

Managerial Economics of Non-Profit Organizations

Marc Jegers

Routledge Studies in the Management of Voluntary
and Non-Profit Organizations

Managerial Economics of Non-Profit Organizations

This is the first book of its kind to bring together the microeconomic insights on the functioning of non-profit organizations, complementing the wide range of books on the management of non-profit organizations by focusing instead on both theoretical and empirical work.

Jegers begins by considering definitions of non-profit organizations before examining the economic rationale behind their existence, the demand for them and its implications for their functioning. The final chapters look at the economic idiosyncrasies of the non-profit organizations, focusing on the fields of strategic management, marketing, accounting and finance.

This book will be perfect for advanced undergraduates and postgraduates engaged in the study of non-profit organizations and managerial economics.

Marc Jegers is Professor of Managerial Economics at the Vrije Universiteit Brussel and the Universiteit Antwerpen in Belgium.

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First published 2008
by Routledge
2 Park Square, Milton Park, Abingdon, Oxon OX14 4RN

Simultaneously published in the USA and Canada
by Routledge
270 Madison Avenue, New York, NY 10016

This edition published in the Taylor & Francis e-Library, 2008.

“To purchase your own copy of this or any of Taylor & Francis or Routledge’s collection of thousands of eBooks please go to www.eBookstore.tandf.co.uk.”

Routledge is an imprint of the Taylor & Francis Group, an Informa business

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British Library Cataloguing in Publication Data

A catalogue record for this book is available from the British Library

Library of Congress Cataloguing in Publication Data

Jegers, Marc.

Managerial economics of non-profit organizations / Marc Jegers.

p. cm.— (Routledge studies in the management of voluntary and non-profit organizations ; 9)

Includes bibliographical references and index.

ISBN 978-0-415-43382-2 (hbk.) -- ISBN 978-0-203-93084-7 (eb) 1.
Nonprofit organizations—Management. 2. Managerial economics. I. Title.

HD62.6.J44 2008

658'.048—dc22

2007034552

ISBN 0-203-93084-3 Master e-book ISBN

ISBN10: 0-415-43382-7 (hbk)

ISBN10: 0-203-93084-3 (ebk)

ISBN13: 978-0-415-43382-2 (hbk)

ISBN13: 978-0-203-93084-7 (ebk)

Contents

<i>List of illustrations</i>	<i>vi</i>
<i>Preface</i>	<i>vii</i>
<i>Acknowledgements</i>	<i>viii</i>
<i>List of frequently used symbols</i>	<i>ix</i>
1 Introduction	1
2 Defining non-profit organizations	5
3 The demand for non-profit organizations	15
4 Founding a non-profit organization	30
5 Governing and staffing a non-profit organization	37
6 Organizational strategy and behaviour of non-profit organizations	57
7 Marketing in non-profit organizations	67
8 Accounting in non-profit organizations	91
9 Financial management in non-profit organizations	110
10 <i>Gaudium et spes</i>	120
<i>Appendices</i>	<i>122</i>
<i>Bibliography</i>	<i>140</i>
<i>Index</i>	<i>161</i>

Illustrations

Figures

2.1	Generic organizational forms	6
2.2	Real organizational forms	7
3.1	Profit organizations and non-profit organizations in the same market	25
4.1	Institutional choice by an entrepreneur-manager	32
4.2	Payoff matrix in a profit–non-profit game	35
8.1	Utility maximizing founder-manager	95
8.2	Accounting and control with an effective board	97

Tables

2.1	International classification of non-profit organizations: main groups and sub-groups	13
5.1	Subscales of Governance Self-Assesment Checklist for non-profit boards	43
9.1	Equity diversity in eight countries, by field (number of countries)	112
9.2	Required rates of return in investment decisions (67 US hospitals, 1989)	116

Preface

This book grew out of my yearly updated course text, written in Dutch, which I have been using since 1996 to teach managerial economics of non-profit organizations at the Vrije Universiteit Brussel to last year undergraduate students and first year master students in (applied) economics and business. The yearly updating, being a good example of incrementalism and therefore a not so good example of rational textbook writing, forced me to restructure and rewrite the original text in such a way that, it is hoped, the present book is far more than just a polished translation.

Given this background, and the fact that economics are the scientific foundation of the present text (see Chapter 1 for an elaboration on this), its 'ideal' reader combines the following characteristics: apart from a genuine interest in the economics of the functioning of non-profit organizations, he/she has a good knowledge of basic microeconomics, knows standard algebra and the traditional mathematical optimization techniques (including the use of Lagrangians), and is acquainted with the essential concepts of management and its most important functional domains, such as strategic management, marketing, accounting and finance. The level of the book remains basic/intermediate, sometimes requiring simplification of the theories presented. An attempt is made to be coherent throughout the book as to the use of symbols, implying that they frequently differ from the symbols used in the papers discussed. In the main text, mathematics is kept to a necessary minimum, with more elaborate proofs having been transferred to the appendices. Finally, without any conscious reason, managers will be female throughout the book, whereas all other persons interacting with them will be male, making the descriptions of these interactions more unambiguous.

Acknowledgements

Though the writing of a book like this takes place in physical isolation, it would be impossible without a multitude of intellectual, logistic and relational ties.

As far as my intellectual indebtedness is concerned, it is only fair to thank everybody who participated with me in researching the functioning of non-profit organizations, making it intellectually possible to produce this book. As it is impossible to rank the contribution of each of them, I present their names alphabetically according to their first names, as these are the names we use, sometimes even forgetting last names: Bruno Heyndels, Carine Smolders, Catherine Schepers, Chris Houtman, Cind Du Bois, Ilse Verschueren, Ralf Caers, Rein De Cooman, Roland Pepermans and Sara De Gieter. Bruno, Cind, Ralf and Roland additionally contributed by commenting on some or all of the drafts of the different chapters of this book. Both of the anonymous referees asked by Routledge to assess the book proposal also made valuable suggestions, most of which were eventually taken into account.

In terms of establishing a research network on nonprofit organization management and being enabled to discuss the latest contributions in the field, the biannual workshops organized by the European Institute for Advanced Studies in Management, which I had the pleasure to co-chair with Bernd Helmig, Fabrizio Panozzo, Irvine Lapsley, and Noel Hyndman, were also very important, including the process of co-editing the proceedings. This cooperation very much shaped my thinking on this book's main topics.

Mia Hofman was indispensable when it came to transforming confusing drawings into clear and understandable figures, but even more so as the psychological head of our department, keeping everybody as happy as possible and enabling all of us to concentrate on our research, a role whose importance cannot be overestimated.

Finally, I owe most to my parents, Micheline Churlet and Pierre Jegers, without whom it would have been impossible to be where I am now, and my partner in life, Christine Locus, who makes me stay there.

List of frequently used symbols

Variables

π	outcome
Π	profit
a	altruism parameter
A	administrative costs net of fundraising costs
b	bonus
C	cost function ($= F_x + V$)
d	discretionary expenses
D	debt
e	effort
E(.)	expected value operator
Eq	equity
f	fundraising efforts
F	funds raised
F_x	fixed (production) cost
g	'warm glow' parameter
nW	non-monetary advantages
oo	organizational objectives
p	input price
P	output price
q	output quality
r	discount rate
R	revenues other than subsidies and fundraising revenues
S	subsidies
t	tax rate
TA	total assets ($= D + Eq$)

u	consumer utility
u_s	societal utility
U	utility (except societal utility and consumer utility)
V	total variable (production) cost
w	wage
W	wealth
y	output in units

Subscripts and superscripts

*	optimal value
a	of an agent
b	of a board member
d	of a donor
e	of an entrepreneur
em	of an entrepreneur-manager
f	of the founder
m	of a manager
max	maximal value
min	minimal value
np	of a non-profit organization
p	of a profit organization
w	of the workforce

1 Introduction

The focus of this book is on the economics of non-profit organizations' management. The social and economic roles of non-profit organizations all over the world are obvious, as becomes visible from the historical overview of the non-profit sector in the West by Robbins (2006) and in the US by Hall (2006), and from the description of the current position of non-profit organizations in a sample of 35 economically and socially very diverse countries by Anheier and Salamon (2006) (see also Boris and Steuerle (2006) for the situation in the US). As the way non-profit organizations are managed impacts on their functioning, non-profit management is important when it comes to making the organization's social and economic roles maximally operational.

In non-profit research, managerial topics are prominently present, but their economic foundations (the economics of management or 'managerial economics') are often ignored or neglected, as witnessed by their absence from the authoritative Research Handbooks edited by Powell (1987) and Powell and Steinberg (2006), who even 'consciously exclude ... chapters on the management of non-profit organizations' (Powell and Steinberg 2006: 9). Furthermore, neither management nor managerial economics show up in the list of topics they plan to include in their Research Handbook's next editions (*ibid.*: ix).

Given the availability of numerous practitioner oriented texts on the management of non-profit organizations, there seems no need to increase their number with another one. The situation for managerial economic textbooks dealing with non-profit organizations is totally opposite: apparently, and somewhat surprisingly, their number was exactly zero. It is hoped that this number has increased to one by the production of the present work. Though its title, *Managerial Economics of Non-profit Organizations*, is selfexplaining, an alternative title might have been *Theory of the Non-profit Organization*, mirroring the traditional 'Theory of the Firm' denomination of the managerial

2 *Introduction*

economic approach to profit organizations, but being less clear for a potential readership not familiar with this body of theories.

An attempt has been made to integrate as far as possible the bits and pieces of high level economic work scattered in a wide diversity of academic publications, as reflected by the list of references, to arrive at a coherent treatment of all the topics relevant for understanding non-profit organizations' management. The focus is on economic theory, but wherever possible theoretical insights are compared with the available empirical evidence. This procedure has led to a book that could be labelled unbalanced, both with respect to the space devoted to the different topics and as to the empirical evidence, most of which is US based and/or relates to health care industries. This lack of balance exactly reflects the status of the literature, and in that way shows in which domains further managerial economic research might be useful, though it will also become clear that on almost no managerial economic topic for non-profit organizations has a generally accepted theoretical framework emerged yet.

The next chapters, excluding the concluding one, can be grouped under three headings: definitions; the economic rationale of non-profit organizations and its implications for their functioning; and the economics of non-profit management.

The first group in fact consists of only one chapter (Chapter 2). After having described the generic institutional forms under which goods or services can be produced (governments (at different levels), profit organizations, and non-profit organizations), and having elaborated on real life organizational forms, the definition of a non-profit organization used throughout this book is presented: an organization whose founders are not entitled to (a part of) the organization's profits, a condition traditionally called the non-distribution constraint (Hansmann 1987: 28). This definition is a purely economics based definition, which is justified by the fact that this book concentrates on what economic theory can teach on the functioning of non-profit organizations. It goes without saying that other approaches (such as from sociology, law, psychology or organization sciences) are equally valuable, and that these complement an economic approach to non-profit organizations.

Two aspects of the Hansmann definition are crucial in an economic analysis: organizational objectives, and incentive mechanisms with the ensuing efficiency consequences. Both are discussed, before closing the chapter with a section on a number of taxonomies of non-profit organizations.

In the second group of chapters, economic justifications of the existence of non-profit organizations are presented. Chapter 3 is on the

‘demand’ for non-profit organizations, and Chapters 4 and 5 on the ‘supply’ of them. First, in Chapter 3, a fundamental economic reasoning on institutional choice is presented: the transaction cost theory, rooted in work by Coase (1937). Its prediction, if not its prescription, is that only institutions that minimize transaction costs can survive. Non-profit organizations are then compared with profit organizations from this perspective, which in fact amounts to translating the different forms of market failure known from the literature in a transaction cost language. Government failure theories are instrumental in comparing non-profit organizations with public bodies. Finally, industries in which at least two of the institutional forms coexist (‘mixed’ industries), need some explanation, as such a situation seems contrary to the idea that there is always one optimal institutional form for each transaction.

After having described why non-profit organizations might be viable, even in market oriented economies, the question why such organizations are established is discussed in Chapters 4 and 5. The first of these concentrates on ‘simple’ organizations, whose activities are under the control of the founder (usually also the manager), and Chapter 5 considers more complex organizations. The simple organizations can be characterized by a founder modelled as a non-profit entrepreneur. Under some circumstances, even an entrepreneur who is not altruistic can be shown to ‘supply’ a non-profit organization. A specific model including both an entrepreneur-manager and subordinate staff is also discussed in Chapter 4.

An economic analysis of complex organizations is traditionally and fruitfully framed within the confines of a principal-agent approach. Therefore, its usefulness for specifically analysing complex non-profit organizations is the first topic dealt with in Chapter 5. Then, principals are discussed. In most analyses, the board is assumed to perform the principal’s role: The effect of the composition of the board on organizational behaviour and more generally the functioning of the board are therefore discussed, before other possible principals (theoretically, every stakeholder can be a principal) are presented. The most frequently researched agent in non-profit organizations is the manager, to whom Chapter 5 devotes appropriate attention, including theory and (non) practice of performance based remuneration systems for managers. Other agents comprise non-managerial staff members, who are also discussed. Finally, some agency based theoretical insights on agent selection close the section on agents. The chapter’s last section turns the attention to volunteers and their place in principal-agent theorizing on non-profit organizations.

4 *Introduction*

In the last group of chapters the economics of managing a number of functional domains are discussed through the lens of non-profit organizations, acknowledging the fact that management of non-profit organizations is ‘a variant of the basic management model’ (Newman and Wallender 1978: 31), and not something completely different. Therefore, the focus will be on the idiosyncracies of non-profit organizations.

Strategic management is elaborated on in Chapter 6. First, strategic planning and strategic choices in non-profit organizations are discussed, and then some models designed to predict differences in strategic responses to exogenous shocks between non-profit organizations and profit organizations are presented, as well as a model on profit–non-profit competition in a mixed industry. The chapter ends with a short discussion of strategic differences between public providers and non-profit organizations.

The next chapter deals with marketing for non-profit organizations. After discussing the role of marketing management in non-profit organizations, the economics of four marketing decisions are analysed: pricing, the role of volunteers, subsidies and gifts (both by individuals and by corporations), and the development of profit activities by non-profit organizations.

Chapter 8 is devoted to non-profit accounting, including auditing. Though it is argued that the accounting and audit principles are not different from the principles to be applied in profit firms, understanding the presence and implementation of accounting and auditing in a non-profit context is different. A principal–agent based (‘accounting and economics’) theory is presented, in which non-profit specificities are taken into consideration, including the problem of (the lack of) accounting knowledge of board members and non-profit staff, and the question of non-profit organizations’ compliance with accounting regulations. Specific cost accounting issues are also discussed, and economic analyses of accounting choices in financial accounting and cost accounting are presented.

The last chapter in this group deals with non-profit financial management, the economics of which are partly related to the standard financial theory, but also depart from it in a number of crucial respects. The topics analysed are the different sources of funds available for non-profit organizations, the determination of the cost of capital (and its impact on investment analysis), the ensuing insights on capital structure, and, finally, the measurement of a non-profit organization’s financial vulnerability.

2 Defining non-profit organizations

Introduction

In this chapter an economics based definition of non-profit organizations is presented, building on traditional institutional ideas about the way goods and services can be provided. The non-profit organization is described as one of the generic organizational forms, together with profit organizations and governmental bodies. Its specificity is the fact that financial surpluses, if present, cannot be distributed to owners and/or staff, making the group of non-profit organizations very diverse as to possible objectives, and possibly vulnerable because of the absence of financial incentives to run the organization in an efficient way.

The chapter concludes with an aside on how to categorize non-profit organizations.

The provision of goods and services

Generic organizational forms

Except in very primitive societies, the production of a substantial part of goods and services (defined to include the promotion of ideas, ideologies or religions) is taken care of by formalized entities. These can be public or private.

The public sector is governed by its own set of decision rules and mechanisms, which are studied from a microeconomic point of view in the research field called Public Choice (Mueller (2003) is a leading textbook). Clearly, the role of the public sector goes beyond producing goods and services, and includes domains such as macroeconomic policy, income redistribution, and fiscal policy.

6 Defining non-profit organizations

The group of privately established organizations is very diverse. A fundamental divide is that between organizations founded by individuals who are allowed to increase their financial wealth out of the organization's profits, and other organizations. The first group is called the group of profit organizations, and the microeconomic theory of their functioning can be found in, for example, Milgrom and Roberts (1992). Logically, the second group (also called the *third sector*, but other more or less accurate designations exist (Salamon and Anheier 1992a: 128)) consists of non-profit organizations.

This brings us to three generic organizational forms: governments (at different levels), profit organizations, and non-profit organizations (Figure 2.1).

Most of the economic analyses of organizational behaviour pertain to these generic or pure institutional forms, a position also taken in this book, with some exceptions. It goes without saying that in reality, organizational forms are frequently more complex (Weisbrod 1988: 1).

Real organizational forms

Figure 2.2 gives an (admittedly stylized) idea of how we might characterize real life organizations at a given moment in time. There is no reason to assume these characterizations should be static.

Organization A in Figure 2.2 could be a privately founded non-profit organization subsidized by a government (Salamon 1987). The fact that

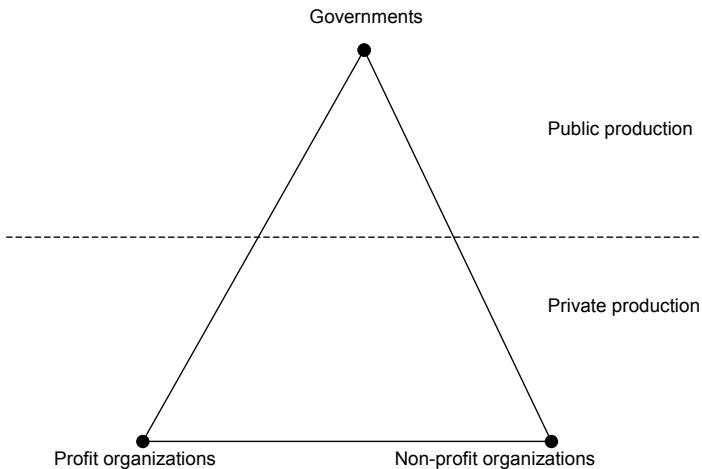


Figure 2.1 Generic organizational forms

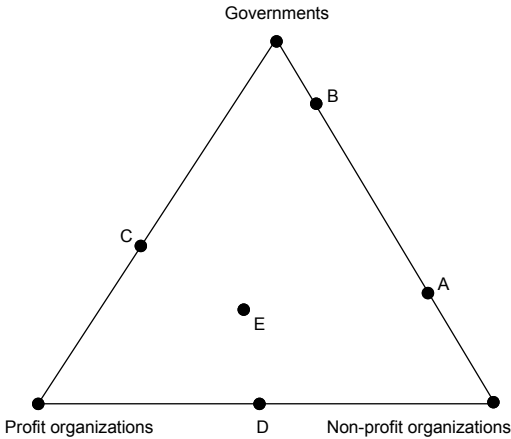


Figure 2.2 Real organizational forms

it receives a subsidy makes it (in a more or less limited way) subordinate to the subsidizing authority, as the latter might force the organization to behave in a way different from the way it would behave if not receiving subsidies. Organization B is an example of a legally private non-profit organization founded and subsidized by a public authority, and C is an example of a profit firm owned by a government. A foundation owned and possibly funded by a profit firm, or an organization grouping firms of the same industry, can be represented by the point D, and by E if it is subsidized. Note that organizations A, B, D and E would be called *bureaus* by Niskanen (1971: 15), who defines them as organizations subject to the non-distribution constraint, earning part of their revenues from sources other than sales.

The fact that most real life organizations are mixtures of generic institutional forms implies that if one wants to assess the practical implications for organizational behaviour of theoretical predictions, one has to take into consideration two or three bodies of research, not always mutually consistent, weighing the profit, non-profit, and public characteristics of the organizations under study.

Definition

The previous section implies the following definition of a non-profit organization: an organization whose founders are not entitled to (a part of) the organization's profits, a condition traditionally called the *non-distribution constraint* (Hansmann 1987: 28).

8 *Defining non-profit organizations*

Although for economic analysis this definition is sufficient, and conveniently parsimonious, more elaborate alternatives also appear in the literature, leading Anheier to say that ‘definitions are perhaps the most lamented and frequently misunderstood “deficit” in our field’ (Anheier 1995: 16). A definition frequently encountered is the structural–operational one by Salamon and Anheier (1992a: 135): A non-profit organization should be formal, private, self-governing, voluntary (in membership and participation), and should satisfy the non-distribution constraint. Apart from the involvement of volunteers, there is no conceptual difference from the definition above, as using the term ‘organization’ implies it is formal, private and self-governing. Needless to say, a large number of non-profit organizations lean on volunteers, but surely not all of them. This might explain why the United Nations makes no reference to volunteers in its definition of a non-profit organization: an organization that is self-governing, institutionally separate from government, non-compulsory, and that meets the non-distribution constraint (United Nations 2003: 17).

Morris (2000: 39–41) seems to define the non-profit sector more in terms of activities and social outcomes, including in the sector, for example, mutual-aid societies and cooperatives, which do not meet the structural-operational definition of non-profit organizations, let alone the non-distribution constraint. But this does not seem to be an appropriate critique of the definition of a non-profit organization as such, but only points to the difference between the group of non-profit organizations and the larger group of civil society institutions, as in fact Morris herself rightly points out (Morris 2000: 41).

Therefore, there seems no reason to depart from the non-distribution constraint characterization of non-profit organizations. Notice that this does not imply that non-profit organizations are barred from making profits, or that they are forbidden to employ paid staff. The point is that potential profits cannot be distributed to owners and consequently also not to board members or staff (making profit based wage schemes incompatible with the non-profit status of the organization; see also Chapter 5).

Finally, note that legal or administrative conditions, such as registration under the US Internal Revenue Service articles 501(c)(3) or (4), are just that: legal and administrative conditions, adding nothing to a definition suitable for economic analysis (Smith and Shen 1996: 271).

Organizational objectives

As there is no point in establishing an organization with the sole objective of not distributing its profits, one might wonder how non-

profit organizations' objectives can be modelled to allow a meaningful economic analysis, comparable to the role of profit maximization in the theory of the firm literature. The non-distribution constraint being a negative condition, its complement encompasses all kinds of possible objectives, a number of which might even be morally reprehensible (depending on whose point of view is taken), totally unrelated to each other, or contradictory. Therefore, it seems inevitable that 'there is no consensus among economists regarding the objective function of npos' (Schiff and Weisbrod 1991: 621), or that finding some overall objective function for non-profit organizations is impossible (Kanter and Summers 1987: 155).

In economic terms, organizational objectives will be reflected by the organizational utility function, U_{npo} . Different variables have been put forward to serve as its main arguments. Output quantity and output quality go back to Newhouse (1970), with all kinds of variations such as an 'optimal' relation between them, trading off, for example, the quality of education and the number of students reached (Steinberg 1986a: 508), or artistic quality and the size of audiences (DiMaggio 1987: 206). Another argument frequently found in the literature is achieving zero profits or the equivalent objective of covering all costs incurred, though this condition might also be considered a constraint under which organizational utility is maximized. Examples of other arguments are cash flow (Davis 1972: 1) or even profits (Brody 1996: 493), which are theoretically acceptable as a non-profit organization's objectives as long as the non-distribution constraint is respected, welfare of (a part of) membership (Canning *et al.* 2003: 247) or clients (Handy and Webb 2003: 266).

As already noted by DiMaggio (1987: 209), organizational objectives cannot be expected to remain unchanged through time. Societal needs may evolve, new needs within the confines of the organization's mission may emerge, and existing objectives may be reached. Further, contingent factors such as dimension or age of the organization, socioeconomic characteristics of sponsors, the volunteers/professionals mix within the organization, subsidy regulations (see also Chapter 7), changing relations with governments, or competition from profit organization and/or other non-profit organizations (Brickley and Van Horn 2002; Minkoff and Powell 2006: 592–594) could impact on them, though the last factors can also be considered an additional constraint on behaviour.

In spite of the idea that 'the objective function [of a non-profit organization] is unobservable' (Pauly 1987: 258), Vitaliano (2003) is an example of an empirical investigation into non-profit organizations' objectives. For a sample of Medicaid residents of New York nursing

homes, he distinguishes profit maximizers (characterized by a situation in which marginal costs equal marginal revenues) and utility maximizers (with marginal costs higher than marginal revenues). Most organizations in this sample appeared to be profit maximizers, but this might (at least partly) be explained by profit organizations' competition (see also Chapter 3). Another empirical, but rather indirect, strategy that may be used to identify organizational objectives is to analyse, if present, the incentive design of the remuneration packages for the organization's top management (Ballou and Weisbrod 2003: 1898; see also Chapter 5), or to contrast behavioural implications of assumed non-profit objectives with behavioural implications of profit objectives or governmental objectives (Du Bois *et al.* 2004a). The work of Lindrooth and Weisbrod (2007) is an example of the latter. They compare admission policies of non-profit hospices run by religious orders and profit maximizing hospices, facing for the large majority of their residents the same financial incentives and also showing no other systematic differences affecting admission policies. The financial incentives make longer stays more profitable. Their sample consists of all Medicare reimbursed admissions to 638 US hospices between 1993 and 1996, and reveals that lengths of stay are significantly longer in the profit hospices, a situation not achieved by treatment differences, but by policies aimed at attracting residents with the more 'profitable' diagnoses, implying longer lengths of stay (Lindrooth and Weisbrod 2007: 353–355). This observation can be explained by the non-profit hospices caring more for all persons at the end of their lives, though it does not rule out an (in)efficiency explanation (*ibid.*: 347), which is spelled out in the next section.

Incentive implications: the property rights approach

When trying to understand organizational behaviour and the underlying incentives, the concepts of *residual control* and *residual claims* are essential. Both reflect a specific aspect of the exercise of property rights. Residual control can be defined as 'the right to make any decisions concerning the asset's use that are not explicitly controlled by law or assigned to another by contract' (Milgrom and Roberts 1992: 289), and a residual claim consists of being 'entitled to receive any net income that the firm produces' (*ibid.*: 291), net income in this context also being called *residual return*, or the income after having met all legal and contractual obligations. The interplay between the two is key to understanding organizational incentives (*ibid.*), as had already been cogently argued by Alchian and Demsetz (1972).

As the owners of a non-profit organization by (the non-distribution constraint) definition cannot be residual claimants of the organization, they have no (financial) incentives to monitor closely the organization's management and staff. Alchian and Demsetz (1972: 790) therefore expect to 'find greater shirking in non-profit ... enterprises', and consequently less efficiency as compared to profit organizations in the same market, if these are conceivable (Steinberg 1987: 128). Competition by profit organizations in the same market might mitigate efficiency losses (Feigenbaum 1987).

As will be shown in later chapters, the property rights view on non-profit (in)efficiency is an over-simplification at best. To give just some of the reasons for this: the motives of owners, managerial employees and non-managerial employees of non-profit organizations might differ significantly from the motives of their counterparts involved in profit organizations (Callen, Falk 1993: 51), or there might exist situations in which visibility or self-dealing compensate for an alleged inclination to inefficiency (Steinberg 1987: 127). The analytical paper by Gassler (1997) leads to a similar conclusion: 'the non-profit constraint does not cause inefficiency nearly to the extent that many economists seem to believe' (Gassler 1997: 278).

As the proof of the pudding is in the eating, resorting to empirical studies might enable us to assess the merits of the efficiency implications derived from the property rights approach. Steinberg (2006: 128) refers to hundreds of studies on efficiency differences between profit organizations and non-profit organizations. The results go in all possible directions: no efficiency differences, non-profit organizations being more efficient, or non-profit organizations being less efficient (the majority of cases). But all these papers suffer from a number of methodological problems (*ibid.*), the most important being 'their failure to control adequately for varieties ... in quality and amenities' (Sloan 1988: 117), which is the consequence of the difficulties in defining non-profit organizations' objectives and measuring organizational performance directly and objectively in terms of these objectives. Selection bias (profit organizations serving client segments other than non-profit organizations) and the impact of competition (mentioned above) are additional problems not always dealt with in empirical efficiency comparisons between profit organizations and non-profit organizations (Kessler and McClellan 2002: 489). Finally, concentrating on output measures instead of process variables might distort the empirical findings, as illustrated by the work of Chesteen *et al.* (2005), and the same problem might be caused by inadequately taking into consideration the input of volunteers (Callen

1994: 215). To sum up, the empirical research to date cannot be considered conclusive as to this topic.

Classifying non-profit organizations

As is the case for profit organizations, non-profit organizations are not alike. A classification according to economically or otherwise significant criteria might prove useful (Salamon and Anheier 1992b: 268).

Hansmann (1987: 28) proposes a global classification according to two dimensions: donative non-profit organizations compared with commercial non-profit organizations, and mutual non-profit organizations compared with entrepreneurial non-profit organizations, leading to four groups. A donative non-profit organization is funded mainly by donations and subsidies, and a commercial one generates most of its funds by selling goods or services, though clients might be insured by public or private schemes (as is frequently the case in the health care sector). Mutual non-profit organizations are run by their funders, whereas entrepreneurial ones are not. Clearly, in the real world different kinds of mixed forms exist, but for the sake of theoretical argument this classification has proved to be highly instrumental.

A special case of a donative non-profit organization is the foundation, which can be defined as private capital, to be used in the general interest (Anheier 2005: 51). Foundations already existed more than 2,000 years ago, under the ancient Greek and Roman republics (Prewitt 2006: 260–265).

Though other classification systems have been proposed (e.g. Douglas 1987: 51), the one put forward by Hansmann has gained wide, if not universal, acceptance. Note that this system does not take into account the activities performed by the organizations, and that the ensuing categories therefore cannot be considered to be industries, whose definition should be based on cross-price elasticities between the goods or services supplied by the organizations to be classified (Robinson 1933: 17). Different attempts have been made to construct a system of non-profit industries, such as the National Taxonomy of Tax-Exempt Entities drawn up by the National Center for Charitable Statistics in the United States, but one has to admit that these industries are not a monopoly for non-profit organizations. Nursing homes, as an example, can be owned by profit organisations, public authorities, or non-profit organizations. Nevertheless, the United Nations commissioned the development of a non-profit organizations classification system, as a satellite account within the System of

National Accounts, by the Johns Hopkins University Center for Civil Society. After testing in 13 countries all over the world, this resulted in the essentially activity based International Classification of Non-profit Organizations (ICNPO) (United Nations 2003: 27, 30). Its main structure is described in Table 2.1. Further details can be found in Appendix I.

Further refinements, both within and across (sub-)groups have been proposed, such as the distinction between multi-purpose organizations, support and service organizations (including auxiliaries, councils, standard-setting and governance organizations), and other organizations (Salamon and Anheier 1992b: 289), or between member-serving and public-serving organizations (United Nations 2003: 32). Broadening the definitions to encompass all organizations in the *social economy*, including also mutual associations, cooperatives and social enterprises, is easily possible (*ibid.*).

Table 2.1 International classification of non-profit organizations: main groups and sub-groups

<i>Groups</i>	<i>Sub-groups</i>
1 Culture and recreation	1 100 Culture and arts 1 200 Sports 1 300 Other recreation and social clubs
2 Education and research	2 100 Primary and secondary education 2 200 Higher education 2 300 Other education 2 400 Research
3 Health	3 100 Hospitals and rehabilitation 3 200 Nursing homes 3 300 Mental health and crisis intervention 3 400 Other health services
4 Social services	4 100 Social services 4 200 Emergency and relief 4 300 Income support and maintenance
5 Environment	5 100 Environment 5 200 Animal protection
6 Development and housing	6 100 Economic, social and community development 6 200 Housing 6 300 Employment and training
7 Law, advocacy and politics	7 100 Civic and advocacy organizations 7 200 Law and legal services 7 300 Political organizations

14 *Defining non-profit organizations*

Table 2.1 Continued

8 Philanthropic intermediaries and voluntarism promotion	8 100 Grant-making foundations
	8 200 Other philanthropic intermediaries and voluntarism promotion
9 International	9 100 International activities
10 Religion	10 100 Religious congregations and associations
11 Business and professional associations, unions	11 100 Business associations
	11 200 Professional associations
	11 300 Labour unions
12 Not elsewhere classified	12 100 Not elsewhere classified

Source: United Nations (2003: 31)

3 The demand for non-profit organizations

Introduction

In Chapter 2 the generic organizational forms were introduced, but the question why they exist and survive was not dealt with. In this chapter it is argued that the fundamental answer lies in the cost implications of the institutional choice when governing economic transactions, the minimal cost bearing institution being theoretically the only viable one for a specific transaction.

Most of the relevant academic literature on the existence and survival of non-profit organizations, which is reviewed here, takes a comparative stance and analyses conditions under which non-profit organizations are 'better' than profit organizations, or conditions under which non-profit organizations are 'better' than public agencies. Though this seems to imply that there is always a 'best' institutional form for a given transaction, frequently two or three of these coexist. Theoretical reasons for this will be developed.

Institutional choice

From an economist's point of view, the fundamental answer to the question why non-profit organizations exist and survive goes back to Coase (1937), who argues that the transaction (a transfer between (at least) two parties of goods or services (Milgrom and Roberts 1992: 21)) is the core concept to be considered. Societal welfare under market governance of transactions is then compared with societal welfare under institutionalized governance. In situations where the latter exceeds the former, the formation of institutions is economically efficient, and their existence understandable. Though Coase contrasted the market with profit organizations, the same line of reasoning can be followed to differentiate institutional forms as to their welfare contributions,

resulting in a set of conditions and situations under which non-profit organizations can be expected to be welfare maximizing. If we assume unrestrained and costless welfare transferability there would be no economic reason to establish any other kind of organization than the welfare maximizing one (Krashinsky 1986: 129), but in reality this assumption is seldom met, implying that surplus distribution might be a second factor to account for when explaining the demand for a given kind of organization (Gui 1991: 555).

The traditional way to address the question why there is a demand for non-profit organizations consists in following an implicit hierarchy of institutions (Weisbrod 1988: 25). To govern a transaction, first try the market. If this does not work, try a profit organization, after which possibly a public authority may be considered. And, as some kind of last resort, we still have the non-profit organization (Young 2000: 150). Apart from the fact that this hierarchy is fully anti-chronological when looking at the first appearances of the different generic organizational forms (Krashinsky 1986: 114; Weisbrod 1988: 4), it also implies a negative justification of the existence of non-profit organizations: when everything else fails, try a non-profit organization. A more neutral and positive approach is warranted (Clark 1980; Salamon and Anheier 1998: 225), in which the welfare implications of institutions are compared with one another, and in which therefore each organizational form can 'fail', hence the denomination 'a three failures approach' (Steinberg 2006: 119). These failures can be time and location specific, as can the ensuing rankings of governance structures according to their welfare implications (Ben-Ner 2002).

The transaction cost approach

Transaction costs

Besides the (utility) benefits accruing to the parties involved and the production costs, which we will assume for ease of exposition not to be affected by the governance structure in place, transactions engender supplementary costs (*transaction costs*), at least in welfare terms. They stem from the *bounded rationality* of the parties involved in the transaction, and possible opportunistic behaviour of these parties.

Bounded rationality involves two aspects. The parties do not know all the characteristics of the transaction relevant to gauge perfectly its welfare implications (imperfect and incomplete information), and even if they knew these, their information processing capacities do not allow

them to combine these characteristics logically in a way leading to optimal decision making.

In the words of Williamson (1979: 239), in transaction cost theory 'economic agents are permitted to ... mislead, disguise, obfuscate, and confuse'. This kind of behaviour is called opportunistic, a kind which, for the sake of realism, cannot be excluded. A typical situation allowing such behaviour is one characterized by informational asymmetries, in which the better informed party can misuse his informational advantage.

Transaction cost thinking distinguishes three transaction characteristics impacting on transaction costs: asset specificity, frequency, and ex ante uncertainty with respect to the efforts required by the parties involved to meet the terms of the transaction and the (utility effects of the) outcome itself.

According to Williamson (1991: 281) *asset specificity* is the most prominent of these. Asset specificity is defined as the lack of reusability of investments explicitly geared towards a specific transaction. Different forms of asset specificity can be observed. They include location specificity (e.g. when a supplier invests near to his only or main client), physical specificity (e.g. installing production capacity that is useful for only one specific client), human asset specificity (e.g. establishing relationships with specific clients, or having employees follow courses that are useful only as long as they remain with their current employer), brand specificity (e.g. an actor being identified with a popular character, making it impossible for him to play any other role in a convincing way (Acs and Gerlowski 1996: 152)), and allocative specificity (losing the possibility of employing the resources invested in another way). Clearly, higher specificity invites more opportunistic behaviour by the party enjoying the assets (the 'hold up' problem).

The, *ceteris paribus*, effect of frequency on transaction costs is straightforward: more frequent transactions can lead to higher transaction costs, almost by definition.

The *ex ante* uncertainty surrounding the transaction with respect to the efforts required by the parties involved to meet its terms and to the (utility effects of the) outcome itself might incite some of the opportunistic parties involved in the transaction to reduce their efforts or lower the quality produced, with higher uncertainty leading to higher expected transaction costs, again *ceteris paribus*.

Understanding the existence of non-profit organizations

Once a potential transaction has been selected, benefits, production costs and transaction costs can, theoretically, be identified. Ideally, the

aggregate level of all costs to all parties affected should guide the choice of an optimal governance institution, but mostly only the benefits and costs of the individual parties directly involved in the transaction will help us understand why in some circumstances non-profit institutions seem to be needed.

Unfortunately, to date no comprehensive theory has been developed to explain fully the demand for non-profit organizations. The insights presented below were developed in comparative independence from one another, are not mutually exclusive, and do not encompass all types of non-profit organizations. Nevertheless, most of them build on an implicit or explicit transaction cost way of thinking (Holtmann and Ullmann 1991; Valentinov 2006, 2007), with some of them concentrating more on aspects of opportunism, others on information asymmetries and the bounded rationality of the agents involved (Valentinov 2007: 53).

Non-profit organizations versus profit organizations

'Market failure' theories

In line with the traditional institutional hierarchy described earlier in this chapter, this group of theories explains the need for non-profit organizations by looking for circumstances in which 'the market' fails. Though in Coasian terms a market transaction should be defined as a transaction between independent agents, its generally accepted interpretation in the present context is the provision of a good or service by a profit organization. Market failure can appear in two forms:

- failure to provide some good or services;
- failure to reach optimal welfare levels or welfare allocations.

As noted by Hansmann (1980: 61), we must not forget that the market can be very successful under a large variety of conditions which can be traced back to conditions leading to low transaction costs: low uncertainty (buyers have a correct *ex ante* view on quality and prices, unambiguous contracts), limited incentives for opportunistic behaviour due to the existence of objective *ex post* quality measures and efficient enforcement procedures (e.g. by competent courts). A number of the market failures described in the literature deal with some departures from these conditions.

The market failing to provide some goods or services

Contract failure

Some transactions (e.g. surgery, education) are so complex that it is economically unfeasible to write a watertight contract dealing with all the possible outcomes of the process. Incomplete contracts are the result, as well as uncertainty with respect to the outcomes of the transaction. In situations where the outcome is very important for one of the parties involved, and in which this party faces an informational disadvantage, profit maximizing providers might be (assumed to be) inclined towards opportunistic behaviour, exerting less effort and producing lower quality. The expected transaction costs to be borne by the consumer can reach such a level that he might prefer not to enter into the transaction at all. Hansmann (1980) is credited with having proposed the idea that the non-distribution constraint would mitigate or even destroy this suspicion of opportunism, making this kind of transactions possible, though Arrow (1963), almost 20 years before Hansmann (1980), implicitly makes the same point with respect to medical treatments: 'As a signal to the buyer of his intentions to act as thoroughly in the buyer's behalf as possible, the physician avoids the obvious stigmata of profit-maximizing' (ibid.: 965). Fama and Jensen (1983b: 342) develop the same line of reasoning with respect to charities. In the words of Steinberg and Gray (1993: 306) this goes as follows: 'It is difficult to conceive of a type of transaction that has more contract failure potential than one in which party A provides services to party B for which party C is expected to pay.'

There have been a number of interesting and challenging attempts to show formally that, from a social welfare point of view, non-profit organizations are optimal in situations of informational asymmetry, unfortunately under rather artificial assumptions (Chillemi and Gui 1991; Easley and O'Hara 1983, 1988). Furthermore, these models do not analyse contract failure as such, but compare welfare outcomes of the provision of profit organizations and non-profit organizations respectively .

It is fair to say that the contract failure reasoning is still a 'dominant rationale' in non-profit organization theory (Ortmann and Schlesinger 1997: 98), in spite of the fact that a number of conditions must be met in order to explain the existence of non-profit organizations by the presence of information asymmetries (ibid.): there are no reputation effects in favour of profit organizations, the people in charge of the non-profit organizations must be trustworthy, implying that these

organizations must take care not to attract staff with opportunistic motives (the ‘adulteration challenge’).

Being a dominant rationale does not exclude the fact that it has been criticized by a number of authors. Brody (1996: 524) notes that production by profit organizations under information asymmetry is possible if non-profit watchdogs can divulge the information necessary to bridge information gaps, especially when applying modern information technologies. One could respond by saying that a non-profit organization is still needed, albeit in a different, modern, configuration, and that this need is still the consequence of information asymmetry and the concomitant impossibility of writing complete contracts. The fact that a large number of health care professionals are employed in profit hospitals and that a number of them are or were paid in a fee for service system does not support the contract failure theory either (Brody 1996: 463, n21; Sloan 1988: 109). But also in the health care sector a variety of non-profit and/or public monitoring agencies, standard-setting bodies, or patient organizations exist, indirectly confirming the main insight of the contract failure approach: the need for non-profit organizations when confronted with information asymmetry for major transactions.

There is also empirical support at least for the basic assumptions of the contract failure theory. Chou (2002), on a sample of 2,992 elderly people admitted to 1,887 US nursing homes (1984–1994) and applying refined econometric techniques, finds that in nursing homes where information asymmetries can be observed (e.g. by looking at visit frequencies), profit nursing homes’ quality was lower than that of non-profit nursing homes. The paper by Grabowski and Hirth (2003) takes a comparable perspective. Their sample consists of 16,978 US nursing homes (1995–1996). They assess two relationships, the first between non-profit nursing homes’ market shares and profit nursing homes’ quality, and the second between non-profit nursing homes’ market shares and average market quality. Both are significantly positive, implying that the presence of non-profit nursing homes is socially useful, as less informed clients will resort to non-profit homes, and profit homes will provide a higher quality service (*ibid.*: 3).

Both these studies look at the supply side of the contract failure story, but there is also a demand side aspect, at least in mixed markets where both institutional forms are present, but also when there are only non-profit organizations in the market. If potential clients do not know whether organizations are profit or non-profit, or if they do not put more trust in non-profit organizations than in profit organizations, or if the market is segmented along the profit/non-profit divide, the contract

failure justification of the existence of non-profit organizations has no ground in markets in which profit organizations compete with non-profit organizations (Ortmann and Schlesinger 1997: 107), and, logically, not even in pure non-profit markets. Schlesinger *et al.* (2004) address this question by surveying 5,000 US citizens on their perceptions of profit organizations and non-profit organizations in the hospital and insurance industries. About one-third of the respondents did not know the difference between profit organizations and non-profit organizations (*ibid.*: 689). The remaining respondents had a positive perception in favour of non-profit organizations as far as non discrimination and reliability were concerned, but a negative perception on non-profit quality compared with profit quality (*ibid.*: 692). Ballou (2005) investigates a comparable question on nursing homes (3,605 observations for the 1984–1995 period). He concludes that ‘ownership type does appear to matter to consumers’, with ‘consistently positive non-profit effects’ (*ibid.*: 253), which he ascribes to perceived quality differences.

All in all, these results, which are geographically and temporally very partial anyway, do not lead to the conclusion that the contract failure approach to the existence of non-profit organizations has lost all credibility.

Public goods

Public goods (including here public services) are goods available to any consumer (*non excludability*), and their consumption by one consumer does not prevent consumption by another (*non rivalry*). Classic examples are the army, fire brigades, lighthouses, education, health care, museums, or public transport systems, though not all of them are pure public goods, mostly due to capacity constraints barring or delaying consumption (*congestion goods*) (Maddison and Foster 2003) or entrance fees (*toll goods*) (Young and Steinberg 1995: 192).

(Pure) public goods are, almost by definition, an open invitation for opportunistic behaviour by consumers, making monetary revenues very uncertain. Further, a substantial number of the public goods we know require very specific investments, making them unattractive for profit organizations to produce. Hence a market failure, and a rationale for non-profit organizations to provide these goods, even in cases when they are not fully public, as in the examples mentioned above (Chang and Tuckman 1996: 27).

22 *The demand for non-profit organizations*

Client control

Organizations in which the members want full control over activities are not easily found in the market. Leisure organizations (such as the 'country clubs' in the US) and a number of mutual organizations are examples. One could argue that the need for non-profit organizations to cope with this demand is just a special case of contract failure, but this is not entirely true (Hansmann 1987: 33). Even in cases where other institutions could provide exactly the goods or services wanted, the members further increase their transaction related utility because of having control in their 'own' organization.

Advocacy

Promoting ideas and convincing other people are transactions for which *a priori* there are no consumers, and certainly no consumers who are willing to exchange something of value to be elected to receive these ideas. It is therefore not surprising that we do not find profit organizations promoting ideological, religious or political ideas, though there are people who want these ideas to be promoted. This is a special kind of market failure, and these people can remedy the failure by establishing their own organizations which we could label supplier induced. Given the specific characteristics of the transactions involved, these organizations can only be non-profit organizations.

The market failing to reach optimal welfare levels or welfare allocations

Unwanted welfare outcomes

If legally allowed, the market can provide an amount of goods and services that show characteristics of both private goods and public goods, *quasi public goods* (Anheier 2005: 118), such as the congestion goods or toll goods mentioned earlier. The profit motive can lead to problems of accessibility, resulting in a social welfare loss. In that sense the market can also be judged to fail, essentially because of undersupply. Non-profit organizations can substitute for the absent market.

Transactions in which contract failures arise can also possibly be governed by markets, as long as the transaction costs surrounding the transaction are in one way or another more than compensated by the perceived revenues. This does not imply that there are no welfare

improvement possibilities. The same transaction governed by a non-profit organization might reduce, for instance, the uncertainty perceived by one of the parties involved, decreasing the transaction costs, and increasing welfare.

For both cases, the central idea is that the non-distribution constraint implies incentives for the producer of the goods or services not to behave opportunistically.

Stochastic demand

An interesting contribution towards explaining the existence of non-profit organizations is made by Holtmann (1983). In a complicated model, he compares the effect on total welfare of profit production compared with non-profit production in the case of a stochastic demand. Firms decide on price and capacity. Non-profit firms (defined as firms not requiring any return on net assets) are shown to generate more welfare. As stochastic demand is central in this model, it neatly fits in the transaction cost approach, as the effects of a kind of uncertainty are assessed.

Employee motives

Francois' model (2001), inspired by Glaeser and Shleifer (1998), to explain the existence of non-profit organizations, explicitly discards the problem of non-contractibility of output, but concentrates on the employees of profit organizations and non-profit organizations (see also Chapters 4 and 5 on this). He assumes identical utility functions for each member of society, be it an owner of a profit firm, a founder of a non-profit organization, or an employee of one of either kind of organization. This utility function contains an argument reflecting concern for the organization's output (called 'care' by the author). Output is perfectly contractable by the government, so contract failure is not an issue here. For goods or services causing a high amount of concern, such as health care or education, the non-distribution constraint results, admittedly through a rather artificial mechanism, in non-profit organizations producing at a lower cost than profit organizations, with obvious welfare implications. Note that this effect stems from the production costs being affected by governance structures, and not from the transaction costs as such.

Presence of both profit organizations and non-profit organizations in the same markets

The previous sections might give the impression that the choice between a profit organization or a non-profit organization to govern a given transaction leads to just one of them being optimal. In reality, different markets seem to exist in which the two kinds of organizations coexist. A typical example of a mixed industry is the US hospital industry, or the nursing home industry in a number of European countries. Mostly, these markets also contain a more or less substantial public component. Reviewing a rather dated literature on the market shares of non-profit organizations in such markets, Brown and Slivinski (2006: 152) conclude that these are higher when the tax advantage of being a non-profit organization increases and when the undersupply problem already mentioned is more severe, and lower when the market grows faster. They also discuss possible reasons why in mixed industries non-profit organizations might want to convert to a profit status: survival, a way of cashing in profits which are now retained within the non-profit organization, getting easier access to capital markets, and a reaction to increasing risk due to changing regulations, making more risk-averse managers of non-profit organizations less motivated to manage (ibid.: 154).

A possible explanation for the existence of mixed industries might consist in noticing that the theories mentioned above are normative, but that opportunism or bounded rationality prevent the optimal situation from prevailing.

However, other explanations might also be put forward, less pessimistic as to human nature. What is perceived to be one market might conceal a segmented market: 'when proprietary firms coexist with public or non-profit providers, there are systematic differences in the form or quality of outputs or the way they are distributed to consumers' (Weisbrod 1988: 40). Market failure could be present in one segment (e.g. the segment with less informed potential clients), but not in the other (Hansmann 1987: 31). The model by Holtmann and Ullmann (1991) conveys the same idea. Although it was designed to show the situation in the nursing home market, it is easily generalized for other markets.

Assume a consumer has a non-mutually exclusive choice between a quantity y_p provided by a profit organization, and a quantity y_{np} produced by a non-profit organization. The product or service quality q_{np} provided by the non-profit organization is not subject to uncertainty

($q_{np} = y_{np}$), whereas the quality provided by the profit organization is stochastic ($\tilde{q}_p = \tilde{z}y_p$, with $E(\tilde{z}) = 1$). The consumer is a utility maximizer:

$$\begin{aligned} & \text{Max } E(u(\tilde{q}_p, q_{np})) \\ & y_p, y_{np} \end{aligned}$$

subject to the budget constraint $B = P_p y_p + P_{np} y_{np}$, where P_p and P_{np} are output prices of profit producers and non-profit producers respectively .

In Figure 3.1 we can distinguish three possible cases, according to the position of the budget line and the shape of the indifference curves.

When the utility function implies an indifference curve as u_1 (u_3), a utility maximizing consumer will resort exclusively to profit organizations (non-profit organizations). If the indifference curve resembles u_2 , the consumer turns to both. This might also explain the coexistence of profit organizations and non-profit organizations in the same market. Also assuming the consumers to be heterogeneous in terms of their utility functions, resulting in markets with ‘ u_1 consumers’, ‘ u_2 consumers’ and ‘ u_3 consumers’, results in a comparable configuration of supply. Technically, even two of the three categories of consumers are sufficient for this result. Handy’s paper (1997) is comparable in its logic, and includes the public sector in its analysis.

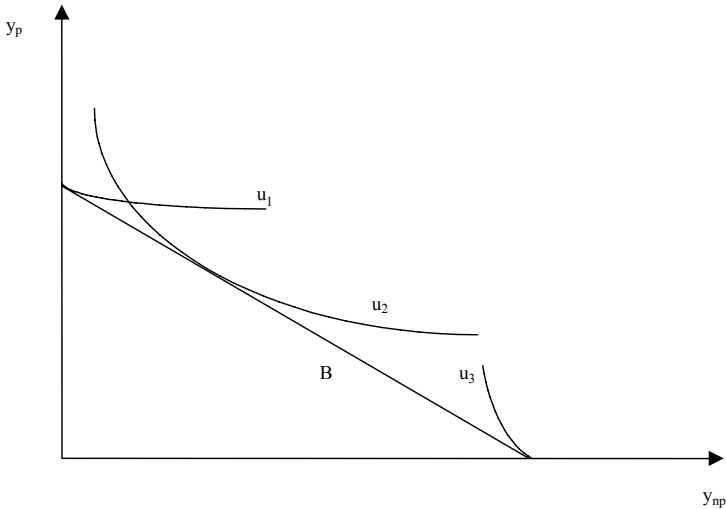


Figure 3.1 Profit organizations and non-profit organizations in the same market

Source: Based on Holtmann and Ullmann (1991)

Trade-offs are not between two types of products, but between two product components (measurable and unmeasurable, both of which are assumed to carry a price, a rather heroic assumption as to the unmeasurable product component). Combining the fact that the slopes of the budget lines are affected by the institutional form of the producer and heterogenous utility functions results also in an equilibrium characterized by the presence of profit organizations, non-profit organizations and public organizations.

Finally, three additional points can be raised as to the coexistence of profit organizations and non-profit organizations in the same market.

First, as already mentioned, the two groups of organizations interact when simultaneously present in the same market. Although in Chapter 6 a theoretical model is presented confronting competitive strategies of profit organizations and non-profit organizations in the same industry, we can already refer to the research by Grabowski and Hirth (2003) mentioned above where it was observed that the presence of non-profit organizations in a market forced the competing profit organizations to increase their output quality. Other interactions have also been observed, such as the presence of profit organizations making their non-profit competitors more efficient (Kessler and McClellan (2000), on more than 1.6 million elderly Medicare (US) patients admitted for acute myocardial infarctions in 1985–1996; and the work of Tuckman and Chang (1988) on 115 (1977) and 185 (1992) US nursing homes. For a rather far-fetched model, see Bolton and Mehran (2006: 298–299)), but also more profit oriented (Duggan (2002), on 401 general acute care hospitals in California in 1990 and 1996; Horwitz, Nichols (2007), on the presence of ‘profitable’ services on a sample of more than 46,000 non-rural, non-federal general and surgical US hospitals for the 1988–2005 period).

Second, exogenous pressures on the markets in which both kinds of organization are present can be substantially more influential as to organizational strategies than institutional differences, as is illustrated by the results obtained by Skinner and Rosenberg (2006) in their qualitative research on the effects of the introduction of managed competition in rural Ontario (72 in-depth interviews held in 2003): ‘distinguishing between for-profit and non-profit orientation adds less to understanding how the implications of long-term care restructuring play out ... than focussing on ... key issues that both types of providers face’ (Skinner and Rosenberg 2006: 2874). The same point can be raised when comparing non-profit organizations and public organizations: Barbetta *et al.* (2007), working on a balanced panel of 321 Italian hospitals (1995–2000), study the introduction of a generalized

prospective funding mechanism (see Chapter 7) for all hospitals involved, whereas before the introduction public hospitals were funded differently from private non-profit hospitals. Behaviour is reflected through efficiency measures, which differed significantly before the introduction of the prospective payment system, but no longer do so once the system is in place.

Finally, profit organizations and non-profit organizations can engage in strategic alliances (Austin 2000). This is analysed in a transaction cost framework by O'Regan and Oster (2000), in two US cases of subcontracting (education and welfare). Galaskiewicz and Sinclair Colman (2006: 180), in a descriptive chapter on collaboration between profit organizations and non-profit organizations in the US, distinguish also three other possible types of collaboration: philanthropic, commercial and political.

Non-profit organizations compared with governments

Without any doubt, governments at all levels can be conceived as an answer to the problems caused by the market, except for advocacy and the promotion of ideological, religious or political ideas, at least in democratic and pluralistic states. But governments can also fail in achieving socially optimal governance mechanisms, both at legislative and executive levels (Dollery and Wallis 2003: 27–28).

Due to the median voter mechanism, goods or services for which there is a heterogeneous demand are less suited for provision by a government (Ben-Ner and Van Hoomissen 1991: 526; Weisbrod 1988: 25). An assessment of the empirical evidence with respect to the US seems to support this conjecture (Kingma 1997: 140), as well as a direct test with panel data techniques on the size of the non-profit sector in all 50 US states (1992–1996), heterogeneity being measured along three dimensions: variation of population age and racial composition, and unemployment (Matsunaga and Yamauchi 2004). In transaction cost terms one could say that provision of a homogeneous good or service by one producer, which is bound to operate with more transparency than private providers (profit or non-profit) due to the presence of an accountability chain (Hansmann 1987: 35), reduces the uncertainty as to the outcome to be expected. Furthermore, governments' income streams are relatively stable and predictable.

The median voter mechanism may also explain why governments are not good at detecting and satisfying new needs or socially controversial needs. These indeed frequently emerge as 'niche markets', relatively unknown and not always very stable. Current and past examples are:

shelters for battered women, HIV/AIDS prevention organizations (Chambré and Fatt 2002: 503), microcredit organizations, adult education organizations, health care centres for prostitutes, and, in general, 'services which react to needs which have formerly been ignored, stigmatized or may not have existed at all' (Badelt 1997: 169).

Furthermore, other factors may weaken the advantages of government provision of goods and services (Dollery and Wallis 2003: 63 ff). To give just a few examples: misallocations are possible because of the loose ties between (fiscal) revenues and spending, evaluations are difficult due to complex or vague objectives, and civil servants may pursue their own objectives. All these factors result in higher production costs and possibly less fair welfare distributions.

Finally, there is also scope for cooperation between government(s) and non-profit organizations, for example in the case of the provision of public goods (Gazley and Brudney (2007: 390–393) present a literature review relating to the cases in which there is no contractual or granting relation between them). Chau and Huysentruyt (2006) present a model in which the private provision of a public good by a non-profit organization results in a higher welfare level than public provision, in a situation where two organizations are played off against each other in an auction organized by the authorities. An interesting part of their analysis is the integration of the welfare effects at the organizational level caused by the trade-off between ideologic purity and payments in this contest. In their empirical paper, Gazley and Brudney, on a sample of 311 public managers in Georgia (US, 2003) and another one of 285 non-profit executives in the same state (2004), observe 'a substantial amount of ... joint activity' (Gazley and Brudney 2007: 397), as about half of both groups of respondents indicated to be involved in non-contractual non-profit public collaboration, their main motives being the 'desire to secure resources that are more scarce for the respective sector: expertise for government, funding for non-profits.' (ibid.: 410).

Where do we stand?

The previous sections clearly show that, in spite of the substantial intellectual efforts already made by various outstanding scholars, we do not yet have a neat and comprehensive theory explaining the need for non-profit organizations. Salamon and Anheier (1998) reach a comparable conclusion after their, 'preliminary at best' (ibid.: 245), empirical work: 'none of the standard theories seem adequate to account for the observed variations in non-profit scale' (ibid.: 232).

It is unlikely that such an overarching theory is even conceivable, given the wide diversity of failures and problems that non-profit organizations seem to be remedying.

Nevertheless, a number of points can be made as to the existing body of theory (Anheier and Ben-Ner 1997: 93; Brody 1996: 464 and 494; Hansmann 1987: 33; Lyons 1993: 306; Steinberg and Gray 1993: 299; Weisbrod 1988: 43):

- most of the theories are conceptual and intuitive. Formal models are very specific, not to say simplistic and sometimes even eccentric in their assumptions;
- most of the theories are useful to explain why the market is not the appropriate institution to govern a given transaction, but remain silent as to the choice between public procurement and non-profit organization's production;
- the predictive power of the different theories is not systematically assessed yet. The available empirical work relates almost exclusively to the US;
- most of the theories discuss the production of goods and services. Less attention is explicitly devoted to advocacy;
- besides market failure and government failure, there might also exist different kinds of non-profit failure, for which Steinberg (2006: 125–127) enumerates a number of possible reasons: insufficient supply, focus on selected segments of potential beneficiaries, 'parentalism' (his politically correct rephrasing of paternalism), amateurism, productive and allocative inefficiency due to the property rights reasoning discussed in Chapter 2. One has to admit that these or other non-profit failures are seldom considered when justifying the existence of non-profit organizations.

4 Founding a non-profit organization

Introduction

In Chapter 3 the ‘demand’ for non-profit organizations was discussed. Here we turn to their ‘supply’, confining ourselves to organizations founded by entrepreneurs who run them themselves, or, more generally, organizations whose behaviour is under their exclusive control. In Chapter 5 we will go deeper into the economics of multi-layered non-profit organizations, considering boards, managers and other staff members.

The economic theory of non-profit organizations’ supply is even more embryonic than the demand side theory, except for a few contributions from different theoretical points of view, which will be presented in the next sections. Furthermore, and continuing within the same metaphor, theoretical thinking about demand–supply interactions has not yet even been conceived (Steinberg 2006: 129).

Non-profit entrepreneurs

Generally speaking, an entrepreneur will found a non-profit organization if, in her perception, her utility will increase by doing so, when alternative ways of action are also taken into account (Ben-Ner and Van Hoomissen 1991: 532). If we accept that there are within the group of potential entrepreneurs individuals whose utility is also affected by the organizational output (Gassler 1997: 268), it is not difficult to understand why non-profit organizations are founded.

A priori, the utility balance can be affected by a number of factors (Ben-Ner and Van Hoomissen 1991: 541). They can be grouped as follows, a plus sign indicating a positive effect on utility, and a minus sign a negative effect:

- market and product characteristics
 - supply of public good or service (-)
 - 'trust' characteristics of good or service (+)
 - expected utility (+)
- personal and social characteristics
 - income (+)
 - education (+)
 - specificity of individual demand (+)
 - social cohesion (+)

Depending on the specific good or service considered, some of these factors may be more or less relevant. Notice also that some of these factors were considered in the previous chapter too: 'consumers may demand services from [non-profit organizations] for the same reasons that make non-profit entrepreneurs form a [non-profit organization]' (Badelt 1997: 165).

Modelled non-profit entrepreneurship

A model without altruism

A model which does not need to resort to altruistic entrepreneurs to understand the establishment of non-profit organizations was developed 25 years ago by Borjas *et al.* (1983).

Assume all potential entrepreneur-managers to have identical utility functions U_{em} . Their utility is affected by two factors: monetary wealth (W_{em}) and non-monetary advantages (nW_{em}), which are imperfect substitutes, as illustrated by the transformation curve in Figure 4.1. The location of point C is partly determined by the level of competition the organization faces, as C moves to the left with increasing competition (Mobley and Bradford 1997: 1130), since competition will make it in general more difficult to survive in the market while visibly 'wasting' too much money on all kinds of perquisites.

The entrepreneur-manager reaches her maximal utility (U_{em1}) at point A. Suppose the non-distribution constraint limits the wealth she can obtain to a level S, her maximal utility would be U_{em2} ($<U_{em1}$). As long as S is relatively low, A will not end up between B and C. But combinations of utility function shapes and levels of S are conceivable, though not very probable, in which A is located between B and C on the transformation curve. Then, the entrepreneur-manager is indifferent between a profit organization and a non-profit organization.

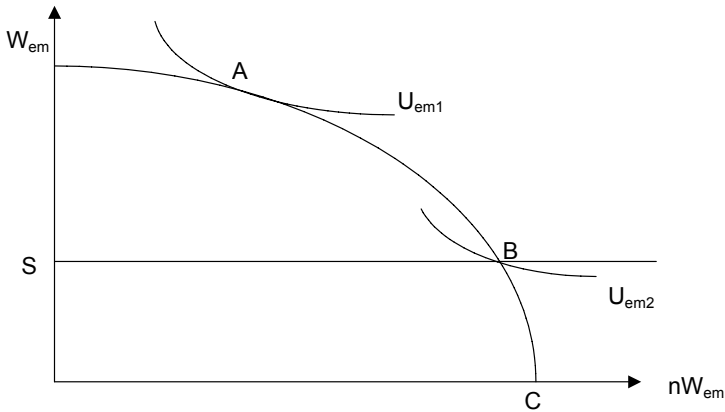


Figure 4.1 Institutional choice by an entrepreneur-manager

Source: Based on Borjas *et al.* (1983)

We can also relax the assumption of each entrepreneur-manager having identical utility functions, even if we continue to assume their arguments are still the same (W_{em} and nW_{em}), but allow the weights to differ. Then, for some, the optimum might lie between B and C. They would be indifferent between establishing a profit organization and a non-profit organization, and therefore, in a probabilistic perspective, some would found a non-profit organization. Note that within this line of reasoning, altruism does not have a role to play: ‘even if all people were narrow egoists, non-profit firms might still survive in the market place’ (Rose-Ackerman 1996: 701).

Another model without altruism is presented by Glaeser and Shleifer (2001). It should be noted, however, that they define a non-profit organization as an organization in which the entrepreneur ‘is forced to spend [profits] on perquisites’ (*ibid.*: 103). Given the confines of the definition set out in Chapter 2 we would not call such an organization a non-profit organization. In essence, in their model the lower utility of the perquisites to the entrepreneur as compared to the utility of the profits which must be spent, induces the entrepreneur to increase product or service quality (a source of utility in itself). If this is much appreciated by the consumers they are willing to pay higher prices, even if quality is non-verifiable, as it is precisely the non-profit status (in the Glaeser-Shleifer sense) that guarantees them that higher quality can be expected. Under some circumstances, this status can eventually be optimal from the viewpoint of the entrepreneur. But however interesting this model might be in its own right, it does not really add to our

understanding of the founding of non-profit organizations defined in terms of the non-distribution constraint, which is the approach taken in this book.

A model with altruism: the voluntary provision of public goods of some value

Altruism can be defined as the utility a person experiences from somebody else's utility, as rightly or wrongly perceived by the altruist. Therefore, altruists can be expected to take some actions increasing the utility of some group(s) of people (colleagues, workers, club members, women, poor people, art lovers, ...). In order to understand why altruists are not (all) free riders, waiting for other altruists to take the utility enhancing actions, Gassler (1997: 9) assumes that at least some of them must adhere to a Kantian ethic: do to others what you expect them to do for you. Another explanation may be found in religious motives, especially if some utility beyond death is taken into consideration.

In a specific context, Bilodeau and Slivinski (1996,1998) present a model from which it can be inferred that in a society composed of altruistic persons, one of them will eventually set up an organization providing a public good that is not available yet, at least in case its mere availability is deemed to be of some value. As explained in the previous chapter, if the revenues of public goods cannot be appropriated by their producers, there will be no profit organization willing to produce the good.

Consider, in a very much simplified version of their model, a society of two non-identical persons, called 1 and 2. They each have a finite time horizon and a utility function U_i ($i = 1,2$). In each period of time four mutually exclusive states are possible for person i : the public good is not available; the organization is founded by person i , the public good is made available through the organization founded by i ; and the public good is made available through an organization founded by somebody else. The subscripts n , f , a and m respectively describe these states. It is assumed that the act of establishing an organization comes at a utility cost compared with doing nothing. Furthermore, and here altruism comes in, the public good being available increases i 's utility, even after factoring in possible volunteering in the production of the good. This increase is higher if i founded the organization, because of aspects such as prestige, or the fact of having a decisive influence on the organization's behaviour. This results in the following ordering of utility levels:

$$U_{i,f} < U_{i,n} < U_{i,m} < U_{i,a}$$

For both persons there is a moment t_i after which founding an organization will not allow them to compensate the initial utility drop $U_{i,n} - U_{i,f}$ with the discounted utility increases $U_{i,a} - U_{i,n}$. It is even possible that t_i can be zero if the utility investment to found the organization is relatively high, or if the availability of the public good only marginally increases both persons' utilities, or if the time horizons are too short, or if the discount factor is too high. In such cases there will be no organization founded.

If just one of the two values, say t_i , is strictly positive, then i has no reason not to found a non-profit organization, as she will increase her utility by doing so, at the latest at t_i , but preferably earlier.

Suppose both values are positive, with, without any loss of generality, $t_1 < t_2$. The assumption that persons 1 and 2 are non-identical is reflected by this inequality being strict. At t_2 person 1 might already have founded a non-profit organization. If not, she will certainly not do so at moment t_2 , as this would have a negative utility impact for her. But person 2 now has no rational alternative other than to found a non-profit organization once t_1 has elapsed. This decision will also, as a side effect, increase person 1's utility, but not at person 2's expense.

To sum up, for the provision of a public good to which some value (in a discounted utility sense) is attached by at least somebody in society, a non-profit organization can be expected to emerge.

Organizational survival

An entrepreneur founding a non-profit organization is a necessary condition for the establishment of such an organization, but this is not sufficient for its viability. Anheier and Ben-Ner (1997: 342) list three minimum conditions that should be met:

- there must be a healthy financial basis (see also Chapter 9 on this);
- the organization must be credible to its stakeholders ('socially legitimate' in an ecological-institutional approach (Baum and Oliver 1996: 1388));
- the organization should reach such an efficiency level as not to destroy the institutional advantages of being a non-profit organization.

Furthermore, if the organization needs not only an entrepreneur, but also (paid or voluntary) collaborators, they must all be willing to exert the

necessary efforts to make the organization viable. Grimalda and Sacconi (2005: 261–263) provide a simple game-theoretic model to illustrate this.

There are two players in the game: the entrepreneur-manager and a worker. Each of them can exert two levels of effort: profit maximizing efforts (l_{em} and l_w respectively), and quality enhancing efforts (h_{em} and h_w respectively). Quality improvement implies some kind of volunteering and preferring quality over profit, hence Grimalda and Sacconi's (idiosyncratic) definition of a non-profit organization as an organization in which h_{em} and h_w are observed simultaneously (ibid.: 262). Since volunteering also implies (partially) working without payment, the worker's real wage under the profit maximizing effort (w_l) will be higher than under the quality improving effort ($w_h < w_l$). The additional production cost to improve quality is c_q ($> (w_l - w_h)$) and is incurred whenever the entrepreneur-manager prefers quality over profit, and therefore exerts the effort h_{em} . If both players exert the quality improving effort, societal utility will increase with a value Δu_s as compared to a situation in which both exert the profit maximizing effort. If one of the players exerts the quality improving effort, and the other exerts the profit maximizing effort, the effect on societal utility will be $\delta\Delta u_s$ ($\delta < 1$). Π^* is the maximum profit, defined here before wages, and assumed to be large enough to cover for wages and possible quality improving costs. Figure 4.2 displays the payoffs of the game.

	h_{em}	l_{em}
h_w	w_h $\Pi^* - w_h - c_q$ Δu_s	w_h $\Pi^* - w_h$ $\delta\Delta u_s$
l_w	w_l $\Pi^* - w_l - c_q$ $\delta\Delta u_s$	w_l $\Pi^* - w_l$ 0

Figure 4.2 Payoff matrix in a profit–non-profit game

Source: Based on Grimalda and Sacconi (2005: 262).

The first line in each cell is the worker's wage, the second line the entrepreneur's profit, and the last line societal utility added compared to the profit maximizing situation. Not taking into consideration societal effects, the cell (l_w, l_{em}) is the only Nash equilibrium. If the players were altruistic in the sense that Δu_s would affect their utilities, the non-profit solution (h_w, h_{em}) would constitute the only Nash equilibrium, provided that the 'other-regarding attitude towards the beneficiary is sufficiently pronounced among the [worker and the entrepreneur]' (ibid.: 263).

5 Governing and staffing a non-profit organization

Introduction

In Chapter 3 the demand for non-profit organizations was discussed, and in Chapter 4 we turned to their supply, confining ourselves to organizations founded by entrepreneurs who run them themselves, or, more generally, organizations whose behaviour is under their exclusive control. Here, we go deeper into the economics of multi-layered non-profit organizations, considering boards, managers and other (voluntary and paid) staff members. The basic microeconomic framework for this will be a principal–agent conceptualization.

The principal–agent framework and non-profit organizations

One of the main assumptions in the previous chapter is that there is no ambiguity as to the objectives of a specific non-profit organization. These were modelled to be reflected by the organizational utility function U_{npo} , identical to the utility function of the entrepreneur-manager U_{em} . In most real life non-profit organizations, especially the ones that are not very small, the situation is not that simple. Entrepreneurs may be persons other than managers, there can be other stakeholders involved, board members are not identical to one another, possibly (part of the) non-managerial staff is indifferent to the organization's objectives, volunteers may pursue their own personal objectives, and so on.

A suitable microeconomic framework within which these kinds of situations can be analysed is the *principal–agent* theory. A principal–agent relationship can be defined as ‘a contract under which one or more persons (the principal(s)) engage another person (the agent) to perform some service on their behalf which involves delegating some

decision making authority to the agent. If both parties to the relationship are utility maximizers there is good reason to believe that the agent will not always act in the best interests of the principal' (Jensen and Meckling 1976: 308). Part of the principal's problem can be solved by designing appropriate incentive schemes, including some amount of monitoring (at a cost called *monitoring cost*). The agent can commit herself by incurring *bonding costs*, in an attempt to convince the principal that she will do her utmost to accommodate his goals. The eventual welfare loss for the principal, as compared with a situation of complete utility alignment, is called the *residual loss*. The sum of monitoring costs, bonding costs and the residual loss is the *agency cost*.

In general, principal-agent relationships are affected by two categories of problems, each resulting from informational asymmetries between the principal and the agent. Before signing the contract, the potential agent can conceal some relevant but negative information about herself, leading to an *adverse selection* problem. After having signed the contract, the agent can misbehave as long as her behaviour is unobservable (*moral hazard*).

Principal-agent relationships abound within society: between shareholders and managers in profit organizations, managers and subordinates in any kind of hierarchical organizations, patients and physicians, students (and/or their parents) and teachers, firms and their advertising agencies, donors and donation recipients, governments and subsidized organizations, needy people and relief organizations, and elsewhere. Without any doubt various relationships in non-profit organizations can also be analysed within this framework (Brody 1996: 462; Herman and Heimovics 1991; Hewitt and Brown 2000; Miller-Millesen 2003; Steinberg 1990), though this runs counter to the 'stewardship' ideal one might cherish. A closer analysis reveals that this opposition between stewardship theory and principal-agent theory is more virtual than real, as a stewardship relationship can be defined as a principal-agent relationship in which the utility functions of principal and agent are identical (Caers *et al.* 2006b: 29). In this interpretation a stewardship relationship is just a limiting case of the general principal-agent relationship, sometimes, rightly or wrongly, believed to be reality by some principals, as illustrated by J.L. Miller (2002) on a small sample of 12, mostly local, US non-profit organizations from New York and Connecticut: 'the board members generally do not believe that their chief executives will behave opportunistically' (J.L. Miller 2002: 437).

Principals in a non-profit organization

The board

The board as principal

An almost philosophical question is knowing all the parties whose utilities are affected by a non-profit organization's activities or the lack thereof. These parties are called organizational *stakeholders*, a stakeholder being '[a]ny person or group that is able to make a claim on an organization's attention, resources or output, or who may be affected by the organization' (Lewis 2001: 202). Note that this definition is applicable to all sorts of organizations.

Every stakeholder can act as a principal in a principal-agent theory of non-profit organizations, although board members and managerial and non-managerial employees would then have two roles. As there is no reason to expect them all to have identical objectives, or, for that matter, identical perceptions of effectiveness (Herman and Renz 2004: 699), a comprehensive principal-agent approach would imply a multiple principals framework. At the moment of writing, such a non-profit theory has not yet been developed.

In line with mainstream theorizing on profit organizations, in non-profit theories the board of directors is acting as if it embodies the organization's mission, assuming away possible differences in objectives between its principals, even if we consider the founders of the organization to be the only principals to reckon with. The board is usually described as a monolithic body, having clear goals and objectives. As in economic theories on profit organizations, non-profit boards are the focal point of analysing 'corporate governance' issues, but unfortunately, compared with the huge amount of theoretical work on profit governance, '[l]ess is known about governance arrangements in non-profit corporations.' (Dyl *et al.* 2000: 335), and 'the economics-based literature has been fairly silent on non-profit governance' (Eldenburg *et al.* 2000: 5). A reason might be the fact that '[n]onprofit organizations have governance problems that resemble the problems in for-profit firms, but are often far more extreme' (Glaeser 2003: 39). By now, the situation has improved slightly, especially due to a number of empirical papers devoted to non-profit governance. This might be the reason why the above quotation from Eldenburg *et al.* is not found in the published version of their paper (Eldenburg *et al.* 2004).

The impact of the composition of the board on organizational behaviour

One of the first empirical papers delving into the impact of board composition on the behaviour of non-profit organizations is by Dyl *et al.* (2000). Their sample consists of 54 non-profit medical research charities in the US (1991), and focuses on managerial representation on the board, which appears to be positively related to higher executive salaries and more attention to fundraising, but not to management expenses or organizational wealth.

Callen *et al.* (2003) assembled a sample of 108 large New York non-profit organizations in 1995 and 1996. After having described size, gender composition and seniority of board members, they characterize board composition by using five categories of members: staff (median value: 2 per cent of board size), major donors, persons with professional skills (the largest group: 37 per cent median value), well-known individuals, and the inevitable 'others' (Callen *et al.* 2003: 501), and also present information on the existence and composition of all kinds of committees. The most frequently observed committees are the finance and nomination committees (in more than 70 per cent of the organizations surveyed), the least frequently observed the audit committee (in 35 per cent of the cases, though this number amounts to about 80 per cent in the post Sarbanes-Oxley sample (2004) of 128 of the largest US non-profit organizations assembled by Vermeer *et al.* (2006)). Further, the composition of the existing committees does not reflect board composition, but seems, logically, adapted to the committees' competences: The median share of professionally skilled members of the audit committees is almost two-thirds of the committee's size, whereas this share is lower than one-third for the nomination committee, to give just a few examples (Callen *et al.* 2003: 502). The governance structure in place and the composition of the governance bodies are clearly shown to affect organizational behaviour. More donors on the board go together with lower administrative expenses and more core activities, and larger boards are positively associated with (relative) fundraising expenses. The effect of the committees as such is not assessed, but donor membership of these committees is. Their presence on finance committees is positively related to the organization's administrative efficiency (*ibid.*: 515–516).

The link between governance structure and performance is also assessed by Alexander and Lee (2006). They concentrate on the board configuration, looking at the impact of having a 'corporate model' board (*ibid.*: 737), characterized by a limited number of paid specialized board members, by including in the board a substantial share of actively

participating inside directors, by making managers directly accountable to the board, by setting finite terms of service for the board members, and by a focus on strategic issues. Their data pertain to non-profit hospitals (three samples, each of around 1,000 observations in the period 1985–1993), and reveal a positive link only between the presence of ‘corporate model’ boards and the level of (adjusted) admissions, and not with efficiency, market share, occupancy, or cash flow (*ibid.*: 747). De Andrés-Alonso *et al.* (2006) concentrate on the relationship between board characteristics (size, relative number of outsiders, rotation of board members, presence of an executive committee, minimum number of board meeting per year, organization’s founder being a board member) and efficiency on a sample of 41 Spanish non-governmental development organizations (1995–2001). There seems to be no relationship with technical efficiency (measured as the share of administrative costs in total costs), but smaller sizes, larger shares of outsiders, and lower meeting frequencies positively affect what is called allocative efficiency (direct project expenses divided by donations and subsidies) (De Andrés-Alonso *et al.* 2006: 600). Finally, a few studies concentrate on the ultimate owner of the organization instead of on the board this owner constitutes. Farsi and Filippini (2004), for instance, find no significant efficiency differences between public non-profit organizations and private non-profit organizations (panel data on 36 Swiss nursing homes in the Ticino canton, 1993–2004), whereas Knox *et al.* (2006) find efficiency differences between private secular non-profit organizations and religious non-profit organizations (about 150 Texan nursing homes in each of the years 1994, 1998, 1999), the secular ones being more efficient (Knox *et al.* 2006: 658).

Another study with New York data, in a sample of more than 3,100 board members of 403 non-profit contractors in New York City (data collected in 1999), is performed by O’Regan and Oster (2005). Contrary to earlier work, they go into a little more detail as to the members’ professional skills (financial, other business, education, law, social services) (O’Regan and Oster 2005: 213). Interestingly, the unit of analysis is the board member, and not the board itself or the organization. The behavioural patterns they discern are complex (*ibid.*: 221). To give one example, they find that the presence of voting executives on the board is inversely correlated with the number of donating board members, but positively with the average amount donated (*ibid.*: 220).

Du Bois *et al.* (2005) try to discover a link between board composition and organizational objectives, based on a sample of 170 chairpersons of non-profit Flemish primary and secondary schools,

collated in 2005. Apart from their gender, board members are grouped into members with an educational, a legal, a financial, or a religious background. Using an ordered probit methodology, it is shown that board composition matters in terms of organizational objectives, at least as expressed by the chairperson. To give just one example, the data show that the presence of more men on the board decreases the importance attached to ideology as a key objective of the school.

All in all, the available research is scattered, making detailed generalizations methodologically impossible. Nevertheless, all the sources point to the possibility that the composition of the board, and the governance structure in general, is not neutral as to its effect on the functioning of the organization (see Jackson and Donovan (1999: 18 ff.) for an example of a practitioner oriented version of this statement). Enacting regulations on board composition, such as for instance on gender representativity, might therefore have unexpected, but not necessarily unwanted or negative, side effects on the organizational objectives effectively pursued.

Functioning of the board

There is still no real economic theory on the functioning of non-profit boards (Ostrower and Stone 2006: 612), despite the existence of numerous practitioner oriented handbooks on the topic. They mostly depart from 'a "heroic" model of the role of the non profit board' (Herman and Heimovics 1990: 168), although this might also be considered simply as a normative stance, in line with the recommendations of Fama and Jensen (1983a: 318) for donative non-profit organizations: expropriation of the organization by managers can be avoided by structurally separating initiative and implementation from fiat and control, the latter two being the competences of the board. Ostrowski's list (1990: 184) of board tasks is more detailed but fundamentally comparable. The tasks include being the stakeholders' voice and determining and guarding the organization's objectives (in other words being a good principal), appointing, supporting and evaluating management, long term planning, financial control, activity planning supervision, reputation building, instance of appeal for internal conflicts, assessment of its own functioning. To assess the non-profit board's functioning, Gill *et al.* (2005) designed and validated (on a sample of 312 respondents, of whom 31 were executive directors, from 32 Canadian non-profit organizations) what they call the Governance Self-Assessment Checklist, consisting of 144 items grouped into 12 subscales (see Table 5.1).

Table 5.1 Subscales of Governance Self-Assessment Checklist for non-profit boards

<i>Subscale description</i>	
1	Board effectiveness quick check (15 items)
2	Board structure (13 items)
3	Board culture (16 items)
4	Mission and planning (13 items)
5	Financial stewardship (10 items)
6	Human resources stewardship (9 items)
7	Performance monitoring (9 items)
8	Community representation (8 items)
9	Risk management (13 items)
10	Board development (10 items)
11	Board management (11 items)
12	Decision-making (17 items)

Source: Gill *et al.* (2005: 277–278, 282)

Finally, as far as prescription is concerned, Preston and Brown (2004: 222) present a literature review from which they derive a list of performance indicators for individual board members: attendance during meetings, input during meetings, organizational knowledge, follow-up of relevant topics, volunteering for operational tasks. The last one does not seem to be essential for a good functioning board member, and even conflicts with the Fama and Jensen recommendation above, possibly affecting independence or psychological distance, but on the other hand it helps the member to get an idea of organizational reality.

An early study that assesses the non-profit board's functioning is by Middleton (1987), who reviews the (essentially US based) empirical results available at that time. She concludes that 'many board members and managers alike contend that boards often function poorly' (Middleton 1987: 141). A more cynical view has been expressed by Brody (1996: 487): 'The most important task of the non-profit board is to ensure its own continuation.' But more recent empirical work allows us at least to qualify these observations, though the measurement of organizational performance is not free from validity problems, and most samples are rather small.

Thirty-nine volunteer managed non-profit organizations in a Boston suburb (1992) constituted the sample of Smith and Shen (1996). Reputation, measured by the number of nominations by leaders of other organizations, is seen to be positively affected by the mere presence of a board (*ibid.*: 279). As already mentioned, Callen *et al.* (2003) use efficiency measures to assess organizational performance, and relate

them, in a number of cases with statistically significant results, to board characteristics. In the paper by Gill *et al.* (2005) mentioned above, for each organization in the sample two external observers familiar with the organization were asked to rate it on ten effectiveness items. Internal effectiveness ratings were also collected. Most of the subscale values of the Governance Self-Assessment Checklist (see Table 5.1) are significantly related to these ratings (Gill *et al.* 2005: 284). On a sample of 100 non-profit, mostly human service, organizations, Brown (2005) finds significantly positive correlations between organizational performance as perceived by executives and board members, and board performance as perceived by board members and executives respectively (Brown 2005: 331).

Somewhat contrary to the previous results, Herman and Renz (2004), on a 1999 sample of 44 United Way funded organizations in the US (health and welfare organizations, organizations helping developmentally disabled people), do not find a relationship between the application of 'good' practices by the board and organizational effectiveness as measured by a number of people involved in the organization.

Other principals

Theoretically, every stakeholder can be considered a principal on its own, instead of the board being seen as a body representing all of them. This has not been incorporated in the extant theoretical literature, except for a casual reference to the organization's beneficiaries (Williamson 1983: 358) and the donors. As to the latter, Hewitt and Brown (2000: 178) present them as principals, and argue that choosing the non-profit institutional form for a donative organization constitutes bonding costs on behalf of the entrepreneur, who shows her willingness to pursue the donor's objectives by deliberately forgoing wealth increases out of the organization's monetary surplus. Therefore, she has no interest in generating such a surplus, as an alternative for more activities in line with the donor's objectives. Brody (1996: 509) does not agree with this reasoning: in her view the non-distribution constraint is not a necessary condition to align the interests of principals and agents. In the paper by De Andrés-Alonso *et al.* (2006: 599–600) on Spanish development organizations mentioned above, the authors establish that the fact of being largely dependent on substantial subsidies granted by a well-organized institutional donor suffices to steer organizational behaviour, in that there is a positive impact on both efficiency measures they use. Note that, at least in this case, the institutional donor does not play this

role as principal by appointing representatives on the organizations' boards, but through direct links with the organizations themselves.

Turning to organizational staff, the manager, besides her role as an agent of the board (see below), also performs a role as a principal with respect to the subordinate staff. Economic theory on this role in a non-profit context is scanty (Caers *et al.* 2006b: 40–41), although there is some literature on this subject in the context of profit organizations (e.g. Beckman 1988).

Agents in a non-profit organization

The manager

Managerial utility

Despite their theoretical and practical importance, 'the particular incentives guiding non-profit managers are not well understood by economists' (Thornton 2006: 206). Leaving aside caricatures describing non-profit managers as persons driven only by material self-interest, there is some consensus that they are at least partially motivated or characterized by a form of altruism: 'the people attracted to managerial positions in the non-profit sector are those who care relatively little about financial gain and relatively highly about putting their own ideals into practice' (Rose-Ackerman 1987: 815), or '[t]hick carpets and mahogany furniture for the executives seem to be a popular illustration, at least among those who have not actually seen the administrative offices of many non-profit hospitals' (Lynk 1995: 444, n19). Therefore we can expect managers in non-profit organizations to earn less than their hypothetically identical counterparts in profit organizations, as the disutility of a lower wage is compensated by the utility effect of managing an organization that is perceived to do something 'good' for others (a phenomenon called *labour donation*). Note that this conclusion is valid not only when profit managers and non-profit managers are assumed to differ as to the arguments in their utility functions (as in Young (1987: 169) or Buelens *et al.* (1999: 54)), but even when it is assumed that all managers are identical as far as their utility functions are concerned. Working in a profit organization, then, does not add utility through altruism, requiring higher wages in order to generate the reservation utility.

The available empirical literature on managerial remuneration seems to confirm this conclusion. In their review, Roomkin and Weisbrod

(1999: 754) observe that non-profit managers are paid between 20 per cent and 59 per cent less than comparable colleagues in profit organizations. Preyra and Pink (2001), with a Canadian sample of 85 non-profit hospitals and 217 profit organizations for 1995–1996, find similar differences. They also find managerial wages in non-profit organizations to be more stable than managerial wages in profit organizations, as the latter consist of relatively more performance based bonuses. Comparable results are presented by Ballou and Weisbrod (2003), who establish that, in a sample of 730 US hospitals (data for 1992), fixed wages for non-profit managers are higher than for profit managers, but that this difference is more than compensated by the amount of bonuses for profit managers. Wage differences therefore can also be understood if the non-profit managers are at least as risk averse as the profit managers, but do not rule out the labour donation idea. In fact, the two mechanisms are not mutually exclusive.

A non-US empirical study in this field is Jobome (2006), based on the 100 largest charities in terms of their 2000–2001 income in the UK. His results are in line with the US results: managerial remunerations are not statistically affected by the presence of typical monitoring instruments such as audit, nomination, and remuneration committees. Therefore, non-profit managers seem to be driven by altruism rather than by personal wealth, and ‘boards should not necessarily invest in controlling board mechanisms in order to curb agency-assumed CEO pay excesses’ (Jobome 2006: 350), though the observed lack of correlation could also be the consequence of ‘pervasive managerial entrenchment’, a less plausible assumption in the eyes of the author (*ibid.*: 351).

Handy and Katz (1998: 252–259) use the observed wage difference in a formal model in which there are altruistic persons and non-altruistic persons applying for a managerial job in a non-profit organization. Altruism is not observable before contracting. Without doing justice to the complexities of their model (in which imperfectly testable managerial abilities are also included), it can be described by stating that proposing wages that are lower than the reservation wage for non-altruistic applicants generates a self-selecting mechanism in which the non-altruists do not apply: ‘Lower wages will attract managers that are more committed to the cause of the non-profit’ (*ibid.*: 259).

The board as a principal and the manager as its agent

The most frequently studied principal–agent relationship in non-profit organizations is the one between the board, acting as the principal, and

the manager, being the agent. Empirical work reviewed by Ostrower and Stone (2006: 617–618) indicates that the balance of power in this relationship is affected by three groups of variables ('b' indicating that higher values of the variable under consideration imply more board influence, and 'm' more managerial power):

- individual variables
 - gender of board members: more female board members seem to make the board less influential;
 - prestige/wealth of board members (see also Chapter 7) (b);
 - managerial tenure (m);
 - managerial credentials (m).
- organizational variables
 - age (m);
 - size (m);
 - complexity and degree of bureaucratization (m).
- environmental variables
 - complexity of interorganizational ties, making power more fragmented;
 - organizational financial dependence on board members (b);
 - stability (m);
 - governmental funding (m).

In a seminal theoretical paper on the board–manager relation in non-profit organizations, Steinberg (1986b) proposes an approach allowing the measurement of differences between managerial objectives and board objectives, and therefore assessing the principal–agent gap.

As usual, the method starts from some simplifications. The board is assumed to aim for service maximization (implying zero profits), whereas the manager, if not constrained, aims for budget maximization. This last assumption, justified by factors such as prestige, salary, and self-dealing (Steinberg 1986b: 508), could be considered as a caricature referred to in the previous section, but it is also instrumental in making the reasoning clear. The method consists in estimating a parameter k at the organizational level, the value of which should lie between zero and one, zero describing a budget maximizing organization, and one a service maximizing organization: the closer to zero, the more severe the agency problems. This follows from the assumption that the organizational utility function can be written as a weighted average of the service level and the budget, which are a function of revenues other than subsidies and funds raised (R), subsidies (S), funds raised (F) as

48 *Governing and staffing a non-profit organization*

determined by fundraising efforts (f), and administrative costs net of fundraising costs (A), which are assumed to be fixed:

$$U_{\text{npo}} = k(R+S+F(f)-f-A) + (1-k)(R+S+F(f)) = R+S+F(f) - k(A+f)$$

Assuming that only the funds raised are affected by the fundraising efforts, maximizing the organizational utility with respect to f (assuming the second-order conditions are met) leads to the optimality condition

$$dF/df = k$$

Estimating dF/df , the marginal donative product of fundraising, therefore, is equivalent to estimating k (and the organizational objective function, hence called a 'revealed' objective function), and therefore to estimating the severity of the agency problems in the organization. The interpretation of this condition is straightforward: service maximizers will increase fundraising efforts as long as their revenues net of fundraising costs are positive ($k = 1$), whereas budget maximizers continue to raise funds as long as there is any additional income for the organization ($k = 0$).

Taking account of lagged effects of fundraising efforts in this context is easy. Suppose there is just a one-year lagged effect (modelling more years is comparable), and define r to be the discount rate. It is easily shown that the organizational utility at moment t now is

$$U_{\text{npo}} = R_t + S_t + F_t(f_t) + (F_{t+1}(f_t)/(1+r)) - k(A_t + f_t)$$

from which the optimality condition

$$\partial F_t / \partial f_t + (\partial F_{t+1}(f_t) / \partial f_t) / (1+r) = k$$

Assuming $F(f)$ is concave, this implies that lagged fundraising effects induce the organization, given k , to spend more on fundraising than would be spent in their absence.

However modelled, k 's estimation involves some econometric intricacies we do not deal with here (Steinberg 1986b: 510–515). Steinberg's empirical results are based on a sample of 2,202 non-profit organizations from four metropolitan areas in the US (1974–1976). He finds welfare organizations, educational organizations and art organizations to be rather service maximizing, and health organizations to be budget maximizers.

Clearly, as acknowledged by Steinberg (*ibid.*: 513–514), his method does not work under a number of circumstances. These include the presence of some forms of financial rationing (e.g. by imposing a ceiling on the funds that can be collected: $F \leq F_{\max}$), a negative effect of fundraising activities on volunteers' motivation (meaning that R and/or A are no longer independent from f), fundraising adding to organizational output (e.g. by informing the public or increasing awareness), all kinds of regulations making unconstrained utility maximization impossible (e.g. rules on how to spend available funds).

Brooks and Ondrich (2007) extend the Steinberg approach by adding a third argument to the organizational utility function: quality of service. They model this concept, under a zero profit assumption, to be the ratio of production costs ($R+S+F(f,y)-f-A$) and the output level (y), leading to the following utility function (Brooks and Ondrich 2007: 132):

$$U_{\text{ppo}} = k_1(R+S+F(f,y)-f-A) + k_2(R+S+F(f,y)) + (1-k_1-k_2)((R+S+F(f,y)-f-A)/y)$$

with $0 \leq k_1, k_2, k_1+k_2 \leq 1$, and the funds raised also being a function of the output level. For a service maximizer, k_1 equals one and k_2 zero, whereas for a budget maximizer the opposite situation prevails. For a quality maximizer, both parameters are zero. The choice variables being the fundraising efforts (f) and the output level (y), the following testable conditions can be derived (for the proof, see Appendix II; subscripts describe (partial) derivatives):

- for a service maximizer: $F_f = 1$ (as in the Steinberg model) and $(R_y + F_y) = 0$
- for a budget maximizer: $F_f = 0$ (as in the Steinberg model) and $(R_y + F_y) = 0$
- for a quality maximizer: $F_f = 1$ and $(R_y + F_y) - ((R+S+F(f,y)-f-A)/y) = 0$

The econometric problems to assess which of these conditions prevails are not discussed here, but they may be found in Brooks and Ondrich (2007: 135–137), who apply their method to a sample of 104 non-profit radio stations in the US over the period 1990–1996. In fact, they test each condition separately, arriving at a conclusion in the following form: 'service is not an objective for about 30% of the stations, quality can be ruled out for 49%; and budget is rejected for 69%' (Brooks and Ondrich 2007: 129).

Contrary to the indirect methods proposed by Steinberg (1986b) or Brooks and Ondrich (2007), Du Bois *et al.* (2006) directly measure potential differences in objectives between non-profit boards and non-profit managers, using a discrete choice methodology combined with a mixed logit estimation (Louviere *et al.*: 2000). Their sample consists

of 503 primary school managers, 187 secondary school managers, and 171 board chairpersons of non-profit schools in Flanders (2005). In this sample a stewardship attitude on the part of managers is certainly not present. Ideology appears to be more important for board chairpersons, whereas objectives such as staff satisfaction and pupil satisfaction seem more important for the managers. This implies that, at least in their setting, agency problems are bound to exist.

Finally, even in cases in which there is no difference in objectives between board and management, differences in ideology or religion, or perceptions on optimal strategies may arise. Theoretically, these are not agency conflicts, but they are clearly practically relevant.

Performance based remuneration

To find incentive mechanisms to discipline managers of profit organizations is, theoretically, not such a difficult task, as is proved by the plentiful academic literature on the matter. For non-profit organizations, the situation is different (Steinberg 1990): 'The core governance problems of [non-profit organizations] arise from their management having generally poor incentives and being shielded from the most potent disciplining devices in for-profit firms, like hostile takeovers, proxy fights, or even independent directors' (Bolton and Mehran 2006: 296). Profits are certainly not an appropriate criterion to use in performance based remuneration schemes, as they divert managerial efforts and attention from the organizational objectives to wealth creation (Preyra and Pink 2001: 511), apart from their potential negative effect on subsidies or donations received.

Finding relevant, objective, measurable and verifiable performance criteria to serve as a basis for the calculation of the managerial remuneration is not easy, but there is some empirical support to argue that this is not impossible, at least to a limited extent. Baber *et al.* (2002), in a study of 331 US charities in a four-year period at the end of the 1990s, establish a very significantly positive relationship between the relative change in managerial compensation and the relative change in *programme* spending (all expenses minus administrative expenses and fundraising expenses). Despite its significance, the relationship is also weak, as a 1 per cent increase in programme spending goes together with a 0.07 per cent increase in managerial compensation (Baber *et al.*: 687, n6). Hallock's paper (Hallock 2002) is comparable in its set-up. His sample contains 9,776 US non-profit organizations (1992–1996), and performance is measured by a number of variables: size, programme expenses relative to total expenses, and financial revenues. After

controlling for industry (being significant on its own) and the organization (in a fixed effects panel estimation), the only statistically relevant (albeit very small) correlation is found between managerial compensation and size (a result also obtained by Jobome in his UK sample described earlier (Jobome 2006: 347)), which is a very questionable performance variable. Furthermore, it might also proxy for organizational complexity, in which case it is natural to expect higher managerial wages in larger organizations, irrespective of possible incentive effects. Finally, O'Connell (2005), in a sample of 133 non-profit liberal arts colleges in the US (1995–1996), also cross-sectionally finds a positive relationship between the colleges' reputations (as perceived by administrators of other colleges) and the chief executive's salary.

All in all, these results are not very convincing as to the possibility of finding effective incentive mechanisms as a basis for managerial remuneration in non-profit organizations (see also the recent review by Jobome (2006: 335–338)), even if there might be organizations considering the implementation of pay-for-performance systems, such as the two in the Austrian sample of nine organizations (2004) in the exploratory study by Brandl and Güttel (2007), which had gone as far as establishing a project group and a change management programme for the matter (Brandl and Güttel 2007: 184–185). The correlations found are implicit at best, and do not allow any conclusion as to causality. Further, the choice of the performance variables, uniform throughout the samples used, need not reflect real organizational objectives. On top of that, when designing incentive based payment systems, there should be no ambiguity with respect to the organizational objectives or to their measurement. If these conditions are not met, performance based remuneration systems will force managers to pursue the objectives implied in this system, departing from the real organizational goals, institutionalizing or sometimes even somehow creating principal–agent differences. Therefore, it is no surprise to conclude that optimal remuneration schemes in non-profit organizations are hardly explored (Brandl and Güttel 2007: 178; Brickley and Van Horn 2002: 228; Preyra and Pink 2001: 511), and to observe that bonuses are much smaller relative to the base managerial pay in non-profit organizations when compared to profit organizations. Roomkin and Weisbrod (1999: 772), in a 1992 sample of US hospitals, document these percentages to be respectively less than 18 per cent and more than 40 per cent (excluding options).

Finally, one should carefully consider possible derived effects of introducing performance based payment systems in non-profit

organizations. A formal presentation can be based on Frey (1997: 429–430). Managerial utility U_m is a function of the certainty equivalent wage w_m and organizational output y (reflecting the altruistic attitude of the manager). Assuming the second-order conditions to be satisfied, the level of output maximizing utility can be determined from

$$\partial U_m / \partial y = 0$$

Increasing the incentive sensitivity of the remuneration scheme (IS) affects this optimality condition as follows:

$$(\partial^2 U_m / \partial y^2)(dy/dIS) + (\partial^2 U_m / \partial y \partial w_m)(dw_m/dIS) = 0$$

Assuming, (mostly) in line with reality and tradition, the manager to be risk averse, the certainty equivalent wage must increase when the wage becomes more variable due to increasing its connection to performance ($dw_m/dIS > 0$). Assuming U_m to be concave in y is also a standard assumption ($\partial^2 U_m / \partial y^2 < 0$). Therefore, the sign of (dy/dIS) must be the same as that of $(\partial^2 U_m / \partial y \partial w_m)$. This can be positive or negative. The interesting case here is the one in which $dy/dIS < 0$, as this would describe a situation in which increasing performance related pressure on managers would result in performance decreasing in terms of output. The reason is that, $\partial^2 U_m / \partial y \partial w_m$ being negative, the effect of increasing the certainty equivalent wage decreases the marginal utility of output, or, in other words, the impact of altruism on managerial utility. This would be an example of the more general crowding-out phenomenon (Frey and Jegen 2001), in which a diminishing altruistic motivation more than compensates for the effect on performance through higher wages.

Non-managerial staff

The principal–agent inspired literature on non-managerial staff in non-profit organizations is less developed than that on managers, and also less conclusive. A reason for this might be that in the empirical research non-managerial staff are seldom approached as a heterogeneous group. A useful distinction could be one between staff performing core tasks (such as nurses and teachers, ...) and staff with more general or secondary tasks (including secretaries and cleaners).

Psychological research (De Cooman *et al.* 2007; De Gieter *et al.* 2006; Schepers *et al.* 2005) shows that, at least for Flemish teachers and nurses, some forms of altruism are relevant to understand the motivations of staff members performing organizational core tasks, as is

also the starting point of the theoretical paper on nurses by Heyes (2005). This is less likely in groups of people with more general qualifications, though it certainly cannot be ruled out, as also pointed out by Handy and Katz (1998: 250–251), looking at the available empirical literature.

Generally speaking, most of the available empirical papers, all of which are based on US samples, do not find wage differences for non-managerial staff in non-profit organizations (Erus and Weisbrod 2003, on 242 US hospitals for 1992 and 1997; Leete 2001, on about 4 million US employees, after controlling for industry and job characteristics; Ruhm and Borkoski 2004, on US data for 1994–1998 with the number of observations ranging between 80,000 and 250,000). The subtle econometric research by Mocan and Tekin (2003), on 1,035 child care workers in 398 day care centres in four US states (1993), leads to a different conclusion: ‘there exist non-profit markups in both wages and compensation’ (ibid.: 41), between 6 per cent and 20 per cent, and between 8 per cent and 10 per cent respectively (ibid.: 49). According to the authors, the absence of an effective residual control might explain these results (see Chapter 2). This result is comparable to the one obtained by Preston (1988: 348) in the US day care industry for federally financed centres, with comparable differences between 5 per cent and 10 per cent (1976–1977, 3,167 observations at the centre level). It is also interesting to note that these differences tend to disappear when the centres experience competition.

Taking a broader view by looking at overall satisfaction with working in a non-profit organization, Benz (2005), on samples of (respectively) about 9,000 UK observations and 6,000 US observations in the 1990s, finds, after controlling for wage, working hours, seniority, age, sex and education, significantly higher satisfaction on the part of people working in non-profit organizations. The univariate results presented by Mosca *et al.* (2007: 75) on 2,332 Italian paid workers in 228 personal care facilities (1998) point in the same direction. Being employed in a non-profit organization makes people more satisfied with their job than being employed in a profit organization. A comparable study by Borzaga and Tortia (2006) on 2,066 employees in the Italian social sector (228 organizations, 1999) leads to a less clear picture: General satisfaction is higher in religious non-profit organizations compared with profit organizations, but lower in non-religious non-profits (ibid.: 233), but an opposite ranking is obtained when looking at the specific satisfaction with the wage received (ibid.: 234).

Selecting the agent

Given that agency problems can also be present in non-profit organizations, appropriately selecting agents is one of the ways by which principals might try to reduce these problems, together with designing incentive based remuneration systems, if possible. Surprisingly, only the latter have been extensively studied in the general principal-agent literature, despite the fact that there is no reason to assume that the former are less effective in making the organization aim for the principal's objectives. One notable exception is the paper by Besley and Ghatak (2005), in which the selection of agents in non-profit organizations is dealt with. What follows is based on their model.

Consider the risk-neutral principal of a non-profit organization striving for an organizational output π , which includes non-monetary components (transformed to monetary values). Output depends on the risk-neutral agent's unobservable and therefore uncontractable effort e , scaled in such a way that it also reflects the probability of success. The agent's disutility of effort is $-e^2/2$. Her minimal subsistence wage is w_{\min} , and her reservation utility U_{\min} . In case of failure, both the principal's and the agent's utilities are just zero. It is assumed that all the variables involved take such values that the optimality conditions for interior solutions are met (Besley and Ghatak: 619, 620).

There are three types of potential agents (indexed $i = 0, 1, 2$), the types being observable by the principal. Type zero is an agent with only monetary objectives, type one has non-monetary objectives different from the principal's objectives, and type two has objectives identical to the principal's objectives. On top of the utility induced by her wage, consisting of a fixed part w_i and a bonus b_i for success, the agent experiences also a non-pecuniary benefit θ_i , which can be interpreted as her motivation (ibid.: 618–619). As it can be assumed that an agent will be more motivated the more her objectives resemble the principal's objectives, we can depart from the following ordering of θ_i s:

$$\theta_2 > \theta_1 > \theta_0 = 0$$

The maximization problem for the principal then is:

$$\max_{i, w_i, b_i} (\pi - b_i)e_i - w_i$$

subject to

$$w_i \geq w_{\min} \text{ (subsistence constraint)}$$

$$U_i = e_i(b_i + \theta_i) + w_i - e_i^2/2 \geq U_{\min} \text{ (participation constraint)}$$

The incentive-compatible e_i is easily seen to be the agent's utility maximizing $e_i = b_i + \theta_i$. In Appendix III (part 1) it is proved that $w_i = w_{\min}$ for all i . For a given agent type i , it is now easily seen that the principal's utility is maximized when $b_i = (\pi - \theta_i)/2$ (Appendix III, part 2): higher motivation therefore goes together with smaller bonuses (ibid.: 621, Corollary 3), a conclusion in line with the empirical results reviewed in the preceding sections. Using this expression shows that e_i is equal to $(\pi + \theta_i)/2$: higher motivation leads to higher efforts by the agent (ibid.: 621, Corollary 2).

The only question to be resolved, in fact the main question, is to know which type of agent will be selected by the principal. As the principal's utility function can be written as (Appendix III, part 3)

$$((\theta_i - \pi)/2) ((\pi + \theta_i)/2) - w_{\min}$$

it is clear that the agent with the highest motivation is to be selected, and she is the agent pursuing the same objectives as the principal.

A comparable three categories typology is used in the analytical paper by Caers *et al.* (2005b). They extend the analysis by also taking characteristics of a potential client into consideration (is it a client covered by the organizational objectives?; how is this perceived by society?; and how difficult is the client's case?), when also considering three observable types of agents with utility functions U_i : selfish agents (comparable to the case $i = 0$ of Besley and Ghatak (2005), but with a more explicit utility function with income, reputation and effort as arguments), 'external stewardship agents', looking predominantly at the potential client's interests ($i = 1$), and 'internal stewardship agents', fully aligned with the organizational goals ($i = 2$). Organizational goals are modelled as successfully serving the right type of clients. By construction, selecting internal stewardship agents is optimal from the point of view of the principal (which is in fact the conclusion reached by Besley and Ghatak (2005)). The interesting result, however, is that, under some realistic combinations of agent reputations and client's case difficulty levels, external stewardship agents or even selfish agents can contribute to the achievement of the organizational goals. This implies that non-profit organizations confronted with a shortfall in supply of internal stewardship agents can recruit in a number of situations other types of agents without jeopardizing organizational performance.

Resorting to numeric simulation techniques because of analytical intractability, this line of analysis is broadened in different directions

(Caers *et al.* 2005a, 2006a). Agent types are combined by considering utility functions of the form

$$U_a = \beta_0 U_0 + \beta_1 U_1 + \beta_2 U_2$$

with $\Sigma\beta_i = 1$, more potential clients are introduced, and finally situations with a board selecting a manager, a manager selecting from one to three employees with different levels of time pressure, and 12 clients are numerically analysed. Here the results also show that under realistic circumstances less than fully committed managers and employees may make their utility maximizing decisions in such a way that they do not materially affect organizational performance.

What about volunteers?

Although the academic economic and managerial literatures on volunteers are extensive, it is surprising to observe that they seldom discuss topics dealing with the functioning of non-profit organizations within agency or governance frameworks (Sampson 2006: 364). The mere existence of these literatures makes it improbable that the organizational impact of volunteers would be comparable to the impact of professionals, as also implied by Liao-Troth and Dunn (1999: 346, 347). Furthermore, in a principal-agent reasoning it seems unwarranted not to make a distinction between voluntary principals and voluntary agents. An empirical justification for this distinction is found in Hustinx (2005: 635–640), who discerns in her sample of volunteers working for the Flemish Red Cross five styles of volunteering, one of which to a great extent corresponds to the group of voluntary board members, also called ‘a unique group of volunteers’ by Preston and Brown (2004: 222), who further observe that boards in numerous non-profit organizations consist almost exclusively of volunteers (*ibid.*: 221). In the same vein, Handy (1995) explicitly models the decision of a volunteer to join a board, taking into consideration wealth and reputation effects (see Chapter 7 for more details). But all these scholarly efforts do not preclude the fact that ‘almost no research has been conducted on how or the extent to which board volunteering affects the achievements of the organization’ (Herman 2005: 78). Clearly, there is on this topic much scope for further pathbreaking research.

6 Organizational strategy and behaviour of non-profit organizations

Introduction

After having discussed the role of day-to-day strategic planning in non-profit organizations, this chapter introduces some economic models describing non-profit strategy. Most of them are comparative: Differences in strategic reactions on exogenous shocks between non-profit organizations on the one hand, and profit organizations (or governmental bodies) on the other hand are analysed. A few focus on the outcomes of competitive processes involving non-profit organizations and profit organizations.

Strategic planning in non-profit organizations

The importance of strategic planning for non-profit organizations can hardly be overestimated, as is also the case for other organizations. Conceptually, there is no real difference between strategic planning for non-profit organizations and that for other organizations, as it is the outcome of an organizational reflection on how to reach organizational objectives, however defined (for another view, see Moore (2000: 184)). The difference lies in the objectives themselves (see Chapter 2), and in the presence of specific constraints and circumstances, such as the diversity of stakeholders and financial sources, the importance of non-market influences (Middleton and Greer 1996: 634), or the non-distribution constraint. K.D. Miller (2002) even shows that the mainstream techniques of strategic planning can be applied to religious organizations, which literally produce *credence goods*, defined as goods or services whose quality cannot be ascertained before or during their consumption, unless perhaps in another life.

A good example of a planning system for non-profit organizations is proposed by Bryson (1991: 48; see also Anheier 2005: 261):

- identify the organization's scope;
- determine the objectives;
- perform a SWOT analysis;
- identify the relevant strategic issues;
- choose an appropriate strategy or appropriate strategies;
- implement this strategy.

Obviously, there is no fundamental difference between this system and the ones found in management textbooks for profit organizations.

Looking at 17 empirical papers published between 1977 and 1992, Middleton and Greer (1996) try to establish a global picture of planning in donative non-profit organizations. Their first observation is that 'formal planning was not widely used' (Middleton and Greer 1996: 636). Four factors seem to induce formal planning (*ibid.*: 636–640): requirements by donors; organizational difficulties or challenges (such as decreasing membership, managers leaving the organization, changing target groups, changing priorities of main funders); managerial commitment to planning and dimension; size, the larger organizations being more inclined to have a formal planning system than the smaller ones. Courtney (2002: 115–118) refers to a survey study by an accounting firm (Clark Whitehill) on larger UK charities (i.e. most of those having annual sales exceeding £1 million sterling), of which 82 per cent reported to apply some form of strategic planning. Given that only larger organizations were surveyed, this result does not contradict Middleton and Greer's conclusions.

The review by Stone *et al.* (1999) goes beyond the descriptive, as it attempts, by looking at 65 empirical research papers published between 1977 and 1997, to establish links between strategic management activities (strategy formulation, strategy content, and implementation) and organizational performance. The findings at the descriptive level are in line with the ones discussed in the previous paragraph. As far as the impact on performance is concerned, the research reviewed has remained silent (as it still is), one of the reasons probably being the difficulty of unequivocally measuring organizational performance (Stone *et al.* 1999: 417). In consequence, none of the studies reviewed includes specific measures of performance (*ibid.*: 407).

Despite the number of practitioner oriented publications in the field of strategic planning for non-profit organizations, and the quantity of empirical work on the matter, there appears to be no generally accepted theoretical framework within which strategic behaviour of non-profit organizations can be analysed: 'There is no accepted theory of [non-profit] behaviour, and little of the empirical work is connected to ...

existing theories' (Malani *et al.* 2003: 181–182). These existing theories, some of which ignore the principal–agent situations referred to in Chapter 5, are grouped by Malani *et al.* (2003) into three clusters of models: altruism models (going back to Newhouse (1970), in which organizational utility is determined by both output quantity and output quality), physician cooperative models (originating in Pauly and Redisch (1973), where the absence of residual claimants transfers control over resources to the physicians in a non-profit hospital), and models departing from noncontractible quality (Glaeser and Shleifer 2001). Confronting these models with the available empirical evidence, they conclude that 'the physician cooperative model is not empirically relevant' (*ibid.*: 211). Furthermore, the strategic implications of these models are not their core points of interest.

Most of the more elaborate available theoretical work has a comparative nature, as it compares in very specific circumstances the organizational behaviour of non-profit organizations with that of profit organizations. Some examples of this will be presented in later sections. Managerial economic theory comparing the behaviour of non-profit organizations with that of public authorities is not available yet.

Strategic choices

Economics and non-profit organizations' strategies

Theorizing on organizational strategy still is quasi-monopolized by a profit organization's point of view, which gave rise to well known strategies such as the *generic strategies* advanced by Porter (1980) (cost leadership, differentiation, focus), or diversification strategies described by, among others, Ansoff (1965). As long as it is kept in mind that non-profit objectives differ from profit organizations' objectives, these contributions are also valuable for boards and managers of non-profit organizations, as illustrated by Tuckman (1998a: 179–183), who applies the Porter framework of the 'five competitive forces' (Porter 1980) to non-profit organizations competing with each other.

It is fair to say that the theories mentioned above do not stem from the field of economics, which entered the domain of strategic management once agency problems within firms were studied. Organizational behaviour is then explained either as fully determined by management (the 'managerial theories' of the firm), or as the outcome of the interplay between organizational principals and agents. An early example is the growth maximization theory to which the name of Baumol (1959) is inextricably connected. Whereas a profit organization

pursuing growth is, except in some rare circumstances, deviating from its main objective (profit maximization), a non-profit organization with the same goal need not suffer from this problem, as deploying as much activity as possible might be a perfectly acceptable objective. Galaskiewicz *et al.* (2006) empirically assess the impact of networking on organizational growth, in a sample of 156 public charities located in Minneapolis-St Paul (1980–1994 data). Even after controlling for status differences, donative non-profit organizations involved in social networks showed higher growth rates than donative organizations not involved in such networks, whereas the reverse was observed for commercial non-profit organizations (Galaskiewicz *et al.* 2006: 368), suggesting for the latter that the cost of establishing such a network is not compensated by activity growth.

Technically, growth is also constrained by financial factors. These are elucidated in the next section, based on Jegers (2003).

Sustainable growth for non-profit organizations

As infinitely growing is impossible, growth rates for non-profit organizations are constrained in different ways, as for all kinds of organizations. Here we look at financial constraints, allowing for a maximal growth rate which is called the ‘sustainable growth rate’ (SGR) of the organization. As proved in Appendix IV, this growth rate, defined as the relative change in output between years one and zero $((y_1 - y_0)/y_0)$ will be affected by the change in the amount of debt, the change in profits, and the change in efficiency in the following way:

$$\text{SGR} = \frac{(1 + d_t)\alpha'}{(1 + d_0)(1 - (1 + d_t)m)} - 1$$

with d_t being the organization’s capital structure expressed as the ratio of debt and equity at the end of year t (D_t/Eq_t), m being the return on assets for year 1 (including all gifts, donations and subsidies), and α' reflecting the change in efficiency during year 1, expressed as an index: output per unit of total assets for year one divided by the same ratio for year zero $((\alpha_1/\alpha_0) = (y_1/TA_1)/(y_0/TA_0))$. The formula for the SGR, which is nothing more than a technical equation showing the financial limits of organizational growth, implies that higher growth rates can be achieved with higher debt rates (higher values of d_t), higher profit rates (m), and more pronounced efficiency gains (α'), as can be intuitively expected. The intuition behind the effect of increasing debt is that additional debt

increases the impact of each currency unit of profits on total assets, resulting in a larger asset base for organizational activities.

Special cases allow straightforward simplifications of the above formula: no changes in capital structure and efficiency ($d_0 = d_1$ and $\alpha' = 1$), no changes in capital structure and no profits ($d_0 = d_1$ and $m = 0$), no profits and no efficiency gains ($m = 0$ and $\alpha' = 1$).

Comparing strategic behaviour of non-profit organizations and profit organizations: some examples

The effect of an exogenous demand change on organizational charity

The model by Banks *et al.* (1997) relates to a mixed hospital market with profit hospitals and non-profit hospitals. They compare the impact of an exogenous demand change, possibly detected by a SWOT analysis, on the supply of uncompensated care by profit hospitals with that supply by non-profit hospitals. As will be shown below, supply of uncompensated care by profit hospitals is predicted to decrease, whereas supply of uncompensated care by non-profit hospitals is expected to increase.

Assume the organizational utility of the non-profit hospital U_{np} is affected only by the amount of uncompensated care (N), and that uncompensated care will be provided as long as the hospital is not rendered loss-making. Further, demand for uncompensated care is higher than the amount that can be supplied. Therefore, the hospital's optimization problem can be written as:

$$\max_{y, N} U_{np} = U_{np}(N)$$

subject to

$$\Pi = 0 = P(y; d) \cdot y - V(y, N) - F_x$$

where y is the amount of compensated care, d is a demand parameter, $P(y; d)$ is the inverse demand function, F_x and $V(y, N)$ are the fixed and total variable production costs respectively. Writing $V(y, N)$ instead of $V(y+N)$ allows for the possibility that compensated care and uncompensated care are delivered in different ways. In Appendix V (part 1) it is shown that an increase in demand (through an increase in the value of the parameter d), will result in an increase of the amount of uncompensated care provided by the non-profit hospital, whereas, under fairly general conditions, a profit hospital would behave in the opposite

way, even when some tax or fine is to be paid if not enough uncompensated care is provided (Appendix V, part 2). This difference has, of course, an economic interpretation: as non-profit hospitals want to provide as much uncompensated care as possible in this model, they will take advantage of demand increases in order to generate more funds, enabling them to extend their supply of uncompensated care. Conversely, with increasing demand the marginal cost to a profit hospital for uncompensated care will increase, resulting in a lower value of N at the newly established optimum.

Other comparative static results on charity care of non-profit hospitals are provided by Frank and Salkever (1991: 431–434), who compare two kinds of non-profit hospitals. The hospitals of the first category show utility functions with two arguments: net revenues and unmet demand for uncompensated care. For hospitals in the second category, a third argument is added: charity care provided by the hospital, relative to this care provided by its competitors. Exogenous demand changes are not analysed, but changes in endowment income, possible revenues from charity care, compensated care price, and the number of indigent patients treated by public hospitals are.

Interesting empirical results on exogenous demand shocks in mixed hospital industries are produced by Hansmann *et al.* (2003). They assess the effect of decreases in demand on capacity decisions (about 2,500 US hospitals between 1985 and 1994) and find that religious non-profit hospitals will be more reluctant in reducing their number of beds as compared to profit hospitals and public hospitals.

Non-profit organizations involved in mergers

As mergers and acquisitions automatically increase the market shares of the organizations involved, and hence their market power, one might wonder whether merging non-profit organizations will use this increased power in another way than profit organizations. Lynk (1995) reviews the empirical literature up to 1995, mostly relating to the US, and concludes that profit hospitals apply higher prices than their non-profit counterparts after a merger. However, in their recent literature review on the matter, Zaleski and Esposito (2007: 317–320) reach the conclusion that ‘the current supply of research has not provided a definitive answer’ (Zaleski and Esposito 2007: 317).

Lynk’s research (1995), with 1989 data on 2,981 discharges in 303 Californian hospitals, shows that profit hospitals with market power indeed apply higher prices compared to non-profit hospitals, contrary to the result of the case study by Vita and Sacher (2001) on the situation in

the city of Santa Cruz, where, after a number of mergers, two non-profit hospitals were left, applying higher prices than were justified by quality considerations. Their conclusion is that competition policy and regulation should apply to both profit organizations and non-profit organizations, as both can be tempted to misuse market power, an insight also seemingly reached by Philipson and Posner (2006) after a microeconomic analysis. Unfortunately, their definition of non-profit organizations does not include the non-distribution constraint, as the consumption of the entrepreneur-manager is modelled to be the sum of income not generated by the organization and organizational profits (Philipson and Posner 2006: 6), making their use of the term ‘not-for-profit’ confusing, if not misleading.

Zaleski and Esposito (2007: 320) argue that the use of prices when assessing abuse of market power in the hospital industry may not be a good idea, as they are subject to all kinds of regulations. They propose output and its relation to capacity to be a better indicator, assuming that abuse of market power translates into investments in excess capacity, meant to deter potential entrants. Their (cross-sectional) empirical results, on 869 US hospitals for the period October 1996 to September 1997, show that non-profit hospitals ‘ignore market power altogether when determining capacity utilization’ (Zaleski and Esposito 2007: 322), though longer-term patients seem to be admitted (*ibid.*: 324), whereas other hospitals take advantage of possible economies of scale when in a situation of market power.

Note that concluding that merging non-profit organizations is not harmful is not meant to imply that competition between non-profit organizations cannot be beneficial. In the case of output maximizing organizations, convex cost functions $C(y)$, and a zero profit constraint, this can easily be shown. Assume a linear inverse demand function for the output of a non-profit organization:

$$P = \alpha - \beta y$$

Organizations maximize output subject to

$$\Pi = 0 = Py - C(y)$$

Suppose there is just one supplier. Then the optimal output will meet

$$y^* = (\alpha - P^*)/\beta = (\alpha - C(y^*)/y^*)/\beta \quad (6.1)$$

which has a unique solution due to the convexity of $C(y)$.

If there are two identical suppliers (generalizing to more than two suppliers is straightforward) both have to satisfy ($i = 1,2$):

$$\Pi_i = 0 = P y_i - C(y_i)$$

from which

$$P(y_1 + y_2) = C(y_1) + C(y_2) \text{ or } P = (C(y_1) + C(y_2)) / (y_1 + y_2).$$

Market output still has to meet

$$(y_1^* + y_2^*) = (\alpha - P^*) / \beta = (\alpha - ((C(y_1^*) + C(y_2^*)) / (y_1^* + y_2^*))) / \beta \quad (6.2)$$

It is impossible that the market equilibrium would be at the same level as in the situation with one supplier, as the left-hand side of equation (6.1) would then be equal to the left-hand side of equation (6.2), whereas the convexity of $C(y)$ makes the right-hand side of (6.2) larger than the right-hand side of (6.1). Increasing the total market output is the only way to meet condition (6.2). An increase in the number of output maximizing competitors, and therefore an increase in competition, increases the performance of the industry, measured in terms of output. Note that in this specific case no abuse of a dominant position in the absence of competition is assumed.

Competition between non-profit organizations and profit organizations

The crux of strategic behaviour being the pursuit of objectives, competitive strategies of profit organizations and non-profit organizations in the same industry must differ. Frequently competition by non-profit organizations is considered to be unfair by their profit competitors, as the former enjoy all kinds of advantages, such as tax exemptions, lowering their production costs. Liu and Weinberg (2004) present a model from which it follows that the main impact on the profit organizations' profits does not stem from competitive advantages enjoyed by their non-profit competitors, but simply from the fact that the latter have other objectives which affect market outcomes, even if there would be no privilege whatsoever granted to them. A simplified version of their (arithmetically very complex) model will be presented here.

The model describes a price competition (Bertrand-Nash) game in a duopoly, one player being a profit organization ($i = p$), the other a non-profit organization maximizing its output under a zero profit constraint ($i = np$). The outputs are not identical, but partly substitutable, with θ describing the degree of substitutability. Demand is

$$q_i = \frac{1}{2} (1 - P_i + \theta P_j) \quad (i \neq j)$$

The intercept with the q_i -axis being one for $\theta = 0$ or $P_j = 0$, $P_i < 1$. Further, it is reasonable to assume that the effect of j 's price on the demand for i will be lower than that of i 's price ($0 \leq \theta < 1$). Average costs (c) equal marginal costs, implying no fixed costs and total variable costs being linear in output. We allow the costs of the profit organization to differ from the costs of the non-profit organization, incorporating the possibility of cost advantages enjoyed by non-profit organizations, e.g. because they are tax exempt or subsidized: $0 < c_{np} \leq c_p < 1$. The last inequality logically follows from $P_i < 1$.

The profit organizations's profit is

$$\Pi_p = \frac{1}{2} (P_p - c_p)(1 - P_p + \theta P_{np})$$

from which the optimal price, taking P_{np}^* as given (Appendix VI, part 1)

$$P_p^* = \frac{1}{2} (1 + \theta P_{np}^* + c_p)$$

Given the zero profit constraint, the non-profit organization's output maximizing price P_{np}^* equals c_{np} (Appendix VI, part 2), which is also intuitively evident. Therefore

$$P_p^* = \frac{1}{2} (1 + \theta c_{np} + c_p)$$

which is greater than P_{np}^* as $(1 + c_p) > 2P_{np}^*$ ($= 2c_{np}$), even in the case where there would be no cost advantage to the non-profit organization ($c_{np} = c_p$). It is also easy to see that the profit organization's optimal price is lower when in a duopoly with a non-profit organization, as compared to the case of a profit organization being its competitor. This applies also when there is no cost difference between the two kinds of organizations (Appendix VI, part 3). As a result, consumer welfare is higher.

The final assessment is in terms of profit: does competition by non-profit organizations, be it unfair or not, affect the profit level obtained by the profit organization in the market? In Appendix VI (part 4), it is shown that the main (negative) effect on the profit organization's profit clearly does not stem from possible cost differences induced by advantages granted to non-profit organizations, but from the fact that the latter pursue other pricing strategies, in accordance with their objectives. Their profit competitors then have to price differently than when competing with profit organizations: the mere presence of non-profit organizations in the market affects the incumbent profit organization's

strategy, leading to lower profit levels than the ones that could be obtained when competing with other profit organizations. A comparable result, but concentrating on welfare, is obtained by Hirth (1999), who develops a model of competition, under asymmetric information between organization and consumer, between profit organizations, 'true' non-profit organizations, and non-profits 'in disguise'. These conclusions are seemingly contradictory to the one analytically reached by Lakdawalla and Philipson (2006), who find that in mixed industries 'marginal industry behaviour is identical to that of a for-profit industry' (Lakdawalla and Philipson 2006: 1681). As they use the same definition of a non-profit organization as Philipson and Posner (2006) (see the previous section), however, their conclusion is not applicable to non-profit organizations as they are defined in the present text.

Comparing strategic behaviour of non-profit organizations and public providers

Although there is some managerial economic work on strategic differences between non-profit organizations and profit organizations, this is not at all the case when comparing non-profit organizations with governmental providers of goods and services: '[T]heory ... is not strong enough to specify a confident prediction of whether governmental and non-profit providers will or will not behave differently under each of a variety of conditions' (Kapur and Weisbrod 2000: 278). Therefore, empirical work in this field floats in a paradigmatic vacuum. Kapur and Weisbrod (2000) introduce a few building blocks of which to establish a comprehensive theory. Using data on a sample of US nursing homes and psychiatric facilities for 1976 (109 and 279 observations respectively) and 1987 (99 and 221 observations respectively), they look at two dimensions of organizational behaviour: accessibility and service quality. For both industries, public organizations were observed to attach more importance to accessibility than their non-profit counterparts, and less importance to service quality, implying different organizational utility functions for organizations which are active in the same markets (ibid.: 302).

7 Marketing in non-profit organizations

Introduction

At a conceptual level, marketing management for non-profit organizations is not different from marketing management for profit organizations, as both are geared to satisfy some target group's need(s), albeit pursuing different goals (Shapiro 1973: 262), the traditional 'four Ps' (product, price, place, promotion) being equally important for both kinds of organization. This might be a reason why there is almost no managerial economic research on non-profit organization marketing, contrary to the abundance of practitioner oriented marketing management handbooks, an example of which is the excellent research-based text by Sargeant (2005). Exceptions in this theoretical vacuum consist of work on specific non-profit related aspects such as volunteering, fundraising (donations, gifts, subsidies), and the development of activities aimed at generating profits. These aspects will be taken up in this chapter.

Marketing management

A hostile attitude towards marketing techniques characterized the majority of non-profit organizations for decades, with marketing being perceived as some capitalistic witchcraft aimed at making capitalists richer. Nowadays a more realistic approach is observed and '[f]or profit marketing and management concepts have ... become acceptable concepts in the non-profit sector realm' (Shoham *et al.* 2006: 454), though 'the impact of [an organizational marketing orientation] on performance of not-for-profit organizations has been underresearched and has not been reviewed or meta-analysed to this date.' (*ibid.*: 456). Shoham *et al.* (2006) then perform a meta-analysis themselves, for which they could find only 11 usable research papers, on 1,589 non-

profit organizations from different industries and from six developed countries located in three different continents (ibid.: 461). Their conclusion is that the presence of a marketing orientation indeed positively affects organizational performance, even significantly more than for profit organizations (ibid.: 464). A possible explanation for this difference could be the fact that the levels of marketing orientation in profit organizations are more or less comparable, mitigating differentiating effects on performance, whereas non-profit organizations embracing a full marketing approach (still) enjoy some kind of first mover advantage. The fact that the marketing orientation–performance link is significantly less documented in the US than in the other countries covered (ibid.: 466) can be understood by a comparable reasoning. Also relevant in this context are the results obtained by Ritchie and Eastwood (2006) who, on a sample of 144 executive directors of US non-profit university and college foundations, find that ‘executives with marketing backgrounds had the greatest impact on financial performance’ (ibid.: 76), financial performance being measured in terms of fundraising performance.

Pricing

In the previous chapter pricing was presented as a component of strategic management and organizational behaviour, but as such it pertains to the domain of strategic marketing, as long as the pricing decision is taken within the organization (see Prieto-Rodríguez and Fernández-Blanco (2006) for an agency model in which the subsidizing principal determines not only the level of subsidies but also the price to be paid to the agent). As already mentioned, there are few economic analyses of pricing decisions of non-profit organizations, and most of them are performed in a comparative context, as the examples in the previous chapter show.

In this chapter, Niskanen’s (1971: Chapter 9) treatment of a monopolistic non-profit organization is discussed, in a market with the following inverse demand function:

$$P = \alpha - \beta y$$

with positive parameters and $0 \leq y \leq \alpha/\beta$ to ensure positive prices. Revenues equal

$$R = Py = \alpha y - \beta y^2$$

and production costs, again with positive parameters

$$C = \chi y + \delta y^2$$

To be viable, the organization's revenues should at least cover the costs ($R \geq C$). As only situations in which $\alpha > \chi$ are economically relevant, this implies

$$y \leq (\alpha - \chi)/(\beta + \delta) (< \alpha/\beta)$$

An output maximizing non-profit organization therefore produces an amount of $(\alpha - \chi)/(\beta + \delta)$ units and determines the price according to the inverse demand function. When unconstrained by cost considerations, a revenue maximizing organization derives its output and the ensuing price from the condition $dR/dy = 0$:

$$y^* = \alpha/2\beta$$

This is clearly smaller than α/β , but does this output level also meet the viability condition? It can easily be seen that this is the case as long as $\alpha \geq 2\beta\chi/(\beta - \delta)$ ('demand constrained' output: increasing prices causes demand to decrease in a revenue reducing way). If $\alpha < 2\beta\chi/(\beta - \delta)$ an output of $y^* = \alpha/2\beta$ would entail that revenues were lower than costs. As $dR/dy > 0$ for $y < \alpha/2\beta$, we should look for the highest possible value of y meeting the viability condition. This is clearly

$$y^* = (\alpha - \chi)/(\beta + \delta)$$

Output is 'budget constrained'.

In both cases, demand constrained output and budget constrained output, the optimal price is

$$P^* = \alpha - \beta y^*$$

Cases with price discrimination and subsidies can be analysed within a comparable approach (Niskanen 1997: 84 ff. and 87 ff.).

Volunteers

Some generalities

Voluntary work can be defined as 'work without monetary pay or legal obligations provided for persons outside the volunteer's own household'

(Anheier 2005: 219). Mostly, but not necessarily, there is no formal contract between the volunteer and the organization for which he performs some tasks.

Data summarized by Anheier (2005: 83–85) show that in a large number of countries a significant proportion of the adult population is engaged in voluntary work, with percentages up to more than 40 per cent. Boraas (2003: 3) states that, during 2000–2001, more than 27 per cent of the US population was engaged in institutional volunteering, with a median value of 52 hours a year (Boraas 2003: 7), institutional volunteering being defined as ‘volunteering ... through organizations or groups’ (Katz and Rosenberg 2005: 432), and known to be the predominant mode of volunteering in the developed world (*ibid.*). The data presented by Anheier (2005: 83–85) also show that a large number of non-profit organizations rely to a large extent on voluntary work: on average, 40 per cent of total full time equivalent (paid and unpaid) jobs in a 35 country sample, with 75 per cent as the maximum value observed. Handy and Srinivasan (2004), for example, describe the situation in 31 Ontario hospitals, where on average 700 volunteers are active, requiring, on average again, 3.4 paid staff members to manage them, and Mook *et al.* (2007: 65), in their sample of 661 Canadian non-profit organizations in all kinds of industries, obtained from an online survey in 2004, even report an organization having 121,982 volunteers, the sample median being 50 volunteers. Only about one quarter of their sampled organizations employed a volunteer manager, and half of these were employed on a full-time basis (Mook *et al.* 2007: 64).

At the board level, Smith and Shen (1996: 272) show that, in the US, almost eight times more non-profit organizations are volunteer managed, as compared to professionally managed organizations. Clearly, the latter are much larger.

Comparing the last three papers referred to leads to the insight that assuming volunteers to be a homogeneous group of people in terms of style of motives is at best a very stylized representation of reality (for a review of the relevant literature, see Dolnicar and Randle (2007: 138–141), who also present an empirical motivations-based segmentation of 4,267 Australian volunteers with data relating to the year 2000; see also Handy *et al.* (2000) and Hustinx (2005: 626)). Furthermore, as observed by Reed and Selbee (2000) and the references therein, volunteers differ significantly from non-volunteers in different important socio-economic and psychological aspects, as also illustrated for the latter by Frey and Götte (1999), who observe for a sample of 691 Swiss volunteers changes in the intrinsic/extrinsic motivation balance once they are rewarded financially: giving volunteers a small financial

reward reduced the amount of voluntary hours performed, and that number increased again only after the payment had been increased.

From a marketing point of view, it is useful to fully understand a person's decision to become a volunteer. It is almost tautological to state that a person becomes a volunteer once he perceives benefits (in utility terms when volunteering is considered a normal good 'consumed' by the volunteer, or in monetary term when volunteering is seen as an investment good (Menchik and Weisbrod 1987: 161–168)) to be higher than costs. The literature reviewed by Chinman and Wandersman (1999) leads them to group volunteering benefits and costs in four categories: material benefits/costs, social benefits/costs, benefits/costs related to the organizational mission, and specific benefits/costs (Chinman and Wandersman 1999: 48 ff.). As far as benefits are concerned, social and mission related benefits seem to be the most important (*ibid.*: 55), whereas the relative importance of the cost categories seems not to be clear-cut. In the approach of Handy *et al.* (2000: 48), perceived benefits are grouped into private benefits (B_p) and social benefits (B_s), whereas all costs (K) are assumed to be private. For somebody to become a volunteer the following condition must hold:

$$B_p + B_s > K$$

or

$$K - B_p < B_s$$

The perceived net private cost ($K - B_p$) therefore must be inferior to the social benefit as reflected by the volunteer's utility in order for a potential volunteer to become a volunteer, or superior to the social benefits in case he decides not to become a volunteer. Sundeen *et al.* (2007) concentrate on the last case, and try to determine which factors decisively affect the net private cost on a sample compiled by the US Bureau of Labour Statistics in 2002, composed of 23,144 volunteers and 48,168 non-volunteers. Three important factors emerge: time, interest, and health (Sundeen *et al.* 2007: 290), whereas other factors (child care facilities, reimbursement of expenses, the availability of better information, the existence of an employer volunteer programme, or a better skills-activity match) did not substantially increase the non-volunteers' willingness to volunteer.

Volunteering for religious organizations might imply an additional argument in the volunteer's utility function: 'afterlife utility' (Tao and Yeh 2007: 773), compounded in the overall expected utility of

(religiously) volunteering, apart from its direct effect on his worldly life well-being. Controlling for devotion and a number of more traditional control variables, Tao and Yeh (2007) establish, on a sample of 1,278 Taiwanese individuals (1999), a significantly positive relationship between the level of volunteering and the amount of expected rewards in the afterlife according to their religion (Christian religions implying a 'longer' afterlife than Buddhist religions) (ibid.: 783), suggesting that afterlife considerations play a role when deciding on volunteering in religious organizations.

From the organization's point of view the presence of volunteers is not always a blessing, as it can be the source of conflicts: the volunteers might feel frustrated, constrained in their expected autonomy, or expecting some kind of eternal gratitude, whereas the employed staff sometimes consider the volunteers to be dilettantes, careless or stubborn people, or snobs. To avoid such kind of conflicts, volunteers also need to be managed professionally, as in the Ontario example mentioned above. This includes investments to attract volunteers, to recruit them, and to design unequivocal expectations as to volunteers' tasks and responsibilities. The recruitment 'procedure' frequently consists of asking a person to become a volunteer, after some implicit or explicit selection procedure. Apparently, being asked to be a volunteer results in the majority of cases in a decision to become a volunteer, whereas only a minority of people not asked volunteer (71 per cent and 25 per cent respectively in the Independent Sector (US) survey during the year 2000, referred to by Sundeen *et al.* (2007: 280)).

Voluntary board members

In Chapter 5 we have discussed the role of the board. Here we delve into the motives of potential voluntary board members for entering the board, paraphrasing a model by Handy (1995).

The potential board member is of course a utility maximizer (U_b), his utility being affected by his wealth (W) and his reputation (Rep), however defined, which are substitutes: $\partial^2 U_b / \partial W \partial Rep < 0$. The standard assumption of decreasing marginal utilities also applies here: $\partial U_b / \partial W > 0$, $\partial^2 U_b / \partial W^2 < 0$, $\partial U_b / \partial Rep > 0$, and $\partial^2 U_b / \partial Rep^2 < 0$. Before joining the board the potential board member has a reputation level Rep^0 . If the organization is successful after he effectively joins the board, his reputation level increases to Rep^+ , if not it decreases to Rep^- .

The probability of being successful is s . For a given level of wealth, the corresponding utility levels are U_b^0 , U_b^+ , and U_b^- respectively. Therefore, the expected change in utility when joining the board is

$$s U_b^+ + (1-s) U_b^- - U_b^0$$

The board is joined only if this expression is positive, or

$$s > \frac{U_b^0 - U_b^-}{U_b^+ - U_b^-} = \hat{s} \quad (7.1)$$

The more reputation the potential voluntary board member has to lose, the lower the probability he will enter the board, as this implies that the numerator of (7.1) will increase, increasing the required probability of success s . This amounts to say that asking people with higher initial reputation levels to enter a board will result in a positive answer only for high enough values of s .

What about the impact of wealth? In Appendix VII the condition for $\partial \hat{s} / \partial W < 0$ is determined. If it applies, this means that wealthier people will be more inclined to join the board of a non-profit organization as volunteers than less wealthy people, as their required level of probability of success is lower. No doubt this is also observed in the real world (Handy 1995: 300–301), though a selection mechanism might be a plausible explanation too.

The empirical literature on motives to join a non-profit board as a volunteer is scanty and concentrates on factors other than the ones discussed in Handy's model. A review is provided by Inglis and Cleave (2006), who subsequently develop a scale to assess voluntary board member motivations. Based on 220 observations of voluntary board members in a Canadian region, they discern six dimensions for these motivations: enhancement of self-worth, individual growth, helping the community, networking, providing unique contributions to the board, and psychological self-healing (ibid.: 93–96).

The value of voluntary labour

It is not because voluntary labour is unpaid that it has no value: time spent on voluntary work cannot be spent otherwise, and therefore engenders an opportunity cost. Of course, voluntary labour also results in benefits, the value of which should equal its cost in a perfectly competitive equilibrium. Because this last condition is not met in most situations where voluntary labour is observed, it is extremely difficult to calculate both its costs and benefits correctly. This results in confusion about the correct interpretation of figures made publicly available, let alone if integrated in some form of financial reporting (see also Chapter 8).

Nevertheless, valuing voluntary work is important, for example when assessing new treatments or pharmaceuticals in the context of cost-effectiveness studies, cost-utility studies, or cost-benefit studies (Drummond *et al.* 1987: Chapter 2). Therefore, it is not surprising that the most comprehensive microeconomic analysis of the valuation of voluntary work to date has been made in a health economics context (Posnett and Jan 1996).

The analysis departs from a perfectly competitive equilibrium, in which the following three microeconomic principles, stemming from the optimality condition that marginal revenues need to be equal to marginal costs, hold true:

- the output price (P) equals the marginal value of output for the consumer;
- wages (w) equal the value of the marginal product of labour;
- wages also equal the marginal value of leisure time.

In a first part of the analysis voluntary labour is a substitute for paid labour, resulting in a reduction of goods or services produced (Δy), and hence a reduction in consumption, unless some compensating production is provided. The value of the production lost is $P\Delta y$, which, according to the second principle, equals w. If there is a compensating production, somebody has to sacrifice leisure time, the value of which is also w, according to the third principle. Posnett and Jan enrich their analysis by taking into consideration utility derived from labour, unemployment, taxes, and non-competitive market structures. Their conclusions remain basically unaffected (*ibid.*: 17–18).

In the second part of their analysis voluntary labour comes at the expense of leisure time, whether or not the volunteer is unemployed. Here too, utility considerations enter the analysis, though some arbitrariness cannot be avoided when trying to determine the voluntary labour's value.

In the literature on voluntary labour valuation, different methods are described and applied. Foster *et al.* (2001: Chapter 4) give an overview: As well as the opportunity cost approach there is the replacement cost method (the cost if the voluntary work would have been performed by paid professionals), and the output-based method. Handy and Srinivasan (2004: 38) also describe a method based on the value the volunteers themselves attach to their voluntary work. This short list already shows how cost aspects and benefit aspects tend to be conflated when dealing with voluntary work, a situation which might still be to a certain extent inevitable. Further, from a practical and academic point of view, it is

worrying that when different methods are applied to value the same voluntary activities, widely divergent results are obtained (Foster *et al.* 2001: 110; Handy and Srinivasan 2004: 38–39).

Subsidies and gifts

Concepts

No doubt a large number of non-profit organizations survive only because they receive all sorts of gifts, in cash or in kind. Voluntary labour, discussed in the previous section, or labour donation, discussed in Chapter 5, are examples of gifts in kind (Garcia and Marcuello 2002; Rose-Ackerman 1996: 702), but there are other possibilities, such as advertising campaigns produced free of charge or at a substantially reduced price by reputed marketing agencies, use of facilities without charge, or employees of profit organizations working on behalf of non-profit organizations.

Here we will confine ourselves to cash donations, which can be conditional or unconditional. Some purely financing aspects will be discussed in Chapter 9, and the role of donors as one of the organization's principals in a principal-agent context is referred to in Chapter 5. Three sources of donations can be distinguished: authorities at all levels, individuals, and private organizations (both profit and non-profit). Donations by authorities, which generally will be conditional, are called subsidies. Attracting subsidies can be considered as a typical marketing activity for non-profit organizations, conceptually comparable to attracting donations from individuals or organizations. As illustrated by Hager *et al.* (2002) for the US, a non-profit organization can organize the fundraising and subsidy seeking tasks in different ways (Hager *et al.* 2002: 312–314): Concentrate them with specific staff or volunteers, possibly supported by external consultants, making a number of members of the organization partly responsible for fundraising, doing nothing (as in the case of sufficient recurrent grants), outsourcing the fundraising function (in which case a transaction cost analysis would help to understand this decision), be it to a professional fundraiser (which was the case in eight per cent of the authors' sample of 1,540 US organizations surveyed in 2001 (*ibid.*: 320)) or to a grant-making charity such as United Way.

Finally, note that in a large number of countries private donations also carry a subsidy component in that they can be deducted from the donor's taxable income: part of the donation is therefore borne by the authorities, through a lessening in the amount of fiscal revenues received.

Subsidies*Subsidy design when subsidizer and non-profit organizations share the same objectives*

If non-profit organizations want to be eligible for subsidies, they have to conform to the conditions implied by the subsidy legislation or regulations. Sometimes these may entail some kind of moral dilemma, when the conditions are not (completely) in line with the organization's values. Consider for example an organization being very much in favor of labour management, confronted with a legal rule that the organization's board must be exclusively or in majority composed of persons not employed by the organization in order to receive subsidies. In such cases, the organization's decision makers have to weigh principles against resources enabling them to pursue the organization's objectives. Note that there are organizations, some of which are fairly large and well known such as Amnesty International, which refuse to accept any subsidy, driven by the principle they have to maximally safeguard (the perception of) their total independence from whatever authority they might be forced by circumstances to criticize because of its human rights policy.

In theory, a subsidizing authority can search for an optimal subsidy design by taking into consideration expected organizational behaviour. Duizendstraal and Nentjes (1994) provide a model in which the organizational objectives coincide with the objectives favoured by the subsidizing authority, but where the organization might divert some of the resources to undesirable destinations ('slack'), such as too high wages, perks, or activities not contributing to reach organizational goals (Duizendstraal and Nentjes 1994: 298). There are no agency problems between the organization's board and its management.

Define y_d as the amount of desirable output, and y_s as the amount of slack. Organizational utility is U , concave in y_d and y_s . The organization's problem then is

$$\max_{y_d, y_s} U(y_d, y_s)$$

Costs are separable in both outputs, convex in y_d and proportional to y_s , the proportionality factor being c_s :

$$C = C_d(y_d) + C_s(y_s)$$

with $\partial C_d / \partial y_d > 0$, $\partial^2 C_d / \partial y_d^2 \geq 0$, $\partial C_s / \partial y_s > 0$, and $\partial^2 C_s / \partial y_s^2 = 0$

Note that it is assumed that there is no fixed cost in producing slack. It is also assumed that only C is observable, and not its components.

Only desired output generates revenues $R = P(y_d)y_d$, and the organization is modelled to break even after taking into consideration subsidies S :

$$S + R = C$$

Subsidies can take different forms, four of which are analysed by Duizendstraal and Nentjes (1994):

- a lump sum subsidy ($S = S_{ls}$)
- a subsidy based on the value of inputs ($S = sC$)
- a subsidy based on the amount of the desired output ($S = gy_d$)
- a subsidy based on the revenues generated by the desired output ($S = tR$)

It goes without saying that the parameters s , g and t are (strictly) positive. Setting $s > 1$ would be illogical, as it makes it impossible for the break even condition to hold. In cases where $(C_d(y_d) - R) > R$, t should be greater than 1, since otherwise it would be impossible for the organization to break even. This is not unrealistic, as numerous organizations provide their goods or services at very low, or even nominal, prices. Note that when goods or services are delivered free of charge, a revenue based subsidy is not an option.

As is shown in Appendix VIII, each subsidy regime implies a relationship between the desired output and slack $y_d(y_s)$, reducing the organizational maximization problem to

$$\max_{y_d} U(y_d, y_s(y_d))$$

The first-order condition for a maximum is

$$dU/dy_d = \partial U / \partial y_d + \partial U / \partial y_s \cdot dy_s / dy_d = 0$$

and from it is derived the traditional condition

$$dy_s / dy_d = - (\partial U / \partial y_d) / (\partial U / \partial y_s)$$

In Appendix VIII (parts 1–4) the optimality conditions along the four ‘pseudo-transformation’ curves $y_s(y_d)$ (one for each subsidy regime) are derived (accents represent (partial) derivatives with respect to quantity):

- under a lump sum subsidy: $dy_s/dy_d = (R' - C'_d)/c_s$
- under an input value based subsidy: $dy_s/dy_d = (R' - (1-s)C'_d)/(1-s)c_s$
- under an output quantity based subsidy: $dy_s/dy_d = (R' - C'_d + g)/c_s$
- under a revenue based subsidy: $dy_s/dy_d = (R'(1+t) - C'_d)/c_s$

The subsidizing authority should take this behaviour into consideration when designing subsidy schemes. Its objective might be efficiency (maximizing y_d/y_s) or just maximizing y_d . The exact forms of the demand function and the cost functions will determine which subsidy type is optimal, as a closer look at the different shapes of $y_s(y_d)$ and the ensuing optimality conditions shows that none of the four subsidy regimes studied dominates all the others.

Subsidy design when subsidizer and non-profit organizations do not share the same objectives

Whereas the previous section deals with a situation in which both the subsidizing authority and the non-profit organization agree upon the desired output, but in which the organization has some preference for the production of slack, there are also cases where there is no complete agreement upon the output. Designing subsidy schemes therefore implies taking into consideration their incentive effects, a problem central in principal–agent theories. Here, the principal is the subsidizing authority, and the organization is the agent. Though the mathematical aspects of these theories are interesting in their own right, it is also useful to have an incentive-based typology of subsidy schemes in mind when theorizing about them. Due to the long-standing budgetary problems related to the provision of health care, such a typology has been developed in the literature of health care financing systems, but it is easily generalized to all subsidized sectors, as will become clear in the following paragraphs (based on Jegers *et al.* (2002)).

The first of the two important dimensions of an incentive-based typology of subsidy systems is the distinction between fixed systems and variable systems, the difference being that fixed systems are independent of activity levels, whereas variable systems are not. Financing systems which are fixed at the organizational level clearly provide incentives to reduce marginal costs, since marginal revenues are zero. This can be done in different ways, e.g. by reducing output levels

and/or quality levels, as long as regulatory benchmarks are not breached. Financing systems fixed at the macro level are called *closed-end* systems (the others being *open-end* systems). They consist of a budgetary cap at the industry level, making budgeting easy for the authorities, but life difficult for the subsidized organizations, as, from their point of view, they will experience uncertainty as to the revenues they are entitled to as long as the allocation of the macro budget has not been decided upon. In systems variable at the organizational level, funding depends on the amount of output produced by the organization. Incentives depend on the balance between marginal revenues and marginal costs, with generous per unit subsidies generating (too) high activity levels. Mostly these systems will be open-ended systems, but if they are of the closed-end type, and therefore fixed at the macro level, it is not only the own organizational activity level that will determine the subsidies the organization will receive, but also the levels generated by the other subsidized organizations. In such a situation, systematically increasing production levels does not guarantee an increase in revenues. This will only be the case if an organization's activity level grows faster than the other providers' aggregate output level.

The second dimension of subsidy schemes is the distinction between *retrospective* funding systems and *prospective* systems. In a retrospective system the organization's costs are subsidized (fully or partially) taking into consideration actual expenses, and it is therefore an ex-post system. This is clearly not an effective mechanism to contain costs. In prospective systems subsidies per unit of activity are determined ex-ante. In that sense a fixed budget at the organizational level can be called a prospective payment system in which the unit is the organization itself. Prospective systems encourage efficiency, as financial profits stemming from the difference between the subsidy per unit of activity and the cost per unit of activity remain within the organization, enabling it to expand activities, increase quality of provision, or serve clients in great financial need. On the other hand, skimming might be a risk, organizations only accepting clients of which they know the treatment cost will be relatively low, necessitating some kind of quality and accessibility control.

In practice, most subsidy systems are not pure in the sense that they can be unequivocally described by determining whether they are fixed or variable, and whether they are prospective or retrospective, considering the appropriate unit of payment. Therefore, they are labelled *hybrid* systems, with interacting, and sometimes counteracting, incentive mechanisms. Different modes of hybridization within one industry can be distinguished (Jegers *et al.* (2002: 269–271) present

examples of each in a health care context): Different subsidizers apply different systems, different systems apply to different categories of providers, different systems apply for different categories of costs or investments, and finally subsidizers themselves mix features of the different generic systems into their subsidy scheme.

Donations by individuals

The optimal level of fundraising

Without any doubt, effective fundraising starts with a thorough knowledge of the relevant characteristics of potential donors, appropriately segmenting the 'donor market' in order to increase the efficiency of the organization's fundraising efforts, and correctly differentiating policies between donor recruitment campaigns and donor development activities (Sargeant 2005: 214–234). A number of descriptive papers on donation behaviour are available, mostly pertaining to the US: Hewitt and Brown (2000: 168–170) provide a review of this literature up to 1996, and other examples of papers worth mentioning are by Brooks (2005), Havens *et al.* (2006), James and Sharpe (2007), Okten and Weisbrod (2000), Tinkelman (2004), and Sargeant *et al.* (2006) who specifically deal with legacy pledgers. Donations to religious organizations are studied by Tao and Yeh (2007). In their Taiwanese sample described earlier in the section on volunteering they also observe a significantly positive link between the amount of donations and the amount of expected rewards in the afterlife according to their religion (Christian religions implying a 'longer' afterlife than Buddhist religions, folk religions promising no afterlife at all) (Tao and Yeh 2007: 782). It is also noted that, in their sample, religious volunteering and religious donations seem to be substitutes for one another (*ibid.*: 783).

From an economic point of view, the standard assumption with respect to donors is that they are 'impurely altruistic', in the sense that they value, in utility terms, three items: their own wealth; the advancement of the cause to which they donate; and the act of giving itself (the 'warm glow' effect) (Andreoni 1990: 465).

Besides the personal characteristics of the potential donors, competition on the donor market also has a bearing on the eventual amount of donations an organization will raise (Bilodeau and Slivinski 1997). An often proposed criterion to compare the ultimate use made of one unit of currency by an organization receiving donations is the 'price' of donations: the outlay of the donor net of personal tax advantages

($F(1-t)$), divided by the programme costs, which are assumed to be spent on activities promoting the objectives of the organization ($C - A - f$; where C stands for total costs, A for administrative costs exclusive of fundraising costs, and f for fundraising costs; the tax rate is assumed to be given, and its determination will be discussed in the next section):

$$\frac{F(1-t)}{C-A-f}$$

The literature review by Parsons (2003: 115) shows that donations, admittedly from all kinds of sources, in general are negatively correlated with this price variable (see also Gordon and Khumawala (1999: 47) for a limited literature review, and Marudas and Jacobs (2004) for an econometrically subtle empirical study on 1,014 US non-profit organizations for 1985–1994). The results obtained by Brooks (2007), on 4,406 US families for the year 2000 and focusing on the specific impact of tax rates, point in the same direction, adding the insight that price elasticities differ significantly between the kinds of activities the receiving organizations are engaged in (Brooks 2007: 609). Tinkelman (1998), in a sample of the 1991 and 1992 donations for 191 large New York non-profit organizations with education programmes, shows that larger donors are more sensitive to donation price indicators than smaller donors. A comparable result is found by Tinkelman and Mankaney (2007), essentially on a 2000–2001 sample of 469,525 US non-profit organizations, the results of which are compared with a restricted sample of 27,602 of these organizations, allowing the authors to conclude that the efficiency sensitivity of donations (efficiency proxied here by $A/(C - f)$) is an issue only when efficiency data are both reliable and relevant (Tinkelman and Mankaney 2007: 54).

Despite the observed relationship between donations and donation prices, there are a number of conceptual problems with the donation price variable, apart from the accounting manipulation possibilities which are discussed in the next chapter. The first is the observation that only programme expenses are taken into consideration, and not output itself, thus ignoring possible efficiency differences between organizations (Parsons 2003: 114). The second is that, from a theoretical point of view, average values are bad guides when it comes to identifying the organization to which an additional donation would result in a maximal increase of output, even though in practice marginal activities are difficult, if not impossible, to determine. The last point is that subtracting total administrative costs and fundraising costs is not really appropriate, as a certain amount of administration is necessary to make programme activities possible, as are some fundraising efforts to

raise funds. The mere presence of these costs is not an indication of inefficiency. Of course, there can be too much (but also too little) fundraising costs or administrative costs, in that they have a negative impact on the total amount of activities the organization can fund. The paper by Kähler and Sargeant (2002) is an example of a benchmarking exercise for the A/C ratio (administration costs to total expenditures), on a sample of 410 English and Welsh charities out of the top 500 fundraising charities (aggregated data for 1992–1996), taking into consideration a size effect, which is natural to expect as a (large) part of the administration costs are fixed. For anecdotal reference, the highest value of A/C observed in their sample was an astonishingly high 0.43 (ibid.: 221).

Combining personal characteristics of the potential donors, competition on the donor market, together with other potential factors such as the design of the fundraising campaign (Landry *et al.* 2006), makes it theoretically possible to derive a fundraising function $F(f)$ at the organizational level, describing the relationship between fundraising expenses (f) and the funds collected. Two opposing effects are at work here. There is a positive effect due to the reduction of the information cost for potential donors, and a negative one (at least in a static sense) as each unit of currency used for fundraising is therefore unavailable for output production (making the price of a donation higher) (Okten and Weisbrod 2000: 257).

The question now is to determine the optimal level of fundraising. In Chapter 5, Steinberg's (1986b) model was presented as a method to gauge the distance, in terms of objectives, between the organizational board and its manager. Here we will use the same kind of model, but from a slightly different perspective, to determine the optimal level of fundraising. The balance between principals and agent is assumed to be fixed, leading to an organizational utility function that is a weighted average of service maximization (preferred by the principals), and budget maximization (preferred by the agent), the weighting factor being k ($0 \leq k \leq 1$), where $k = 0$ describes a situation of pure budget maximization, and $k = 1$ represents a situation of pure service maximization (S is the level of subsidies, not affected by the amount of funds raised, and R stands for the other revenues):

$$U_{\text{ppo}} = k(R+S + F(f) - f - A) + (1-k)(R + S + F(f)) = R + S + F(f) - k(A+f)$$

Taking the first derivative with respect to f leads to the (first-order) optimality condition

$$dF/df = k \tag{7.2}$$

or, expressed as an elasticity,

$$\frac{dF/F}{df/f} = kf/F$$

The Brooks-Ondrich (2007) formulation of the organizational utility function, discussed in Chapter 5, leads to a slightly more complex first-order condition for $\partial F/\partial f$ than (7.2) (to be derived from (II.1) in Appendix II).

Tinkelman (2006), acknowledging the fact that in practice determining marginal values such as dF/df is difficult, if not impossible, evaluates whether average historical values (of the type F/f) are good proxies. His conclusion, on a 1982–1994 panel of 2,430 US organizations providing higher education, is that ‘average historic ratios are not an appropriate proxy for marginal fundraising ratios’ (ibid.: 461).

Assuming $F(f)$ to be concave, Thornton (2006) infers that entry on the donor market would reduce the marginal effect of the fundraising efforts, resulting in lower optimal fundraising efforts at the organizational level, as the parameter k in (7.2) is unaffected (the same conclusion can be reached when assuming a Brooks-Ondrich (2007) organizational utility function). But as the number of organizations increases, one can wonder how the aggregate fundraising costs would change. If there would be an increase, as is the case in his sample of about 30,000 local US non-profit organizations for the period 1990–2000, there might be a social cost that could be avoided if an entry preventing or reducing regulation were in place.

Socially optimal tax (exemption) rate

An analysis of how the optimal tax exemption rate for donations is determined can be based on the work by Kaplow (1995).

The tax exemption rate t is the variable to be chosen by the authorities in order to maximize social utility in a simple world with one potential donor and one non-profit organization. As discussed earlier, the donor’s utility function contains three arguments: his own wealth, the advancement of the cause to which he donates (reflected by the utility U_{TA} experienced by the non-profit organization), and the act of giving itself (the ‘warm glow’ effect). Assume his utility function to be separable in these arguments:

$$U_d = U_W(W-(1-t)F) + aU_{TA}(TA+F) + gU_G((1-t)F)$$

where W is the donor's initial wealth, F his donation, a an altruism index, TA the initial total assets of the non-profit organizations, and g a 'warm glow' index. Note that it is assumed that either each non-profit activity for which a donation is made has the same effect on the (representative) donor's utility, or that the government is capable of setting tax exemption rates in function of the receiving organization's industry.

The donor chooses the level of donations maximizing his utility, from which this first order condition follows, assuming we are only looking at interior solutions:

$$\partial U_d / \partial F = 0 = - (1-t) \partial U_W / \partial F + a \partial U_{TA} / \partial F + b(1-t) \partial U_G / \partial F \quad (7.3)$$

As can be intuitively expected, a low level of altruism will result in fewer donations, assuming all utility functions involved to be concave and the wealth component in U_d to dominate the 'warm glow' effect: a low value of 'a' makes the second term of the right hand side smaller, requiring the sum of the other two terms to increase. As the impact of U_W is assumed to dominate the impact of U_G , the only way to obtain this is a smaller value of F . Assuming U_G to be convex makes the assumption that U_W dominates U_G unnecessary.

As our stylized society consists of only one donor and one non-profit organization, the first best societal utility (implying no taxes) equals

$$u_s = U_d + U_{TA} = U_W(W-F) + (1+a)U_{TA}(TA+F) + gU_G(F)$$

The socially optimal level of donations results in the following first-order condition:

$$\partial u_s / \partial F = 0 = - \partial U_W / \partial F + (1+a) \partial U_{TA} / \partial F + b \partial U_G / \partial F \quad (7.4)$$

As the government is not omniscient, it can use a judiciously chosen tax rate to meet this condition, also assuming the effect on the total level of taxes is negligible. In Appendix IX it is proved that a sufficient condition for this is

$$t = 1/(1+a)$$

The more altruistic the potential donor, the lower the tax rate necessary to induce him to donate up to the socially optimal level. On the other hand, potential donors being complete egoists ($a=0$) requires a 100 per cent tax exemption for donations, which then can hardly be called a donation any longer. Notice that the 'warm glow' effect does not

play any role here, as it does not differentiate between the private optimum of the donor and the societal optimum.

Donations by firms

The question why firms, and not their owners, donate to non-profit organizations or provide sponsorship, is still an unresolved matter, both in normative writings and in descriptive studies: 'Researchers cannot agree on the motives, and commentators cannot agree on what ought to motivate philanthropic collaborations. To complicate matters one often finds different motives in the same firm, and sometimes in the same executives' (Galaskiewicz and Sinclair Colman 2006: 185). Probably, a universally valid motive just does not exist, as motives will depend on factors such as circumstances, psychological diversity of the actors involved, and/or opportunities. A good illustration of this, though there might be some problems of socially desirably answering, is the work by Meijer *et al.* (2006). They surveyed between 998 and 1,122 Dutch firms (1995–2003) on their giving behaviour. A large majority of the respondents indicated that they had only one motive for sponsoring or giving. Strangely enough, even for sponsoring the most frequently mentioned most important motive was social involvement (38 per cent of respondents in the last year surveyed), followed by commercial motives (29 per cent). These percentages change to 56 per cent and 7 per cent respectively for charitable giving (Meijer *et al.* 2006: 20–21).

Though Galaskiewicz and Sinclair Colman (2006: 185–195) discern six categories of motives for corporate philanthropy (which is broader a concept than mere donations) in their extensive review of the empirical literature, these categories can be aggregated in two non mutually exclusive groups as far as donation motives are concerned (Aralumpalam and Stoneman 1995: 938): shareholders' wealth maximization (special cases of which are the following groups of Galaskiewicz and Sinclair Colman (2006: 188–195): strategic collaboration, commercial collaboration, and political collaboration), and managerial utility maximization (including the pursuit of social welfare (*ibid.*: 188)). Maximizing shareholders' wealth can be achieved by positively affecting the firm's profit, e.g. through the creation of public goodwill with respect to the firm (for an early model, see Navarro 1988: 67–70), but also by donating to causes to which the shareholders themselves would donate, taking advantage of differences in tax deductibility between corporate donations and private donations. In these cases, managers are perfect agents. Agency conflicts arise when managers donate to beneficiaries they personally like, ignoring their

shareholders' preferences (Navarro 1988: 70–76). A very special case of managerial utility increasing donations is the use of corporate foundations, which possibly serve causes supported by the firm's owners, but to which discretionary payments are made as part of an earnings management policy, without necessarily jeopardizing the stability of the foundation's disbursements. Data on a sample of 323 of the larger US corporate foundations (1989–2000) presented by Petrovits (2006) are consistent with the existence of this kind of behaviour, which can be labelled 'real' earning manipulations, as opposed to the 'accounting' manipulations discussed in Chapter 8.

An empirical strategy to discriminate between a perfect agent situation and an imperfect agent situation is to look at changes in corporate donations when corporate tax rates change. The idea is that under the hypothesis of the firm acting in the interest of its owners, increasing corporate tax rates would decrease the relative price of corporate donations as compared to private donations by the owners. Increasing corporate donations should then be expected, whereas utility maximizing managers would decrease the amount of corporate donations, as long as the marginal managerial utility with respect to (net) donations is smaller in absolute value than the marginal managerial utility with respect to (net) profits. The results of Aralumpalam and Stoneman (1995), on a sample of 53 UK firms for the period 1979–1986, indeed show rising donations when corporate taxes increase, which is in line with the perfect agent point of view. A comparable conclusion is reached by Carroll and Joulfai (2005). Their analysis is cross-sectional, however, on a very large sample of more than 26,000 US firms for 1991.

Brown *et al.* (2006) follow another empirical strategy to distinguish between the two groups of motives. They build on the idea that if weaker governance structures are in place, imperfect agents will feel free to pursue private utility maximization. Therefore, establishing a link between looser governance mechanisms and giving points at the presence of imperfect agents as far as donating is concerned. Their results, on a cross-sectional analysis of 701 firm years based on data of 207 Fortune 500 (US) firms for a period ending in 1999, are compatible with this. Larger firms with larger boards and lower levels of debt are more inclined to donate. Note that this conclusion is opposite to that of the tax effect studies discussed in the previous paragraph, confirming the opening citation of this section.

Notwithstanding the motives leading to corporate charity, there is empirical support to state that it brings corporate benefits with it (Lichtenstein *et al.* (2004), based on a field survey of 1,000 customers

and three follow-up laboratory experiments). Furthermore, Lichtenstein *et al.* (2004) observe an increase in private donations by the customers of 'socially responsible' firms to the non-profit organizations these firms are visibly linked with.

Marx (1999) addresses the position of corporate philanthropy in the corporate strategic planning process. Data from a sample of 226 large US companies allow him to conclude that 'companies are increasingly integrating philanthropic management into the formal strategic planning of the firm' (Marx 1999: 185), rather pointing at a profit maximizing role of corporate philanthropy, though 'strategic philanthropy programmes do not frequently measure the direct impact of contributions to business goals' (*ibid.*: 191). Furthermore, the majority of firms did not seem to bother to assess the final destination of their donations.

Interactions between gifts and subsidies

When developing strategies in order to maximise gifts and subsidies, one should not ignore the possibility that the two are connected in one way or another. There are at least two mechanisms through which this can happen.

The first is an internal one, described by Brooks (2005: 553): obtaining subsidies could result in less managerial efforts to raise other kinds of funds, either spontaneously or forced by the subsidy rules.

The second mechanism is external: higher subsidies can make donors less inclined to continue to donate, as they perceive their gifts to be less necessary (*crowding out*), but can also attract new donations, if obtaining subsidies is considered to be a signal of the organization's reliability and trustworthiness (*crowding in*). The two effects are not mutually exclusive, and their combined result (together with the possible effect of the internal mechanism) is not *a priori* constant across industries (Smith 2007: 139) or across different subsidy levels. This last point is illustrated by Borgonovi (2006) for 404 pooled observations on 82 US non-profit theatres (1997–2001): at low subsidy levels she observes crowding in, whereas at higher levels, crowding out occurs (Borgonovi 2006: 443–444).

It goes without saying that crowding in and crowding out are realistic options only if donors have some background knowledge about the subsidies granted to the organization they intend to donate to. Institutional donors can be expected to possess such knowledge, but this is not necessarily the case for individual donors: Horne *et al.* (2005) establish that in a sample of 675 donating inhabitants of the state of

Georgia, 45 per cent did not have any idea about the subsidies received by the organizations they donated to (and therefore had no perception, right or wrong), whereas only 28 per cent of the sample managed to make a correct estimation within 10 per cent error limits.

Profit activities by non-profit organizations

Selling goods or services produced by non-profit organizations at a non-zero price is clearly more 'commercial' than delivering them free of charge, especially when the payment is to be made by the client himself, and not through some collective insurance system. Guo (2006: 125) argues that US organizations have been forced increasingly to adapt this kind of commercialization due to the apparent decrease in the levels of donations and, more importantly, of subsidies. Pricing as such is discussed earlier in this chapter.

The commercial activities we want to discuss in this section are of a different order, as they pertain to activities not related to the organization's mission or objectives, with the sole aim to generate funds to finance the organization's core activities. This implies that developing unprofitable unrelated activities negatively affects the organization's possibilities as to these core activities (Weisbrod 1998: 16). Besides the requirement that the profit activity should generate profits, initiating such activities seems rational only if the following conditions are met (Cordes and Weisbrod 1998: 201; Tuckman 1998b: 36):

- there must be a need for additional funds;
- there is no better way than the profit activity under consideration to generate these funds;
- the activity cannot be incompatible with the organization's values and objectives;
- the organization must be able to deliver the 'profit' output and to develop an adequate marketing plan for it;
- there must be a market for this output.

Additionally, possible crowding out effects must be taken into consideration, both of voluntary labour (Enjolras 2002) and of donors. Donors might think their donations are less necessary, or just may dislike the commercial aura within commercial activities (Young and Steinberg 1995: 161). Their attitude towards the organization's commercialization can be influenced by a number of elements (*ibid.*): are buyers and donors different groups, is the product sold unique, are organizations competing on the donor market also engaging in

commercial activities, and the price and quality of the 'profit' good or service. An experiment by Desmet (1998) within a large French charity shows that commercial activities had a negative effect on the level of donations in the long term.

A basic economic model of a non-profit organization engaged in profit activities is provided by Schiff and Weisbrod (1991: 621–625). In their model, there is no agency conflict between board and management, and the organization is constrained to break even. The organization produces a desired output y_d and a commercial output y_c . Organizational utility is $U_{np}(y_d, y_c)$, the desired output being liked, but the commercial output not being liked: $\partial U_{np}/\partial y_d > 0$, $\partial U_{np}/\partial y_c \leq 0$. The level of donations F is positively affected by the amount of desired output, and negatively by the amount of commercial output: $\partial F/\partial y_d \geq 0$, $\partial F/\partial y_c \leq 0$. The commercial output y_c is sold on a competitive market at a price P_c , whereas y_d is sold at an exogenous price P_d , which is possibly zero. Joint costs are $C(y_d, y_c)$. The maximization problem therefore is

$$\begin{aligned} & \text{Max } U_{np}(y_d, y_c) \\ & y_d, y_c \end{aligned}$$

$$\text{subject to: } F(y_d, y_c) + P_d y_d + P_c y_c - C(y_d, y_c) = 0$$

From Appendix X we learn that the organization will provide the desired output beyond the profit maximizing level, whereas it will not fully take advantage of the profit generating potential of the commercial output (except if neither the donations nor the organization's utility are affected by it ($\partial F/\partial y_c = \partial U_{np}/\partial y_c = 0$)). Given the initial assumptions made as to the utility function, these conclusions are not surprising.

Bises (2000) introduces agency problems in a comparable context, though his eventual objective is to assess the appropriateness of tax exemptions on commercial profits, as opposed to subsidizing y_d . Managers derive utility from making y_d available and from discretionary expenses. The commercial output y_c has bearing neither on their utilities nor on the level of donations (Bises 2000: 24, 25), assumptions automatically leading to a profit maximizing production level of the commercial output, the profits being split between discretionary expenses and additional production of the desired output.

Finally, the empirical paper by Du Bois *et al.* (2004b), on 2,103 US non-profit organizations for the fiscal year 2000, departs from the assumption that $\partial U_m/\partial y_c > 0$. These authors expect that the more important agents are in a non-profit organization, the more their objectives will be pursued, including more commercial activities.

Potential agency conflicts are measured as the ratio between the level of directors' compensation and net assets, whereas the pursuit of managerial objectives is reflected by the level of Unrelated Business Income. After taking stock of the required control variables such as size, their conclusion does not contradict their expectations.

8 Accounting in non-profit organizations

Introduction

Though there are no accounting concepts exclusively applicable to non-profit organizations, a specific economic theory of the presence and form of accounting in non-profit organizations has its place. Such a theory is presented in this chapter, looking at financial accounting, cost accounting, auditing, and financial statements and their disclosure. As is the case for the accounting theory developed for profit organizations, this approach is embedded in a principal-agent framework.

Principles of accounting and control

Accounting

Defining accounting as registering transactions having an impact on the organization's wealth and periodically reporting this wealth implies that there is no reason for the concepts and techniques of accounting to be different for non-profit organizations compared with other organizations (Anthony 1980: 84). Therefore, textbooks on accounting for non-profit organizations, such as the one by Razek and Hosch (1985), are perfectly comparable with accounting textbooks dealing with profit organizations, except perhaps for the examples included and elaborations on specific regulations.

Nevertheless, trying to understand why and how accounting and accounting regulations emerge in a non-profit context is a distinct economic problem, that can be dealt with within the confines of the well-established field of 'accounting and economics', which up to now has focused on these questions almost exclusively on profit organizations. The work by Watts and Zimmerman (1986, 1990) is seminal in this domain. A limited number of papers characterized by a

more economic approach to accounting of non-profit organizations are available for the health care sector (early examples are: Burik and Duvall 1985; Carey 1994; Eldenburg and Kallapur 1997; Eldenburg and Soderstrom 1996; Jegers and Houtman 1993; Noreen and Soderstrom 1994), though the health care institution point of view mostly dominates institutional choice aspects. Most of the samples involved contain a mix of profit hospitals, public hospitals, and non-profit hospitals. A first attempt to develop a specific non-profit accounting economic theory is Jegers (2002), on which the following sections are based.

Auditing

Once again there is no reason to presume that auditors should apply specific standards and methods when auditing non-profit organizations. Clearly, the way external control is implemented might be idiosyncratic, taking into consideration industry specificities and possible (non-accounting) regulatory obligations. The same reasoning applies when it comes to audit fees (Beattie *et al.* 2001: 249). In general, non-profit organizations are characterized by a lower litigation risk, more complex financing regulations, the presence of gifts and donations which impact on control procedures, uncertainties with respect to future income and their implications for the going concern assessment, and possibly the position of volunteers in the organization's financial management. The widespread absence of performing internal control procedures, that will be touched upon in the next section, complements this list as it affects the auditor's procedures and activities, and hence the auditing cost. Finally, auditors can also show some proclivity towards altruism (*ibid.*: 272), making (part of) their audit a donation in kind, in which case it is hoped that they apply the same professional standards as in fully billed audits.

Beattie *et al.* (2001) investigate audit fees (1995 and 1997) for more than 200 UK charities which have to disclose audit fees and fees for non-audit services. The original sample contained more than 300 organizations, but a large number of them did not provide their financial statements, contrary to the legal obligation to do so. Generally, fees appear to be lower than for audits as comparable as possible in the profit sector. The three possible reasons for this (lower audit risk, auditor altruism, lower audit quality) cannot be disentangled. A traditional audit pricing model is also developed and tested. Two auditee characteristics positively influence audit prices (and hence monitoring costs): size, and the share of year-end stock in total assets. On top of that, Big Six fees are considerably higher (18.5 per cent) than fees charged by other audit

firms, and there is also an (albeit small on average) premium for non-Big Six audit firms with charity experience.

How are accounting and control perceived?

As has been the case for marketing (see Chapter 7), accounting and financial control have been viewed for decades as (un)necessary evils in the non-profit sector, frequently because of 'the ideological rejection of commercial values and practices' (Panozzo and Zan 1995: 8) within the organizations involved. Increasing regulatory pressures seem to have curbed this attitude, especially in larger organizations, though there still seems to be a long way to go before accounting information will be used in a non-profit setting in the same unprejudiced way as in a profit setting, accepting the fact that assessing organizational wealth does not imply maximizing organizational wealth.

A consequence of the limited role attributed to accounting procedures is the absence of fully developed internal control procedures in the majority of non-profit organizations. There is 'an accumulation of evidence which points to systemic and widespread failure of internal control' (Ortmann and Schlesinger 1997: 103), a problem that can only be resolved once the techniques of financial registration and control become fully accepted.

Empirical research on internal control in non-profit organizations is scant, except for the early paper by Rayburn and Rayburn (1991), who analyse internal control reactions of 307 US hospitals to the introduction of prospective payment systems for hospital financing (see Chapter 7). The non-profit hospitals appeared to increase the tightness and centralization of financial controls, and the use of administrative committees and ad hoc coordination groups more intensively than proprietary hospitals. Whether the explanation for this was catching up or taking the lead could not be assessed.

Accounting theory for non-profit organizations

The framework

Assuming managerial utility in non-profit organizations is affected by both the achievement of organizational objectives (labelled 'oo' in what follows) and discretionary managerial expenses ('d') (see Chapter 5), and the non-profit board members' utilities only by the achievement of organizational objectives, information asymmetries between board and management can induce managerial behaviour that is not compatible

with board utility maximization, entailing welfare losses for the board (which is the principal). Part of the information asymmetry pertains to the financial condition of the organization, which is (partially) affected by discretionary managerial behaviour. Even in a world without accounting regulations, an assumption that will be relaxed later on, imposing the production and audit of financial statements will mitigate this asymmetry and the ensuing residual loss at a cost, which is a monitoring cost. As long as the latter is lower than the reduction of the former, the introduction of an accounting system will improve the eventual welfare position of the board, even if, realistically, a first best situation will never obtain.

Though the same line of reasoning can be applied to deal with other principal–agent relationships, such as the relationships between donors and the organization (Krishnan *et al.* 2006: 402), we will confine ourselves to the interplay between managers and board members. Generalizing the theory presented here to other principal–agent configurations is straightforward.

In this context, religious organizations considering some deity, which, by definition, is omniscient, as the ultimate principal occupy a special position. Information asymmetry between this principal and the worldly agents cannot exist, hence accounting is useless as an information asymmetry reducing tool. In the words of Abdul-Rahman and Goddard (1998: 196): ‘Accountability in such a world is to God and accounting can contribute little in this relationship.’ If one accepts this position, religious non-profits are to be excluded from the present analysis. If not, they can be treated like any other non-profit organization, as exemplified by Duncan *et al.* (1999) or Laughlin (1990). The latter is a principal–agent analysis of the Church of England, albeit with definitions (Laughlin, 1990: 95) deviating from the Jensen-Meckling standard definitions of principals and agents (see Chapter 5).

No board: The founder is the manager

In organizations in which the founder and the manager are the same person (called in Chapter 4 the entrepreneur-manager), there is no agency problem to be solved. Defining oo_{\max} to be the highest level of organizational objectives that can be attained, Figure 8.1 describes the utility maximizing balance between objectives and discretionary expenses.

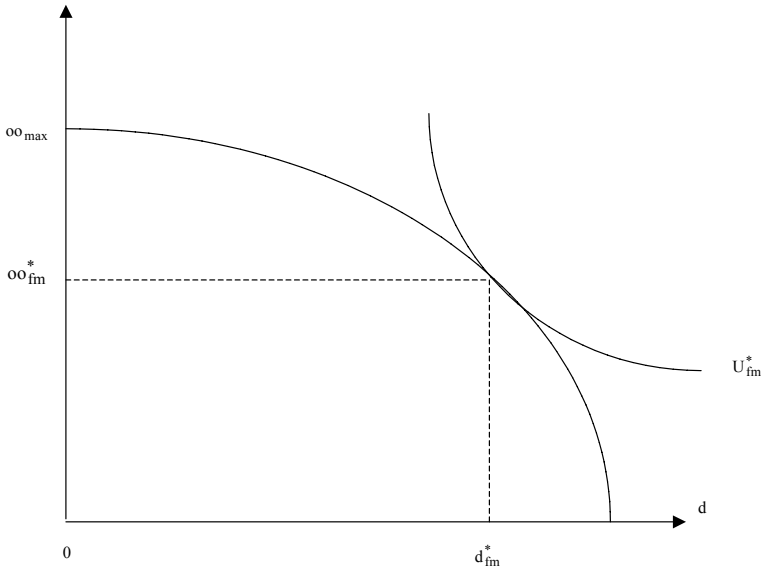


Figure 8.1 Utility maximizing founder-manager

Source: Based on Jegers (2003: 434)

By definition, increasing discretionary expenses lowers the level of organizational objectives that can be reached, as resources are diverted from them. U_{fm}^* is the maximal utility that can be obtained by the founder-manager. The difference between oo_{max} and oo_{fm}^* depends on the shape of the indifference curve corresponding to U_{fm}^* . As there are no agency costs, and assuming there is no regulation on accounting and external control, there is no need for accounting information aimed at mitigating agency costs. Clearly, this does not imply that there are no other reasons to justify the presence of accounting and control. The most obvious one is purely managerial: in order to manage the organization in a rational way, accounting information is more than useful (Anthony 1989), and increasingly so when the organization is larger, more complex, or more diversified.

The ineffective board

Though theoretically not very interesting, cases in which boards do not perform well in their monitoring tasks are widespread (see also

Chapter 5). It would not be fair to assume that the manager, who is now hired by the board, is not interested at all in the organizational objectives (Chapter 5), but on average her preference for discretionary expenses will be relatively higher than for a founder-manager, making her indifference curves steeper. It can immediately be seen from Figure 8.1 that the organizational performance resulting from managerial utility maximization (leading to a utility level U_{ib}^*) will be lower than when having the founder managing the organization, and the level of discretionary expenses higher: $oo_{fm}^* > oo_{ib}^*$ and $d_{fm}^* < d_{ib}^*$ ('ib' meaning 'ineffective board'). The board being ineffective, it will not be able to impose accounting procedures in order to avoid agency costs, though managerial requirements might result in an accounting system being present.

The effective board

Reducing agency costs with accounting and financial control

If the board is maximally effective in observing the manager's behaviour, it has a direct way to incite her to pursue as much as possible the organizational objectives, allowing exactly the amount of discretionary expenses resulting in the managerial utility level to be equal to her reservation utility U° .

If managerial behaviour is not perfectly observable, the implementation of a system of accounting and financial control (assumed to be more elaborate than the one required for managerial purposes) results in a signal on the level of discretionary expenses. The additional resources required for this system can no longer be used for the pursuit of organizational objectives or for financing discretionary expenses, making the maximally obtainable level of organizational performance decrease to $oo_{max, acc}$ (Figure 8.2).

If there were no effect on managerial behaviour, managerial utility would now reach U_{acc}^* , and organizational performance oo_{acc}^* . A maximal impact on managerial behaviour would imply that her utility level would not exceed her reservation utility U° , with the concomitant performance level being oo° (assuming the manager can be kept from choosing the lower performance–higher discretionary expenses combination resulting in the same utility). In reality, the effect of monitoring will be neither insignificant nor maximal. Assume managerial utility can be driven down to U_{eb}^* ($U^\circ < U_{eb}^* < U_{acc}^*$). If the resulting performance level oo_{eb} is higher than the performance level without monitoring (oo_{nm}^* , with managerial utility level U_{nm}^* ($= U_{ib}^*$)) it

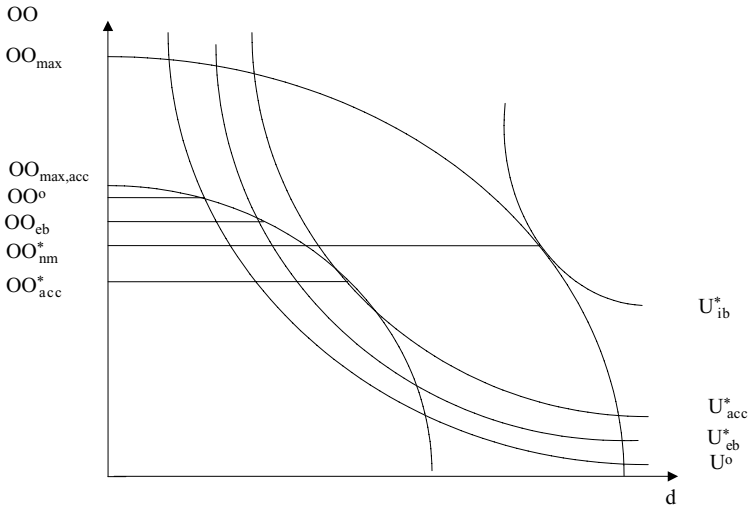


Figure 8.2 Accounting and control with an effective board

Source: Based on Jegers (2003: 436–437).

pays to have an accounting system, as the reduction of the maximal performance level is more than offset by the increase in the performance level reached. In the opposite case, accounting would increase the eventual agency cost incurred by the board.

Figure 8.2 allows us to hypothesize about the relationship between the dimension of the organization and the presence of accounting and control systems. For larger organizations, the relative difference between oo_{max} and $oo_{max,acc}$ will be smaller. Therefore, the probability that oo_{eb} (performance with monitoring) exceeds oo^*_{nm} (performance without monitoring) increases, making the presence of accounting and control systems geared at monitoring management, *ceteris paribus*, more probable. As there are also operational reasons to expect larger organizations to have better developed accounting and control systems in place, it is difficult to determine from an empirical point of view whether the presence of these systems is dictated by operational needs or by the need to contain agency costs.

On the other hand, increasing complexity and diversification increase the cost of accounting and control, as illustrated in the paper by Beattie *et al.* (2001: 271), mentioned above, and therefore make the probability

of oo_{eb} exceeding oo_{mm}^* smaller, contrary to the dimension effect. It is probable that efficiency effects dominate the relative inability to monitor management in a performance increasing way, meaning in terms of Figure 8.2 that without accounting oo_{max} would be rather small in complex and/or diversified organizations, perhaps even making it impossible for the manager to reach her reservation utility level.

Assuming the intensity of control is higher when performed by a 'Big' audit firm, indirect empirical proof of the relation between organizational dimension and intensity of audit is provided by Tate (2007), on a sample of 15,955 US non-profit organizations for the period 1997–2002 receiving at least US\$300,000 in federal funds per year. Larger organizations on average were audited by an (at that time) Big Five auditor, whereas smaller ones were not (Tate 2007: 58). Furthermore, in the sample of Vermeer *et al.* (2006), consisting of 118 of the largest US non-profit organizations for 2004, dimension (and the presence of a Big Four auditor) was positively related to the level of independence of the audit committee (Vermeer *et al.* 2006: 86), and the audit thoroughness that this can be assumed to imply.

Refinements

In the previous section accounting and financial control were presented as constituting an indivisible whole carrying a given implementation cost decreasing oo_{max} to $oo_{max,acc}$ (Figure 8.2). In reality, a number of decisions can be considered in this context. There are at least three crucial decisions to be made. The first is the choice between cash accounting and accruals accounting; the second is to know whether financial information will be voluntarily disclosed; and the last is a decision on hiring an external auditor. For each of these decisions a conceptual analysis comparable to that of the previous section can be made (Jegers 2002), the bottom line always being the eventual level of organizational performance.

Turning to the choice between cash accounting and accruals accounting, 'in comparison with cash flow accounting, accruals adjustments demand a higher administrative and accounting cost' (Jones and Pendlebury 1996: 155). Introducing accruals accounting therefore can be justified only if it leads to stricter monitoring, more than compensating its higher cost in terms of reaching a higher level of organizational performance than under cash accounting.

Christensen and Mohr (2003) describe the situation of 170 US museums in 1994 as to financial reporting and external control. They observe a wide diversity, though a general attitude not to disclose

financial information seems to prevail (ibid.: 148). In general, from the point of view of a non-profit organization's principal, external control can be viewed as a means to affect agency costs, as it is for profit organizations: 'The economic role of auditing is to reduce agency costs' (Sunder 1997: 115). Its relative cost being smaller for larger organizations, one should expect larger organizations to contract more frequently for an external financial audit than smaller organizations. Further, observing the level of internal control in most non-profit organizations (discussed earlier in this chapter) when compared with profit organizations, adds to the usefulness of external control, at least from the principals' point of view.

Donors as principals

When non-profit organizations are (partly) financed by (private or corporate) donors, the latter are a specific group of external stakeholders delegating decision authority to the organizations, and hence the principals, the organization being the agent. Clearly, information asymmetries exist between the two, even more if there is no direct link between donors and eventual beneficiaries (Gordon and Khumawala 1999: 39). The question then is whether disclosing accounting information helps to reduce this gap, stimulating donors to be more generous than they would be in its absence.

Accounting here can be considered as a bonding cost from the point of view of the organization, though '[t]here is limited empirical research examining the impact of *accounting* data on charitable giving decisions' (Parsons 2003: 104), and it appears there is no research at all on the role of auditing, although audited financial statements are mentioned in the papers by Gordon and Khumawala (1999: 42) and Hyndman (1990), and Tate (2007: 58) establishes in her sample mentioned above that organizations audited by a Big Five audit firm rely more heavily on donations.

Accounting knowledge

In a profit context, it is taken for granted that both board members and managers fully understand the content and intricacies of accounting and financial statement analysis. In a non-profit setting, and especially in smaller organizations, this need not be the case. Frequently, both board members and staff are experts in the domains relevant to the organization's mission, accounting knowledge not being a priority (see also the section earlier in this chapter on the attitude towards accounting

and financial control). Therefore, accounting knowledge is an issue in thinking about accounting in non-profit organizations.

The less qualified are the staff (or volunteers) responsible for implementing accounting procedures, the higher will be the impact on the implementation cost, negatively affecting $oo_{\max,acc}$ in Figure 8.2, and therefore requiring a stronger impact on managerial discretionary behaviour to justify these procedures. Hence, from an agency point of view, the expectation that non-profit organizations will be less inclined than comparable profit organizations to implement these systems. Empirical results on this do not seem to be available, but Froelich *et al.* (2000) provide an indication that accounting knowledge considerations are relevant in non-profit organizations. About 50 interviews in large and medium-sized US non-profit organizations revealed that 12 per cent of them did not have any accounting staff, whereas in about three-quarters of the remaining organizations nobody had an accounting education. In the same vein, Trigg and Nabangi (1995: 260) lament the deplorable quality of financial statements issued by non-profit organizations: 'Beggars cannot be choosy' (*ibid.*: 260), commenting on the staff or volunteers which organizations (have to) employ to comply with their accounting obligations.

The same kind of reasoning can be applied to board members, leading to the expectation that the presence of accounting knowledge in the board makes it more probable that more sophisticated accounting systems will be instrumental in monitoring management (Christensen and Mohr 1995: 324; Miller-Millesen 2003: 524). Other principals to whom this line of thinking is applicable are the donors, and Hyndman (1990: 300–306) indeed finds that they prefer summary financial information instead of the full financial statements (a survey on a sample of 156 individual donors of the larger British charities). As a matter of fact, he also finds that financial information is not considered to be that important when compared with reporting on operational activities. A comparable conclusion is reached by Buchheit and Parsons (2006) in their laboratory experiment (157 undergraduate management accounting students). Potential donors considered operational information combined with more general information on the organization as significantly more useful than the general information alone, leading to a higher reported proclivity to donate, though this did not result in significantly more donations (Buchheit and Parsons 2006: 679). Only 37 per cent of the actual donors (remember they were management accounting students) were interested in making a financial comparison with a competing organization when this information was made available in a very simple way. A total of 89 per cent of them

eventually donated to the most efficient organization, as measured by the percentage of total expenses dedicated to programme activities $((C-A-f)/C$ where C stands for total costs, A for administrative costs excluding fundraising costs, and f for fundraising costs (ibid.: 680)). Summarizing their results, Buchheit and Parsons state that 'only a minority of individual donors request and use financial information, however, ... , there is a need for increased accuracy or not-for-profit expense classification' (ibid.: 667), reducing the scope for accounting manipulations, which are discussed at the end of this chapter.

The role of debt

In the first writings on accounting theory for profit organizations there was already an important role for debt as it was assumed to (partly) contain agency problems between shareholders and management, though it also acknowledged that debt generates an additional agency conflict between shareholders (now acting as agents) and debtholders (the principals), which in its turn can be mitigated by imposing protective covenants, most of which will be expressed in accounting and auditing terms.

A comparable reasoning applies for non-profit organizations. Lenders to non-profit organizations know that these have specific objectives not expressed in financial terms, but as long as the organization is expected to be able to pay interest and capital repayments when due, there is no reason to be financially worried (see also Christensen and Mohr 1995: 324). Agency problems between board and management could also be addressed by obliging the organization to borrow, in order to have management forced not to divert earnings into discretionary expenses. Measuring potential agency costs in an organization by dividing compensations, salaries and wages by total assets, Jegers and Verschueren (2006) and Verschueren and Jegers (2004), in a multivariate setting on samples of (respectively) 22,766 Californian non-profit organizations and 7,294 US cultural non-profit organizations for 1999, find a positive correlation between these potential costs and the presence of debt, which is in line with an agency explanation of debt. Here, the debtholders can also protect themselves by obliging the borrowing organization to produce and have audited accounting information.

Accounting regulation and compliance

In the preceding sections it was assumed that non-profit organizations were not subject to any accounting regulation. This clearly is not the case, at least in most countries and for the larger organizations. Although other reasons to enact accounting regulations can be considered (Maijoor, 1991), accounting regulations for non-profit organizations are also easily understood in a principal-agent framework: authorities grant subsidies only under a number of conditions, making them the principal, and the organization has to report on how the funds obtained have been used. Part of this reporting is financial reporting, which is therefore one of the monitoring instruments available to the authorities. The obligation for US hospitals to explicitly report charity care expenses from 1990 onwards can be interpreted in this way as far as the non-profit hospitals are concerned (Eldenburg and Vines, 2004).

Accounting regulations make the interpretation of the submitted financial statements easier, enhancing the authority's chances of reducing residual losses, but also enabling other principals to interpret the statement's contents more correctly. Furthermore, uniform accounting rules reduce the monitoring costs as such, because of the possibility of common training programmes, and the availability of common rules that do not have to be reinvented at the organizational level. In the absence of governmental regulations, comparable (monitoring) cost advantages can be obtained by self-regulation, as witnessed in different US non-profit industries (Christensen and Mohr, 2003). In terms of Figure 8.2, this would imply that the difference between oo_{\max} and $oo_{\max, acc}$ would be smaller than in a situation without common rules, making the usefulness of accounting and control more probable.

If the accounting regulations impose rules that imply at least an accounting intensity and sophistication required to cope with the board-management agency problems, there is no agency based need for additional accounting procedures. In the opposite case, where the rules to be applied due to regulation are not sufficient to optimally reduce agency costs between the board and management, one can expect accounting to be more elaborate than legally required.

The question whether to comply with accounting regulations is essentially an economic one. From the agent's point of view, not complying is an optimal decision if the expected costs of noncompliance do not exceed the expected revenues gained by misinforming the principal on the financial condition of the organization, and possibly

causing additional residual losses, especially in relationships where the authorities act as a principal.

Empirical research on compliance in non-profit organizations is scarce. Jegers and Houtman (1993) assess compliance with accounting rules for 197 Belgian public and private non-profit hospitals in 1988. The compliance variable is the number of specific reporting violations of the law, of which the highest value possible was 32. There appeared to be no statistically significant difference in compliance behaviour between public and non-profit hospitals. Larger hospitals produced significantly better financial statements than smaller hospitals. This can be understood by noting that the relative cost of complying is smaller for larger hospitals (again making the difference between oo_{max} and $oo_{max,acc}$ in Figure 8.2 relatively smaller), combined with the expectation that the visibility of noncompliance (the 'political cost' as discussed below) and the ensuing negative impact on the manager's reputation are higher. Krishnan and Schauer (2000) analyse financial disclosure for 1994–1995 by 164 non-profit health and welfare organizations from Pennsylvania and New Jersey, and observe comparatively low compliance for specific non-profit items. Only 45 of the 164 organizations in the sample disclosed cash donations and pledges, and 91 disclosed donated materials and services. Also in this piece of research, larger organizations complied more. The authors also find an interesting effect of the auditor's reputation and dimension. After controlling for client characteristics (including size), compliance of organizations audited by one of the (at that time) Big Six is higher than that of organizations audited by large non-Big Six, which in turn is higher than that of organizations audited by small non-Big Six audit firms (Krishnan and Schauer 2000: 20). Which situation is optimal theoretically depends on the comparison between the value of the residual losses avoided and the additional audit fees (monitoring costs). Up to now, empirical work on this point does not seem to be available.

Another empirical paper on financial statement quality has been published by Yetman and Yetman (2004). These authors, in a sample of between 6,168 and 15,669 yearly observations for the period 1985–2000 (US data), compare at the state level the effect of governance mechanisms on accounting quality. They conclude that market governance (debt, donors) is more closely linked with high quality financial statements than regulatory governance (Yetman and Yetman 2004: 31). Apparently, at least for this sample, the cost of not complying is higher in the relationship with debtholders or donors as principals, than with regard to the regulatory authorities.

Accounting choices

Most accounting regulations, both for profit and non-profit organizations, allow for some choices to be made in a number of cases. Traditional examples are: depreciation rules (which frequently can be chosen from a limited set of alternatives), stock valuation rules, and capitalization requirements. Theoretically, the eventual choice influences the information (or signal) given to the principal about the agent's (financial) performance, and therefore the agent might be induced to choose the most favourable alternative from her point of view (Steinberg 1993: 24). In a profit context, most choices are analysed with respect to their effect on managerial remuneration. But there is also published research available concluding that accounting choices in non-profit organizations can be understood.

The possible impact of accounting figures on remuneration schemes depends on the question 'whether charities explicitly use accounting measures for setting executive compensation' (Baber *et al.* 2002: 691). If not, from the revenue maximizing manager's point of view, there is no point in manipulating any accounting figure. The paper most relevant in this context is written by Robbins *et al.* (1993), who study accounting choices in 298 US hospitals (public, private non-profit, and proprietary). The LIFO/FIFO choice and the depreciation method used are combined in a binary choice variable with two categories: income-increasing choices (84 per cent of the sample) and income-decreasing choices (16 per cent of the sample). Unfortunately, separate results for non-profit organizations are not given. In the sample as a whole, there seems to be a positive relation between the existence of management compensation plans and income-increasing choices, but this might be due to the presence of proprietary hospitals in the sample.

Chase and Coffman (1994) propose a 'political cost' reasoning to explain accounting choices made by non-profit organizations. The reported wealth is assumed to impact on the government's and donors' willingness to provide subsidies and gifts. Higher levels of wealth are considered to be either a reason to reduce payments or a signal of financial viability entailing more subsidies and gifts, which are then expected not to be wasted. Apparently, the civil servants concerned and the public are assumed not to be able to assess the disclosed data correctly. On top of that, managers are believed to be concerned about their personal reputation, therefore trying to select accounting methods indicating maximal financial performance (return on endowments in this case). In a sample of 137 private colleges and universities in the US

(data pertaining to 1989), the choice between fair market value reporting of the endowments and their reporting at cost is considered. The results show that the institutions choosing the fair market value method are more highly endowed (supporting the financial viability reasoning) and realize higher returns on their endowments (not contradicting the reputation argument). In Leone and Van Horn (2005), managerial reputation is again the focus, now in a traditional earnings management study. In a sample of 8,997 non-profit hospital-year observations (US, 1996–2002) they find data confirming the hypothesis that non-profit managers try to avoid losses, though they do not try to avoid negative earnings changes (Leone and Van Horn 2005: 835). As profit maximization is not an objective of non-profit organizations, this result is not surprising: managerial reputation, then, is based on the fact that managers convey the message that they do not endanger the financial viability of their organizations by accepting losses. Very idiosyncratic earnings management incentives are provided by the UK National Health Service Trusts, who are subject to a statutory obligation to break even (Ballantine *et al.* 2007: 421), both profits and losses resulting in problems, losses being more severely punished than profits. In such a situation it does not come as a surprise that in a sample of 859 (English) Trusts years (1999–2003) earnings manipulating (through discretionary accruals) towards zero is observed (*ibid.*: 433–436), ‘undermining’ the reliability of financial accounting information (*ibid.*: 438).

Christensen and Mohr (1995) frame their accounting choice study on US museums explicitly in a principal–agent context (1989 data on 106 museums, of which 84 are non-profit). The choice here is whether or not to capitalize the museum’s collection. There seems to be statistical support for political cost reasoning: the more federal government support is obtained, the less capitalization is observed. The results of Eldenburg and Vines (2004) can also be understood in a principal–agent framework. Using a sample of 98 non-profit hospitals located in Florida (1989–1991), they observe that hospitals with higher cash levels are more prone to report a larger share of their uncompensated care as charity care, and not as bad debt, signalling to the (fiscal) authorities that their tax-exempt status is fully justified. As labelling uncompensated care as charity care implies forgoing any cash collection (e.g. through Medicare or Medicaid), hospitals with lower cash levels have to trade off the expected cost of losing their non-profit status against the expected cost of illiquidity.

Retrospective funding based on costs (Chapter 7) contains an incentive to choose accounting methods aimed at reporting costs as high as possible. This effect is, of course, not specific to non-profit organizations, but applies to all kinds of organizations that are financed in that way.

Finally, it is not only financial accounting choices that are possible. As will be shown below, cost accounting procedures and methods can be geared towards purposeful signalling.

Financial statements of non-profit organizations

Content

Some authors contend that non-profit organizations' financial reports should 'reflect the service story of the entity instead of the net income or net loss' (Trigg and Nabangi 1995: 262), or at least should take account of the value of voluntary work (Mook *et al.* 2007: 60–61, observing 1 per cent of their sample described in the previous chapter doing this (*ibid.*: 63); see also Chapter 7 on the calculation of the volunteers' value), further bridging the informational gap between principal(s) and agent. Unfortunately for the adherents of this view, a financial statement is not an appropriate instrument to achieve this, as it is conceptually confined to the organization's financial situation. Other sorts of reporting should be produced to describe the non-financial performance of the organization (Falk 1992: 490), which is, without any doubt, far more important than its financial performance (Hyndman 1990: 304; Parsons 2003: 106), though the latter constrains the former to some extent. In that respect it is interesting to note that in a recent sample of 341 US museums (both public and non-profit), 76 annual reports contained no financial data whatsoever (Christensen and Mohr, 2003), let alone a financial statement.

Financial statement analysis

As far as financial analysis is concerned, there is no need to invent new concepts for non-profit organizations. Cash-flow, funds flow statement, profitability, liquidity, or financial structure ratios have the same interpretation as they have for profit organizations, though the operational implications of reaching certain values will be different, due to the differences in organizational goals (Abraham 2006). A dissenting view on the usefulness of profitability ratios for non-profit organizations is expressed by Wedig and Kwon (1995), who build on the old idea that

accounting rates of return should reflect, in a direct or indirect way, internal rates of return earned on investments, which they do according to some, but not according to these authors (see e.g. Salamon (1985) and Fisher and McGowan (1983) respectively for seminal papers on both sides).

The only conceptual problem is the interpretation of the value added figure. For a profit organization, its calculation and interpretation are founded on the assumption of perfectly competitive input and output markets, in which the unconstrained equilibria between demand and supply reveal the societal value attached to the goods and services sold. The value added of a firm (as a component of (gross or net) national product) then is naturally defined as the difference between the value of the firm's output and the value of its input, values which can be estimated by using items in the financial statement of the firm. Adapting this calculation method for non-profit organizations is straightforward, but the value obtained is meaningless, as the conditions of perfectly competitive output and input markets are met in only a few cases. This is not to say that non-profit organizations do not generate societal value. The point being made here is that financial statement information will not help in determining this value.

Cost accounting in non-profit organizations

Cost accounting principles

As is the case for financial accounting techniques, cost accounting techniques are alike in profit organizations and non-profit organizations, as exemplified by most cost accounting textbooks (such as Horngren *et al.* 2005), which contain applications to both kinds of organizations.

As is well known, some arbitrariness cannot be avoided when allocating indirect costs to cost objects, allowing the possibility of window dressing if cost accounting data are to become known outside the organization. Two situations can be considered: allocating indirect costs to profit activities and non-profit activities taking into consideration tax implications; and showing a high level of programme activities (as opposed to fundraising and administration; see also Chapter 7 on the price of donations) when faced with potential donors.

The cost of profit activities

Frequently, subsidizing authorities calculate the amount to be granted taking into consideration the cost of the subsidized activities, especially

when retrospective financing schemes are applied (see Chapter 7 and earlier in this chapter). If organizations develop both subsidized and non-subsidized activities, it is rather difficult for the authorities to have a clear picture of the relevant costs. Cost accounting reduces this information asymmetry, especially in cases where cost accounting regulations are enacted to guide the allocation of the indirect costs. Sometimes these regulations are very strict and sometimes they give the organizations some leeway, in which case organizations could be inclined to allocate as much of the indirect costs as possible (and allowed if they want to comply) to the subsidized activities. If the non-subsidized activities are taxed, some trade-off has to be made between higher subsidies and lower taxes payable. Furthermore, if the non-subsidized activity is developed on a profit market, overhead allocation techniques potentially distort competition in this market (Weisbrod 1988: 116).

Both the paper by Cordes and Weisbrod (1998: 208) (on 1,476 US non-profit organizations from the arts, education, health, and human services industries (data for 1992)) and that by Yetman (2001: 308–309) (on 703 US non-profit organizations for 1995–1997 from the education, health, and charity industries) document cost shifting behaviour towards taxable activities. A number of organizations seem to be too zealous when shifting costs. Three out of five organizations reporting taxable unrelated business income in the US in 1991 (32,690 observations) managed to report losses, which when aggregated exceeded the aggregated profits (Cordes and Weisbrod 1998: 201, referring to work by Riley). Remembering from Chapter 7 that profit activities by non-profit organizations are meant to generate profits, one can only hope that either applying creative allocation rules is the explanation for this situation, or at least that the balance of direct profit revenues and direct losses is positive, and not engaging in unprofitable ‘profit’ activities.

Finally, note that cost shifting away from non-profit activities to profit activities reduces the reported cost of the former, which then appear to have been performed more efficiently.

Donors and organizational costs

In Chapter 7 and earlier in this chapter it was shown that there are reasons to believe that inefficiency measures or the price of donations, defined as

$$\frac{F(1-t)}{C-A-f}$$

(where F is the amount of funds raised, t is the donor's (marginal) tax rate, C is total organizational costs, A is administrative costs net of fundraising costs, and f is fundraising costs), negatively affects the level of donations. Therefore, organizations have an incentive to guide indirect cost allocations in a way signalling high activity levels (Trussel 2003), especially when total programme costs (direct programme costs plus allocated indirect programme costs) are disclosed, together with the total administrative costs and the total fundraising costs. Krishnan *et al.* (2004) present empirical evidence of this. Comparing the data of 719 hospital-year observations (Californian non-profit hospitals, 1994–1998) in two databases that should contain the same data, they find that on average programme expenses reported in the publicly available database exceeded the same expenses reported in the other database by US\$13.9 million (Krishnan *et al.* 2004: 15). Furthermore, of the 95 hospitals reporting no fundraising expenses at all, at least 19 appear to have publicly documented fundraising activities (*ibid.*: 22; for a comparable result in which, in two samples, about 50 per cent of (respectively) more than 16,000 New York contribution receiving organizations and more than 16,000 US contribution receiving organizations (1992–1994) report fundraising expenses lower than 1 per cent of contributions, see Tinkelman (2006: 449)), apparently shifting the fundraising costs maximally to programme costs and/or administration costs. In their subsequent paper (Krishnan *et al.* 2006) they also find that the probability of not reporting any fundraising cost increases with the intensity of the relationship between donations and the share of programme costs in total costs. The same conclusion is reached when looking at the relationship between managerial remuneration and the share of programme costs.

Jones and Roberts (2006) do not look at programme activity share increasing manipulations, but at manipulations to dampen programme activity share variability. In their sample of 708 organization-year observations of US non-profit organizations (1992–2000), they indeed find such behaviour. Two methods are used for this: influencing the absolute level of indirect costs, and adapting the allocation base.

Clearly, auditing cost accounting data will contribute to their reliability when disclosed (Tate 2007: 51), reducing information asymmetries between potential donors and the organization.

9 Financial management in non-profit organizations

Introduction

Leaving aside dividend decisions, which are not relevant because of the non-distribution constraint, the technicalities of non-profit financial management do not differ from those of traditional corporate finance, once differences in objectives are taken into account. This does not imply that a specific non-profit financial theory is not conceivable, though such a theory has not yet been formulated, except for some fragmented contributions to be discussed below. In a few early papers, such as Sloan *et al.* (1988) and Wedig (1994), attempts are made to apply standard financial theory to non-profit organizations, but these can be deemed conceptually flawed, as these theories' foundations (portfolio selection to arrive at an optimal risk–return combination for the investor, with ensuing systematic risk levels for the portfolio components and their required returns) are meaningless in a non-profit context, exactly because of the non-distribution constraint, making investments in (portfolios of) 'shares' of non-profit organizations not really a (financially) rational thing to do.

The topics discussed in this chapter are the non-profit specific sources of funds and their respective weights, the cost of non-profit capital, the capital structure of non-profit organizations, and the issue of financial vulnerability of non-profit organizations.

Sources of funds

Terminology

As is the case for profit organizations, we can distinguish two major categories of funds in non-profit organizations. Here we will call them equity or net assets on the one hand, and debt or liabilities on the other.

The sum of the two equals the (accounting) value of all organizational assets (total assets), which is just another way of expressing the accounting equation. The relation between debt and equity is the organization's capital structure.

Equity

Diversification of equity

Equity of non-profit organizations can be far more diversified than equity of profit organizations, as more sources can be tapped. Tuckman (1993) distinguishes two categories: internal sources and external sources. The former consist of contributions when founding the organization (in cash or in kind), and profits/losses which have to be retained due to the non-distribution constraint, the latter all kinds of donations, gifts and subsidies. Although all sources are not easily accessible for all sorts of non-profit organizations (and sometimes, as already mentioned in Chapter 7, not wanted), too much reliance on one might make the organization vulnerable (Froelich 1999: 248, 253), both in a financial way (see below) and a functional way (when it has to face pressures to adapt organizational objectives ('goal displacement') or procedures). Too much diversification, on the other hand, possibly inflicts mutually exclusive obligations on the organization.

Salamon and Anheier (1998: 219) present a comparative description of the most important categories of funds received by non-profit organizations (classified in 11 activity categories) in eight countries (France, Germany, Hungary, Italy, Japan, Sweden, UK, US). They distinguish three sources of funds: privately paid fees (which indirectly add to equity, through the retained profit/loss of the organization), subsidies, and private donations. Table 9.1 shows a wide variation between countries and industries. To give just one example, the main funds for social services are private payments in one of the countries in the sample, subsidies in six of these countries, and private donations in another one.

Just looking at the predominant source of equity is a crude way of quantifying equity diversity. A more comprehensive measure is the diversity index (DI), which is based on the Herfindahl-Hirschman index of industrial concentration (n categories of equity Eq_i , with eq_i as the share of category i in total equity : $eq_i = Eq_i/\Sigma eq_i$):

$$DI = \sum_{i=1}^n eq_i^2$$

Table 9.1 Equity diversity in eight countries, by field (number of countries)

<i>Field</i>	<i>Dominant funding by</i>		
	<i>Private payments</i>	<i>Subsidies</i>	<i>Private donations</i>
Culture, recreation	8	0	0
Education, research	4	4	0
Health	2	5	1
Social services	1	6	1
Environment	6	2	0
Development, housing	5	2	1
Civic, advocacy	4	4	0
Philanthropy	6	2	0
International	1	3	4
Business, professional	8	0	0
Other	3	0	1

Source: Salamon and Anheier (1998: 219)

When all equity categories increase, eq_i^2 can be substituted by $(\Delta Eq_i / \Sigma \Delta Eq_i)^2$, the squared share of the increase in equity category i within the total increase in equity. DI then reflects the diversity of additional equity. The usefulness of DI as diversification variable stems from its property to be negatively correlated with diversification, its range being]0,1] (see Appendix XI).

Chang and Tuckman (1994) empirically try to understand revenue diversification (which amounts to work with a variation on $(\Delta Eq_i / \Sigma \Delta Eq_i)$ when calculating DI) on a US sample of 113,525 non-profit organizations (data for 1986). They consider nine categories ($n = 9$: donations, institutional charity, subsidies, programme revenues, membership dues, financial revenues from interests, dividends or rents, realized capital gains/losses, fundraising, other) (Chang and Tuckman 1994: 277). In a nutshell, they conclude that (ibid.: 281–284):

- the non-profit industry to which the organization belongs affects the organization's equity diversity;
- predominantly donative non-profit organizations are more diversified than predominantly commercial non-profit organizations, but the in-between organizations are even more diversified, though this last result can be partly induced by the way donative organizations and commercial organizations are defined, namely in terms of the share of respectively programme revenues and gifts and subsidies, which should exceed a threshold of 60 per cent;

- non-profit organizations reporting higher fundraising costs also have more diversified revenues.

Retaining earnings

As the non-distribution constraint does not imply that non-profit organizations are barred from making profits, the question arises whether it is better to accumulate profits (increasing equity) or to spend them in the pursuit of organizational objectives, eventually decreasing profits or even driving them to zero. Accumulating profits postpones some of the organization's activities, and makes the organization look wealthier, possibly inducing crowding out effects with respect to subsidies (Handy and Webb 2003) or donations (see Chapter 7). Therefore, organizations accumulating profits must perceive some advantages from this, compensating for these obvious disadvantages.

Chang and Tuckman (1990: 123 ff.) and Tuckman (1993: 208) discuss a number of these benefits: immediate availability (e.g. when confronted with unexpected client needs), a lower need to justify later use, a safety net for harsh times (see also Fisman and Hubbard 2003: 218), less reliance on capital markets, and collecting funds for future expansions. Furthermore, there is no uncertainty as to the amount of funds available, which allows the organization to use them in a straightforward way as collateral for debt. On top of that, the cost of retained earnings is lower than the cost of most alternatives (see below), at least when there are any alternatives. In general, one can say that retaining earnings in non-profit organizations mostly amounts to trading off current activities against (more) future activities.

Debt

Conceptually, debt of non-profit organizations is comparable to debt of profit organizations. Together with the spontaneous forms of debt (such as trade credit or tax (and other) accruals), all kinds of financial debt, including bonds, can also be observed. A specificity for non-profit organizations is the fact that two groups of financial debt can be distinguished (Jegers 1997: 70): market debt and nonmarket debt. Market debt stems from loans granted by banks or other commercial lenders at market conditions, whereas nonmarket debt is provided by individuals (possibly owners) or institutions sympathetic to the organization's mission. The financial cost of nonmarket debt, if any (Sloan *et al.* 1988), is lower than the cost of comparable market loans, as the lender's utility function contains more arguments than financial

risk and financial returns. Therefore, a traditional risk–return portfolio approach to determine the cost of nonmarket debt is inappropriate, as the additional utility increasing factors compensating for lower return levels are not taken into consideration.

As far as market debt is concerned, its presence might give rise to agency problems between the organization and its providers (Wedig *et al.* 1996: 1251), as the organization could be inclined to give priority to organizational objectives over financial health, a situation the lender would like to avoid as much as possible, for example by negotiating protective covenants.

In a number of countries, such as the US, systems exist by which interest paid to lenders by non-profit organizations is tax exempt. Whether a loan can be considered a market debt should then be assessed on an after-tax basis, notwithstanding the benefit for the borrowing organization. It is not inconceivable that such tax exemptions engender effects that some would label perverse. Gentry (2002: 858–860), on a sample of 2,454 US non-profit hospitals (in 1995), finds convincing evidence of what he calls ‘tax arbitrage’: ‘simultaneously borrowing in tax exempt markets and investing in non-operating assets (presumably with higher after-tax rates of return)’ (Gentry 2002: 858).

Cost of capital

Determining the cost of capital in a non-profit organization

No doubt equity providers and non-market debt providers do not primarily require the organization to generate financial surpluses, but expect the organization’s objectives to be aimed at (Ligon 1997: 68; Wedig 1994: 258), although they can also hope for prudent and rational financial management of the organization’s operations.

Together with the obvious financial requirements of the market lender, this puts some financial strain on the organization’s activities, in the sense that a minimal financial return on the funds invested might be necessary, not for the sake of profit maximization, but for the sake of financial health and survival. This return is called the *cost of capital*, as it incorporates the financial returns expected by all the contributors of funds, be it equity or debt. Therefore, the organization’s activities and projects should (at least) generate a financial return equal to this cost of capital.

Technically, the cost of capital is the weighted average of the cost of equity and the cost of debt, the weights being equal to the value of equity and the value of debt (taking into consideration the shares of market debt

and nonmarket debt if both categories of debt are used), relative to the total value of the organization. Theoretically, market values should be used, but these are not available in most circumstances. Therefore, departing from accounting figures is an accepted practice in empirical work. Further, from an economic point of view, a financial assessment of potential investments should be based on the marginal cost of capital, which is very difficult, if not impossible, to determine. Resorting to average values is a possible way out, though not always without validity problems.

In practice, measuring the cost of debt, both market debt and nonmarket debt, should not pose insurmountable problems.

This is not the case for the return on non-profit equity, for which no satisfying theory has been developed yet. An exception is found in the paper by Fama and Jensen (1985), who develop a reasoning based on the interaction between the need for funds and cost reductions to propose that the donor's discount rate play this role (Fama and Jensen 1985: 116), but this method has not gained wide acceptance, if any. Some would argue that the required rate of return on non-profit equity ought to be zero, at least for donors who 'merely wish to have a brass plaque on a ... wall' (Sloan *et al.* 1988: 38; see also Bowman (2002: 295)), or even negative if this allows the organization to pursue its objectives, or the donor's objectives, in an effective way. On the other hand, as described above in the section on retained earnings, equity providers might have good reasons to require the organization to generate a minimal return on equity. Logically, this return is lower than the expected cost of (nonmarket) debt, as otherwise the organization would be better off, in terms of the activity levels that can be reached, not by raising additional equity, but by issuing nonmarket debt. Note that for profit organizations, risk considerations unequivocally lead to the required return on equity being higher than that on debt.

Investment analysis in non-profit organizations

Is there any empirical indication of non-profit managers using a required return criterion when making investment decisions? There is only one, rather old, empirical study on the matter (Kamath and Oberst 1992). In a survey on a sample of 67 rather large US hospitals (1989), they find the average required rates of return presented in Table 9.2.

For this sample the required return of non-profit organizations is lower than the required return of profit organizations, which is at least compatible with the idea that the return required on equity is lower for the former than for the latter, and the fact that non-profit organizations

Table 9.2 Required rates of return in investment decisions (67 US hospitals, 1989)

	<i>Required rate of return (%)</i>
Public hospitals	8.19
Non-religious non-profit hospitals	9.75
Religious hospitals	10.36
Profit hospitals	12.50

Source: Kamath and Oberst (1992: 210)

can attract non-market debt, especially if it can be assumed that there need not be a substantial difference in the cost of market debt between the two institutional forms.

The same authors also note that about one-third of the sample still applied payback methods when evaluating investment proposals, instead of the theoretically correct present value based techniques (*ibid.*: 210–214).

Capital structure

The fact that for non-profit organizations the cost of equity is lower than the cost of debt implies that their most efficient capital structure would consist only of equity. But it is also ‘a stylized fact that almost all [non-profit] hospitals have debt obligations’ (Wedig *et al.* 1988: 21). This statement is also valid for a large number of other non-profit organizations: slightly more than 50 per cent in the Californian sample of 22,766 non-profit organizations (1999) of Jegers and Verschueren (2006) show any form of debt, and less than 20 per cent of their sample have any financial debt (tax-exempt bonds, mortgages, and other notes payable) (Jegers and Verschueren 2006: 320), begging the question how the presence of debt can be explained. Bacon (1992) and Bowman (2002), on samples of 200 randomly chosen US non-profit general independent hospitals with more than 100 beds (1989 data), and of 1,393 US non-profit organizations (1991–1994), respectively, assess the explanatory power of two classic profit organization capital structure theories: the static trade-off theory (grounded by considering the investor’s tax exemptions as an equivalent to the profit organization’s tax deductability of interests) and the pecking order theory (see below; its idea is that the cheapest sources of funds will be tapped first). Their conclusions are divergent: Bacon (1992: 88) concludes that ‘the pecking order hypothesis applies to [non-profit hospitals]’ and that the ‘[s]tatic

tradeoff ... does not seem to describe actual financing behaviour of [non-profit hospitals]' (ibid.: 89), whereas Bowman states that 'non-profit managers ... appear to use a static trade-off decision rule' (Bowman 2002: 308). There is probably no justification at all for framing the non-profit capital structure question into a traditional capital structure theory, as the objectives and incentives of the key players and organizations differ substantially from those involved in a profit environment.

A non-profit specific capital structure theory is presented by Jegers and Verschuere (2006: 312–314). They consider three groups of reasons explaining the presence and amount of debt in non-profit organizations.

A standard pecking order reasoning (Myers 1984) adapted to non-profit organizations would imply the following financing policy: avoid as much debt as possible in order to minimize the overall cost of capital, and resort to debt only when the equity available (donations, gifts, subsidies, retained earnings, contributions) does not cover the organization's financial needs. Following Gentry (2002: 846), such a case is labelled a situation in which *equity constraints* prevail.

A second group of reasons stems from potential agency problems (see also Chapter 8). Control rights enjoyed by managers enable them to extract rents. Mitigating the ensuing agency costs by designing incentive-based managerial remuneration contracts, a standard method in profit organizations, is less conceivable in non-profit organizations (see Chapter 5 on this), but issuing debt as an indirect way for the principals to monitor management might do the job (Jensen 1986). Repayment and interest obligations, and the concomitant screening by the lenders, can be assumed to curtail managerial discretion.

Non-profit organizations facing equity constraints do not automatically have access to (market or non-market) debt. For a variety of reasons some non-profit organizations are rightly or wrongly considered to be a 'good risk' by potential lenders, and other a 'bad risk'. Non-profit organizations unjustly considered bad risks are subject to *borrowing constraints* (Calem and Rizzo 1994). This story is the mirror image of the financing constraints reasoning developed for profit organizations in Fazzari *et al.* (1996).

Jegers and Verschuere (2006) submit two questions to empirical testing in their sample described earlier in this chapter. How can the presence of debt be explained, and, for debt carrying organizations, how can the amount of debt be understood? A first conclusion is that the mechanism governing the decision to borrow differs from the mechanism determining the amount to be borrowed, once the decision to

borrow has been made. Size, for example, has a significantly positive effect on the borrowing decision, but is negatively related to the amount borrowed (*ibid.*: 322). The results concerning the three groups of reasons described above are mixed, possibly due to the proxies that had to be used. Potential agency problems seem to have a debt increasing effect (except for the amount of financial debt), whereas less severe equity constraints reduce the amount of debt, except at very low levels of equity constraints.

Financial vulnerability

The least that can be expected from an organization's financial management is that it aims to reduce its financial vulnerability, avoiding default payments and hence some form of bankruptcy or forced cessation of activities.

Though the use of the standard financial concepts such as liquidity, profitability or financial leverage cannot be excluded in assessing an organization's financial health (see also Chapter 8), Chang and Tuckman (1991: 659–662) propose, without any theoretical or empirical justification, four criteria to assess a non-profit organization's financial vulnerability:

- capital structure, in accordance with traditional financial failure analysis: the more equity, the less vulnerable. The ratio they use in their descriptive empirical work (4,370 US non-profit organizations for 1983 and 6,168 for 1985) is equity divided by revenues, but as this is the ratio of a stock variable and a flow variable, standard capital structure ratios (such as equity/total assets or equity/debt) relating two stock variables seem to be more appropriate;
- revenue diversification, which is discussed earlier in this chapter;
- the relative level of administrative costs. Their argument, which is open to dispute, is that high levels of administrative costs are relatively easy to cut back in times of financial hardship, without impacting on the organization's activities;
- profitability, measured by the authors as operational profit/loss divided by revenues. The higher this ratio, the less vulnerable the organization.

Hager (2001) assesses the predictive power of the four Chang-Tuckman vulnerability indicators on a sample of 7,266 US non-profit art organizations for 1990–1992, looking at their survival in 1994–1997. Apart from a very few exceptions, these indicators are not at all

mutually correlated (Hager 2001: 384). In a multivariate setting (*ibid.*: 387) the four indicators have the expected (and significant) effect on survival in the theatre subsample (2,043 observations), and three of them do so in the instrumental and choral music subsample (2,483 observations), the only exception being profitability, whose coefficient carries the expected sign, but is not significant. In the other subsamples (visual arts, museums, performing arts including schools and centres, dance organizations) only a few significant coefficients are observed. Therefore, generally speaking, the predictive power of the model seems rather modest, even within the arts sectors (*ibid.*: 389). A comparable exercise is done by Trussel (2002) on a sample of 39,993 US non-profit organizations (data for 1996), defining financial vulnerability as a situation in which an equity decrease of at least 20 per cent is observed over 1997–1999 (7,161 organizations being vulnerable according to this definition). Due to data limitations the administrative cost measure is not included, but size is added to the logit estimation. Controlling for industry, the three Chang-Tuckman indicators perform as predicted, whereas there is also a significant positive effect of size on financial health (Trussel 2002: 25). For this study also, and despite the good performance of the explanatory variables, when predicting financial problems ‘the error rates are still relatively high’ (*ibid.*: 26). Keating *et al.* (2005) have data on more than 280,000 US organizations (1998–2000). They use four different variables to measure financial vulnerability (negative net assets, and a 25 per cent decrease over one year in equity, revenues, and programme expenses respectively), and reach comparable significance results, but also comparable explanatory power. Adding two independent variables to their model substantially increases its performance without making it more than modest. The variables are the share of commercial revenues (the more, the less vulnerable), and returns on endowments (the more, the less vulnerable).

10 *Gaudium et spes*

Before the 1980s, non-profit organizations were absent from mainstream economic thinking, as illustrated by the statement by Hansmann (1986: 57) at that time, that ‘the existing literature in ... economics ... has largely overlooked non-profit institutions’, the reason being, also at that time, that ‘economists usually view[ed] non-profits as economic anomalies, organizations outside the “real” economic system’ (Easley and O’Hara 1986: 85). Looking at the period starting in the 1980s, Steinberg (2004), in his introduction to the collection of the most important papers under the heading ‘The economics of non-profit enterprises’, sees three waves of academic research on the topic. The first deals with the non-profit organization’s objective function, the second with its role, and the third tries to integrate the two. Concluding, he states that ‘it is fair to say we now have a rudimentary understanding of the role and behaviour of non-profit organizations within a broader economy’ (Steinberg 2004: xxxviii). These aspects are the subject of Chapters 3 to 5 of this book.

A comparison of the contents of the Steinberg volume with the contents of books on profit organizations carrying similar titles such as *Economics, organization and management* (Milgrom and Roberts 1992) or *Managerial economics and organization* (Acs and Gerlowski 1996) reveals that the latter contain a substantial number of chapters on the economics of the internal functioning of firms, whereas the first only casually touches upon this topic (see also Chapter 1), a situation exactly reflecting the ‘*status questionis*’ of both strands of research. This led us to state, also in 2004, that ‘... for internal functioning, economic theorists, and those disciplines that are heavily influenced by economic thought, have failed to explain the microeconomic internal functioning of non-profit organizations’ (Helmig *et al.* 2004: 112). Chapters 6–9 of this book show that this conclusion might have been too

pessimistic, though most of the references there are very recent. Furthermore, the sources from which they are drawn are very diverse and frequently outside the circle of the 'usual suspects' browsed by non-profit researchers. This might also explain the fact that these contributions do not always depart from the same conceptual framework, even when defining non-profit organizations, thus making comparison, let alone integration, difficult. Therefore, Chapters 6–9 of this book can only be, at best, considered to be a first step towards some kind of integration of the managerial economic insights related to non-profit organizations' strategic management, marketing, accounting and finance, together with the human resources management aspects developed in Chapter 5 (remuneration, selection). This does not imply that everything has been said on the demand/supply aspects of non-profit organizations. As Chapters 3–5 show, a lot of work remains to be done in this respect also.

Though the title of this chapter has no connection with the pastoral document with the same title issued by the Roman Catholic Church after the Second Vatican Council, it perfectly reflects the actual situation of managerial economic research on non-profit organizations. We have enough reasons to be glad to have witnessed during the last two decades or so a growing body of high-quality research (*gaudium*), even though the parts of this body do not always seem to be connected with each other. The increasing rate at which this body grows, can only make us hope (*spes*) that it eventually will turn into a homogeneous and useful set of insights, of the same level, in all respects, as the level reached in the 'theory of the firm'. Given the role of non-profit organizations in society, this is something they deserve.

Appendices

Appendix I: Further details of the international classification of non-profit organizations (ICNPO)

Group 1 Culture and recreation

1 100 Culture and arts

Media and communications. Production and dissemination of information and communication; includes radio and TV stations; publishing of books, journals, newspapers and newsletters; film production; and libraries.

Visual arts, architecture, ceramic art. Production, dissemination and display of visual arts and architecture; includes sculpture, photographic societies, painting, drawing, design centres and architectural associations.

Performing arts. Performing arts centres, companies and associations; includes theatre, dance, ballet, opera, orchestras, chorals and music ensembles.

Historical, literary and humanistic societies. Promotion and appreciation of the humanities, preservation of historical and cultural artifacts and commemoration of historical events; includes historical societies, poetry and literary societies, language associations, reading promotion, war memorials and commemorative funds and associations.

Museums. General and specialized museums covering art, history, sciences, technology and culture.

Zoos and aquariums.

1 200 Sports

Provision of amateur sport, training, physical fitness and sport competition services and events; includes fitness and wellness centres.

1 300 Other recreation and social clubs

Recreation and social clubs. Provision of recreational facilities and services to individuals and communities; includes playground associations, country clubs, men's and women's clubs, touring clubs and leisure clubs.

Service clubs. Membership organizations providing services to members and local communities, for example, Lions, Zonta International, Rotary Club and Kiwanis.

Group 2 Education and research

2 100 Primary and secondary education

Elementary, primary and secondary education. Education at elementary, primary and secondary levels; includes pre-school organizations other than day care.

2 200 Higher education

Higher education. Higher learning, providing academic degrees; includes universities, business management schools, law schools and medical schools.

2 300 Other education

Vocational/technical schools. Technical and vocational training specifically geared towards gaining employment; includes trade schools, paralegal training and secretarial schools.

Adult/continuing education. Institutions engaged in providing education and training in addition to the formal educational system; includes schools of continuing studies, correspondence schools, night schools and sponsored literacy and reading programmes.

2 400 Research

Medical research. Research in the medical field; includes research on specific diseases, disorders or medical disciplines.

Science and technology. Research in the physical and life sciences and engineering and technology.

Social sciences, policy studies. Research and analysis in the social sciences and policy area.

Group 3 Health

3 100 Hospitals and rehabilitation

Hospitals. Primarily inpatient medical care and treatment.

Rehabilitation. Inpatient health care and rehabilitative therapy to individuals suffering from physical impairments due to injury, genetic defect or disease and requiring extensive physiotherapy or similar forms of care.

3 200 Nursing homes

Nursing homes. Inpatient convalescent care and residential care, as well as primary health-care services; includes homes for the frail elderly and nursing homes for the severely handicapped.

3 300 Mental health and crisis intervention

Psychiatric hospitals. Inpatient care and treatment for the mentally ill.

Mental health treatment. Outpatient treatment for mentally ill patients; includes community mental health centres and halfway homes.

Crisis intervention. Outpatient services and counsel in acute mental health situations; includes suicide prevention and support to victims of assault and abuse.

3 400 Other health services

Public health and wellness education. Public health promotion and health education; includes sanitation screening for potential health hazards, first aid training and services and family planning services.

Health treatment, primarily outpatient. Organizations that provide primarily outpatient health services, e.g., health clinics and vaccination centres.

Rehabilitative medical services. Outpatient therapeutic care; includes nature cure centres, yoga clinics and physical therapy centres.

Emergency medical services. Services to persons in need of immediate care; includes ambulatory services and paramedical emergency care, shock/trauma programmes, lifeline programmes and ambulance services.

Group 4 Social services

4 100 Social services

Child welfare, child services and day care. Services to children, adoption services, child development centres, foster care; includes infant-care centres and nurseries.

Youth services and youth welfare. Services to youth; includes delinquency prevention services, teen pregnancy prevention, drop-out prevention, youth centres and clubs and job programmes for youth; includes YMCA, YWCA, Boy Scouts, Girl Scouts and Big Brothers/Big Sisters.

Family services. Services to families; includes family life/parent education, single parent agencies and services and family violence shelters and services.

Services for the handicapped. Services for the handicapped; includes homes, other than nursing homes, transport facilities, recreation and other specialized services.

Services for the elderly. Organizations providing geriatric care; includes in-home services, homemaker services, transport facilities, recreation, meal programmes and other services geared towards senior citizens (does not include residential nursing homes).

Self-help and other personal social services. Programmes and services for self-help and personal development; includes support groups, personal counseling and credit counseling/money management services.

4 200 Emergency and relief

Disaster/emergency prevention and control. Organizations that work to prevent, predict, control and alleviate the effects of disasters, to educate or otherwise prepare individuals to cope with the effects

of disasters, or to provide relief to disaster victims; includes volunteer fire departments, life boat services etc.

Temporary shelters. Organizations providing temporary shelters to the homeless; includes travellers' aid and temporary housing.

Refugee assistance. Organizations providing food, clothing, shelter and services to refugees and immigrants.

4 300 *Income support and maintenance*

Income support and maintenance. Organizations providing cash assistance and other forms of direct services to persons unable to maintain a livelihood.

Material assistance. Organizations providing food, clothing, transport and other forms of assistance; includes food banks and clothing distribution centres.

Group 5 Environment

5 100 *Environment*

Pollution abatement and control. Organizations that promote clean air, clean water, reducing and preventing noise pollution, radiation control, treatment of hazardous wastes and toxic substances, solid waste management and recycling programmes.

Natural resources conservation and protection. Conservation and preservation of natural resources, including land, water, energy and plant resources for the general use and enjoyment of the public.

Environmental beautification and open spaces. Botanical gardens, arboreta, horticultural programmes and landscape services; organizations promoting anti-litter campaigns; programmes to preserve the parks, green spaces and open spaces in urban or rural areas; and city and highway beautification programmes.

5 200 *Animal protection*

Animal protection and welfare. Animal protection and welfare services; includes animal shelters and humane societies.

Wildlife preservation and protection. Wildlife preservation and protection; includes sanctuaries and refuges.

Veterinary services. Animal hospitals and services providing care to farm and household animals and pets.

Group 6 Development and housing

6 100 Economic, social and community development

Community and neighbourhood organizations. Organizations working towards improving the quality of life within communities or neighbourhoods, e.g., squatters' associations, local development organizations and poor people's cooperatives.

Economic development. Programmes and services to improve economic infrastructure and capacity; includes building of infrastructure, such as roads, and financial services, such as credit and savings associations, entrepreneurial programmes, technical and managerial consulting and rural development assistance.

Social development. Organizations working towards improving the institutional infrastructure and capacity to alleviate social problems and to improve general public well-being.

6 200 Housing

Housing associations. Development, construction, management, leasing, financing and rehabilitation of housing.

Housing assistance. Organizations providing housing search, legal services and related assistance.

6 300 Employment and training

Job training programmes. Organizations providing and supporting apprenticeship programmes, internships, on the job training and other training programmes.

Vocational counseling and guidance. Vocational training and guidance, career counseling, testing and related services.

Vocational rehabilitation and sheltered workshops. Organizations that promote self-sufficiency and income generation through job training and employment.

Group 7 Law, advocacy and politics

7 100 Civic and advocacy organizations

Advocacy organizations. Organizations that protect the rights and promote the interests of specific groups of people, e.g., the physically handicapped, the elderly, children and women.

Civil rights associations. Organizations that work to protect or preserve individual civil liberties and human rights.

Ethnic associations. Organizations that promote the interests of or provide services to members belonging to a specific ethnic heritage.

Civic associations. Programmes and services to encourage and spread civic mindedness.

7 200 *Law and legal services*

Legal services. Legal services, advice and assistance in dispute resolution and court-related matters.

Crime prevention and public policy. Crime prevention to promote safety and precautionary measures among citizens.

Rehabilitation of offenders. Programmes and services to reintegrate offenders; includes halfway houses, probation and parole programmes, prison alternatives.

Victim support. Services, counsel and advice to victims of crime.

Consumer protection associations. Protection of consumer rights and the improvement of product control and quality.

7 300 *Political organizations*

Political parties and organizations. Activities and services to support the placing of particular candidates into political office; includes dissemination of information, public relations and political fund-raising.

Group 8 *Philanthropic intermediaries and voluntarism promotion*

8 100 *Grant-making foundations*

Grant-making foundations. Private foundations; including corporate foundations, community foundations and independent public-law foundations.

8 200 *Other philanthropic intermediaries and voluntarism promotion*

Volunteerism promotion and support. Organizations that recruit, train and place volunteers and promote volunteering.

Fund-raising organizations. Federated, collective fund-raising organizations; includes lotteries.

Group 9 International

9 100 International activities

Exchange/friendship/cultural programmes. Programmes and services designed to encourage mutual respect and friendship internationally.

Development assistance associations. Programmes and projects that promote social and economic development abroad.

International disaster and relief organizations. Organizations that collect, channel and provide aid to other countries during times of disaster or emergency.

International human rights and peace organizations. Organizations which promote and monitor human rights and peace internationally.

Group 10 Religion

10 100 Religious congregations and associations

Congregations. Churches, synagogues, temples, mosques, shrines, monasteries, seminaries and similar organizations promoting religious beliefs and administering religious services and rituals.

Associations of congregations. Associations and auxiliaries of religious congregations and organizations supporting and promoting religious beliefs, services and rituals.

Group 11 Business and professional associations, unions

11 100 Business associations

Business associations. Organizations that work to promote, regulate and safeguard the interests of special branches of business, e.g., manufacturers' association, farmers' association and bankers' association.

11 200 Professional associations

Professional associations. Organizations promoting, regulating and protecting professional interests, e.g., bar associations and medical associations.

11 300 Labour unions

Labour unions. Organizations that promote, protect and regulate the rights and interests of employees.

Source: United Nations (2003: Annex A1)

Appendix II: Brooks-Ondrich (2007) method to determine the organizational objective function

To determine the first-order optimality conditions (assuming the second-order conditions are met), we derive the organizational utility function

$$U_{\text{np0}} = k_1(R+S+F(f,y)-f-A) + k_2(R+S+F(f,y)) + (1-k_1-k_2)((R+S+F(f,y)-f-A)/y)$$

with respect to the choice parameters f and y , which are assumed not to be influenced by each other (subscripts describing partial derivatives):

$$k_1(F_f - 1) + k_2(F_f) + (1-k_1-k_2)((F_f - 1)/y) = 0 \quad (\text{II.1})$$

$$k_1(R_y + F_y) + k_2(R_y + F_y) + (1-k_1-k_2)((R_y + F_y)/y) - (1-k_1-k_2)((R+S+F(f,y)-f-A)/y^2) = 0$$

Inserting the three configurations of the k_i parameters described in the main text, leads directly to the conditions to be proved.

Appendix III: Proofs of an agent selection model, based on Besley and Ghatak (2005)

Part 1

First it is proved that at least one of the constraints should bind in an optimum. Suppose this is not the case: then w_i can be reduced without violating the constraints, simultaneously increasing the principal's utility. Therefore the original situation cannot be optimal.

Suppose now that the participation constraint binds, but not the subsistence constraint. In order not to violate the participation constraint, reducing w_i should be accompanied by an increase in b_i . Differentiating the binding participation constraint with respect to w_i results in the following condition for the change in b_i : $(b_i + \theta_i)db_i/dw_i = -1$.

Substituting $e_i = b_i + \theta_i$ in the maximand, differentiating with respect to w_i and then substituting $db_i/dw_i = -1/(b_i + \theta_i)$ results in $b_i - \pi < 0$ (Besley and Ghatak 2005: 620, n11). Decreasing w_i then results in an increase in the principal's utility, which therefore could not have been optimal in the first place. Concluding, the subsistence constraint must bind.

Part 2

The maximand now is $(\pi - b_i)(b_i + \theta_i) - w_{\min}$ substituting $(b_i + \theta_i)$ for e_i . Deriving this with respect to b_i leads to the result in the main text.

Part 3

Substituting $b_i = (\pi - \theta_i)/2$ in $(\pi - b_i)(b_i + \theta_i) - w_{\min}$ results in the expression described in the main text.

Appendix IV: Derivation of the sustainable growth rate of a non-profit organization (Jegers 2003)

Given the definitions of the variables in the main text, the return on assets can be written as

$$m = (Eq_1 - Eq_0)/TA_1$$

By definition, total assets can be expressed in the following way:

$$TA_1 = y_1/\alpha_1 = Eq_0 + (Eq_1 - Eq_0) + D_1$$

from which

$$SGR = \frac{y_1 - y_0}{y_0} = \frac{\alpha_1(Eq_0 + (Eq_1 - Eq_0) + D_1)}{y_0} - 1$$

Substituting y_0 by $\alpha_0 TA_0$, $(Eq_1 - Eq_0)$ by mTA_1 , and Eq_1 by D_t/d_t , results, after some tedious algebraic manipulations, in

$$SGR = \frac{(1 + d_1)\alpha'}{(1 + d_0)(1 - (1 + d_1)m)} - 1$$

Appendix V: Changes in demand and uncompensated care (Banks *et al.* 1997)

Part 1

We assume the following characterizations of the functions involved, using subscripts to describe partial derivatives:

$$\begin{array}{llll} P_y < 0 & P_d > 0 & (Py)_y < 0 & V_y > 0 \\ V_N > 0 & V_{yy} > 0 & V_{NN} > 0 & V_{yN} > 0 \end{array}$$

The Lagrangian of the optimization problem is

$$U_{np}(N) - \lambda(P(y; d) \cdot y - V(y, N) - F_x) = U_{np}(N) - \lambda\Pi$$

with the Lagrangian parameter λ .

With subscripts again describing partial derivatives, the first order conditions for a maximum are:

$$\begin{array}{l} U_{np,N} - \lambda\Pi_N = 0 \\ \Pi_y = 0 \\ \Pi = 0 \end{array}$$

These conditions have to be met whatever the value of d . Therefore

$$\Pi_d = 0 = P_{y_d}y_d + P_dy + P_yd - V_yy_d - V_NN_d = (P_yy + P - V_y)y_d + P_dy - V_NN_d$$

As the expression in parentheses exactly equals Π_y , which is zero according to the second first-order condition, this can be written as

$$\Pi_y y_d + P_d y - V_N N_d = P_d y - V_N N_d$$

This being zero implies $N_d = P_d y / V_N$, which is positive as all the variables involved are positive. Therefore increasing demand goes together with increasing uncompensated care.

Part 2

Assume a profit hospital has to pay an amount $L(N)$ to the authorities for not providing enough uncompensated care, with $L_N < 0$ and $L_{NN} < 0$. The hospital's profit therefore is now

$$\Pi = P(y;d) \cdot y - V(y,N) - F_x - L(N)$$

Choosing y and N to maximize profits implies the following first-order conditions, with subscripts describing partial derivatives:

$$\begin{aligned} P_y y + P - V_y &= 0 \\ -V_N - L_N &= 0 \end{aligned}$$

Both conditions have to be met whatever the value of d . Therefore

$$\begin{aligned} P_{yd} y + P_{yy} y_d y + P_y y_d + P_y y_d + P_d - V_{yy} y_d - V_{yN} N_d &= 0 \\ -V_{NN} N_d - V_{Ny} y_d - L_{NN} N_d &= 0 \end{aligned}$$

This is a system of two linear equations in two unknowns (N_d and y_d) which can be solved applying Cramer's rule. For N_d the following expression can be derived:

$$N_d = \frac{(P_{yd} y + P_d) V_{Ny}}{V_{yN}^2 - (-L_{NN} - V_{NN})(P_{yy} y + 2P_y - V_{yy})}$$

As $\partial^2 \Pi / \partial y^2 = P_{yy} y + 2P_y - V_{yy}$, $\partial^2 \Pi / \partial N^2 = -V_{NN} - L_{NN}$, and $\partial^2 \Pi / \partial y \partial N = -V_{yN}$, the denominator is the opposite of the Hessian determinant of Π . Assuming again that the second-order conditions are met, the Hessian is negative definite, and its determinant positive. The denominator of N_d therefore is negative. As long as $P_{yd} > 0$ (the inverse demand curve getting flatter with increasing demand), the numerator is clearly positive. More generally, this is the case when $(P_{yd} y + P_d) > 0$, the expression in parentheses being the derivative of $P_d y$ with respect to y . This derivative being positive describes a situation in which, with increasing demand, sales increase more for higher values of y . Under

this condition N_d is negative, implying that the profit hospital decreases its provision of uncompensated care with increasing demand.

Appendix VI: A simplified version of Liu and Weinberg's (2004) model on non-profit-profit competition

Part 1

Deriving $\Pi_p = \frac{1}{2} (P_p - c_p)(1 - P_p + \theta P_{np}) = \frac{1}{2} (P_p - c_p - P_p^2 + c_p P_p + \theta P_p P_{np} - \theta c_p P_{np})$ with respect to P_p and setting this equal to zero leads to the result in the main text.

Part 2

Demand for the non-profit organization is

$$q_{np} = \frac{1}{2} (1 - P_{np} + \theta P_p)$$

Given the optimal price for the profit organization, this can be written as

$$q_{np} = \frac{1}{2} (1 - P_{np} + \frac{1}{2}\theta (1 + \theta P_{np} + c_p)) = \frac{1}{2} (1 - (1 - \frac{1}{2}\theta^2)P_{np} + \frac{1}{2}\theta(1 + c_p))$$

From $\theta < 1$ we have $(1 - \frac{1}{2}\theta^2) > 0$, making q_{np} larger for smaller values of P_{np} . Given the zero profit constraint, the lowest possible value is c_{np} .

Part 3

In a duopoly with two identical profit organizations their optimal prices would be determined by the following reaction curves:

$$P_p^* = \frac{1}{2} (1 + \theta P_p^* + c_p)$$

from which

$$P_p^* = (1 + c_p)/(2 - \theta)$$

We will prove that $(1 + c_p)/(2 - \theta) > \frac{1}{2} (1 + \theta c_p + c_p) (\geq \frac{1}{2} (1 + \theta c_{np} + c_p))$. A necessary and sufficient condition for the first inequality to hold is $0 > c_p - 1 - \theta c_p$. As $c_p < 1$ this condition is always met.

Part 4

In a duopoly with two profit organizations, their profit is

$$\frac{1}{2} \left(\frac{1+c_p}{2-\theta} - c_p \right) \left(1 - (1-\theta) \frac{1+c_p}{2-\theta} \right)$$

The profit organization’s profit when competing a non-profit organization is

$$\frac{1}{2} \left(\frac{1+\theta c_{np} + c_p}{2} - c_p \right) \left(1 - \frac{1-\theta c_{np} + c_p}{2} \right) \tag{VI.2}$$

As proved in part 3 of this Appendix, the first bracketed factor of (VI.1) exceeds the first bracketed factor of (VI.2). This is also the case for the second bracketed factors, as a necessary and sufficient condition for this is $-2\theta - 2\theta c_p < -2\theta c_{np} - \theta + \theta^2 c_{np} - \theta c_p$. As $c_p < 1$ and $c_{np} \leq c_p$, this condition is always met, even when $c_{np} = c_p$. From (VI.2) it is also clear that decreasing c_{np} (and thus increasing the cost advantage to the non-profit organization in the market) will decrease the profit organization’s profit even further, but only marginally. Compared with a situation with no cost differences, the difference affects only the profit organization’s profit in each factor of (VI.2) through $(c_{np} - c_p)\theta/2$.

Appendix VII: Wealth and voluntarily joining a board (based on Handy (1995))

In order to make the notation less cumbersome, the subscript ‘b’ will be dropped here, as this will not entail any notational ambiguity. Partial derivatives with respect to W will be denoted with an accent.

In this Appendix we will try to establish the sign of $\partial \hat{s} / \partial W$. As its denominator is a squared expression (different from zero), it is always positive. Therefore the sign of the numerator is also the sign of $\partial \hat{s} / \partial W$.

The numerator equals

$$(U^+ - U)(U^{\circ\prime} - U^{-\prime}) - (U^{+\prime} - U^{-\prime})(U^{\circ} - U)$$

As $\partial^2 U_b / \partial W \partial Rep < 0$, both $(U^{\circ\prime} - U^{-\prime})$ and $(U^{+\prime} - U^{-\prime})$ are negative, the last expression being larger in absolute value. If $\partial \hat{s} / \partial W$ were to be negative, the following condition should consequently prevail:

$$(U^+ - U)(U^{\circ\prime} - U^{-\prime}) < (U^{+\prime} - U^{-\prime})(U^{\circ} - U)$$

It is easy to see that the same condition must apply for $\partial\hat{s}/\partial W$ to be negative when reputation and wealth are complements ($\partial^2 U_b/\partial W\partial \text{Rep} > 0$).

Appendix VIII: Effect of different subsidy regimes on output and slack (Duizendstraal and Nentjes 1994)

Part 1: Lump sum subsidy

Substituting $S = S_{ls}$ and $C = C_d(y_d) + C_s(y_s)$ in the break-even condition, taking into consideration that $C_s(y_s) = c_s y_s$, gives with a slightly simplified notation

$$S_{ls} + R = C_d + c_s y_s$$

from which $y_s(y_d)$ can be derived:

$$y_s = (S_{ls} + R - C_d)/c_s$$

Taking the first derivative with respect to y_d leads to the expression in the main text.

Part 2: Input subsidy

Substituting $S = sC$ and $C = C_d(y_d) + C_s(y_s)$ in the break-even condition, taking into consideration that $C_s(y_s) = c_s y_s$, gives with a slightly simplified notation

$$S(C_d + c_s y_s) + R = C_d + c_s y_s$$

from which

$$y_s = (R - (1-s)C_d)/(1-s)c_s$$

Taking the first derivative with respect to y_d leads to the expression in the main text.

Part 3: (Desired) output subsidy

Substituting $S = g y_d$ and $C = C_d(y_d) + C_s(y_s)$ in the break-even condition, taking into consideration that $C_s(y_s) = c_s y_s$, gives with a slightly simplified notation

$$gy_d + R = C_d + c_s y_s$$

from which

$$y_s = (gy_d + R - C_d)/c_s$$

Taking the first derivative with respect to y_d leads to the expression in the main text.

Part 4: Revenue based subsidy

Substituting $S = tR$ and $C = C_d(y_d) + C_s(y_s)$ in the break-even condition, taking into consideration that $C_s(y_s) = c_s y_s$, gives with a slightly simplified notation

$$gy_d + R = C_d + c_s y_s$$

from which

$$y_s = ((1+t)R - C_d)/c_s$$

Taking the first derivative with respect to y_d leads to the expression in the main text.

Appendix IX: Socially optimal income tax rate (Kaplou 1995)

From (7.3) we obtain that the following condition must hold

$$\partial U_W / \partial F = (a/(1-t)) \partial U_{TA} / \partial F + b \partial U_G / \partial F$$

whereas (7.4) leads to

$$\partial U_W / \partial F = (1+a) \partial U_{TA} / \partial F + b \partial U_G / \partial F$$

A sufficient condition for both expressions to describe the same situation is

$$a/(1-t) = (1+a)$$

from which

$$t = 1/(1+a)$$

Appendix X: Profit activities by non-profit organizations (Schiff and Weisbrod 1991)

The Lagrangian of the optimization problem is

$$U_{np}(y_d, y_c) - \lambda (F(y_d, y_c) + P_d y_d + P_c y_c - C(y_d, y_c))$$

with the Lagrangian parameter λ , from which we find the first-order optimality conditions:

$$\partial U_{np} / \partial y_d = \lambda (\partial F / \partial y_d + P_d - \partial C / \partial y_d) \quad (X.1)$$

$$\partial U_{np} / \partial y_c = \lambda (\partial F / \partial y_c + P_c - \partial C / \partial y_c) \quad (X.2)$$

λ is negative, as it measures the marginal utility of no longer breaking even: not spending the whole budget available requires producing more of the commercial output (which generates funds, as shown below) and/or less of the desired output, reducing the organization's utility.

In (X.1), the left-hand side is assumed to be positive. Therefore, the absolute value of $\partial C / \partial y_d$ should be larger than the marginal revenue of the desired output ($\partial F / \partial y_d + P_d$). As (X.2) is assumed not to be positive, as is $\partial F / \partial y_c$, $P_c \geq -(\partial F / \partial y_c - \partial C / \partial y_c)$. Both conclusions lead to the statements in the main text.

Appendix XI: Properties of the diversification index

The diversification index is defined as

$$DI = \sum_{i=1}^n eq_i^2$$

The eq_i are defined in such a way that $\sum eq_i = 1$.

If only one of the equity categories is different from zero, $DI = 1^2 = 1$.

If there are $n (> 1)$ non-zero equity categories, the following proves that $DI < 1$:

$$DI = \sum_{i=1}^n eq_i^2 < \left(\sum_{i=1}^n eq_i \right)^2 = 1$$

Suppose the number of non-zero equity categories is given (n). Intuitively, a situation in which each category takes the same share is

more diversified than a less equal distribution. In such a situation, DI, given n , will be minimal. To prove this, we solve

$$\begin{aligned} \text{Min}_{eq_1, \dots, eq_n} \quad & \sum_{i=1}^n eq_i^2 \\ \text{s.t.} \quad & \sum eq_i = 1 \end{aligned}$$

The Lagrangian of this problem is, with λ as the Lagrangian multiplier:

$$\sum_{i=1}^n eq_i^2 - \lambda(\sum eq_i - 1)$$

The n first-order conditions read for all i :

$$2eq_i - \lambda = 0$$

From this $eq_1 = eq_2 = \dots = eq_n = 1/n$. The DI value corresponding with this situation is

$$DI = \sum (1/n)^2 = n(1/n)^2 = 1/n$$

Therefore, when there are $n (> 1)$ equity categories, $1/n \leq DI < 1$, and if n grows to infinity, the lower bound of DI goes to zero.

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Index

- Abdul-Rahman, A.R. 94
abuse of market power 63–4
academic research on non-profit organizations 120
accountability chains 27
accounting procedures 4, 91–109;
 choice of 104–6; definition of 91;
 knowledge of 99–101; regulation
 of and compliance with 102–3
accruals accounting 98
adverse selection 38
advocacy organizations 22
agency costs 38, 95–102, 117
agency theory *see* principal–agent
 relationships
agents, selection of 54–6, 130–1
Alchian, A.A. 10–11
Alexander, J.A. 40
allocative efficiency 41
altruism 33, 45–6, 52, 59, 80, 84, 92
Amnesty International 76
Anheier, H.K. 1, 8, 28, 34, 70, 111
Ansoff, H.I. 59
Aralumpalam, W. 86
Arrow, K.J. 19
asset specificity 17
auditing and audit fees 92–3, 98–9
- Baber, W.R. 50, 104
Bacon, P.W. 116–17
Badelt, C. 28
Ballou, J.P. 21, 46
Banks, D.A. 61
Barbetta, G.P. 26–7
Baumol, W.J. 59
Beattie, V. 92, 97
- Ben-Ner, A. 34
Benz, M. 53
Besley, T. 54–5, 130–1
Bilodeau, M. 33
Bises, B. 89
boards of directors 39–47, 93–101;
 corporate model for 40–1; effective
 and ineffective 95–101; volunteers
 as members of 72–3
Bolton, P. 26, 50
bonding costs 38, 44, 99
bonuses 51
Boraas, S. 70
Borgonovi, F. 87
Boris, E.T. 1
Borjas, G.J. 31
borrowing constraints 117
Borzaga, C. 53
bounded rationality 16, 18, 24
Bowman, W. 116–17
Brandl, J. 51
Brody, E. 20, 43–4
Brooks, A.C. 49, 81, 83, 87, 130
Brown, D.K. 44, 80
Brown, E. 24
Brown, W.A. 43–4, 56
Brown, W.O. 86
Brudney, J.L. 28
Bryson, J.M. 57–8
Bucheit, S. 100–1
- Caers, R. 55
Callen, J.L. 40, 43–4
capital, cost of 114–16
capital structure 111, 116–18
Carroll, R. 86

- cash accounting 98
 Chang, C.F. 112–13, 118–19
 Chase, B.W. 104
 Chesteen, S. 11
 Chinman, M.J. 71
 Chou, S.-Y. 20
 Christensen, A.L. 98, 105
 civil society institutions 8
 Cleave, S. 73
 client control of organizations 22
 closed-end financing systems 79
 Coase, R. 3, 15, 18
 coexistence of profit and non-profit organizations 24–6
 Coffman, E.N. 104
 commercial non-profit organizations 12
 committees 40
 competition between profit and non-profit organizations 64–6, 134–5
 congestion goods 21–2
 contract failure 19–22
 Cordes, J.J. 108
 cost accounting 107–9
 Courtney, R. 58
 crowding out and crowding in 87–8

 De Andrés-Alonso 41, 44
 debt 101, 110–11, 113–14
 Demsetz, H. 10–11
 Desmet, P. 89
 DiMaggio, P. 9
 directors *see* boards of directors
 disclosure, financial 103
 diversity index 111–12, 138–9
 Dolnicar, S. 70
 donations to non-profit organizations 80–9; by firms 85–7
 donative organizations 12, 42, 44, 58, 60, 112
 Du Bois, C. 41, 49–50, 89
 Duizendstraal, A. 76–7
 Duncan, J.B. 94
 Dunn, C.P. 56
 Dyl, E.A. 39–40

 Eastwood, K. 68
 efficiency of non-profit organizations 11–12, 43–4
 Eldenburg, L. 39, 105

 entrepreneurship 12, 30–7
 equity funding 110–13
 Esposito, A.G. 62–3

 Fama, E.F. 19, 42–3, 115
 Farsi, M. 41
 Fazzari, S.M. 117
 Filippini, M. 41
 financial management 110–19
 financial statements 106–7
 financial vulnerability 118–19
 Foster, V. 74
 foundations 12
 founding of non-profit organizations 30–6
 Francois, P. 23
 Frank, R.G. 62
 Frey, B.S. 52, 70
 Froelich, K.A. 100
 funding for non-profit organizations, sources of 110–14
 fundraising by non-profit organizations 48–9, 75, 80–3, 109; optimal level of 82–3

 Galaskiewicz, J. 27, 60, 85
 game theory 35
 Gassler, R.S. 11, 33
 Gazley, B. 28
 Gentry, W.M. 114, 117
 Ghatak, M. 54–5, 130–1
 gifts to non-profit organizations 75
 Gill, M. 42–4
 Glaeser, E.L. 23, 32, 39
 Goddard, A. 94
 Götte, L. 70
 governance arrangements 39–43, 50
 government provision of goods and services 27–8, 66
 Grabowski, D.C. 20, 26
 Gray, B.H. 19
 Greer, C. 58
 Grimalda, G. 35–6
 growth, organizational 60
 Guo, B. 88
 Güttel, W.H. 51

 Hager, M. 75, 118–19
 Hall, P.D. 1

- Hallock, K.F. 50
 Handy, F. 25, 46, 53, 56, 70–4,
 135–6
 Hansmann, H.B. 2, 12, 18–19, 62,
 120
 health care 12, 19–20, 23–7, 74,
 91–2
 Helmig, B. 120
 Herman, R.D. 44
 Hewitt, J.A. 44, 80
 Heyes, A. 52–3
 Hirth, R.A. 20, 26, 66
 ‘hold up’ problem 17
 Holtmann, A.G. 23–4
 Horne, C.S. 87–8
 Hosch, G. 91
 hospices 10
 Houtman, C. 103
 Hustinx, L. 56
 Hyndman, N. 100
- incentive schemes 51, 54, 78
 indirect costs 107–9
 informational asymmetries 19–20,
 38, 66, 93–4, 99, 106–9
 Inglis, S. 73
 internal control procedures 93, 99
 International Classification of Non-
 profit Organizations 13–14,
 122–30
 investment analysis 115–16
- Jacobs, F.A. 81
 Jan, S. 74
 Jegers, M. 37–8, 78, 92, 94, 101,
 103, 117
 Jensen, M.C. 19, 42–3, 115
 Jobonne, G.O. 46, 51
 Jones, C.L. 109
 Jones, R. 98
 Joulfaian, D. 86
- Kähler, J. 82
 Kamath, R. 115
 Kantian ethic 33
 Kaplow, L. 83
 Kapur, K. 66
 Katz, E. 46, 53, 70
 Keating, E.K. 119
 Knox, K.J. 41
- Krishnan, J. 103
 Krishnan, R. 109
 Kwon, S. 106–7
- labour donation 45–6
 lagged effects 48
 Lakdawalla, D. 66
 Lee, S.-Y.D. 40
 Leone, A.J. 105
 Lewis, D. 39
 liabilities *see* debt
 Liao-Troth, M.A. 56
 Lichtenstein, D.R. 87
 Lindrooth, R.C. 10
 Liu, Y. 64, 134–5
 Lynk, W.J. 45, 62
- Malani, A. 58–9
 managerial economics 1–2, 121
 managers of non-profit organizations
 45–6
 Mankaney, K. 81
 market failure 3, 18–24
 marketing 67–90
 Marudas, N.P. 81
 Marx, J.D. 87
 Meckling, W.H. 37–8, 94
 median voter mechanism 27
 Mehran, H. 26, 50
 Meijer, M.-M. 85
 mergers of non-profit organizations
 62–4
 Middleton, M. 43, 58
 Milgrom, P. 6, 10
 Miller, J.L. 38
 Miller, K.D. 57
 Mocan, H.N. 53
 Mohr, R.M. 98, 105
 monitoring costs 38, 94
 Mook, L. 106
 moral hazard 38
 Morris, S. 8
 Mosca, M. 53
 Mueller, D.C. 5
 mutual organizations 12
- Nabangi, F.K. 100, 106
 Nash equilibrium 36
 National (US) Center for Charitable
 Statistics 12

- National Health Service Trusts 105
 Nentjes, A. 76–7
 networking 60
 Newhouse, J.P. 9, 59
 Newman, W.H. 4
 niche markets 27
 Niskanen, W.A. 7, 68
 non-distribution constraint 2, 7–11,
 19, 23, 44, 57, 63, 110–13
 non-excludability and non-rivalry 21
 non-profit organizations,
 classification of 12–14; compared
 with governments 27–8; definition
 of 7–8, 32, 121; demand for
 15–29; supply of 30–6
 nursing homes 12, 20–1, 24, 66
- Oberst, E.R. 115
 objectives of non-profit organizations
 8–11, 37, 42, 89, 95–6, 101
 O’Connell, J.F. 51
 Ondrich, J.I. 49, 83, 130
 open-end financing systems 79
 opportunism 17–24
 opportunity cost concept 73
 O’Regan, K.M. 27, 41
 Ortman, A. 93
 Oster, S.M. 27, 41
 Ostrower, F. 47
 Ostrowski, M.R. 42
- Panozzo, F. 93
 Parsons, L.M. 81, 99, 100–1
 Pauly, M. 59
 pay levels in non-profit organizations
 45–6, 50–2, 104
 pecking order theory of capital
 structure 116–17
 Pendlebury, M. 98
 Petrovits, C.M. 86
 Philipson, T.J. 63, 66
 Pink, G. 46
 ‘political’ costs 103–5
 Porter, M.E. 59
 Posner, R.A. 63, 66
 Posnett, J. 74
 Powell, W.W. 1
 Preston, A.E. 53
 Preston, J.B. 43, 56
 Preyra, C. 46
 pricing decisions 68–9
 Prieto-Rodríguez, J. 68
 principal-agent relationships 3–4,
 37–9, 46–7, 51–4, 75, 78, 82, 90,
 91, 94, 99, 102, 105, 114, 117–18
 profit activities of non-profit
 organizations 88–90
 profit maximization 9–10, 89
 property rights view of non-profit
 organizations 11
 protective covenants 101
 public choice research 5
 public goods 21–2, 28, 33–4
- Randle, M. 70
 Rayburn, J.M. and L.G. 93
 Razek, J. 91
 Redisch, M. 59
 Reed, P.B. 70
 religious motives 33
 religious organizations 53, 57, 71–2,
 80, 94
 Renz, D.O. 44
 reputation 19, 43, 51, 72–3, 103–5
 residual control and residual claims
 10
 residual losses 38, 102
 retained earnings 113
 retrospective funding systems 79
 Ritchie, W.J. 68
 Robbins, W.A. 1, 104
 Roberts, A.A. 109
 Roberts, J. 6, 10
 Roomkin, M.J. 45–6, 51
 Rose-Ackerman, S. 32, 45
 Rosenberg, J. 70
 Rosenberg, M.W. 26
- Sacconi, L. 35–6
 Sacher, S. 62–3
 Salamon, L.M. 1, 8, 28, 111
 Salkever, D.S. 62
 Sargeant, A. 67, 80, 82
 Schauer, P.C. 103
 Schiff, J. 9, 89
 Schlesinger, M. 21, 93
 segmented markets 24
 Selbee, L.K. 70
 selection bias 11
 shareholders’ wealth 85

- Shen, C. 43, 70
 Shleifer, A. 23, 32
 Shoham, A. 67–8
 Sinclair Colman, M. 27, 85
 ‘skimming’ of clients 79
 Skinner, M.W. 26
 Slivinski, A. 24, 33
 Sloan, F.A. 11, 110, 115
 Smith, D.H. 43, 70
 Srinivasan, N. 70, 74
 staff, non-managerial 52–3
 stakeholders 37, 39, 42, 44, 57
 static trade-off theory of capital structure 116–17
 Steinberg, R. 1, 11, 19, 29, 47–9, 82, 120
 Steuerle, C.E. 1
 stewardship relationships 38, 50, 55
 stochastic demand 23
 Stone, M.M. 47, 58
 Stoneman, P. 86
 strategic alliances 27
 strategic choices 59–61
 strategic planning 57–9, 87
 subsidies 6–7, 44, 68, 75–8, 87, 107–8, 113, 136–7
 Sundeen, R.A. 71–2
 Sunder, S. 99
 survival of organizations 34–6
 sustainable growth rate (SGR) 60, 131–2

 Tao, H.-L. 71–2, 80
 Tate, S.L. 98–9
 taxation and tax exemptions 75, 81–5, 113, 137
 Tekin, E. 53
 third sector 6
 Thornton, J. 45, 83
 Tinkelman, D. 81, 83
 toll goods 21–2

 Tortia, E. 53
 transaction cost theory 3, 16–19, 22–3, 27, 75
 Trigg, R. 100, 106
 Trussel, J.M. 119
 Tuckman, H.P. 59, 111–13, 118–19

 Ullmann, S.G. 24
 United Nations 8, 12–13
 utility functions 9, 23–6, 31–4, 37–8, 45–9, 52, 55, 61, 66, 71–3, 82–4

 value added 107
 Van Horn, R.L. 105
 Vermeer, T.E. 98
 Verschuereen, I. 101, 117
 Vines, C.C. 105
 Vita, M.G. 62–3
 volunteers, as board members 72–3; use of 8, 11, 56, 69–75; value of 73–5

 Wallender, H.W. 4
 Wandersman, A. 71
 ‘warm glow’ effect 83–5
 Watts, R.L. 91
 Wedig, G.J. 106–7, 110, 116
 Weinberg, C.B. 64, 134–5
 Weisbrod, B.A. 9–10, 24, 45–6, 51, 66, 89, 108
 welfare, societal 15–16, 19, 22–3, 28
 Williamson, D.E. 17

 Yeh, P. 71–2, 80
 Yetman, M.H. 103
 Yetman, R.J. 103, 108

 Zaleski, P.A. 62–3
 Zan, L. 93
 Zimmerman, J.L. 91