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### Corporate social responsibility and financial markets

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## Chapter 6

# Conclusion

### 6.1 Summary

Government regulation cannot at all times guarantee that the way business is conducted is perceived as 'fair' or 'just' by society. As a response, a growing number of firms self-regulate their business under the label *corporate social responsibility*. Corporate social responsibility can be defined as the extent to which firms internalize externalized costs or avoid distributional conflicts. There are various reasons for firms to engage in corporate social responsibility; preempting future regulations, liability management, vertical product differentiation, improving stakeholder relations, lowering the cost of capital, or intrinsic motivation. All these classifications boil down to identifying who reaps the benefits of corporate social responsibility and who bears the associated costs. This thesis deals with various aspects of the economics of corporate social responsibility.

In chapter 2 we use a general equilibrium stock market model with production externalities to model the relation between corporate social responsibility and various measures of corporate financial performance. Investors are assumed to incorporate the production externalities in constructing their portfolios. Accordingly, socially responsible firms take this into account in their production decisions. Our model is able to explain the seemingly conflicting results of empirical studies on the relation between corporate social responsibility and corporate financial performance. We show that it makes a huge difference which financial performance measure is used to analyze the relation. For the Market-to-Book ratio we expect a positive relation with corporate social responsibility, for the Return-on-Assets ratio also a positive relation, and for stock market returns this relation is ambiguous

at the aggregate level and negative at the industry level. With externalities, different financial performance measures capture different effects. As such, one should be cautious when interpreting empirical results. Furthermore, our analysis shows that there are in fact strong linkages between corporate social responsibility and financial performance. The linkages are intuitive: engaging in corporate social responsibility compromises pure profits, but it potentially establishes maximum firm value.

In chapter 3 we empirically analyze the performance of banks that adopted the *Equator Principles*. With the *Equator Principles* banks try to ensure sustainable development in project finance. Using data from EIRIS, a third-party rating agency, we find that the social, ethical, and environmental policies of the non-adopters significantly differ from those of banks that did adopt the *Equator Principles*. The banks that did not adopt the principles are also significantly smaller. Most other bank characteristics do not show significant differences between the adopters and non-adopters. Using an event study, we show that shareholders did not react negatively to the announcement of the adoption of the *Equator Principles*.

In chapter 4, we link corporate social responsibility to sustainable development. Typically short-lived agents do not incorporate long-term effects of pollution, in effect forcing future generations to bear the associated costs. Such externalities are usually tackled by fiscal policy. In presence of socially responsible investors, however, the stock market can potentially deal with environmental externalities. We analyze the role of a forward-looking stock market in an overlapping generations model. Consumers choose between investing in bonds or corporate shares, taking into account that the firm pollutes. We show that when corporate property rights are traded, proper firm valuation can resolve the conflict between current and future generations.

In chapter 5 we analyze whether developing countries have comparative advantages in terms of regulations and link this to corporate social responsibility of multinational enterprises. More specifically, we use firm level data on 540 multinational enterprises with 44,149 subsidiaries in 188 countries and test whether firms with relatively low environmental standards are more often located in countries that are poor, corrupt or have weak environmental regulations. We find new empirical evidence in favor of the Pollution Haven Hypothesis, which states that multinational enterprises are transferring their dirty operations to countries with weak environmental regulation. Our findings suggest that these are not necessarily the poorest or most corrupt countries. We establish that multinational enterprises with

strong social responsibility avoid locating their operations in countries with weak environmental regulation.

## 6.2 Policy recommendations

This thesis is on corporate self-regulation, the message is certainly not that society does not need rules and as such it is not promoting laissez-faire policies. Not every company engages in corporate social responsibility and this simple observation by itself is an argument against deregulation. We simply acknowledge that regulation is not always optimal and some corporations are aware of this and act upon it by self-regulating, for various reasons. Second, the empirical evidence on the relationship between corporate social responsibility and financial performance might seem mixed. However, in chapter 2 we argue that if one knows how to interpret the empirical evidence, there are strong linkages between corporate social responsibility and financial performance. We want to make policy makers aware of the potential paradoxes that distinct financial performance measures create in the presence of externalities.

Another important message is that the empirical evidence suggests that a large group of investors does care about issues other than cash-flows. However, information on a firm's social and environmental performance is often lacking. Currently, with voluntary compliance comes voluntary reporting, i.e. companies that engage in social responsibility often also choose to report their conduct, but many companies feel free not to report on social or environmental issues. Reporting in itself has become a virtue of the firm. Therefore, we recommend that firms should be legally forced to report on a set of measurable, universally applicable, and objective standards, just as there exist accounting standards to provide information on financial performance. This need not be an extensive list, because correlations of such measures are generally high. One could think of the amount of greenhouse gas emissions in tonnes of CO<sub>2</sub> equivalents per year or the number of accidents per million hours worked.

In chapter 3 we show that investors do not reject bank policies that incorporate environmental and social standards when it comes to financing large projects. Especially for developing countries, where there is little or no environmental regulation, such financing policies are of great importance. According to our event study on adoption of the Equator Principles, having socially responsible financing policies does not affect shareholder value significantly. We therefore feel that banks

need not be hesitant in adopting socially responsible financing policies.

In chapter 4 we discuss the role of the stock market to achieve sustainable development. This is analyzed in the presence of socially responsible investors. Note however, that instead of an externality-premium, a *Pigouvian* pollution tax on dividends is an effective way of letting the stock-market deal with intergenerational externalities. Our model does not take into account the possibility of underprovision of the public good, and a Pigouvian tax can account for the intra-generational as well as the inter-generational externality.

Finally, in chapter 5 we show that we cannot reject the pollution haven hypothesis. It is questionable whether this type of internationalization pattern is preferable. Since socially responsible firms self-regulate, they have less incentives to migrate their dirty operations to countries with poor environmental regulation. This provides domestic governments with tools to regulate internationally operating firms. Subsidizing responsible firms or taxing irresponsible firms can, to some extent, exert some control on the international location decisions of the firm.

### 6.3 Outline for future research

Throughout this thesis, it has been taken as given whether firms behave socially responsible or not. One direction for future research is to model an underlying micro-structure of this management decision making. Models of corporate finance/governance incorporating agency costs, as discussed in e.g. Tirole (2006) can potentially explain why some firms engage in corporate social responsibility and why others do not. These type of models seem to be especially useful, as there currently are a lot of information asymmetries between corporate management and shareholders regarding environmental and social performance.

The focus so far has been on financial markets and the agents we were interested in are shareholders. The main reason is that models that analyze consumer and employee behavior, namely models of product differentiation and models of compensating wage differentials already exist. These are examples of hedonic pricing models (see Rosen, 1974). Such hedonic pricing models are few in the investment literature and modeling socially responsible investment is a novel and attractive starting point. Nevertheless, there is still a need for research addressing the interaction of corporate social responsibility with the behavior of other stakeholders. It is interesting to find out which stakeholders are specifically targeted by socially responsible firms. In this context, there is another interesting causality issue that could

be addressed. Do socially responsible firms attract socially responsible investors, or do socially responsible investors induce firms to behave socially responsible? So the question is how social responsibility is actually governed. It is interesting to combine theories of corporate governance with the literature on social responsibility.

A second direction for future research is to empirically test the three propositions in chapter 2. Although the propositions seem to be in line with the existing empirical literature, it is useful to test the three propositions using a structural econometric model. Furthermore, the propositions try to explain what has been found by empiricists. The general equilibrium model allows for more specific and theoretically based hypotheses that can also be tested. Socially responsible firms do not maximize profits and based on a naive approach we would label such firms as inefficient. However, in chapter 2 we show that with externalities, maximizing profits or value is not the same. Stochastic frontier analysis as proposed by Hughes et al. (1996) can take into account distinct corporate goals and, as such, measure "true" inefficiency. This seems to be an attractive road for empirical work.

Furthermore, the model in chapter 4 is rather stylized. Endogenizing the interest rate and including realistic savings behavior enriches the analysis. It would be interesting to see how the savings decision interacts with the investment decision and how this effects the long-run environmental quality. With an endogenous savings decision, we can have both under- or over investment in the capital stock as well as in the environmental good. A priori it is not clear how this affects economic outcomes, and worth researching.

Finally, the empirical chapters use cross-sectional data. This limits one in making conclusions based on the results. Causality issues, endogeneity problems and unobserved heterogeneity can, to some extent, be better dealt with if we expand the data-set with more observations and create a panel. For instance, it is unclear whether firms make their decisions based on regulations, or if presence of a firm affects local regulations. So far, the possible type of analysis is often severely limited by the data, but as data on corporate social responsibility becomes more available, it opens up many doors for future research.

