values.

THE ENVIRONMENT AND THE ACCOUNTING PROFESSION

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1.0 INTRODUCTION

The concern throughout all segments of society regarding environmental degradation has placed the pollution problem in the highest category of issues facing industry, politicians, government, trustees-in-bankruptcy, and the public at large. Several environmental disasters - Bhopal, Exxon Valdez, Love Canal, the Hagersville tire fire, and the PCB fire at St. Basile-le-Grand - have raised the collective awareness and underscored the importance of corporate environmental accountability and stewardship.

The range of environmental matters that accountability and stewardship must currently address include the responsibility for, and costs associated with:

- ***investigative work and planning***: includes environmental audits, preliminary site assessments, feasibility studies, planning and engineering;
- ***pollution prevention measures***: measures undertaken to prevent future contamination;
- ***pollution control measures***: measures undertaken to control, to specified standards/levels, air emissions and contaminant loadings to soil and water;
- ***site remediation***: removing contaminants from the air, water and soil that are present as a result of current and past activities;
- ***site restoration***: rehabilitating sites and restoring them to a prior or desired state;
- ***conservation of natural resources***: measures to conserve non-renewable resources and sustainable use of renewable resources;
- ***impact management***: provision of financial support, or support in kind (services, facilities), to compensate for impacts resulting from past, present or future activities;
- ***monitoring and performance measurement***: development of performance measures and systems, provision of services, equipment and staff to undertake environmental performance monitoring and measurement;
- ***regulatory violations, penalties***: satisfaction of penalties, fines and other punitive measures levied in response to prior regulatory non-compliance;
- ***contingencies***: potential, environmental liabilities contingent on future events not within the firm's control; and
- ***environmental risk***: risk to the environment inherent in the firm's operations and risk to the firm arising from society's environmental awareness and the regulation expressing it.

Federal, provincial and local governments have been introducing measures, such as more stringent regulations and broader investigative powers, to force industry to be more environmentally accountable. These measures have also been accompanied by a noticeable shift in enforcement and prosecution policy, resulting in substantial increases in penalties and fines for contravention of environmental legislation. For example, Ontario's Environmental Protection Act has seen a number of recent amendments to ensure that the fines act as deterrents rather than simply licensing fees. In 1990, the Act was amended to reflect maximum fines for individuals and corporations of $50,000 and $1,000,000 per day on the first conviction and up to $100,000 and $2,000,000 per day for subsequent convictions, respectively (Smith et al., 1991). While sentencing to date has not approached maximum penalties, recent convictions are opening the door to more aggressive prosecution. For example, the Ontario Court recently fined Bata Industries Ltd. and its directors $144,000 under the Ontario Water Resources Act, and the Alberta court recently blocked a $266,000 default loan payment to a secured creditor from Northern Badger Oil & Gas Ltd. on the grounds that the money was needed to cap oil wells (Financial Post, April 13, 1992).

While environmental legislation is intended to embody and uphold environmental principles and practices acceptable to society-at-large, issues beyond the current law continue to emerge. The public continues to apply pressure on governments to make regulations more stringent, and on industry to adopt self-initiated actions that go beyond existing standards and established contracts. Industry is expected to assume a proactive, leadership role, where it assists in finding solutions to environmental problems and setting legislation, and goes well beyond existing regulatory requirements. As noted by David T. Buzzelli, Chairman, President and Chief Executive Officer of Dow Chemical Canada Inc. with reference to industry's environmental responsibility (Bulletin of The Canadian Federation for the Humanities, 1991):

> 'The 1980's raised global consciousness about environmental issues. The 90's present a challenge to leaders in business and government to take positive action - responsible action. After all, environmental stewardship is our [industry's] ethical responsibility.'

The result of the environmental momentum is a new ***social contract*** that is defining an organization's environmental accountability and responsibility, and essentially determining its legitimacy. For free enterprise to survive, a convincing and growing body of evidence suggests that it will have to provide greater accounting for the environmental impact of their activities and of the extent to which the social contract has been fulfilled.

It is in providing information relevant to assessing environmental impact and deciding upon the fulfilment of the social contract that accountants have a significant role to play. Accountants are presumed to be neutral in their capacity as standard setters and information providers. They are expected to establish standards in response to the information requirements and risk management issues facing various stakeholders. They are not expected to set the social agenda or the information requirements of stakeholders, but rather contribute to satisfaction of those requirements and to the ultimate goal of informed, responsible decision-making. In summary, accountants satisfy the information requirements of stakeholders by providing them with reliable, balanced and objective information, through the preparation of financial statements, performing the attest function, and advising decision makers.

Our position is that the profession has an obligation to make available to society those professional skills particularly relevant to environmental issues, such as: standard setting, information systems development, auditing, development of performance measures and indicators, and reporting. It is our belief that the existing infrastructure, regulatory enforcement and standards generating capacity of the accounting profession will contribute most significantly to the area of financial evaluation and monitoring of an organization's environmental risk, obligations and performance.

This paper is based on the assumption that accountants have a significant role to play in establishing environmental performance standards, developing information systems to measure and monitor performance, and reporting performance results to interested stakeholders. This paper discusses the implications for accountants of assuming this role and satisfying the demands of the emerging social contract brought about by the increased environmental momentum.

2.0 THE CONTINUUM OF ENVIRONMENTAL AWARENESS

Responsiveness to environmental matters differs among organizations at any given time, and differs over time within the same organization. Essentially, organizational responsiveness is a continuum ranging from reactive approaches to regulatory compliance at the lower end to sustainable business activities and a proactive response to social issues at the upper end (Eckel et al., 1992). While there is agreement in the literature concerning the existence of a continuum, conceptual frameworks differ in terms of the nature and number of stages. Recent research has identified four stages in the development of organizational environmental responsiveness (IISD, 1992):

1. ***Fixing Problems***: Management prepares to deal with possible problems;
2. ***Regulatory Compliance***: Most Canadian firms appear to be at this stage. It begins with the introduction of environmental legislation and regulation, causing directors and senior executives to become concerned about their exposure to lawsuits and prosecution. Companies establish programs and organizational structures to implement and monitor compliance with legislation and regulation.
3. ***Comprehensive Environmental Management***: Management goes beyond ensuring compliance and takes a proactive stand on environmental issues; and
4. ***Sustainable Development***: In a further natural progression, this stage requires management to consider the impact of operations on the long-term interests and needs of stakeholders.

The implication of the continuum for accountants is that, in order to satisfy the information requirements of organizations and their stakeholders, they must be prepared to address a variety of needs. These needs place demands on accountants for information ranging in complexity, from relatively straightforward regulatory compliance to performance with respect to more complex, poorly defined matters concerning fulfilment of the social contract or minimization of externalities. Furthermore, given that the pace of change is fast and in the direction of sustainable development (the upper end of the continuum), accountants should be prepared to meet the most stringent corporate information needs concerning environmental performance. This paper concentrates on the implications for accountants of satisfying information needs at the upper end of the continuum - sustainable development. This is justified on two grounds: if accountants are prepared to serve at the highest level, they will be able to serve at all lower levels; accountants should be prepared to serve at a level higher than that required at any point in time, thereby leading rather than lagging behind society's needs.

3.0 PRINCIPLES FUNDAMENTAL TO SUSTAINABLE DEVELOPMENT

While the concept of sustainable development is receiving growing support, it remains abstract and theoretical to many accountants and business leaders. The following definition captures the spirit of the concept (IISD, 1992):

> '***Sustainable Development***: For the business enterprise, sustainable development means adopting business strategies and activities that meet the needs of the enterprise and its stakeholders today while protecting, sustaining and enhancing the human and natural resources that will be needed in the future.'

This definition captures the spirit of the following principles inherent in the concept (World Commission on Environment and Development, 1987):

- Anticipation and Prevention of Damage to Human, Natural Resources;
- Development and Sustainable Practices; and
- Cooperation among all members of Society.

3.1 Anticipation and Prevention of Damage

This principle embodies the need to adopt a philosophy of anticipating and preventing environmental degradation before investment decisions are made and resources are committed. Essentially, environmental considerations must be included in the criteria used in making investment decisions, though this is often easier said than done. One particular constraint is the difficulty in incorporating ***equity*** criteria into economic models.

Sustainable development and environmental imperative are founded upon certain equity principles, such as intergenerational equity, which holds that preservation and conservation of the environment and natural resources is necessary in order to provide future generations with an opportunity to benefit from them. There is continued debate concerning the methodology for including equity principles in the investment evaluation framework. Equity matters do not often lend themselves to quantification and valuation, thereby limiting our ability to directly incorporate them in economic evaluation models such as cost-benefit analysis and net present value. The common practice of incorporating these criteria into traditional models, through modifications to the discount rate, have been heavily criticized for inadequately or arbitrarily protecting the rights of future generations (Hirshhorn, 1990; Sudar and Muir, 1989; Markandya and Pearce, 1988; Hirschhorn, 1985; Pearce, 1977)). More recent approaches have emphasized a) the development of comprehensive measures indicative of social welfare, which is a broader concept than economic welfare (Hirshhorn, 1990), or, b) the development of environmental and equity criteria in the investment decision that are separate from traditional economic measures and techniques (Norgaard, 1992). While the more recent approaches will not remove the potential disparity between economic and environmental/equity criteria, they at least avoid the inclusion of such criteria in models that are effectively unable to comprehensively capture the essence of the criteria.

Another constraint to incorporating environmental matters in the investment evaluation decision is the difficulty in valuing many ***externalities and intangible impacts***. Externalities are the unintended effects of a project or process, and include damages to the terrestrial and aquatic environment, destruction of wetlands and other sensitive natural areas, and impacts on native communities. Many of these effects are intangible, and as such they are difficult to quantify and value. As a result, we are limited in our ability to incorporate them into existing economic evaluation models. There has been considerable criticism of virtually all of the valuation techniques used to arrive at monetary values for environmental resources (Hyman, 1981). These criticisms suggest a variety of reasons why existing valuation techniques typically understate the value of environmental resources, and therefore understate the costs of damages to them. While research continues in an attempt to improve and refine existing measurement techniques, it may be more appropriate to re-examine the inclusion of intangibles and non-quantifiable environmental effects in the investment evaluation decision. For example, criteria for accepting or rejecting an investment could include explicit environmental endpoints such as the acres of wetlands destroyed or the number of aquatic/wildlife species threatened. Such endpoints would be explicitly taken into account in the investment decision, along with traditional cost-benefit ratios, net present values and other economic criteria. Endpoints might consist of threshold limits - e.g., no more than the 22 acres of damage, and no destruction of rare or endangered species.

3.2 Development and Sustainable Practices

This principle, that sustainability requires (and assumes) continued development, is often overlooked and misunderstood among environmentalists and business leaders alike, who frequently assume that sustainability means no development. However, despite the recent movement towards separate recognition of environmental and equity criteria in the investment evaluation decision, rejecting all future development in the interests of preserving the environment and resources for future generations will also jeopardize the achievement of sustainability.

As noted above, there is a broad range of environmental matters demanding stewardship and accountability, some of which are extremely costly and long lasting. For example, removal of soil and disposal in a landfill ranges from \$300 to \$800 per ton, remediation of groundwater systems is known to potentially cost at least \$250,000 per acre and last 10 or more years, and the planning and engineering for remediation projects costing \$30 or \$40 million can exceed \$2 million (Duvel, 1991). Impact management can include the costs of constructing roads, recreational facilities and housing for entire communities, and it can also include the decommissioning of urban infrastructure (e.g., roads, sewers, schools) in the event of plant closures.

The point is that achieving sustainability will be expensive, requiring both continued development ***within reasonable environmental limits*** and the diversion of resources towards priority environmental issues and areas. We will be essentially unable to afford sustainability without a concurrent commitment to growth and development, which in fact is what the term 'Sustainable Development, is intended to embody.

3.3 Involvement and Commitment of All Members of Society

Sustainable development requires commitment to an individual's right to an environment adequate for maintaining health, intergenerational equity and conservation of natural resources as an integral part of development. There is a reluctance on the part of jurisdictions to take positive action and make an independent commitment to these principles, primarily because they do not see themselves as capable of making a significant difference. Jurisdictions often wait for evidence that others are willing to make a similar commitment in order to spread the costs equally among the responsible parties and maintain a competitive position. Unfortunately, many environmental problems and solutions to them are typically indivisible and non-severable, and as a result, each community/country must cooperate with and assist one another to achieve the objectives of sustainable development. Environmental issues are such that, it is important for a jurisdiction to consider its impact on others while striving for survival and prosperity, and not expect others to demonstrate involvement prior to becoming concerned and taking positive action.

4.0 IMPLICATIONS FOR ACCOUNTANTS AND THE ACCOUNTING PROFESSION

4.1 Dealing with High Levels of Uncertainty and the High Rate of Change

Accounting with respect to the environment will be performed within the high level of uncertainty and the high rate of change that surrounds environmental matters. The uncertainty relates to a variety of concerns, particularly a number of technological and regulatory uncertainties quite unlike those traditionally encountered by accountants. For example, contaminant release rates, environmental fate and transport mechanisms, effectiveness of remediation measures, nature and extent of damage, the time lag between discovery and court action, and the stringency of enforcement of regulation are some of the significant sources of environmental uncertainty (Bailey and Karam, 1991/1992).

The uncertainties inherent in environmental matters is at the heart of the recognition issue. Recognition refers to the decision as to whether a potential obligation should be taken into account by decision makers. While uncertainty initially impacts recognition, it also impacts valuation and reporting matters. For example, if an environmental obligation is to be recognized, then the question arises as to the measurement of the obligation and the manner or form in which it is to be reported.

Uncertainty will make quantification and valuation difficult, as in, for example, the forecasting of costs of a groundwater remediation program. These costs are a function of the future and present states of: prices, technology, regulation, and society's expectations concerning environmental performance. Cost forecasting will often be done in the absence of relevant analogues resulting in the use of engineered costs. Engineered cost estimation techniques are often inconsistent with the accountants approach to costing, and the costs vary in reliability. For example, the lifetime of a cleanup program usually involves at least five different engineering cost estimates, which represent continued refinements to the original estimates as programs progress from site investigation through to the subcontracting of services and actual remediation activities (Duvel, 1991).

Questions that need to be addressed include: How do we communicate the nature of engineering estimates used to arrive at accounting estimates? How do we measure and report on remediation activities when the activities are highly uncertain and contingent upon future, detailed site investigation studies? How do we reflect the impact of assumptions concerning the interpretation of regulation and anticipated regulatory changes? These questions, and many others, make it difficult to determine whether environmental obligations should be recognized, how they should be valued and disclosed, and what form accounting standards should take to ensure consistency in reporting environmental obligations and expenditures.

We believe that the level of environmental uncertainty will remain high for a number of reasons, including the diversity of stakeholders; the foundation of uncertainty in abstract areas such as societal expectations and the regulation by which expectations are expressed; the use of experts and the court system to settle enforcement issues; and continuing development in the science of remediation and contaminant transport and fate mechanisms. In fact, we expect there to be a high rate of change in certain areas, such as environmental regulations, macroeconomic instruments to achieve environmental objectives, enforcement practices, financial and non-financial reporting requirements and our understanding of environmental science and engineering. As a result, the high rate of change, will impact on the work of accountants, particularly with respect to the design and updating of systems for performance measurement, monitoring of regulatory compliance, decision making, external reporting of financial and non-financial data, and for gathering the data both externally and internally to support the above activities.

4.2 Re-examining the Neutrality of Accounting Standards

It is tempting, in the presence of the environmental imperative, to hold that accounting standards should further the environmental cause, or at least not serve as an obstacle to environmental performance in the private sector. Accounting standards concerning environmental expenditures, costs and obligations can influence an organization's resource allocation decisions. For example, consider an accounting standard that allowed the deferral of cleanup costs rather than writing them off against current income and earnings per share. Deferral may encourage the commitment of resources and incurrence of cleanup costs, which when viewed in a broader societal context, should have been allocated to another purpose. Alternatively, a requirement to write off all clean up costs against current income may encourage firms to misallocate resources (e.g., discourage firms from committing resources to environmental matters and/or addressing the most pressing environmental matters as viewed by society).

The use of accounting standards as an instrument of macroeconomic policy has traditionally been found to be unacceptable in Canada, as evidenced by, for example, the PIP Grant controversy, and it has been a controversial issue in the USA as well (Zeff, 1978). The environmental imperative is perhaps best viewed as a social policy which has a potential macroeconomic impact, rather than a macroeconomic policy per se. The key question then is whether the environmental imperative is sufficient to justify the use of GAAP in support of this social policy? At first glance, the answer may appear to be a matter of public policy and subject to the contemporary political posture of the stakeholders. However, it should be recognized that knowingly compromising the goal of providing objective, unbiased, neutral, information on which societal decisions can be based would be a most serious matter. Aside from the philosophical implications, it may lead to suboptimal resource allocation and may also be self-defeating. The resources available to be allocated to the environment are limited, and unbiased cost and benefit data are essential to ensure the optimum use of resources within the subset of environmental matters and within the broader set of public policy initiatives with which the environment competes for funding (e.g., health care, education, national defence).

The issue of neutrality can also be viewed against the continuing discussion as to whether the traditional accounting model is neutral or biased in favour of shareholders and creditors (Solomons, 1991; Tinker, 1991). To the extent that the non-neutrality in accounting is a direct function of reporting to a limited audience, the environmental reporting by accountants will be open to criticisms of non-neutrality. The demands of heightened environmental awareness are also consistent with the more concrete proposals of the critical accounting movement which consider the neutrality issue and suggest that the market-directed focus on investors and creditors interests be replaced by a concern for the broader community of stakeholders affected by accounting (Neu, 1991).

It is interesting to examine the positions of standard influencing bodies regarding the neutrality issue. For example, the terms of reference for the Study Group 'Accounting for and Reporting on Environmental Issues within the existing Financial Reporting Framework' includes the following (CICA, 1990):

- *2.*: To determine the extent, if any, to which current accounting requirements are an impediment to entities undertaking expenditures relating to improvements to, and protection of, the environment, and the extent (if any) to which such impediments can be overcome within the present financial reporting framework.
- *7.*: To discuss, in general terms, how to encourage voluntary recognition of environmental issues and the consequential impact on operating results (i.e., making it less burdensome for entities to be proactive in their environmental pursuits).

The charge to the Group reflects a non-neutral position in the sense that the standards are seen as potential instruments to encourage positive environmental action on the part of entities.

4.3 Accounting for Natural Resources

Accountants, economists and other financial experts are recognizing that a significant deficiency in accounting as it is currently practised is the failure to recognize the natural capital resources contributed by society and the depletion of such resources as a result of extraction or permanent/irreversible impairment. Essentially the use of natural resources such as air, water, forests and minerals are portrayed as free goods, since the impact of resource exhaustion and the use of unsustainable development practices are currently not reflected in financial statements or annual reports. Furthermore, economic activity required to clean up pollution damage is paradoxically reflected in accounts and indicators, such as gross national product (GNP), as a contribution to economic welfare.

Many nations are in the process of developing innovative ways of accounting for natural resources and recognizing the true economic soundness of development practices. For example, Norway and France have already established systems of natural resource accounting and budgeting, and Japan has developed a net national welfare (NNW) measure which adjusts GNP for environmental and other factors (BCSD, 1992). The U.S. is focusing on developing measures of environmental quality and pollution control, and the Netherlands and Canada are committed to providing a framework combining environmental and accounting objectives (CICA, 1991).

The implication for accountants is that they have a role to play in revising national and institutional income accounting to reflect the costs of environmental damage and the net changes to the physical stocks of natural resources. Rubenstein's natural asset trust account model is an example of how environmental transactions can be integrated with the traditional accounting framework (Rubenstein, 1991). While Rubenstein's model is preliminary, provocative, and one of a number of methods of incorporating environmental concerns into traditional accounting models, it nonetheless provides a focus in terms of the issues that accountants need to address and the problems that are likely to arise. His model highlights the need for expanded definitions of assets and liabilities, the difficulty in developing estimates of natural resource which are appropriate for use within a financial reporting context, and the need to challenge existing accounting principles such as matching, conservatism and the going-concern concept.

4.4 Indicators and Performance Measures

The movement toward natural capital accounting suggests the need for not only an overall environmental accounting framework, but also expanded national and corporate environmental information systems. New indicators and performance measures need to be developed that address specific environmental regulatory requirements as well as broader environmental matters, and systems need to be developed to collect and analyze related data. For example, definition, measurement and disclosure of the following types of information is increasingly required to demonstrate stewardship and to assist management in decision-making related to environmental matters (Eckel et al, 1992):

- the state of corporate policy and infrastructure in support of environmental performance;
- volume and types of wastes processed by internal and external waste recycling, treatment and disposal facilities;
- measures of efficiency, energy conservation, input-output conversion factors, and rates of spoilage and products and production processes;
- air emission rates for contaminants such as carbon dioxide, methane, CFCs, sulphur oxides, nitrogen oxides;
- water quality concentration measures for dissolved oxygen, nitrate and other chemicals;
- number of occurrences where relevant legal and regulatory requirements are exceeded;
- number and volume of hazardous or toxic chemical spills and the monetary values of damages to the natural and social environments; and
- nature and extent of environmental liabilities, contingencies and environmental lawsuits.

The above list of indicators and measures, though not intended to be exhaustive, reflects both the breadth of environmental reporting and the non-financial nature of much of the underlying data. For example, scientific, social and regulatory measures are relevant in addition to financial measures of environmental liabilities and expenses. While much of the data lends itself to expression in a quantitative manner, measurement difficulties arise because of inherent, environmental uncertainties that essentially limit our ability to link cause and effect. The physical consequences of specific activities are often uncertain, the remedial options for addressing consequences may be untried or unproven in relation to the scale or nature of the particular application, and the impact on social and ecosystem components may be unclear or indeterminate. These uncertainties complicate the prediction and quantification of effects and the assignment of monetary values to activities. Our lack of understanding regarding the relationship between ecosystem components further impairs our ability to accurately and comprehensively quantify effects and the true economic impact of activities.

It is interesting to note the progress that Canada is making in the development of a national set of environmental indicators. Canada's 1991 state of the environment report points to many problems that must be solved before reliable indicators and information can be produced and used for decision-making (Environment Canada, 1991). Particular problems discovered include the lack of information in certain regions of the country, the differences in time periods for which data are available, the lack of a standard system of measurement and the inconsistencies in collecting and aggregating data (CICA, 1991).

The implication for accountants is that they have a role to play in defining a comprehensive set of environmental indicators and measures, and developing the systems to collect and analyse the related data. Much of the data is required for broad environmental reporting, as well as the full costing and valuation of environmental activities for financial reporting. While the debate continues among accountants and financial experts concerning the extent to which accountants should be involved in environmental reporting, we would argue that accountants have a significant role to play for the following reasons:

- non-financial, environmental indicators and measures frequently form the basis of financial measures. For example, before the environmental liability associated with the clean-up of underground gas storage tanks can be accurately estimated, a clear understanding of the following non-financial data is required: legislative requirements for clean-up, required remediation techniques and restoration/rehabilitation levels; technological alternatives (and combinations of alternatives) and their effectiveness; and physical parameters such as the number of storage tanks, extent of the potential damage/leakage, and the length of time for clean-up and restoration.
- in Canada, accountants are one of the primary professionals responsible for establishing and implementing external financial reporting standards. External financial reports and annual reports are the outputs of exercising this responsibility, and represent the primary means of communicating information to interested stakeholders (e.g., shareholders, institutional investors, employees, the public at large). Therefore, at a minimum, accountants have a vested interest in the integration of financial information with environmental and other types of information. Going beyond this minimum, it can also be argued that accountants have the required expertise to provide a framework for reporting on environmental matters; essentially, accountants have the training to discern environmental information requirements and shape institutional responses aimed at addressing them.
- accountants have traditionally, actively participated in the design and documentation of management information systems. These particular skills are useful in ensuring that environmental information enables meaningful comparative analysis and provides reasonable assurance that quality control standards are being met.

4.5 Accounting for Externalities and Public Goods

Externalities are the impacts created by a project that are incidental to its main objective. Typically, these impacts represent damages to public goods such as wetlands, recreational sites, fisheries habitat and wildlife reserves. Since externalities are incidental, most negative ones (damages) are not paid for, or are at best indirectly paid for through compensation and other impact management programs. Economic theory suggests that internalizing externalities would ensure that environmental impacts are acknowledged, accounted for, and directly considered in investment/operating decisions.

Effective internalization of an externality requires the determination of the value of a good or the amount people are willing to accept as compensation for accepting risk or harm to a good. Determination of the value of public goods in turn requires consideration of a set of measurement and valuation principles different and broader than those traditionally relied upon in accounting. For example, common techniques for valuing externalities include the travel cost method and methods of extracting preferences (e.g., defensive expenditures, hypothetical valuation, tradeoff analysis). These and other valuation techniques arise primarily out of economics rather than accounting. Also, these techniques frequently undervalue public goods and damages to them (Hyman, 1981).

The implication for accountants is that they need to become familiar with a new set of valuation techniques in order to accurately report the financial information relating to externalities. In particular, accountants need to appreciate the nature of externalities, the deficiencies in techniques used to value them, and the limitations of the value estimates generated.

4.6 Environmental Auditing

In Canada, no statutory definition yet exists for environmental audits and there are no official standards and procedures. However, various types of environmental auditing have been practised for years and corporations are beginning to establish formal programs to monitor and audit environmental performance. It is clear from the experience to date that environmental auditing requires a multidisciplinary team of experts, continues to expand in scope, and requires a more formal structure to ensure consistency and reliability in the audit results.

While environmental auditing currently lacks the sophistication of financial auditing, the discipline is likely to undergo a similar development and relies on many of the same principles. For example, environmental audits, as with financial audits, focus on assessing and facilitating management control and compliance with external and internal policies. Also, as in the case of financial audits, environmental audits should comprise a systematic, documented, periodic and objective evaluation of how the organization, management, equipment and operations are performing (CICA, 1991).

Environmental audits also typically include a financial component. Financial considerations that environmental audits address include the nature and extent of insurance coverage, impairment of assets, third party liability, pending litigation, potential environmental liabilities, environmental fines and penalties, accrual of clean up costs and impacts on liquidation values (Griffis and Sands, 1992).

The implication for accountants is that they have a role to play in designing, structuring and conducting the environmental audit. In addition to ensuring the credibility of financial estimates relating to environmental matters, accountants are well suited to designing environmental audits in view of their experience in carrying our the attest function. Accountants have carefully formulated audit guidelines, are experienced with the reporting and technical requirements of comprehensive auditing, and have a long-established professional infrastructure to support the external audit function.

4.7 Risk to the Environment versus Risk to the Entity

The social contract demands that organizations report on the risks to the environment which are inherent in normal operations. This differs from current accounting standards, which focus on reporting risks to the entity arising out of environmental matters. For example, if only risks to the entity were to be reported, a fully insured risk to the physical environment would not even be disclosed.

It is a much different thing to disclose financial risk to the organisation which arises out of an environmental matter than it is to disclose risk to the environment - the latter need not address such concerns as impact on earnings per share, income and other criteria of concern to shareholders and creditors. The other stakeholders may be interested in impacts to the physical environment without any interest in the financial position of the organization. This has been recognized by the CICA, whose charge to the Committee on *Accounting for and Reporting on Environmental Issues within the Existing Financial Reporting Framework* included:

> 'the research report will discuss the information needs ... relating to the impact of an entity's operations on the environment,...'

One of the authors is a member of the Committee, and has observed the difficulty the Committee is having in fulfilling this objective. He has observed a tendency to restrict disclosure requirements to impacts that can be expressed in dollars and to impacts on financial variables such as net income, earnings per share, and expected future cash flows. Under these restrictions, only those potential impacts to the physical environment that can be quantified and monetized, and that would be recognized under traditional principles of liability recognition, would be dealt with. As a result, potential externalities and intangibles such as impacts on air and water quality, wetlands and recreation sites, would not be reported.

It is understandable that accountants and management are hesitant to assume a responsibility to report on all potential impacts to the environment of the organization's operations. This hesitation is due not only to a lack of standards relating to environmental matters, but to a lack of accounting standards and principles with respect to the measurement and communication of risk generally (Boritz, 1990).

4.8 Context for Interpreting Environmental Expenditures and Performance/Status

It is generally considered desirable that environmental expenditures be disclosed. Two main reasons are given in support of this position: the ability to predict future cash flows and a stewardship view of the environmental performance of the entity.

Each disclosure rationale may require a different context. With respect to stewardship, a context built around compliance with current regulation might be appropriate. For example, two firms with the same expenditure may be in very dissimilar positions with respect to the environment: one may have spent the funds voluntarily to go beyond its current status of regulatory compliance while the other may have made only a token and forced payment towards prevention of continuous environmental degradation. If we adopted a context built around compliance, reporting would have to go beyond simply disclosing the expenditure and include information on compliance. With respect to the prediction of future cash flows, the context for reporting by these two firms might be built around information on future expectations and the discretionary nature of cash flows.

The appropriate context may in fact be one that serves both disclosure rationales, thereby lending itself to evaluating prediction of future cash flows and stewardship. For example, consider the continued operation of a facility at a loss for the express purpose of avoiding a regulatory requirement to restore the site upon plant closure. This would constitute not only a non-transient change to the cost structure, but also a constraint on the general decision making ability of the organization. It also reflects a perverse and not uncommon result of environmental regulation (Cairncross, 1991). The existence of this situation would be of interest to a wide variety of stakeholders, including investors, creditors, the public and government regulators. Effective reporting would require disclosure of not only the annual expenditure, but of the entire circumstance surrounding it.

The main point is that effective reporting of environmental matters requires context, and the formulation of such a context will require a decision as to the objective to be served by reporting or the willingness to serve multiple objectives.

5.0 IMPLICATIONS FOR ACCOUNTING EDUCATION

Accountants should be prepared to support decision-making in the private and public sector, which for environmental matters, will require an appreciation of the diversity of decision-makers and interest groups. Because decision makers may use different decision paradigms, and are interested in and competent to comment on different aspects of the problem at hand, the emphasis is on the provision of complete and comprehensive information to serve as input to a variety of decision models and analyses.

In order to address the variety of information requirements, accountants should be introduced to a knowledge base which includes more than just accounting concepts, methods and rules, and is broader than that reflected in the current training of accountants. They should be prepared to confront projects with significant non-accounting elements and participants, and address tasks which require multi-disciplinary knowledge and require data and expertise from a variety of sources/areas. They should be able to use data from a variety of external as well as internal sources, and assemble reports on complex matters such as: the impact of new legislation, the potential cleanup cost for a contaminated site, management support and employee involvement in pollution prevention initiatives, and the status of the environmental setting (e.g., quality of surface water, groundwater, air, soil).

Professional accountants should develop skills which can be applied over a broad range of society's problems. The specific skills requiring broad application include: the attest function; the development of internal evidence to complement independent, external audit results; the ability to organize, analyze, document and communicate complex matters to management and the public; the ability to organize teams of experts to address tasks which have a non-accounting component; and the ability to design and implement management information systems to support performance measurement and reporting.

In order to enable them to effectively apply these specific skills to a broader setting, students should first study the disciplines that underlie accounting: behavioral science including decision making, economics including public goods as well as markets, statistics and inference, information, uncertainty and risk, systems generally and information systems, and forecasting. Then much of accounting can be seen as applications of concepts from the disciplines, e.g., valuation including non-market goods, the regulation of external reporting, project evaluation and capital budgeting, managerial systems design, the generic attest function, and the economic justification for independent audits. The advantages include an appreciation that the accounting methods are applications of broader, more fundamental concepts which can be used to cope with problems which have not yet been confronted; an understanding of the broader fundamental concept itself, rather than of just the accounting application; and an awareness that other disciplines have useful concepts and techniques to offer, and ways of viewing problems. An example is the treatment of project evaluation and capital budgeting where the basic cash flow model is considered in finance and the derivation of the cash flows is considered in managerial accounting. If, instead, the concept is first studied in the context of economic cost benefit analysis generally, it becomes clear that the traditional private sector "capital budgeting model" is a narrow subset of project evaluation because it deals only with monetizable impacts (Sugden and Williams, 1978). The limitations and constraints of traditional accounting concepts when applied to complex matters such as those relating to the environment become obvious.

6.0 The CICA Study Group: Accounting for and Reporting on Environmental Matters within the Existing Financial Reporting Framework

6.1 Introduction

The Group was struck in 1990 and is currently working on a draft report. The main question the Group addressed was, ***within the existing financial reporting framework***, what information should be provided in financial reports about the entity's impact on the environment, and the impact on the entity of the public's concern about the environment. It is interesting to consider the degree to which the 'existing financial reporting framework' may have acted to limit the appreciation of key issues raised by environmental matters and limit the nature of the solutions considered available. Two examples illustrating such limitations are: the reluctance to require disclosure of risk to the environment, and the adherence to traditional accounting principles of liability reporting - matching, provisions, and the recognition of only incurred liabilities - rather than society's perception of the 'entire liability'. The following comments on the Group's tentative conclusions should be read with this in mind.

A central question that the Group addressed is whether environmental matters are sufficiently different as to require new and different accounting principles rather than application of existing ones. The Group generally is of the opinion that environmental costs are unique only in the reason for their incurrence, and should not be expected to require new accounting rules. However, the Group, in attempting to determine the proper accounting treatment of environmental matters, appears to challenge existing standards many times. The report challenges existing handbook statements which deal with fundamental notions:

- **the notion of a betterment versus repair;**
- **the definition of an event within the prior period adjustment section;**
- **the definition and recognition of a liability, contingency and provision;**
- **the definition of cost of a capital asset, with reference to the notion of recovery value and the 'prudent cost' test; and**
- **the objectives of reporting.**

In the Group's view, there is conflict between a) the general principles underlying our existing accounting model, b) GAAP as evidenced in the provisions of the CICA Handbook, and c) current practice with respect to environmental matters. The general standards of recognition and measurement have frequently not been followed in practice in accounting for environmental costs. The one standard that now exists that is specific to environmental matters - site restoration in sec 3060 - is inconsistent with our general standards of measurement and recognition. The Group concludes that new specific disclosure standards for environmental matters are needed to ensure that practice reflects existing general standards of disclosure and make certain disclosures that are frequently not made now. The Group also concludes that new specific standards dealing with the measurement and recognition of environmental cost are needed.

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THE DILEMMA OF AUDITING EDUCATION: CAN IT BE RELEVANT PREPARATION FOR BOTH PRACTICE AND A PROFESSIONAL EXAMINATION?

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Although the Common Body of Knowledge of accounting is well defined and generally agreed upon in terms of generally accepted accounting principles and the topical coverage of the CPA and other professional examinations, no such consensus appears to exist with regard to a similar embodiment of auditing knowledge. Because of the agreement among accountants and educators, financial accounting texts usually cover the same topical materials with great consistency, mirroring the relative uniformity of collegiate courses in the financial accounting area. Likewise, there is general agreement among accountants and accounting educators as to the type of teaching emphasis which is desirable for financial accounting and what are the most appropriate teaching methods to be used.

In comparison with the other disciplines in accounting, there appears to be little consensus among auditing educators and practitioners concerning appropriate teaching methods, the amount of coverage of specific topics, and the best general emphasis for collegiate courses in auditing. Some auditing courses have strongly emphasized the conceptual aspects of the subject matter, while other courses have equally strongly emphasized the practical aspects. Three types of general approach to the study of auditing have been identified: the traditional, the neo-traditional, and the modern. The traditional approach emphasizes the implementation aspects of auditing, whereas extensive coverage of conceptual matters characterizes the neo-traditionalist approach. The modern school of thought emphasizes the transaction cycle approach of auditing financial information systems rather than limiting its focus to financial statements alone, and attempts to cover internal as well as external auditing practice.

Auditing textbook authors likewise reflect the differences existing in approaches to auditing education and attempt to present coverage of both auditing concepts, including the philosophy and environment of auditing, as well as a description of specific auditing techniques and their use in practical situations. Coverage of both areas reflects the need to appeal to all parts of the university marketplace.

Previous Research

The subject of the appropriate education for a career in the accounting profession has been studied extensively, especially subsequent to the mid-1980's. Building on the study and reports of the Bedford Commission entitled: Future Accounting Education: Preparing for the Expanding Profession, and also the Big Eight White Paper on Accounting Education, Perspectives on Education: Capabilities for Success in the Accounting Profession, The Accounting Education Change Commission (AECC) has embarked on a long-term study designed to develop, test, and facilitate the implementation of a delivery system for accounting education that can be characterized as a revolutionary improvement over the existing system. One of the focuses of the AECC has been an attempt to "decouple" preparation for a professional examination from the academic curriculum.

In the specific area of auditing education, research prior to the mid-80's has primarily focused on comparisons of educator and/or practitioner opinions concerning what should be the appropriate amount of coverage of various topics in auditing courses, (Bohne, 1974; Grinaker, 1978; Arens, 1978; Kirby, 1981). Most studies involve the perspective of educators and senior members of CPA firms and reveal significant differences exist between the opinions of those two groups. One of the conclusions of the Cohen Commission was that many practicing accountants were inadequately prepared by their university education, and that other professions were more able to rely on the formal education process to develop competence to practice, (Commission on Auditor's Responsibilities, 1978).

In spite of suggestions for more cooperative efforts between educators and practitioners, (Neumann, 1978), little research effort prior to the mid-80's was devoted to auditing education. In a study of that era, (Martin and Whisant, 1982), the "schism" between auditing educators and practitioners was further highlighted. Prior to the mid-80's, the electronic data bases of published academic and popular articles had a limited number which deal with auditing education. At that time, the INFORM data base carried 1,731 articles indexed using the word "auditing", but only one dealing with auditing curriculum matters, (Wyatt, 1974). At the same time, the ERIC data base contained 143 articles indexed using the word "audit", but none dealt with the teaching aspects of auditing or the content of the auditing course(s) in the curriculum. A recent review of the INFORM and ERIC data bases confirms the fact that little research has been specifically directed toward education in auditing, the study of which is significantly different from the study of financial accounting and other accounting disciplines.

The most notable recent research effort relating to auditing education was undertaken in 1985 by the standing Audit Education Committee (AEC) of the Audit Section of the American Accounting Association. The objective of this study was to develop a set of prioritized learning objectives for courses in auditing. A list of 80 learning objectives divided into 13 categories was distributed to 15 audit educators. A major problem encountered by the educators was prioritizing all of the "essential" or "desirable" topics into one course, particularly if an accounting systems course does not precede the auditing course. In a "Survey of Undergraduate Auditing Education" presented at the 1986 AAA Annual Meeting, only 17% of the reporting schools required a systems course as a prerequisite for the introductory auditing course.

Objective of the Study

Since the first-year staff auditor is a primary user of the knowledge and skills taught in collegiate auditing courses, it would seem that the educational needs of that person should be of major importance to auditing pedagogy. Also, since many auditors have relatively short careers in public accounting, it is reasonable to conclude that job performance in the early years is important to long-term success. A needs analysis performed recently by a large national firm of CPAs indicated that significant differences of opinion existed among staff, supervisors, and partners concerning the training needs of each group. This is understandable because of the concerns, for example, of a first-year staff person for passing the CPA examination as well as successful performance of auditing tasks. A partner's most immediate concern for that same person, however, is likely to be the development of technical skills immediately useful to the firm's practice.

In spite of these apparent differences of opinion, little previous research has been accomplished to measure the potential differences which may exist among various experience levels of auditing practitioners as well as possible differences of opinion between individuals in local and national firms. Likewise, little consideration has been given in past studies to the determination of the optimal teaching methods which should be used in auditing education as well as the best pedagogical emphasis, either conceptual or practical, which should be used in covering specific topical areas. All of these issues should be important to auditing curriculum and course designers.

Design of the Study

The purpose of this study was to provide information from practicing auditors with varying levels of experience in public accounting regarding the importance for first-year staff auditors of knowledge of specific auditing topics. Listings of topics developed in previous research were grouped into ten topical areas. Another purpose of the study was to ascertain whether practicing auditors of varying levels of experience believed that a conceptual or a practical emphasis would be most appropriate for the teaching of each. Lastly, the study was designed to determine whether auditing practitioners perceived their own college-level auditing course as satisfactory preparation for their taking the auditing portion of the CPA examination and also for performing their first-year auditing tasks.

In order to measure the effect on these issues of the recent focus on accounting education as well as the developments in public accounting, the current study is a replication of previous research performed in the mid-1980's. Both studies involve a questionnaire survey of a sample of auditors engaged in public practice in both local and national firms. Sole practitioners were not included in the population studied, since performance of auditing services is generally a minor part of their practices. Additionally, a sole practitioner does not have any staff at different levels of experience which was required by the design of the study. Separate samples were selected for experienced staff auditors, senior auditors, audit managers, and audit partners.

In order to maximize the response rate, a verbal agreement was obtained from each CPA firm selected, indicating willingness to cooperate in the study, usually a partner, who would distribute personally the survey instrument to randomly-selected participants in their office. They also followed up to make sure they were properly completed in a reasonable period of time. Because of these factors, the overall response rate in the earlier study amounted to 449 usable responses or 77% of the total distributed, which was calculated to be sufficient to support a maximum error level of ten percent. National firm responses amounted to 257 or 57.2% of the total and local firms 192 or 42.8%. The number of responses was quite comparable in each of the four experience levels. The specific response rates by category of respondent are set forth in Table 1. The response rate for the current study approximated that of the earlier study.

In order to test the representativeness of the samples, matching characteristics were used. These characteristics included sex, age, CPA certification, and college attended by the respondents. Actual responses from the sampled individuals were compared with data about the entire population in each firm which was provided by the contact person at that firm. The samples in both studies were all judged to be representative of the actual population of the various staff levels in each firm.

Results of the Studies

The results of the respondent's ranking of the relative importance to first-year staff auditors of each of ten topical areas for both the earlier and current study are set forth in Table 2. The practitioners ranked the topical areas of auditing procedures, audit evidence, and the study and evaluation of the internal control structure as of the greatest importance. The topical areas ranked by the practitioners as least important were: introduction to the public accounting profession, extensions of the attest function (operational auditing), and audit administration. The remaining topical areas were considered to be of moderate importance. Only one change of significance was noted between the findings of the two studies. The topic of professional responsibilities in auditing, such as legal liability and professional ethics was considered to be significantly more important by practitioners in the recent study than they were in the earlier study. This change is explainable as reflecting the expanded emphasis on a CPA's legal liability which has been brought about by the greatly increased number of lawsuits against CPAs and the extremely large unfavorable verdicts being returned by juries.

The results of the earlier study also indicated that considerable agreement exists among the practitioners concerning the issue of whether, in general, an auditing education should have a conceptual or a practical emphasis. A practical orientation would emphasize implementation skills necessary to apply existing knowledge to the solution of specific problems, such as the application of a particular auditing technique to a specific asset or liability. A conceptual orientation would emphasize non-applied knowledge, for example evidence concepts or the theoretical aspects of internal controls. The earlier study showed that a majority of practitioners preferred a practical emphasis for each of the six auditing topical areas they considered most important to first-year staff auditors. A conceptual emphasis was preferred for each of the four auditing topical areas they considered to be of lesser importance. In the recent study, a practical emphasis was preferred by practitioners for seven of the ten topical areas, including each of the six topical areas preferred in the earlier study. A conceptual emphasis was preferred for only three topical areas.

To determine the extent of agreement among respondents, a level of 75% of the total was defined to indicate a consensus in the surveyed respondent group. As thus determined, a consensus did exist in six of the ten topical areas in the earlier study. A consensus of the practitioners in the earlier study prefer a practical emphasis for the study of four areas and a conceptual emphasis for the study of two areas. In the remaining four areas, opinions were almost equally divided in three areas, and in one, a moderate preference for a practical emphasis but not a consensus. In the recent study, a consensus of respondents existed in only two topical areas. These were the two the respondents considered most important, auditing procedures and audit evidence. The percentage of the respondents in total that preferred each emphasis for each topical area in order of importance in both the earlier study and the recent study are set forth in Table 3.

The auditing topical areas where a consensus of the respondents in the earlier study preferred a practical emphasis related to the study of the following areas: auditing procedures, audit evidence, study and evaluation of internal control, and statistical sampling. As previously noted, the first of three of these topical areas were considered to be the three most important to first-year staff auditors. On the other hand, a consensus of practitioners preferred a conceptual emphasis for the study of the introduction to the public accounting profession plus ethics and legal liability. As noted previously, the respondents to the earlier study considered these two topical areas to be sixth and tenth out of ten in importance to first-year staff auditors.

The study also showed there were few differences existing between the preferences for a practical or a conceptual emphasis by surveyed practitioners in local firms as compared with those in national firms. Several of these differences were significant at the .05 level, using Chi-Square analysis. In the earlier study, all of the significant differences involved local firms believing more strongly than national firms that the emphasis for particular topical areas should be practical (2 cases) or conceptual (2 cases). Additionally, even where no significant difference existed, local firm practitioners generally preferred a practical emphasis for topical areas where a majority of respondents preferred that emphasis. Where a majority of practitioners preferred a conceptual emphasis for the teaching of a particular topical area, local firm preferences exceeded those of national firms. In the recent study, only two topical areas had a significant difference measurable at the .05 level. These were two of the three topical areas where a conceptual emphasis was more strongly preferred by local firms than national firms. Table 4 shows the breakdown of the earlier study's respondents' preferences for practical and conceptual teaching emphasis between those in national firms and those in local firms. Table 5 provides comparable data for the recent study.

There were several differences of opinion between the practitioners of various levels of experience concerning whether a practical emphasis or a conceptual emphasis is most appropriate for the teaching of specified auditing topics, however, none of these differences were significant at the .05 level. The percentage of respondents preferring a practical emphasis and a conceptual emphasis for each of the ten auditing topical areas is set forth in Table 6 for the earlier study and Table 7 for the recent study.

The practitioner survey respondents also expressed their opinions concerning how adequately their own collegiate course(s) in auditing prepared them for (1) passing the auditing section of the CPA examination, and (2) their first-year auditing tasks. This study supported the results of prior research studies which state that practitioners are not particularly satisfied with auditing education. Respondents to both the earlier and recent study believe that neither principal objective of auditing education, preparation for practice or for the CPA examination, is presently being accomplished very well.

In general, survey respondents were more satisfied with their auditing education as preparation for the CPA examination than for their first-year auditing assignments. Respondents from national firms were somewhat more satisfied with their auditing education than were those from local firms, but the differences in preparation for both practice and the CPA examination were not significant at the .05 level.

In terms of preparation for the CPA examination, only a bare majority of the respondents to the earlier study as a group, 53.8%, either agreed (41.4%) or strongly agreed (11.9%) with the statement that they were adequately prepared to pass the auditing section of the CPA examination after completing their collegiate course(s) in auditing. Even fewer respondents believed their collegiate auditing course adequately prepared them for practice. Only 48.1% of the respondents to the earlier study as a group either agreed (41.5%) or strongly agreed (6.6%) with the statement that their collegiate auditing course(s) adequately prepared them to perform the audit-related tasks assigned to them during their first year in practice.

In the more recent study, 54% either strongly agreed (16.4%) or agreed (37.6%) that they were adequately prepared to pass the auditing portion of the CPA exam. The proportion that strongly disagreed was 13.4% with the remainder disagreeing. As was the case in the earlier study, a majority of the respondents to the recent study disagreed (41.2%) or strongly disagreed (13.7%) that their collegiate course in auditing adequately prepared them to perform the audit related tasks assigned to them during their first year in practice. Only 6.6% strongly agreed and 38.5% agreed that their preparation for practice was adequate.

Conclusions of the Study

Auditing educators should be alert to the needs of the "consumers" of their efforts. Particularly, they should consider utilizing a more practical emphasis when teaching each of the seven auditing topical areas that practitioners now consider most important to first-year staff auditors. In this way, educators should be better able to satisfy the needs of college students to both prepare to pass a professional examination and also have sufficient background to be successful as a first-year auditor.

The growing internationalization of auditing practice mandates additional research to determine whether the findings in this study are in agreement with those of auditing practitioners in other countries. Because of the Canadian-American Free Trade Agreement and steps being taken to allow reciprocity among auditors in those countries, this research should be undertaken at once.

TABLE 1

RESPONSE RATES BY FIRM TYPE AND EXPERIENCE LEVEL
Earlier Data
(N = 449)

	National	Local	Frequencies
Experienced Staff Auditors	82%	74%	134
Senior Auditors	75	71	101
Audit Managers	87	68	102
Audit Partners	76	79	112
Frequencies	257	172	449

TABLE 2

IMPORTANCE RANKING (1-10) OF AUDITING TOPICAL AREAS
BY ALL RESPONDENTS AS A GROUP

	Earlier Data (N=449)		Recent Data (N=431)	
Topical area	Mean Ranking	Importance Rank	Mean Ranking	Importance Rank
a. Auditing Procedures	2.449	1	2.525	1
b. Audit Evidence	2.615	2	2.836	2
c. Evaluation of Internal Control Structure	2.673	3	3.970	3
d. Audit Reports	5.273	4	5.456	5
e. Auditing Inferences/ Statistical Sampling	5.361	5	6.103	7
f. Auditing in a Computer Environment	5.637	6	5.904	6
g. Professional Responsibilities/ Ethics - Legal Liability	6.953	7	5.394	4
h. Audit Administration	7.339	8	7.449	8
i. Extensions of the Attest Function	7.719	9	7.645	9
j. Introduction to the Public Accounting Profession	8.416	10	7.963	10

TABLE 3

PERCENTAGE OF TOTAL RESPONDENTS
PREFERRING A CONCEPTUAL OR A PRACTICAL EMPHASIS
BY AUDITING TOPICAL AREA
IN ORDER OF IMPORTANCE

	Earlier Data (N=443)		Recent Data (N=431)	
Topical area	Conceptual Emphasis	Practical Emphasis	Conceptual Emphasis	Practical Emphasis
TOPICS WHERE A MAJORITY PREFERS A PRACTICAL EMPHASIS:				
a. Auditing Procedures	10.8%	89.2%	6.7%	93.3%
b. Audit Evidence	19.1	80.9	14.6	85.4
c. Evaluation of Internal Control Structure	21.3	78.7	28.0	72.0
d. Audit Reports	44.1	55.9	37.1	62.9
e. Auditing Inferences/ Statistical Sampling	23.1	76.9	44.9	55.1
f. Auditing in a Computer Environment	30.4	69.6	27.9	72.1
h. Audit Administration	-	-	48.9	51.1
TOPICS WHERE A MAJORITY PREFERS A CONCEPTUAL EMPHASIS:				
g. Professional Responsibilities/ Ethics - Legal Liability	75.0%	24.0%	70.5%	29.5%
h. Audit Administration	58.0	42.0	-	-
i. Extensions of the Attest Function	52.7	47.3	62.2	37.8
j. Introduction to the Public Accounting Profession	76.9	23.1	74.4	25.6

TABLE 4

PERCENTAGE OF RESPONDENTS BY TYPE OF FIRM
BY AUDITING TOPICAL AREA
IN ORDER OF IMPORTANCE
Earlier Data

Topical area	All Respondents (N=433)	National Firms (N=247)	Local Firms (N=186)
TOPICS WHERE A MAJORITY PREFERS A PRACTICAL EMPHASIS:			
a. Auditing Procedures	89.2%*	88.3%	90.2%
b. Audit Evidence	80.9*	75.5**	88.0**
c. Evaluation of Internal Control Structure	78.7*	76.4	81.7
d. Audit Reports	55.9	55.9	55.9
e. Auditing Inferences/ Statistical Sampling	76.9*	73.0**	82.0**
f. Auditing in a Computer Environment	69.6	68.8	70.7
TOPICS WHERE A MAJORITY PREFERS A CONCEPTUAL EMPHASIS:			
g. Professional Responsibilities/ Ethics - Legal Liability	75.0*	75.2	74.7
h. Audit Administration	58.0	49.4**	69.4**
i. Extensions of the Attest Function	52.7	50.6	55.4
j. Intro. to the Public Accounting Profession	76.9*	73.3**	81.7**

* Indicates a consensus in the respondent group.

** Represents a significant difference measured at the .05 level.

TABLE 5

PERCENTAGE OF RESPONDENTS BY TYPE OF FIRM
BY AUDITING TOPICAL AREA
IN ORDER OF IMPORTANCE
Recent Data

Topical area	All Respondents (N=403)	National Firms (N=211)	Local Firms (N=192)
TOPICS WHERE A MAJORITY PREFERS A PRACTICAL EMPHASIS:			
a. Auditing Procedures	93.3%*	95.8%	90.6%
b. Audit Evidence	85.4*	87.7	82.8
c. Evaluation of Internal Control Structure	72.0	73.5	70.3
d. Audit Reports	62.9	65.6	59.9
e. Auditing Inferences/ Statistical Sampling	55.1	56.5	53.6
f. Auditing in a Computer Environment	72.1	77.3	74.6
h. Audit Administration	51.1	54.0	47.9
TOPICS WHERE A MAJORITY PREFERS A CONCEPTUAL EMPHASIS:			
g. Professional Responsibilities/ Ethics - Legal Liability	70.5	67.0**	74.5**
i. Extensions of the Attest Function	62.2	61.7	62.6
j. Intro. to the Public Accounting Profession	74.4	71.6**	77.6**

* Indicates a consensus in the respondent group.

** Represents a significant difference measured at the .05 level.

TABLE 6

PERCENTAGE OF RESPONDENTS BY EXPERIENCE LEVEL BY AUDITING TOPICAL AREA IN ORDER OF IMPORTANCE
Earlier Data

Topical area	Total Respond. (N=431)	Staff Auditor (N=128)	Senior Auditor (N=100)	Audit Manager (N=94)	Audit Partner (N=109)
TOPICS WHERE A MAJORITY PREFERS A PRACTICAL EMPHASIS:					
a. Auditing Procedures	89.2%	88.0%	90.0%	88.0%	90.6%
b. Audit Evidence	80.9	79.5	82.5	76.1	85.0
c. Evaluation of Internal Control Structure	78.7	77.2	80.4	71.4	84.8
d. Audit Reports	55.9	60.6	55.0	55.4	51.4
e. Auditing Inferences/ Statistical Sampling	76.9	73.0	78.8	75.3	81.0
f. Auditing in a Computer Environment	69.6	64.6	69.4	68.1	77.6
TOPICS WHERE A MAJORITY PREFERS A CONCEPTUAL EMPHASIS:					
g. Professional Responsibilities/ Ethics - Legal Liability	75.0	71.1	77.0	73.4	78.9
h. Audit Administration	58.0	61.2	58.2	55.8	55.6
i. Extensions of the Attest Function	52.7	52.8	52.5	62.1	44.8
j. Intro. to the Public Accounting Profession	76.9	74.4	74.0	72.3	86.2

TABLE 7

PERCENTAGE OF RESPONDENTS BY EXPERIENCE LEVEL BY AUDITING TOPICAL AREA IN ORDER OF IMPORTANCE
Recent Data

Topical area	Total Respond. (N=403)	Staff Auditor (N=86)	Senior Auditor (N=130)	Audit Manager (N=90)	Audit Partner (N=97)
TOPICS WHERE A MAJORITY PREFERS A PRACTICAL EMPHASIS:					
a. Auditing Procedures	93.3%	89.7%	93.1%	100.0%	90.6%
b. Audit Evidence	85.4	80.5	83.8	89.0	88.5
c. Evaluation of Internal Control Structure	72.0	65.5	74.4	62.6	83.3
d. Audit Reports	62.9	56.3	65.4	59.3	68.8
e. Auditing Inferences/ Statistical Sampling	55.1	48.2	49.2	59.3	65.3
f. Auditing in a Computer Environment	72.1	70.1	74.8	76.9	82.1
h. Audit Administration	51.1	42.5	53.8	52.7	53.7
TOPICS WHERE A MAJORITY PREFERS A CONCEPTUAL EMPHASIS:					
g. Professional Responsibilities/ Ethics - Legal Liability	70.5	74.7	77.0	64.8	70.5
i. Extensions of the Attest Function	62.2	74.1	52.5	60.0	45.3
j. Intro. to the Public Accounting Profession	74.4	75.6	74.0	76.4	74.2