



# Business Ethics Model

## From a qualitative to a quantitative approach

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Internship report

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## **Preface**

The last part of the study Business Mathematics and Informatics at the Vrije Universiteit Amsterdam consists of an internship at a company, research facility, or institute. My internship took place at the Data Quality & Integrity (DQI) service line within the department Enterprise Risk Services (ERS) of the accountancy firm Deloitte in Amstelveen. This internship consisted of developing a Business Ethics Model, a mathematical model to measure the degree of integrity within organizations.

I would like to thank my supervisors from Deloitte: Walter Diele and Suzanne de Vries. They gave me the freedom and assistance needed to do this research. My special thanks go to Wojtek Kowalczyk, my supervisor from the VU, for his valuable guidance and comments.

Furthermore, I would like to thank all of my colleagues within DQI for their listening ear and advice, and the colleagues of the group on integrity for their support and evaluation, but also all the other colleagues of Deloitte ERS who have made these past seven months a very pleasant experience.

Hinke Visser

Amsterdam, April 2008





## Management Summary

From March 1<sup>st</sup> 2006 changes to the *Ambtenarenwet* (civil law) have been made active which oblige government employers to do something with integrity, [5]. Organizations have to take measures and procedures to keep these obligations. Deloitte responded to this development by offering different products around integrity. A number of (qualitative) products have been developed which help Deloitte's customers to understand integrity issues. The current approach is especially qualitative and for several reasons it would be desirable to have a *quantifiable* model, that will be called a Business Ethics Model.

The objective of this research is the development of the Business Ethics Model, a quantitative model that can be used as a new instrument to get a view on how well the organization performs on integrity. The model is based on a questionnaire which contains issues about ethics and must be filled in by the employees within an organization. The issues are divided into five dimensions/categories and for each issue a score for *Importance* and a score for *Performance* must be given.

Different models for numeric prediction (multiple linear regression, robust regression, and regression trees) are used to make the questionnaire shorter and therefore more efficient. Then Importance Performance Analysis (IPA) is used to combine the scores on importance and performance. The ranking scores on importance and direct scores from performance are placed on the traditional grid to get a view on how well the organization performs on integrity. The idea of the diagonal model of IPA is used to make the 'Attention Grid' to see which items need the most attention to improve integrity.

Data used to build the model is obtained from an internal pilot project at Deloitte ERS. The results of the Business Ethics Model were evaluated and it turned out that the model well reflects the situation at Deloitte ERS.

The Business Ethics Model, that was developed in this project is just a first prototype of the integrity instrument. Therefore, further work is needed to turn it into a product and to market it.





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