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**PROFITS AND PRINCIPLES: AN ECONOMIC
FRAMEWORK**

By Johan J. Graafland

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Profits and principles: an economic framework

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Abstract

The relationship between profits and principles is rather diffuse. In the literature on business ethics various alternative views exist. Some argue that ethical behaviour is the best long-term business strategy for a company. Others suggest that a minimum ethical performance is required to receive a 'licence to operate'. The purpose of this article is to clarify these different views. For this purpose, we develop an economic model that provides a uniform framework for discussing these alternative views. The model is then used to analyse how external factors, like the deregulation of the government, a change in consumer interests and competitiveness affect the relationship between profits and principles.

Tilburg University
Room P2211
Warandelaan 2
P.O. Box 90153
5000 LE Tilburg
The Netherlands
phone:31 13 4662702
fax:31 13 466

E-mail: J.J.Graafland@kub.nl

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1 Introduction

Business ethics is a hot item. Although the term ‘Business ethics’ is not very popular, there is an increasing attention to synonymous subjects, like sustainability management and corporate social responsibility. Many companies are concerned about values like integrity and develop ethical codes to foster responsible behaviour of their employees (Kaptein et al, 1999). Firms find it increasingly important to behave like corporate citizens who take their responsibility in solving large social-economic problems. Recent research shows that 78% of directors of medium sized Dutch companies agreed that the company should contribute to solve social problems (van Luijk, 2000).

Why this interest in business ethics and sustainability management? Running a company in a financial successful way is already difficult enough. Why also consider difficult issues like values, moral standards and the external effects of the business operation? With tough competition, nobody wants to increase his burden by also considering ethical issues. So why?

In order to shed light on these questions, we first review some trends that redefine business today. Corporations discover that social responsibility pays off. This changes the very nature of business and creates win-win situations. However, this is not the only perspective from which the relationship between profits and ethics can be interpreted. In particular, by investigating the Shell report ‘Profits and Principles’, section three develops the thesis that this report holds four different perspectives on the relationship between profits and principles. We present a mathematical formulation of these four relationships and analyse which situation was most relevant for Shell in 1998. In the next section, we develop an economic model that explains the trade-off between short-run profits and long-run reputation effects and derive an expression for the optimal strategy of the firm. Section five uses this model to analyse how external trends as described in section two impact strategic behaviour of firms. The next section places some ethical notions and considers which perspective is preferable from a moral point of view. From this moral point of view we look for some implications for government policies. The last section summarizes the main results.

2 A growing attention to social responsibility of firms

There are several trends that explain the interest in corporate social responsibility. In contrast to Jeurissen (2000), we distinguish between two types of trends. First, there are developments that create a moral urgency for social responsibility of firms. These trends make clear that we have a vacancy, a vacancy of taking responsibility for the adverse effects of the market operation. However, these trends do not automatically ensure that companies will respond to this challenge. Indeed, although some entrepreneurs are intrinsically concerned with social goals and do the best they can, their hands are tied by the actions of their competitors.

However, there are also some trends that provide economic incentives that stimulate firms with no intrinsic stake in social goals are increasingly interested. These trends are described in section 2.2.

2.1 Trends that create a vacant responsibility

From a moral point of view there are five reasons why business should take more social responsibility for the effects of their operations. First, the deregulation of the government. The seventies have shown that there are limits to the controlling and guiding power of the government. She lacks the expertise to solve all social problems. Therefore, the government seeks ways to involve business by deregulating certain tasks (Jeurissen, 2000) or by privatisation of public companies. Deregulation is, however, only successful if companies take responsibility for certain social targets, for example by sectoral agreements on how to reduce the environmental effects of production.

Second, the globalisation of the world economy intensifies ethical problems related to cultural differences, for example with respect to the issue of human rights. Some countries have autocratic regimes that repress democratic movements. Unfortunately, we lack a strong international government that is able to prevent such situations. And the power of the national government is restricted to its own territory. Therefore, in some cases only the international company trading in such a country can possibly affect the political situation. Indeed, as globalisation goes together with concentration of business by international mergers, very large and powerful companies come to existence. Because of their power, they can exert a substantial impact on local governments. In short, power implies responsibility (Chryssides and Kaler, 1993).

Third, in our knowledge economy economic success crucially depends on technological innovations. New technologies confront firms that use or develop these technologies, however, with new ethical issues, like the privacy of users of Internet or the risks of new technologies like biogenetic food (Jeurissen, 2000). Recently, there is also a debate about the threat from the combination of genetic manipulation, robotic technology and nano technology on the independence of the human (Achterhuis, 2000). Will we still be human beings if it becomes possible to implement chips to the consciousness of human beings?

A fourth reason is the environmental concern. Because pollution has no price, firms will tend to pollute more than is optimal from a social point of view. As the potential of the government to put a price on pollution by, for example, fines or other penalties is limited, there is a social need that companies take responsibility to develop production techniques that save the environment.

Another threat for the sustainability of our way of life is the increasing economic disparity all over the world. In the last two centuries the ratio between the average income per

capita of the richest country (say Switzerland) and the poorest country (say Ethiopia) has increased from about 5:1 to 56:1.¹ The financial assets of the three richest persons exceed the Gross National Product of the poorest 48 countries together (NRC, 1999). Such large income disparities are probably not sustainable. It stimulates economic migration from South to North and generates protests like those against the World Trade Organisation meeting in Seattle.

2.2 *Incentives for firms to fill this vacancy*

The five trends mentioned above create a vacant responsibility. There is no automatic insurance that firms will respond positively to this challenge. On the contrary, the deregulation of the government and the growing internationalisation make government controls less effective and reduce the probability to be caught when firms infringe the law. Moreover, the growing dynamics and resulting uncertainty in the economy caused by the globalization and the ICT revolution may shift the focus of firms from long-term strategies to short-term strategies. As a result, reputation may become less important and this may reduce the incentive to integrate social effects in the firm's strategy. Also the increased competition and higher flexibility of financial capital may force firms to pay more attention to profitability at the costs of social goals like environment or employees rights. Hence, what makes us feel comfortable that business will take up the challenge posed by the trends mentioned above?

The first incentive comes from direct stakeholders that can punish the firm when its operations are not in line with the moral expectations of these stakeholders. Think of consumers. Both the rise in welfare and in the skill level have made consumers more interested in the world behind the products they buy. Especially in those issues that have a direct impact on the consumer's stake, health issues etc. But also in broader ethical issues. Consumers have learned by experience that the society is a 'closed system'. Automobile exhaust does not disappear into the sky, it transforms the atmosphere and consequently our climate. Moreover, as the public realises that the expertise and power of the government to control these effects is limited, it is transferring its expectations of leadership in solving social problems from the government to business. People judge corporations today also by their social performance, not only by their financial performance. Firms who do not meet the expectations of consumers, have a higher probability of losing their reputation with a negative impact on market shares and profitability (McIntosh et al, 1998).

The same holds for other direct stakeholders, like shareholders. Pension funds become increasingly interested in responsible stock funds and financial banks introduce more and more special funds that consider the ethical quality of the firms in which they invest. The new

¹ See Landes (1998) and UNDP (1996).

consumer's conscience necessitates this attention to the ethical standing of a firm. If financial institutions or private persons do not invest their money in companies with actual or potential social and environmental liabilities, they reduce their risk of owning a company that suddenly owes huge fines or settlements in damage suits (Daviss, 1999).

Also employees may impact the policy of their firm. With the tighter labour market, employees are more particular about the company they want to work and social status is one of the conditions that makes a company attractive. Also social rest and prevention of moral conflicts stimulate the company to consider the expectations of the employees.

A second trend that explains the interest of companies in social responsibility is the increasing impact of indirect stakeholders like NGO's. Activists are becoming increasingly effective in forcing corporations to operate in line with their vision of social change. Some large corporations are reacting pro-actively to this trend by seeking active cooperation with NGOs. As a result, the role of activists is expanding from adversary to adviser.

The role of NGOs is strengthened by a third trend, that of an increasing role of the media. Technological innovations like ICT makes the gathering of information much cheaper and the organisation of networks easier. This strengthens the controlling function of the media. If the media discovers that a company in some or another way misuses the trust given by society, it will be very difficult to maintain its reputation. A Company's ethical lapse can now be flashed to news outlets and brokerage firms globally before a CEO can hurry back from lunch. This makes companies more cautious and more inclined to take care that their acts are in line with the expectations of the society.

A fourth trend that stimulates firms to pro-actively develop ethical strategies is that the traditional moral authorities loose their impact. Moral standards are developed in the public debate. And companies have a genuine interest to affect the way moral standards develop by actively participating in this debate.

These trends suggest that ethics pays itself partly back. As people come to expect corporations to take a larger social role, companies will develop a social identity that is as important as brand identity. Indeed, if a company completely disregards ethics, the continuity of the company is highly uncertain in the long run. However, sometimes doing what is ethical will prove very costly to a company. This suggests that there may be decreasing returns to considering social goals. If so, what is an optimal strategy for an individual firm? And how is this strategy affected by such external changes as described above?

3 The Shell report: Four views on the relationship between profits and principles

As a starting point for our investigation of the relationship between profits and principles, we take the Shell report of 1998 *Profits and Principles - does there have to be a choice?* In this report Shell views its role in the challenge of the 21st century: how to attain a sustainable

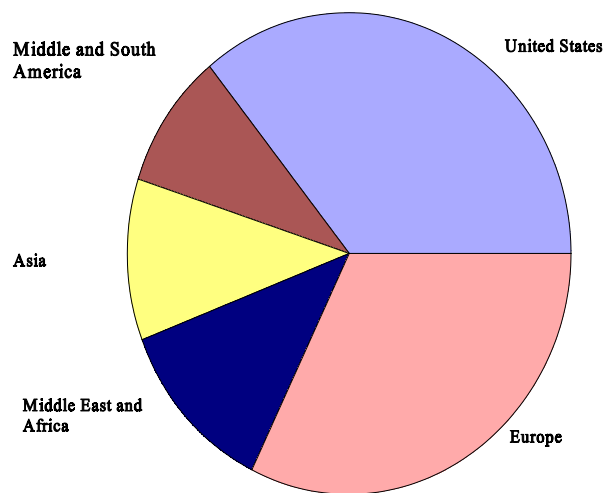
economic development?² Three aspects of sustainability are distinguished: economic, environmental and social sustainability. Companies are more and more judged on criteria related to this so-called ‘triple bottom line’. The title of the Shell report of 1999 refers to these three dimensions: profit, planet and people. Following the title of the 1998 Shell report (Profits and principles: does there have to be a choice?), we take the environmental and social dimension together under the heading ‘principles’ and investigate the balance between profits and principles³.

Shell is an interesting case indeed. First, Shell is a very large transnational company. Shell operates in 129 countries and investments are allocated to all parts of the world.⁴ This means that Shell is confronted with all kinds of ethical questions related to the social-economic and cultural differences between various countries.⁵

Second, the core business of Shell is energy. The current expectation is that the estimated stocks of gas and oil will be depleted in 100 respectively 80 years. As an energy company, Shell has an important responsibility with respect to the future supply of energy.

Third, Shell fascinates because of its recent conflicts with the public opinion. Think of Nigeria and the Brent Spar debacle. In both cases, Shell did not succeed to convince the public of the moral legitimacy of its strategy. Forced by consumer boycotts during this crisis, Shell had to change its plans. From this time on, there has been a remarkable change in the Shell strategy. From a rather closed and arrogant organisation, it developed towards an open organisation willing to participate in a dialogue with NGO’s like

Figure 1 Investments in 1998 per region



² The Shell Report 1998, page 46.

³ Or, as Daviss (1999) defines, the balance between cash flow and conscience.

⁴ Shell, 1999, People, planet and profits. An act of commitment, The Shell Report 1999, page 7.

⁵ For example, if Shell employees all over world are paid an equal salary, employees in developing countries will live on a ‘Island of wealth’. If, at the other hand, the salary is adjusted downwards to take account of the local circumstances, the company can be accused of using double standards and exploitation of people living in poor countries. Another dilemma concerns the human rights. Oil is sometimes found in countries where the human rights situation is particular bad. How about operating in such a country? For a contractual approach to these questions, see chapter 8 in Donaldson and Dunfee (1999).

Pax Christi (Gruiters, 2000). When we compare Shell with other companies, it seems that Shell is in the frontline of business ethics. For example, in the KPMG report *Sustainability Management* (1999) nine of the eleven quotations refer to Shell.

As one of the frontrunners in business ethics, one would expect that Shell has a clear idea of the relationship between profits and principles in its report *Profits and Principles - does there have to be a choice?* However, careful reading of the report shows various statements on the relationship between profits and ethics which reflect rather different positions. Shell seems to be not aware of these differences. Our first purpose, therefore, is to clarify the relationship between profits and ethics by developing an economic framework which distinguishes four perspectives on the relationship between profits and principles and illustrate these perspectives with some statements present in the Shell reports.

3.1 *Win-win perspective*

The first perspective is that there is no tension between profits and principles. Rather, profits and principles reinforce each other. As Velasquez (1998) argues: ethical behaviour is the best long-term business strategy for a company. Firms with the highest ethical standing will in the long run also make the highest profits. Let us call this the win-win perspective. In a win-win situation the business strategy is straight forward. Just be sure that you attain the highest ethical standing, then you will be the most successful firm. And the other way around. Mathematically, we define the win-win perspective as the maximalisation of a utility function subject to a restriction in which profits depend positively on the level of principles. Note that the win-win perspective does not require the exact specification of the utility function: if principles have a positive impact on profits, it does not matter which goals enter the utility function, because maximizing profits implies maximizing principles and vice versa. It only considers the positive relationship between profits and principles in the restriction under which the utility function is maximized. For the specification of the utility function there are three possibilities: both profits (π) and principles (p) are positively valued $U(\pi, p)$, only profits are considered $U(\pi)$ or only principles $U(p)$.

Examples of statements in Shell reports that reflect a win-win perspective are given in Box 1. The win-win situation is, of course, the most ideal situation. The task of the manager is to turn as many problems into win-win situations as possible. Then there is no tension between 'sollen' und 'sein'. Business ethics boils down to choosing an effective business strategy. The critical question is of course: does the win-win perspective capture all situations? Are win-win strategies sufficient to realise sustainability in the long run? Is Shell not too optimistic if it views the relationship between profits and principles as a win-win situation? Are the risks involved well taken into account? Or is this optimistic view motivated by the wish to avoid costly adjustments in the production and investments patterns,

which would be necessary to prevent an environmental and energy crisis in the future?

Box 1 The win-win perspective

max U subject to $\pi = f(p)$; $f' > 0$, with π : profits; p : principles

Examples in Shell reports:

We believe fundamentally that there does not have to be a choice between profits and principles in a responsibly run enterprise. (Shell Report 1998, page 3, 48)

New fast-forward advances in climate-friendly technologies could bring commercial success as well as climate benefits. (Cor Herkstöter, Reflections on Kyoto, 1998, page 3)

We believe that cutting corruption is essential and leads to greater equality, a happier workplace, more efficient economies, rapidly increasing investment flows and the spread of prosperity. (Shell Report 1998, page 20)

In this respect, the future scenario's of Shell are telling. For example, in the Shell report *Klimaatverandering: Hoe denkt Shell erover en wat doet Shell eraan?* Shell develops two energy scenario's to scan the future. In the first scenario the share of energy in world production falls by 1 percent per year. Moreover, after 2025 Shell expects a substantial increase in the share of renewable energy sources, up to 50% in 2050, because innovation will reduce the costs of these alternative sources whereas the increase in oil and gas prices will further stimulate this substitution process. The second scenario assumes a more drastic reduction in the consumption of energy, partly because of the information and communication technology. In both scenario's the expulsion of CO₂ reaches a maximum between 2020-2030. This seems encouraging in two aspects. First, it seems that we will gain control on the expulsion of CO₂. Second, it is remarkable that both scenario's come to the same conclusion. This suggests limited risks involved. However, one wonders when one compares with scenario studies of, for example, the Central Planning Bureau (1992) that show a much larger bandwidth, whether Shell is not too optimistic. Is Shell's expectation to raise the share of renewables in 2050 to 50% realistic or is it rather to be interpreted as a *stretched target*?

Another reason why the win-win perspective is insufficient to describe the whole reality is that the optimal strategy implied in such a situation is reached when both profits and principles are infinite. This can easily be seen from the mathematical formulation of the win-win perspective. This suggests no scarcity and an abundance of free lunches. This is not realistic. For example, a full guarantee of work safety by making the probability on business accidents negligible can only be attained at a very high cost, which will not pay itself back.

This suggests that the strategic decision problem of the firm can not be fully described by a win-win perspective. Although dynamic external changes may temporarily create new win-win situations, the steady state will generally not be characterized by this perspective.

3.2 *Licence to operate perspective*

Other statements in Shell reports show that Shell is aware of a certain tension between profits and principles. Sometimes doing what is ethical will prove costly to a company. Ethical behaviour is not always rewarded by a competitive advantage over companies that are not ethical. Much depends on how consumers react and whether they are prepared to pay a higher price for products that are produced in a responsible way. Neither is unethical behaviour always punished. On the contrary, unethical behaviour sometimes pays off and the good guy sometimes loses.

Given a negative relationship between principles and profitability, there are again three possible specifications of the utility function: both profits and principles are positively valued $U(\pi, p)$, only profits are considered $U(\pi)$ or only principles $U(p)$. Let us first consider the case in which the firm only attaches an intrinsic value to profits, in accordance with the standard neoclassical model of the firm. In the neoclassical theory, the shareholder is the only legitimate stakeholder. An exponent of this view is Friedman (1970). Friedman claims that business corporations have only one social responsibility and that is to increase profits. Friedman mentions five reasons. First, a corporation is an 'artificial person'. Hence, it cannot have moral responsibilities. Second, accepting social responsibilities means not having profit as the only goal and this would imply that political mechanisms will interfere with economic mechanisms. Third, Friedman endorses Adam Smith's 'invisible hand' argument that the common good is best served by people pursuing their own self-interest. Fourth, managers are agents of the shareholders in the business they work for. As such, they must only do what is in the interest of these shareholders, which means making as much money as possible. Friedman last argument is that the costs involved with taking social responsibility implies a tax on shareholders because of lower dividends, or alternatively on customers because of higher prices, or workers because of lower wages. And all this without being elected.

If profits are negatively related to principles and profits is the only goal of the firm, the optimal situation is reached where profits are at a maximum value and principles at a minimum value. Statements in Shell reports indicate that this minimum value cannot be freely chosen by the firm. Indeed, because of the countervailing power of consumers, NGOs and the media, the company will have to take some social responsibility in order to get a licence to operate. Let us call this the licence to operate perspective. In this perspective the company maximizes profits under the condition that the level of principles is sufficient to receive a licence to operate from the society. In some cases, this licence takes the form of a real licence. For example, Shell needs a licence from the Dutch government for its gas

operations in the Dutch Waddenzee. In order to receive this licence, Shell must convince the politicians that its operations will not harm the unique environment of the Waddenzee. More general, the licence stands for the acceptance of Shell's operations by all stakeholders who can effectively impact the profitability of Shell. Also non-gouvernemental organisations and the public at large have to be convinced of the moral legitimacy of Shells operations. Otherwise, Shell risks a boycott from consumers, as the Brent Spar experience has shown. This perspective is illustrated by various statements in the Shell reports. Box 2 gives some examples.

Box 2 The licence to operate perspective

*max U(π) subject to: (1) $\pi = f(p)$; $f' < 0$, with π : profits; p : principles
 (2) $p \geq \bar{p}$, with \bar{p} : minimum required level of principles*

Examples in Shell reports

To continue, it is essential to have endorsement from society - what some call a 'licence to operate'. (Shell Report 1998, page 18)

Business realises that its success depends on the approval of a broad range of people, including those outside the organisation. (Shell Report 1998, page 29)

Mathematically, the licence to operate perspective can be modelled by the maximisation of profits subject to two restrictions. The first restriction specifies the negative relationship between profits and principles. The second restriction requires that the level of principles is at least as large as some minimum level of principles, required to obtain the licence to operate. In contrast to the win-win perspective, this problem yields an unique solution.

The licence to operate perspective assumes an active role of the stakeholders in pursuing their interests and the interests of the society at large. If the government or citizens fail to actively monitoring the activities of companies, the incentives for companies to consider broader interests will weaken.

3.3 *Acceptable profit perspective*

In the licence to operate perspective, we assume that firms only strive at maximum profits. Another situation arises if the utility function of the company only depends on principles. Indeed, some companies like ASN bank are well known for their high ethical standards and are intrinsically motivated to pursue these (Scott and Rothman, 1994). At a negative

Box 3 The acceptable profit perspective

*max U(p) subject to: (1) $\pi = f(p)$; $f' < 0$, with π : profits; p : principles
(2) $\pi \geq \bar{\pi}$, with $\bar{\pi}$: minimum required level of profits*

Examples in Shell reports

Profits are essential to sustain a private business: without profits to re-invest, a business ceases to exist and contributes nothing. They enable us to fulfil our social and environmental obligations. (Shell Report 1998, page 9).

Profits give us the confidence to take a long-term view, and the capacity to avoid the temptation of short-term wins, which could undermine our commitment to sustainable development. (Shell Report 1998, page 18)

Without profits, no private company can sustain principles (Shell Report 1998, page 19) Acceptable is used intentionally, rather than 'maximum'. This is because it reflects our responsibility to make profits while taking full account of social and environmental considerations. (Shell Report 1998, page 10)

relationship between profits and principles, the firm will seek a combination of maximum level of principles and a minimum level of profits. In that case, a firm will tend to be restricted by the constraint that the firm must be sustainable from a financial perspective. This happened, for example, with Consumer Unity. Founder Gibbons funded a local youth group in Washington D.C. and promised each of the children who joined that if they stayed drug-free, Consumer United would pay their way through college. Such largesse drew attention of insurance industry regulators. They were not convinced that Gibbons was prudent enough with policy-holders' money and sought a court order declaring Consumers United insolvent. In 1993, the company was shut down (Daviss, 1999).

Firms that strive at maximum principles, will therefore be restricted by the condition that the profitability is equal to some kind of minimum acceptable level of profits that is necessary to guarantee the continuity of the firm. The real goal of the firm, however, is the contribution of the firm to the interest of its stakeholders and the society at large. An acceptable profitability is just a necessary condition to realise these goals. It generates the freedom to act in a responsible way. Let us call this the acceptable profit perspective. Examples of Shell statements reflecting this view are presented in Box 3.

Mathematically, the acceptable profit perspective can be defined as the maximisation of the level of principles subject to two restrictions. The first restriction is the negative relationship between profits and principles. The second restriction is that profitability must at least be as high as some kind of minimum acceptable profitability required to assure the

continuity of the company.

A crucial question is, of course, how high the minimum acceptable profitability is. Shell states that dividends should grow at least as fast as inflation (Shell Report, 1998, page 10). This seems to be a modest and not very realistic target. A more realistic target is the profitability of the competitors or the business at large. Indeed, if Shell wants to attract the financial capital required to finance its investment plans, it cannot afford to stay behind its competitors. Otherwise, the value of its stocks will start to decline and the probability of successful emissions will fall. Another crucial question is, then, whether the minimum acceptable profitability leaves some room for realising principles. If competitors take a strong shareholder view, how much freedom is left to integrate social and ecological goals in the business strategy?

3.4 *Trade-off perspective*

Both the licence to operate perspective and the acceptable profits perspective are extreme in their specification of the utility function of companies. In the licence to operate perspective, firms only strive at maximum profits, in the acceptable profits perspective principles are the only goal of the firm. A logical and more realistic option is that a company attaches an intrinsic value to both profits and principles. In that case, an optimal balance must be found between profits and principles. Let us call this the trade-off perspective. Mathematically, the business problem can now be defined as the maximalisation of a utility function in which, again, both profits and principles are positively valued, but subject to a restriction in which profits depend negatively on the level of principles. Some examples of statements reported in Shell reflecting this view are presented in Box 4.

In contrast to other perspectives, the trade-off perspective is an example of a standard economic problem with a unique optimal solution (if certain conditions with respect to the utility function and the restriction are met). The optimal utility is found where the ratio between the marginal utility from profits and principles equals the absolute value of the inverse of the marginal impact of principles on profits.⁶

⁶ Max $u(\pi, p) + \lambda(\pi - f(p))$ gives:

- (1) $u'(\pi) + \lambda = 0$ where $u'(\pi)$ denotes the marginal utility from profits and λ the lagrange operator
(2) $u'(p) - \lambda f'(p) = 0$ where $u'(p)$ denotes the marginal utility from principles and $f'(p)$ the marginal impact of principles on profits.

Combination gives: $u'(\pi) / u'(p) = -1 / f'(p)$.

Box 4 The trade-off perspective

$\max U(\pi, p)$ subject to $\pi = f(p)$; $f' < 0$, with π : profits; p : principles

Examples in Shell reports:

Sustainable development is about balance and integration. Integrating the economic, social and environmental aspects of everything we do. (Shell Report 1999, page 1)

Our primary responsibility has to be economic - wealth generation, meeting customer needs, providing an acceptable return to investors, and contributing to overall economic development. But there is also an inseparable responsibility to ensure that our business are run in a way that is ethically acceptable to the rest of the world and in line with our own values. (Shell Report 1998, page 3)

When we compare the trade-off perspective with the other perspectives, one further remark is in order. This concerns the possibility that firms attaching an intrinsic value to both value profits and principles are still restricted by the restrictions of a minimum level of principles required by society or an acceptable level of profits required by the capital market. In that case, the behaviour of the firm is seemingly not distinguishable from that of firms that operate in a licence to operate perspective respectively acceptable profit restriction. However, if the restrictions are relaxed for one or another reason, such a firm might react in another way than firms that only attach an intrinsic value to profits or principles (see section 5 for examples). In order to distinguish between these cases, we shall denote these specific cases of a trade-off perspective as principle-restricted respectively profit-restricted trade-off perspectives.

3.5 *An encompassing framework*

Figure 2 presents an encompassing framework for the four perspectives on the relationship between profits and principles. The vertical axes reflects the profit level, the horizontal axes the level of principles. The curve connecting the points A-B-C-D reflects the restriction on the choice of the company. Let us call this the profit-principle restriction curve, or more shortly, the PPR curve. The PPR curve assumes that a company without any principles suffers losses and has no future. For this part of the PPR curve, it is assumed that raising the ethical standard of the company also improves its profitability. Ethical aspects of firm behaviour for which this win-win relationship with profits hold are, for example, integrity of employees and the prevention of corruption and bribery. Companies that are able to successfully realise these working patterns, for example by ethical codes, reduce the transaction costs and raise the

transparency of their organisation which allows a more efficient allocation of means within the company.

The PPR-curve assumes, however, that the marginal profits from raising the ethical standing of the firm declines with the ethical level of the firm. For example, a further reduction in the probability of an environmental accident in the chemical industry becomes progressively costlier if the current safety standards are higher. At a certain point (point A in Figure 2), the marginal return of an investment in safety standards becomes negative. This marks the borderline of the win-win perspective. Companies operating in a win-win perspective, will end in this point if they go for maximum profits. This once again makes clear that the win-win situation is generally no representative characterisation of the situation of the firm: a win-win situation provides incentives to raise the level of principles up to a

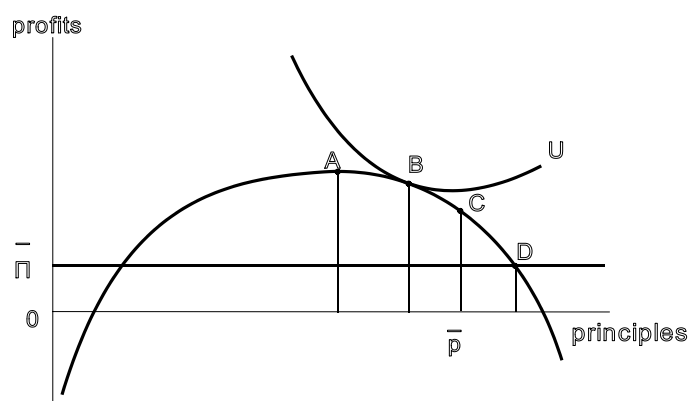


Figure 2 An encompassing framework

the only goal of the firm, as in the licence to operate perspective, the firm will choose point C.

Second, if firms only strive at the maximization of principles, they will raise the level of principles to the point where the level of profitability is restricted by the minimum profitability ($\bar{\pi}$) required to assure the financial basis of the firm. In Figure 2 this is reflected by point D.

Third, if the company attaches an intrinsic value both to profits and to principles, the point of tangency between the iso-utility curve (which reflects equal levels of utility U) and the PPR-curve will ly at the right of point A. In figure 2, this is reflected by point B. Note that at the minimally required level of principles \bar{p} , the level of principles in point B is not sufficient to receive a licence to operate. Hence, in this case, the firm will be forced to chose for point C and operate in a principle-restricted trade-off perspective.

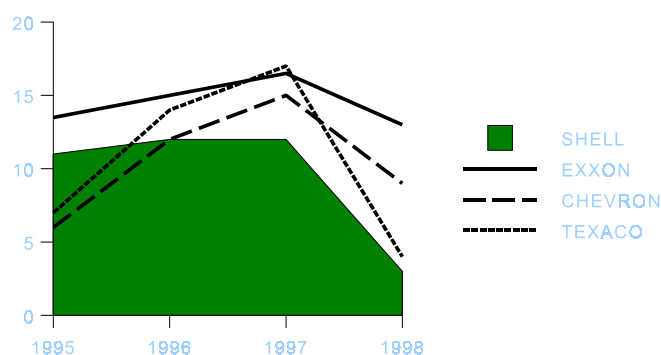
point were the positive relationship between profits and principles ends.

There are three reasons why firms may choose a point further at the right than point A. First, the level of principles at point A may be insufficient to receive a licence to operate. Suppose, for example, that \bar{p} denotes the minimum level of principles to attain such a licence. That means, only points at the right of point C belong to the part of the PPR curve that the firm can choose. If profits is

3.6 Shell's position in 1998

An intriguing question is in which position Shell operated in 1998? The statements of Shell in the Shell Report 1998 indicate that they felt that all perspectives were relevant for them. How is this possible? To answer this question, we must realise that Figure 2 depicts a very specific situation. The optimal choice depends on the position of all curves. For example, if the minimum acceptable profitability lies at the profit level in point A, the firm is left no other choice than maximizing its profits, even if the goal of the firm is to maximize principles. If, moreover, the minimum level of principles matches the level of principles in point A, the

Figure 3 Return on capital



firm is also restricted from this point of view. In such a case, both the win-win perspective (namely, the left side of point A), the profit restriction perspective and the licence to operate perspective may be relevant.

The Shell report suggest that this was the situation Shell perceived in 1998. Indeed, in 1998 Shell was in a difficult position. The return on average capital employed (ROACE) was 3%, much lower than the level expected in 1997 and also much lower than the

ROACE of Exxon, Chevron and Texaco, some important competitors of Shell. Accordingly, the market value of Shell's stocks declined by 24 billion dollars, whereas for BP the market value increased by 24%. At the same time, Shell had committed itself to a more responsible strategy in reaction to the Brent Spar debacle and the ongoing criticism on Shell's operations in Nigeria. The combination of financial pressure from competitors at the one hand and the public opinion on the other hand may have inspired the statement of Moody Stuart in the Shell report of 1999: '*There is no alternative*'. It just reflects a situation in which one feels bound by external restrictions.

4 Modelling the strategic choice between profits and principles: short term and long term considerations

Until now we have taken a static view on the relationship between profits and principles. In this section we extend the framework and also include intertemporal considerations. For that purpose, we develop an economic model that describes strategic behaviour of firms with respect to the trade off between profits and principles.

4.1 Model assumptions

Suppose there are two situations: a state in which the firm has a good reputation and a state in which the firm has a bad reputation. Firms with a low ethical standard can initially have a good reputation, but have a higher risk of losing this position and enter the state with a bad reputation. For example, even companies with low safety standards can have a long period of no accidents happening. Even if some accidents occur, they are sometimes able to hide these accidents from the public. But, of course, the probability of an accident will be higher and so will be the chance of being exposed to the public opinion. Firms can reduce this probability by raising the ethical standards, but then they incur some additional operation costs. This can be modelled by the following utility equation:

$$(1) \quad \rho e_g = \alpha \ln \pi_g(d) + (1-\alpha) \ln d + f_1(d) (e_b - e_g) \quad \begin{aligned} \partial \ln \pi_g / \partial d < 0; \partial f_1 / \partial d < 0; \\ \partial(\partial \ln \pi_g / \partial d) / \partial d < 0; \partial(\partial f_1 / \partial d) / \partial d > 0 \\ \partial(\partial \ln \pi_g / \partial d) / \partial \pi_g = 0 \end{aligned}$$

where e_g and e_b denote the discounted intertemporal utility of the firm in a state of a good reputation respectively bad reputation, ρ the rate of time preference, π_g the short run profits in a state of a good reputation, d the level of principles and f_1 the probability of moving from a state of a good reputation to a state of a bad reputation. The first two terms reflect the short term interests of the firm, which is modelled as a logarithmic utility function with iso-utility curves that are concave in short term profits and the level of principles. It is assumed that (in the short run) profits depend negatively on the level of principles, because of the additional costs involved by maintaining a high level of principles. The second order derivative is assumed to be negative. That means: the negative impact on short term profits rises with the level of principles. Indeed, if the firm raises its safety standards, the costs will generally increase progressively and, hence, the profits will decline increasingly. The probability to lose the good reputation depends negatively on the level of principles. However, the second order derivative of principles is assumed to be positive. That means: the marginal impact of the level of principles on the probability to lose the good reputation decreases with the level of principles. The second order derivative of the logarithm of profits is probably negligible and therefore assumed to be zero: if profits increase, the marginal impact of principles on the logarithm of profits remains constant. This also implies that a rise in the level in principles will have a similar negative impact on the logarithm of profits in the state of a good reputation as in the state of a bad reputation ($\partial \ln \pi_b / \partial d - \partial \ln \pi_g / \partial d = 0$). Finally, if $\alpha < 1$ the firm attaches an intrinsic value to the level of profits. If $\alpha = 1$, the level of principles has only an extrinsic value.

The firm's utility in the state of a bad reputation (b) is defined as:

$$(2) \quad \rho e_b = \alpha \ln \pi_b(d) + (1-\alpha) \ln d + f_2(d) (e_g - e_b) \quad \begin{array}{l} \partial \ln \pi_b / \partial d < 0; \partial f_2 / \partial d > 0; \pi_b < \pi_g \\ \partial(\partial \ln \pi_b / \partial d) / \partial d < 0; \partial(\partial f_2 / \partial d) / \partial d < 0 \\ f_2(d) < f_1(d) \end{array}$$

It is assumed that in the state of a bad reputation short run profits are lower than in the state of the good reputation, for example because of a loss in output. The firm has a probability f_2 of restoring its reputation. This probability depends positively on its principles. The second order derivative is assumed to be negative: if the level of principles increases, the probability of restoring the reputation rises degressively. We assume that f_2 will be lower than f_1 . Indeed, once a good reputation is lost, it often takes a long time before the damage is taken away. Bovenberg (2000) even argues that firms that have lost their good reputation, will not be able to reenter a state of good reputation.

4.2 *Link with the four perspectives*

Rewriting equation (2) gives:

$$(3) \quad e_b = (\alpha \ln \pi_b(d) + (1-\alpha) \ln d + f_2(d) e_g) / (\rho + f_2(d))$$

Substitution in equation (1) gives:

$$(4) \quad e_g = \{ \alpha \ln \pi_g(d) + (1-\alpha) \ln d + f_3(d, \rho) \alpha (\ln \pi_b(d) - \ln \pi_g(d)) \} / \rho$$

where $f_3(d, \rho)$ equals $f_1(d) / (\rho + f_1(d) + f_2(d))$. f_3 reflects the average probability of being in a state with a bad reputation. It can be shown that both $\partial f_3 / \partial d$ and $\partial f_3 / \partial \rho$ are negative whereas $\partial(\partial f_3 / \partial d) / \partial d$ is positive.⁷ Raising the level of principles lowers the probability of being in a state of bad reputation because the probability of moving from a state of a good reputation to a state of a bad reputation declines, whereas the probability of moving the other way around increases. If the level of principles rises further, the marginal impact of principles on the probability of being in a state of a bad reputation weakens, however. If the rate of time preference increases, the firm cares less about the future. Consequently, the firm will focus more on short-run profits whereas the weight of the reduction in profits caused by a loss of the good reputation declines.

At this point of the presentation of the model, we are ready to point at the link between the graphs presented in section 3 and the intertemporal model presented in this section. For that purpose, we rewrite equation (4) in the form of a utility function and a profit-

⁷ Define $f_4 = \rho + f_1 + f_2$. The first order derivatives are: $\partial f_3 / \partial d = [(\partial f_1 / \partial d)(\rho + f_2) - (\partial f_2 / \partial d) f_1] / (f_4)^2 = (\partial f_1 / \partial d)(1 - f_3) / f_4 - (\partial f_2 / \partial d) f_3 / f_4 < 0$; $\partial f_3 / \partial \rho = -f_3 / f_4 < 0$.

principle-restriction:

$$(5) \quad e_g = \{ \alpha \Pi_g(d) + (1-\alpha) \ln d \} / \rho \quad \text{Intertemporal utility}$$

$$(6) \quad \Pi_g = \ln \pi_g(d) + f_3(d, \rho) (\ln \pi_b(d) - \ln \pi_g(d)) \quad \text{Profit-principle restriction}$$

Note that the profit-principle restriction exhibits the characteristics assumed in section 3. If the level of principles is low, the negative impact of principles on profits is relatively low, whereas the negative impact on the probability to be in a state with a bad reputation is relatively high. Hence, the total impact of principles on intertemporal profits is likely to be positive and the firm operates in a win-win perspective. If the level of principles increases, the negative impact of principles on profits increases ($\partial(\partial \pi_g / \partial d) / \partial d < 0$), whereas the negative impact on the probability of being in a state with a bad reputation increases ($\partial(\partial f_3 / \partial d) / \partial d > 0$). Hence, at some turning point, a maximum value of Π will be reached, from where a further increase in the level of principles results in a decline of Π . If α equals 1 so that the firm only attaches an intrinsic value to profits, firms will only chose for a higher value of principles than implied by the turning point if they are forced to do so because of an effective minimum principle restriction. In this case the firm will operate in a licence-to-operate perspective. If $\alpha=0$, firms will only consider the level of principles as an argument in the utility function and therefore chose a level of profits that is equal to the minimally level required by the capital market for continuing the firm. This is the acceptable profit perspective. Finally, if $0 < \alpha < 1$, the company attaches an intrinsic value to both profits and principles and will chose an optimal level of principles that is derived in the next subsection, provided that both the principle and profit restriction are not binding.

4.3 Derivation of the optimal level of principles

In this subsection we derive the optimal level for a representative firm starting with a good reputation. This firm sets d in order to maximize e_g . The first order condition for maximum utility (e_g) can be written as:

$$(7) \quad \partial e_g / \partial d = [\alpha (\partial \ln \pi_g / \partial d) + (1-\alpha) / d + (\partial f_3 / \partial d) \alpha \{ \ln \pi_b - \ln \pi_g \} + f_3 \alpha \{ \partial \ln \pi_b / \partial d - \partial \ln \pi_g / \partial d \}] / \rho = 0$$

As explained above, the last term is assumed to be zero. This means we can simplify equation (7) to:

$$(8) \quad - \partial \ln \pi_g / \partial d = ((1-\alpha)/\alpha) / d + (\partial f_3 / \partial d) \{ \ln \pi_b(d) - \ln \pi_g(d) \}$$

Equation (8) expresses that at the optimal level of principles the marginal reduction in short run profits equals the sum of the marginal intrinsic value of principles plus the marginal returns from a reduction in the probability of being in a state of bad reputation.

Taking the total differentiation of equation (8) gives (again assuming that $\partial(\partial \ln \pi / \partial d) / \partial \pi = 0$):

$$(9) \quad p_1 \Delta d = p_2 (\Delta \ln \pi_b - \Delta \ln \pi_g) + p_3 \Delta \alpha + \Delta(\partial \ln \pi_g / \partial d) + p_4 \Delta(\partial f_3 / \partial d)$$

$$\text{with } p_1 = -\partial(\partial \ln \pi_g / \partial d) / \partial d + ((1-\alpha)/\alpha)/d^2 - \partial(\partial f_3 / \partial d) / \partial d \{ \ln \pi_b - \ln \pi_g \} > 0$$

$$p_2 = \partial f_3 / \partial d < 0$$

$$p_3 = -(1/\alpha)^2 / d < 0$$

$$p_4 = \{ \ln \pi_b - \ln \pi_g \} < 0$$

Note that the sign of p_1 is strictly ambiguous. The first two terms are both positive. The third term can be defined as:

$$(10) \quad \partial(\partial f_3 / \partial d) / \partial d = [(\rho + f_2)(\partial(\partial f_1 / \partial d) / \partial d - f_1 \partial(\partial f_2 / \partial d) / \partial d - 2(\partial f_1 / \partial d + \partial f_2 / \partial d)) / f_4^3]$$

which is strictly ambiguous but is most likely to be positive as the first two terms are both positive and dominate the third ambiguous term (which is zero if $\partial f_1 / \partial d = -\partial f_2 / \partial d$). Therefore, we feel confident that the term as a whole is positive. As $-p_1$ is equal to the second order derivative of e_g with respect to d , this is a condition for a maximum solution for e_g .

From equation (9) it follows that the level of principles chosen by a representative firm in a state of good reputation is higher if:

- S the difference in the logarithm of profits in a state of a good reputation (π_g) and profits in a state of a bad reputation (π_b) is higher;
- S the firm attaches more intrinsic value to principles, i.e. if α is lower;
- S the impact of principles on current profits ($\partial \ln \pi_g / \partial d$) is less negative;
- S the negative impact of principles on the average probability of being in state of a bad reputation ($\partial f_3 / \partial d$) is larger, for example because the rate of time preference is lower⁸ or because of a higher impact of the level of principles on the flow rates between the states of good and bad reputation.

Likewise, we can derive the optimal level of principles for firms with a bad reputation. First

⁸ The marginal impact of the rate of time preferences on $\partial f_3 / \partial d$ can be defined as $\partial(\partial f_3 / \partial d) / \partial \rho = (\partial f_1 / \partial d)(1 - 2f_3) / f_4^2 + (\partial f_2 / \partial d) 2f_3 / f_4^2$, which is positive if $f_1 > (\rho + f_2) / (1 - 2 \partial f_2 / \partial d)$, which is plausible because of the asymmetry between losing and restoring reputation.

rewrite equation (1) into:

$$(11) \quad e_g = (\alpha \ln \pi_g(d) + (1-\alpha) \ln d + f_1(d) e_b) / (\rho + f_1(d))$$

Substitution in equation (2) gives:

$$(12) \quad e_b = \{ \alpha \ln \pi_b(d) + (1-\alpha) \ln d + f_5(d, \rho) \alpha (\ln \pi_g(d) - \ln \pi_b(d)) \} / \rho$$

where $f_5(d, \rho)$ equals $f_2(d) / (\rho + f_1(d) + f_2(d))$. The first-order condition for an optimal level of principles reads:

$$(13) \quad - \partial \ln \pi_b / \partial d = ((1-\alpha)/\alpha) / d + (\partial f_5 / \partial d) \{ \ln \pi_g(d) - \ln \pi_b(d) \}$$

Total differentiation equals:

$$(14) \quad p_1' \Delta d = p_2' (\Delta \ln \pi_g - \Delta \ln \pi_b) + p_3 \Delta \alpha + \Delta (\partial \ln \pi_b / \partial d) + p_4' \Delta (\partial f_5 / \partial d)$$

with $p_1' = - \partial (\partial \ln \pi_b / \partial d) / \partial d + ((1-\alpha)/\alpha) / d^2 - \partial (\partial f_5 / \partial d) / \partial d \{ \ln \pi_g - \ln \pi_b \} > 0^9$
 $p_2' = \partial f_5 / \partial d > 0$
 $p_4' = \{ \ln \pi_g - \ln \pi_b \} > 0$

From equation (14) similar conclusions follow as for equation (9). In particular, the level of principles chosen by a representative firm in a state with a bad reputation is higher if:

- S the difference in the logarithm of profits in a state of a good reputation (π_g) and profits in a state of a bad reputation (π_b) is higher;
- S the firm attaches more intrinsic value to principles, i.e. if α is lower;
- S the impact of principles on current profits ($\partial \ln \pi_b / \partial d$) is less negative;
- S the positive impact of principles on the average probability of being in state of a good reputation ($\partial f_5 / \partial d$) is larger.

4.4 Steady state

Once the optimal choices of firms in a state of a good respectively bad reputation are determined, we can derive the share of firms with a good reputation respectively bad reputation. In particular, in the steady state the flow of firms from a state of a good reputation

⁹ Here again the first two terms are positive, whereas the third term is positive provided that $\partial (\partial f_5 / \partial d) / \partial d = [(\rho + f_1)(\partial (\partial f_5 / \partial d) / \partial d) - f_2 \partial (\partial f_1 / \partial d) / \partial d - 2(\partial f_1 / \partial d + \partial f_2 / \partial d)] / f_4^3$ is negative, which is most likely since the first two terms are both negative and probably dominate the third ambiguous term (which is zero if $\partial f_1 / \partial d = -\partial f_2 / \partial d$).

to a state of a bad reputation is equal to the flow of firms from a state of a bad reputation to a state of a good reputation, i.e.

$$(15) \quad f_1(d_g) n_g = f_2(d_b) (n - n_g)$$

where d_g (d_b) denotes the optimal level of principles of companies in a good (respectively bad) state, n_g the number of companies in a good state and n the total number of companies. Rewriting for the share of companies in a good state gives:

$$(16) \quad n_g / n = 1 / (f_1(d_g) / f_2(d_b) + 1)$$

Taking the total differentiation yields:

$$(17) \quad \Delta(n_g / n) = - p_5 (\partial f_1 / \partial d) \Delta d_g + p_5 (f_1(d_g) / f_2(d_b)) (\partial f_2 / \partial d) \Delta d_b$$

with $p_5 = 1 / [f_2(d_b)(f_1(d_g) / f_2(d_b) + 1)^2] > 0$. From equation (17) it can easily be seen that the share of firms operating in the state of a good reputation depends positively on the level of principles chosen by firms both in the state of a good reputation and in the state of a bad reputation.

5 Interpreting the impact of the various trends on strategic choice of companies

Section 3 and 4 sketch a graphical and mathematical framework which allows us to investigate the determinants of strategic choices of firms with respect to the balance between profits and principles. In this section, we use this framework to analyse the impact of various trends on strategic firm behaviour. First, we study three cases in which the growing dynamics in the economy tend to shift the balance between profits and principles in favour of profits. Then we look at three other trends that stimulate an inverse movement.

5.1 *Decreasing impact of the government*

As described in section 2, one of the causes that explains the increased interest in the social responsibility of firms is the diminished role of the government. New growing dynamics in the economy because of the increasing speed of technological innovations and the internationalisation of the economy reduce the effective power of the government to regulate and control the effects of the production processes of corporations. Indeed, the past two decades has shown that there are limits to the capability of the government to solve social problems. As a result, Western governments have withdrawn from several areas of the economy by deregulating the economy and allowing more competition in sectors like health

care and social security which were highly regulated in the seventies.

The deregulation in the last decade may have shifted the balance between profits and principles in favour of profits. In particular, by making controls less stringent, the minimum level of principles required to receive a licence to operate may have decreased from $\bar{p}1$ to $\bar{p}2$ and in some cases to $\bar{p}3$. This may increase the significance of moral values because the way firms respond to this vacant responsibility depend on the location of their iso-utility function including their intrinsic interest in principles. In case of a small shift from $\bar{p}1$ to $\bar{p}2$, firms that strive to profit maximisation (U1) will fully accommodate to the new lower minimum level of principles and maintain their licence to operate perspective on the relationship between profits and principles. Firms that attach some intrinsic value to principles (U2) and find their optimal level of principles in between $\bar{p}1$ and $\bar{p}2$, will not fully accommodate their level of principles to the new minimum. Other firms with a high intrinsic value to principles (U3) will

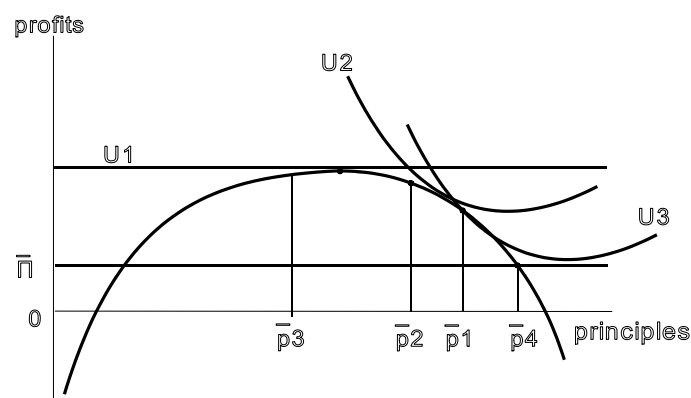


Figure 4 Shift in minimum required principles

not change their balance between profits and principles at all.

In case of a large shift from $\bar{p}1$ to $\bar{p}3$ firms that only attach extrinsic value to principles will also shift away from a licence to operate perspective and choose the level of principles that maximizes profits. At this point, a further reduction in the level of principles will decrease profits which is not in the interest of the firm.

This analysis also illustrates that the recent interest of companies in

social responsibility is not necessarily good news from a social point of view. Indeed, insofar this interest is a response to the decreasing ability of the government to extort a certain level of principles, the rising interest of companies actually goes together with a reduction of the level of principles itself.

Of course, in some cases we also see a movement towards more stringent government regulations. If a particular economic sector causes a lot of environmental damage, the government can raise the ecological requirements for that sector. If the minimum level of principles shifts from $\bar{p}1$ to $\bar{p}4$, the profitability of the firms falls below the minimum acceptable profitability rendering these activities unmarketable anymore. For this reason, the government may sometimes refrain from raising its standards or postpone the commencing date, but in other cases the evidence of the environmental damage of a sector may be so evident, that the government is left no other choice.

Finally, it should be noted that the deregulation of the government may also have had an inverse effect by activating the civil society in their direct control of the operations of

firms. Moreover, if information is hardly verifiable, deregulation may improve the realisation of social goals if it stimulates firms to commit themselves to contribute to these goals (Bovenberg, 2000).

Another remark concerns the privatisation of collective firms, which is often combined with an increase in regulations in order to secure that the privatised firm produces the public services demanded by the government. This change can be interpreted as a weakening of the weight of principles in the utility function of the company (since it is privatised) combined with the introduction of an external restriction on the minimum level of principles required by the government. The effect on the balance between profits and principles is uncertain. For example, if the iso-utility curve shifts from U_2 to U_1 , whereas the government introduces a licence to operate restriction at \bar{p}_1 , the level of principles will increase. But if the licence to operate restriction is set at \bar{p}_2 , the level of principles will decrease.

5.2 Increased mobility of capital

Another implication of the increased globalization and transparency of the economy is an increased mobility of capital. This also impacts the balance between profits and principles. In particular, it might raise the minimum level of profitability required by the capital market. Firms that cannot come on terms with the profitability level that the market demands will face difficulties in attracting new capital to finance their investments and become an object for take over by more profitable firms.

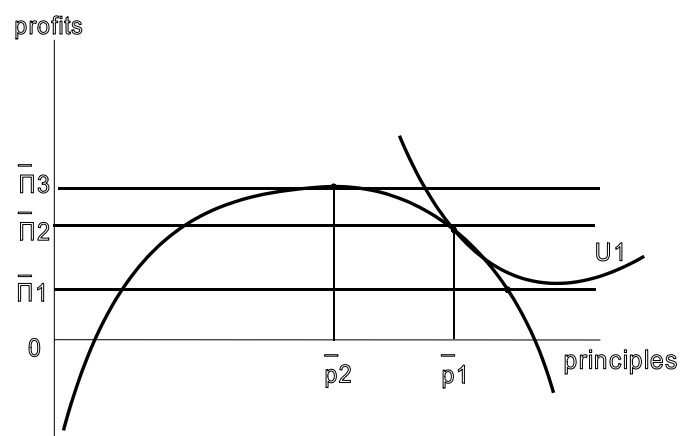


Figure 5 Shift in acceptable profitability

The rise in the minimum required profitability will raise the share of companies that are restricted by this condition. In particular, an increase in the minimum required profitability from $\bar{\pi}_1$ to $\bar{\pi}_2$ (see Figure 5) will reduce the level of principles of firms with iso-utility curve that imply an optimal level of principles beyond \bar{p}_1 . As a result, some firms will shift from a unrestricted to a profit restricted trade-off perspective (like, for example, the firm with iso-utility curve U_1). In a fully competitive capital market, the

minimum level of profitability will be equal to $\bar{\pi}_3$ allowing no freedom at all to raise the level of principles beyond will \bar{p}_2 . Managers preferring a higher level than \bar{p}_2 face a risk that the financial basis of the company collapses.

5.3 Greater dynamics in the economy

Another aspect of the growing dynamics of the economy as a result of, for example, the high speed of technological inventions, is that it is more difficult for economic agents to assess future developments in the market. Because of the high uncertainty, economic agents will be inclined to employ a higher rate of time preference. As a result of the associated shorter time horizons and increased ‘short-term’ thinking, the discounted benefits of maintaining a high reputation decline.

As shown in section 4 a higher rate of time preference will reduce the negative impact of the level of principles on the probability of being in a state of a bad reputation. Whereas

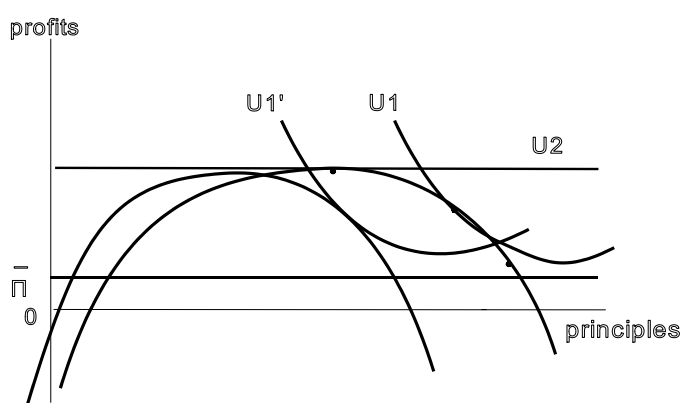


Figure 6 Shift in profit-principle restriction

left. Accordingly, the optimal level of principles falls, both for firms that attach an intrinsic value to principles (whose iso-utility curve shifts from U1 to U1') and for firms who extrinsically value principles (with iso-utility curve U2).

the negative direct impact of the costs of maintaining a higher level of principles on profits remains unchanged, the positive marginal impact of principles on profits by reducing the probability of a loss of reputation is less valued because of the shorter time horizon. As a result, the optimal level of principles falls.

Graphically, this is illustrated by Figure 6.

The rise in the rate of time preference shifts the PPR curve to the

5.4 Shifting consumer preferences

Whereas the previous sections showed some trends that cause the balance between profits and principles to shift in favour of profits, the next three sections analyses some trends with inverse implications.

In this subsection, we first consider the impact of a higher preference of consumers for social goals. There are several ways of interpreting this trend in the context of the framework developed in section 4. First, a higher preference for the social quality of the goods delivered by the company may reduce the negative impact of principles on short run profit. In particular, although raising the ethical quality of the product generates additional production costs, the change in consumers' preferences implies that the demand for this type of goods will increase. As a result, the firm can set a higher price for its product or increase its sales.

Hence, the negative impact of the level of principles on short run profits will decline.

Another mechanism through which the shift in consumer preferences affects the balance between profits and principles is by lowering the profit level in the state of a bad reputation. Upon discovery of unethical aspects firms are sometimes confronted with a strong consumer boycott of their products. The strength of the boycott depends on the attitude of consumers. If a lot of consumers are sensitive to the social effects of the operations of the firm, the discovery of the lapse may invoke a mass response of the public with dramatic consequences for the firm with, as possible outcome, bankruptcy. If, on the other hand, only a small group of activist consumers are prepared to pay the price of boycotting the firm, the expected decline in profits upon discovery of ethical lapse will be small and firms will be tempted to choose a lower level of principles.

A shift in consumer preferences can also affect the balance between profits and principles through a change in the flow probabilities between the state of a good reputation and a state of a bad reputation. For example, if consumers have a relatively short memory, it will be easy for a firm to restore its reputation. For example, when the public found out that Ford had deliberately chosen for a dangerous position of the gas tank in the Ford Pinto causing the death of many motorists in the seventies, the American consumer was furious. Ford reacted by finishing the production of the Pinto. Fortunately for Ford this accident caused no permanent damage of its reputation, apparently because of the short memory of the public (NRC, 2000). This may also explain why Ford is currently again involved in a safety scandal focussing on the motor-tires used for the Ford Explorer, which have caused several accidents and casualties.

Graphically, all these impacts of more social awareness of consumers on the balance between profits and principles can be illustrated by a shift of the PPR curve to the right. The impact on the optimal level of principles is inverse to the changes depicted in Figure 6.

5.5 Shifting preferences of shareholders, managers and employees

The growing social awareness of the public will also change the attitudes of shareholders, managers and employees. The public's new conscience reflects itself in a rise of socially conscious investing. Indeed, stock funds that subscribe social aware investments have seen an enormous growth in the last ten years. Also managers are convinced that social responsibility is a legitimate purpose of the company. For them a concern with the ethics of their business is part of a now well established and seemingly inevitable process of professionalization (Chryssides and Kaler, 1993). The motivation is almost certainly a desire for the high social esteem which this social concern brings. Finally, the growing individualization and increased skill level make employees more independent of the company. In the management literature it is widely accepted by now that if an organisation respects the individual employee, they will respond with a loyalty and a commitment to the organisation which generate increases in

productivity.

The shift in preferences of shareholders, managers and employees has similar effects on the balance between profits and principles as the shift in consumer preferences. First, these shifts may reduce the negative impact of principles on short run profit. For example, if a higher level of principles increases the productivity of employees, the negative impact of principles on short run profits will decrease and even change sign in some cases. Second, these shifts may also lower the profit level in the state of a bad reputation. In particular, if shareholders are more sensitive to the ethical standing of the firm, discovery of unethical aspects may have dramatic effects on the stock value of the firm with similar consequences on the continuity of the firm as a consumer boycott. Third, the change in attitude will also change the flow probabilities between the state of a good reputation and a state of a bad reputation for similar reasons as mentioned in the previous subsection.

However, there is one additional mechanism through which shifts in the preferences

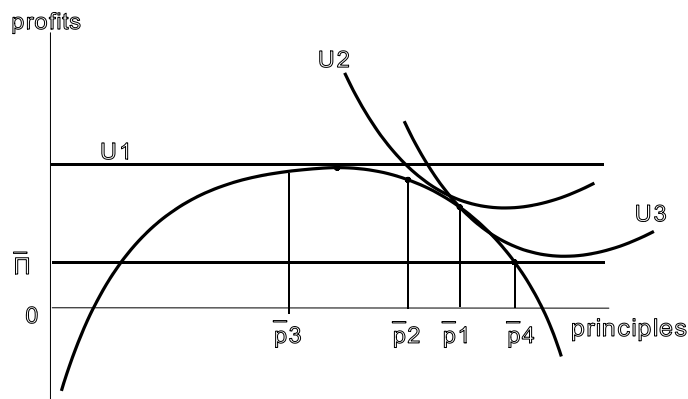


Figure 7 Shift in minimum required principles

of shareholders and managers, and to a lesser extent, of employees will affect the balance between profits and principles. That is: it might also change the intrinsic value of principles in the utility function of this company. As shown in section 4, this has an unambiguous positive impact on the optimal level of principles. Graphically, the change in intrinsic value of principles can be illustrated by Figure 7.

A shift of the iso-utility curve from U1 (with no intrinsic value of principles) to U2 increases the optimal level of principles provided that both points are not restricted by the minimum level of principles restriction. If not (as for example if $\bar{p} = \bar{p}_1$), we will see no effect. In that case, only a drastic increase in the intrinsic value of principles in the utility function from U1 to U3 will cause an increase in the level of principles and a shift from the licence to operate perspective to an unrestricted trade-off perspective. If the iso-utility curve shifts to U4, the company will enter in an acceptable profitability perspective.

Finally, we note that public corporations are more likely to be bound to the profit restriction than closely held companies like family owned companies. As family companies are not directly subject to the market forces on the capital market, their minimum required profitability will generally be lower than that of public corporations. Hence, there is more freedom for family owned firms to live up with their principles. This illustrates that there are several ethical aspects of turning a family company into a public corporation. Of course, a

complicating factor is that principles are less well defined and measured than profits, especially if a company holds a lot of different principles. A family company therefore also runs a higher risk of moral hazard, not being disciplined by the market.

5.6 *NGO's and the increased role of the media*

Our final example of applying our framework for interpreting the impact of trends on the balance between profits and principles is the influence of the NGOs and the increased role of the media. I take both together, because both are strongly intertwined. The success of the NGOs depends largely on the ability of the media to expose their findings to the public, whereas the media depends strongly on the expertise of NGOs for discovering cases that are ethically unsound, although individual journalists also become more and more sophisticated.

The NGOs and media impact the balance between profits and principles mainly by raising the probability to lose a good reputation if the firm's level of principles is low and to raise the probability of regaining a good reputation if the firm seriously adapts its principles if the firm is found shirking.

Another effect of the rise of NGOs and the increased role of the media is that companies have an incentive to start a dialogue. Indeed, by seeking cooperation with NGO's these organisations may become less critical once they get convinced of the good intentions of a firm. For example, after Shell started a dialogue with NGOs like Amnesty International and Pax Christi, these organisations have been more inclined to apprehend some of the human right problems Shell faces in developing countries. The effect of this cooperation may be that corporations benefit from the expertise of NGOs and are therefore able to raise their level of principles in a cost effective way. This may reduce the negative impact of principles on short run profits.

Both effects will shift the PPR curve to the right and redefine the balance between profits and principles in favour of the latter (see Figure 6).

6 An ethical valuation

Until now we have only looked at the relationship between profits and principles from an economic point of view. Indeed, our main interest in this article is to clear up the relationship between profits and principles by developing an economic framework to interpret the shifting balance between the two in response to some exogenous trends. In this section we also take a brief look to the ethical valuation of the relationship between profits and principles. The question we are interested in is which of the perspectives derived in section three is responsible from an ethical point of view.

Win-win perspective

First, let us consider the win-win perspective. In our framework, the win-win perspective only specifies the restriction under which the utility of the firm is maximized. It leaves open the goals of the firm: if principles have a positive impact on profits, it does not matter which goals enter the goal function, because maximizing profits implies maximizing principles and vice versa. As the goal function remains unspecified, it is hard to evaluate this perspective from an ethical point of view. The most relevant question here is therefore: is the set of measures that are in line with the win-win perspective sufficient to attain social goals? If the economic incentives for firms to take account of social goals are not strong enough, ecological and social sustainability will not be realized. For that reason, the win-win perspective is not considered the only relevant perspective.

Licence to operate perspective

If the relationship between profits and principles is negative, the goal function must be specified in order to determine the solution. First, consider the licence to operate perspective. In that case, a company only attaches an intrinsic value to profits. Principles are only considered if other parties in the market force the firm to take account of them. The advantage of this perspective is that the role division is clear. Firms have to take responsibility for sustainability from an economic point of view, the other parties are responsible for setting minimum standards of principles that secure social and ecological sustainability. If these other parties are successful in setting a high standard of minimally required principles, principles will really matter and unconditionally be applied. Indeed, one of the main functions of NGOs and the media is that they transform the relative small power of individual persons into a strong interest party at a relatively low cost of a small contribution. However, it remains uncertain that this countervailing power is strong enough to reverse the unfavourable social and ecological trends outlined in section two. If these external parties fail somehow, the company will reduce its level of principles and restrict its social and ecological efforts to the level where profits are maximized. In a consequentialistic approach like utilitarianism this outcome is acceptable provided that the firm is fully transparent in its social effects. Indeed, if the society does not ask for social or environmental goals and is not motivated to force firms in that direction, why should firms do so? Also in the contract approach of Donaldson (1982) and Donaldson and Dunfee (1999), the firm will not be morally obliged to take social responsibility beyond the point where profits are maximized in such a case.

In other approaches, like for example ecological ethics, this is not acceptable. In that case, environmental sustainability should have an intrinsic value of itself. That means: nonhuman parts of the environment deserve to be preserved for their own sake, regardless of its usefulness for humans. Every life should be respected. Also from the point of view of virtue ethics such a respectful attitude toward nature is required, based on the notion that each

living seeks its own good. This implies that all living have an inherent good of their own, that should be respected. This view is quite radical and highly controversial. It seems to be subject to the criticism of the naturalistic fallacy, that derives a moral statement from factual situations. However, facts never imply moral standards. From the fact that a certain animal, plant or lake exists, we cannot derive the moral obligation that it should exist (Velasquez, 1998). Another criticism on ecological ethics is that it is very difficult to value nature intrinsically. Every valuation is a human valuation and reflects human interests in nature. Therefore, you cannot value nature regardless of human interests, because all valuation incorporates preferences of humans (Manenschijn, 1988).

Another approach bases environmental sustainability on the rights ethics. Right ethics stress that social and ecological sustainability is something to which each human has a right. Note the difference with the ecological ethics. Here we talk about human rights, not of a right of the environment itself. Why do human beings have this right? The reason is that social and ecological rights are essential to the fulfilment of our human capacities as rational and free beings. They override other rights like the property right which is behind the right of shareholders on economic sustainability. Even if the civil society is not able to effectuate social or environmental rights by successfully setting certain minimum standards that guarantee social or environmental sustainability, this does not dismiss companies from their obligation to consider these rights.

Acceptable profit and trade-off perspective

Reversal of the social and ecological trends outlined in section 2 is more guaranteed if companies attach intrinsic values to principles and act as corporate citizens. In that case, there remain two perspectives, the trade-off perspective and the acceptable profit perspective. In both cases companies attach intrinsic value to principles. The difference is that in the acceptable profit perspective profits are only seen as an instrument to guarantee the continuity of the firm, whereas in the trade-off perspective the company also attaches an intrinsic value to profits. How do we value this difference from an ethical point of view? From a consequentialistic point a view, there is no a priori preference for one of these perspectives. It depends on the social welfare of high economic growth versus the social welfare of a high level of principles. From a non-consequentialistic view like the rights ethics, there neither seems to be a preference for the trade-off perspective or the acceptable profit perspective. Both the property rights of shareholders and the (prima facie) rights of other stakeholders are considered in both perspectives. In the trade-off perspective directly by the arguments in the utility function, in the acceptable profit perspective indirectly by the minimum acceptable profit restriction. Only if the latter restriction is not effective in assuring the economic continuity of the firm, the trade-off perspective is more preferable than the acceptable profit perspective.

We therefore conclude that the trade-off perspective is preferable to the licence to

operate perspective and the acceptable profit perspective if the level of principles required to obtain a licence to operate is too low to realise social and ecological sustainability and if the minimum level of profits is too low to guarantee economic sustainability.

7 Some implications for government policy

In section 2 we have sketched several trends that create a vacant responsibility for firms to consider the social effects of their operations. We have also shown how other trends provide incentives for firms to take up this challenge. What if these incentives are insufficient to motivate firms to take up the role of corporate citizens and if they chose a level of principles that makes it likely that the unfavourable social and environmental developments, sketched in section 2, will continue? Are there, in that case, possibilities for the government to enforce these incentives?

The analysis in section 2 suggests that the role of the government is limited. Indeed, with the growing dynamics and complexity of the economy, it becomes more difficult for the government to regulate business operations by laws and other directrices. This makes it difficult for the government to affect the balance between profits and principles by raising the minimum level of principles that is required to obtain a licence to operate. Still, the government has some other possibilities to influence the balance between profits and principles. First, the government can raise the intrinsic value of principles of firms by raising the awareness of the importance of social responsibility. For example, by creating a platform that provides information on codes developed by international corporations and international organisations like the OECD. The government can also reduce the negative impact of principles on short run profits by subsidizing actions of firms that improve the social and environmental effects of their operations or raise the costs if found shirking by putting higher fines on operations that damage the social and ecological environment. However, like legal measures, financial incentives by subsidies or fines are only effective if the government can control the social and environmental effects of the firms' operations. This requires a good accounting system of social and environmental effects of the operation of companies. Insofar such an accounting system is lacking, providing financial incentives faces the risk of an inefficient allocation of government means. Insofar the quality of social and environmental reports improves, this generates more possibilities for government regulations that internalize the social effects of operations and provide a level playing field for the firms that are subject to these regulations.

Another way of stimulating companies to take social responsibility for the social and ecological effects of their operations is by strengthening the countervailing power of consumers, NGOs and the general public. This shifts the profit-principle restriction to the right and enlarges the relevance of the win-win perspective. For example, by providing information on the effects of certain consumption goods or by tax exemptions for the returns

of financial assets invested in funds that are certificated as ethical responsible, consumers will be prepared to pay a higher price for social responsibility. The position of NGOs could also be improved by providing financial support to the operations of these organisations. However, the government should not push this approach to far. This would turn these organisations into government offices. Moreover, by providing financial incentives for consumers or their representative organisations, the intrinsic motivation of consumers and NGOs may diminish. Indeed, as Frey and Oberholzer-Gee (1997) show, extrinsic motivations may crowd out intrinsic motivations and the net effect may even be negative. Another way of improving the quality of the impact of NGOs is to raise the accountability of these organisations. Indeed, as these organisations are less disciplined by the market, they should meet certain standards of transparency in order to secure the quality of their operations.

Alternatively, government policies may affect the balance between profits and principles through the effect on the acceptable profit constraint. A traditional task of the government is to stimulate competition between firms by an active antitrust policy and other kinds of market regulation that raise the transparency of the market and reduce transactions costs. The welfare effects of competition are well known: it raises the efficiency of the allocation process by forcing firms to set price as low as possible and to raise the efficiency of the production process. However, raising the competition on the capital market, for example by improving its transparency, may induce an upward shift in the acceptable profits constraint for an individual firm. In case of perfect competition, a firm cannot afford making additional costs because of social responsibility unless these costs can be shifted forward into higher prices (Homann and Blome-Drees, 1992). For firms operating in a trade-off or acceptable profit perspective, this may induce a shift in the balance between profits and principles in favour of profits. On the other hand, firms operating in the win-win perspective may be stimulated to speed up the process of raising profits by increasing principles. As the win-win perspective is only a temporary state, it is plausible that only a small minority of firms will raise its principles in reaction to more severe competition. This points at a trade-off between the (macro) economic advantages and the social and environment disadvantages of more competition on the capital market.

8 Summary

The retreat of the government, the globalization and growing dynamics of the economy create a vacant responsibility for firms to consider the social and environment effects of their operations. Other trends, like a higher environmental and social concern of consumers and an increased role of NGOs and the media, foster that companies have an incentive to fill this vacant responsibility. This paper analyses how these trends affect the balance between profits and principles in strategic firm behaviour.

For this purpose, section 3 investigates some Shell reports and looks for statements

about how Shell views the relationship between profits and principles. Shell is an interesting case. After its clash with German customers and NGOs in the Brent Spar case, it changed its strategy in order to internalize the effects on its operations on the countervailing powers in the society. A study of the Shell reports shows, however, that Shell has no clear idea of the relationship between profits and principles. Section 3 clarifies this relation by distinguishing between four different perspectives which can all be found in the Shell reports. First, some statements argue that more principles generate higher profits. This win-win perspective implies that no choice between profits and principles is required: maximizing profits implies maximizing principles and vice versa. Other statements show, however, that there can be a tension between profits and principles. In that case, there are three possibilities. If the goal of the firm is profit maximisation, the optimal balance between profits and principles is found where profits are at a maximal value and principles at a minimal value. This minimum value of principles can not be freely chosen, but is set by the society from which the company needs a licence to operate. This is the licence to operate perspective. If the goal of the company is to maximize principles, the principles are set at a level where the company is confronted with the restriction that the profitability must reach an acceptable level, that is required by the capital market to assure the financial continuity. This is the acceptable profits perspective. Finally, if the company attaches an intrinsic value to both profits and principles, the optimal balance between profits and principles is there where the ratio between the marginal utility of profits and principles equals the absolute value of the inverse of the marginal impact of principles on profits.

Section four extends the framework by modelling the impact of principles on the trade-off between short run profits and long-term reputation effects. From the mathematical model we derive that the optimal balance between profits and principles shifts in favour of principles if the firm attaches a higher intrinsic value to principles; if the impact of principles on short run profits is less negative; if the reputation effect of principles is higher; if the time horizon of the company is higher and if the loss in profits upon losing a good reputation is higher.

Section five uses the framework developed in section 3 and 4 to analyse how the trends described in section two affect the balance between profits and principles. This section illustrates how firms react in a different way to the various trends. For example, a reduction in the level of principles minimally required by society to obtain a licence to operate will be fully accommodated by a firm that strives at profit maximisation, whereas firms attaching an intrinsic value to both profits and principles may not be affected. Furthermore, it is argued that certain trends affect the balance between profits and principles through various mechanisms. For example, a shift in consumer preferences may influence the firm behaviour either by changing the direct costs of principles, by lowering the profit level if the firm loses its good reputation or by affecting the probability to lose a good reputation or restoring the good reputation if found shirking.

Section six evaluates the various perspectives from an ethical point of view. The win-win perspective would be the most attractive one provided that the set of measures that are in line with this perspective is sufficient to attain social and environmental sustainability. If this is not the case, the trade-off perspective is valued as the most ideal perspective: the licence to operate perspective is rejected if the level of principles required to get a licence to operate insufficiently promotes social and environmental sustainability. The acceptable profit perspective is rejected if the minimum required level of profits is too low to secure economic sustainability.

Section seven derives some policy conclusions. It is argued that the government can provide financial incentives in the form of subsidies and fines on both producers and countervailing powers. However, the government cannot push this strategy too far, either because of insufficient information required for an efficient allocation of these subsidies and because of the danger that financial incentives will weaken intrinsic motivations. Another implication for government policy is that the government task to stimulate competition by anti-trust policy and raising the transparency of capital markets, may have a negative impact on social and environmental goals.

References

- Achterhuis, Hans, 2000, Frankenstein revisited, NRC special, 2-9-2000, pp. 23-28
- Bovenberg, A.L., 2000, On the cutting edge between policies and academia: challenges for public economists, *De Economist* 148, pp. 295-329
- Central Planning Bureau, 1992, *Scanning the future. Long-term scenario study of the world economy 1990-2015*, Sdu publishers, The Hague, page 230.
- Chryssides, G. and J.H. Kaler, 1993, *An introduction to business ethics*, Chapman & Hall
- Daviss, B., 1999, Profits from Principle. Five forces redefining business, *The Futurist*, March, pp. 28-33
- Donaldson, T., 1982, *Corporations and morality*, Prentice Hall, Englewood Cliffs, New Jersey
- Donaldson, T. and T.W. Dunfee, 1999, *Ties that bind*, Harvard Business School Press
- Frey, B.S. and F. Oberholzer-Gee (1997), The costs of price incentives: An empirical analysis of motivation crowding out, *American Economic Review* 87, pp. 746-55
- Friedman, Milton, 1970, The social responsibility of business is to increase its profits, *The New York Times Magazine*, 13 september
- Gruiters, J., 2000, De stille revolutie. Internationale ondernemingen en mensenrechten, in: H. Noordegraaf and J. Van Workum (ed.), *Maatschappelijk verantwoord ondernemen. Een nieuwe fase in het kapitalisme*, Kok, Kampen, pp. 140-54
- Herkstöter, Cor, 1998, Reflections on Kyoto
- Homann, K. and F. Blome-Drees, 1992, *Wirtschafts- und Unternehmensethik*, Vandenhoeck und Ruprecht, Göttingen
- Jeurissen, R.M.J., (ed), 2000, *Bedrijfsethiek. Een goede zaak*, Van Gorcum, Assen
- Kaptein, S.P., H.K. Klamer and J.C.J. ter Linden, 1999, De integere organisatie. Het nut van een bedrijfscode, Den Haag/Amsterdam

KPMG Ethics and Integrity Consulting, 1999, *Sustainability Management: balancing and integrating economic, social and environmental responsibilities*, Amsterdam.

Landes, D.S., 1998, *The wealth and the poverty of nations. Why some are so rich and some so poor*, Norton and Co., New York/London

Luijk, H. van, 2000, Eén stap verder dan ethiek, in: H. Noordegraaf and J. Van Workum (ed.), *Maatschappelijk verantwoord ondernemen. Een nieuwe fase in het kapitalisme*, Kok, Kampen, pp. 52-65

Manenschijn, G., 1987, *Geplunderde aarde, getergde hemel. Ontwerp voor een christelijke milieu-ethiek*. Ten Have, Baarn

McIntosh, M., D. Leipziger, K. Jones, G. Coleman, 1998, Corporate citizenship: Successful strategies for responsible companies, *Financial Times Management*, London, pp. 61-68

NRC, 2000, 9-9-2000, page 18

Scott, M. and H. Rothman, 1994, *Companies with a conscience: Intimate portraits of twelve firms that make a difference*, Carol Publishing Group, New York

Shell, 1998, *Klimaatverandering. Hoe denkt Shell erover?*

Shell, 1998, The Shell Report 1998, *Profits and Principles - does there have to be a choice?*

Shell, 1999, The Shell Report 1999, *People, planet and profits. An act of commitment*

UNDP, 1996, *Human Development Report*

Velasquez, M.G., 1998, *Business ethics. Concepts and cases*, Fourth edition, Prentice Hall