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Organizations' receptiveness to management accounting innovations: the Beyond Budgeting case

*A study on the basic characteristics
of the Beyond Budgeting Roundtable organizations*

by

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Foreword

This thesis is written as a part of the Master of Science in Economics and Business Administration program at the Norwegian School of Economics and Business Administration (NHH), with a major in International Business. The thesis is written for the Beyond Budgeting research program at NHH, on a commission from the Institute for Research in Economics and Business Administration (SNF), and is financed by Statoil.

During the work on this thesis, a preliminary electronic database about the basic characteristics of 183 Beyond Budgeting Roundtable (BBRT) organizations has been prepared, and the collected data have been analyzed. The database contains information about the organizations' size, age, nationality, corporate sector, ownership and organizational structure, financial indicators, and certain data about their chief executive officers and chief financial officers. The database is intended to allow making some initial insights into the diffusion and, possibly, adoption of the Beyond Budgeting ideas. In addition, this thesis seeks to hypothesize about the possible explanations for the observed variables (characteristics) of the analyzed organizations. I hope that the results of this study will serve as a first contribution towards a database about organizations that are interested in control systems without budgets.

I would like to express my sincere gratitude to my supervisor, Associate Professor Daniel Johanson, for his remarkable guidance, encouraging discussions, and constructive comments throughout the research process. I am also grateful to Trond Bjørnenak, Katarina Kaarbøe, Nina Haraldsen, and the whole research team for their collaboration, enthusiasm, and inspiration.

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Bergen, June 20th 2011

Yulia MilovaContents

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1. INTRODUCTION

The aim of this chapter is to introduce the problem statement and the research questions of the study, its theoretical background, relevance, and structure.

1.1 Report background

Management control systems¹ in organizations are used “to ensure that the behaviours and decisions of their employees are consistent with the organisation’s objectives and strategies” (Malmi & Brown, 2008). For that reason, budgets can also be seen as a part of management control systems because they transform company’s objectives into specific plans and provide a point of reference for performance evaluation and, therefore, can influence the behaviours and decisions of employees (King, Clarkson, & Wallace, 2010).

Budgeting within large corporations was initiated as early as in the 1920s (Johnson & Kaplan, 1987). A budget is “a forward looking set of numbers which projects the future financial performance of a business, and which is useful for evaluating the financial viability of the business’s chosen strategy or deciding whether changes to the overall plan are required” (King et al., 2010). Budgets help to formulate clear goals, facilitate co-ordination, accountability and control, support contracting with partners, and provide “the ability to weave together all the disparate threads of an organisation into a comprehensive plan that serves many purposes” (Hansen & Otley, 2003). The use of budgets is argued to assist companies to achieve profitability (Horngren, Datar, & Foster, 2006). Previous studies have also found a positive association between the use of budgets and growth in small and medium enterprises (Gorton, 1999).

As noted by Den Hertog and Roberts (1992), management accounting developed in the times of mass production, slow pace of technological and market changes and relatively low uncertainty. Many academic researchers recognize that over the last decades, there have been

¹ Consistent with Chenhall (2003), the terms ‘management accounting’, ‘management accounting systems’, and ‘management control systems’ are used in this thesis interchangeably.

significant changes in the business external environment, such as intensive competition, increased customer demands, product diversity, shorter product life cycles and new information technologies (e.g. Baines & Langfield-Smith, 2003; Drury & Tayles, 2005). Burns and Vaivio (2001) argue that the organizational designs of companies also change; new organizational forms appear (flat and horizontal organizations, matrix structures, networks of virtual organizations).

One of the streams in recent management accounting research examines whether and how these changes in external and internal environment lead to changes in companies' management accounting systems in order to support managers' demand for necessary information (Baines & Langfield-Smith, 2003). Burns and Vaivio (2001) argue that since the publication of *Relevance Lost* (Johnson & Kaplan, 1987), academics and consultants have developed several new (so-called 'advanced') management accounting techniques in order to meet the information requirements of today's business managers. Burns and Vaivio (2001) suggest that in today's dynamic environment, the introduction of flexible planning and control mechanisms seems crucial. Otley (2003) notes that whereas in the 1960s and 1970s organizational control implied vertical integration and divisionalization, in the 1990s it transformed into various connections between enterprises (outsourcing, business process re-engineering and value chain management); accordingly, the central role of budgeting as a control technique has declined.

Nevertheless, traditional management accounting techniques (including budgeting) remain popular (Burns & Vaivio, 2001). However, the new 'advanced' accounting techniques such as rolling forecasts, activity-based costing (ABC) and the balanced scorecard (BSC) have been increasingly used in practice, although their implementation has not been widespread (Innes, Mitchell, & Sinclair, 2000).

Some academics explain the low rate of ABC adoption by doubts in its proposed benefits (ability to generate more accurate product costs calculations) and awareness of high costs of its implementation (Al-Omiri & Drury, 2007). Some other scholars have explained the relatively low success rate of implementing such new management accounting techniques (innovations), in particular, by inability of management accountants to innovate (Emsley, 2005).

The literature about diffusion of innovations suggests that innovation is “an idea, practice or object that is perceived as new by an individual or other unit of adoption” (Rogers, 2003, p.12); newness of an innovation includes new knowledge, persuasion and a decision to adopt. Innovations are believed to enable companies to adapt effectively to unpredictable business environments (Rogers, 2003). Innovations may include new products or services, new technologies, new structures or administrative systems and new plans or programs; and can be recognized as innovations anywhere from the emergence of the initial idea to the point of its full implementation (Emsley, 2005). It should be mentioned, however, that not all innovations are useful and desirable for every individual or social system (Rogers, 2003).

Management accounting’s contribution to the innovation process is to provide the company’s managers with relevant information (Emsley, 2005). For management control systems, an innovation may imply that, for instance, a new information system or a new cost allocation base is implemented (Quattrone & Hopper, 2001). Management accounting innovations include not just management accounting techniques, but also changes to work practices. Radical management accounting innovations are introduced for the first time and designed to ‘do things differently’ – for example, a totally new cost accounting system (Foster & Ward, 1994) – whereas non-radical innovations make only certain improvements to existing management accounting techniques in order to ‘do things better’ (Emsley, 2005).

Academic researchers have conducted many studies of management accounting change across different business sectors and countries, using various research methods and theoretical frameworks. Burns and Vaivio (2001) argue that there are three perspectives on change. First, what is the nature of change? Do activity-based costing and the balanced scorecard really provide something new? Is change useful and is it associated with progress? Second, is change always carried out rationally? Or are there some random influences, fashions and fads, power conflicts and resistance to change? Third, is change centrally driven (from the top management side) or locally driven (from the local change agents)? The prior research on those issues has provided different, somewhat controversial results (Quattrone & Hopper, 2001).

One of the new, and rather radical, management accounting and control techniques (or management accounting innovations) that has attracted academic interest in recent years is

the Beyond Budgeting concept. The main message of Beyond Budgeting is criticism of budgets and the proposal of their complete elimination (Hammer, 2010)². Ax and Bjørnenak (2007), however, argue that Beyond Budgeting is not a management accounting innovation *per se*, but rather a specific type of management accounting innovations, namely, ‘housing’ (combination) of ideas from some other innovations, including, for example, the balanced scorecard. For that reason, and taking into account the above-mentioned characteristics of innovations, one may consider Beyond Budgeting as a particular kind of management accounting innovation.

Budgeting in private companies (as opposed to governments) was developed several decades ago in order to improve planning efforts. Nevertheless, there has been a lot of criticism: budgeting is a slow and time-consuming process, it is too bureaucratic and too detailed, and it is inflexible and non-adaptive; sometimes, confirmed budgets are seen as appropriations that should be spent in a given season (Bergstrand, 2009). Since the business environment becomes more and more demanding and unpredictable, several scholars propose to move the focus of managing business from traditional (detailed) accounting systems to new (more flexible) management control systems which are able to make every employee contribute to increasing company value. In order to succeed, companies must be good at developing new businesses and should not focus only on short-term performance measures (Haraldsen, 2009). In the same vein, Rappaport (2006) argues that firms concentrating only on short-term performance will not be able to follow a value-creating growth strategy because they pay attention to their existing businesses rather than developing new ones. Moreover, according to Abdel-Kader and Luther (2008), many scholars believe that the new management accounting techniques have in fact shifted the focus of accounting from cost determination and financial control to value creation.

Ax and Bjørnenak (2007) argue that prior research has considered some specific internal and external company characteristics, or variables (such as cost structure, product diversity, level

² However, Becker, Messner and Schäffer (2011) argue one of the main messages of the Beyond Budgeting concept is not only the abandonment of budgets, but also the total transformation of the existing management model, which will be discussed further.

of competition, environment uncertainty etc.) associated (either in theory or in practice) with particular management accounting innovations. Analogously, the Beyond Budgeting Roundtable (BBRT)³ suggests that so-called ‘beyond budgeting organizations’ “are either at or near the top of their industry peer group rankings on a whole range of indicators from operating margins and shareholder returns to employee and customer satisfaction... They all have a clear purpose that is greater than short-term shareholder value... The management control bureaucracy has been dismantled... Competitors... failed to...copy the success formulae of these organizations...” (BBRT, 2011b).

Thus, prior management accounting research has found a number of assumptions relating to the financial, environmental and organizational characteristics (variables) of companies that are interested in specific types of management accounting innovations. In particular, there are claims that members and exemplar companies of the BBRT (that is, companies that either actually abandon budgets or, at least, are receptive to the Beyond Budgeting ideas and show explicit interest in them) might have certain financial, environmental or organizational characteristics that allow them to feel keenly the trade-off between positive and negative sides of budgeting. Consequently, these companies may be interested in abolishing budgets in order to increase their value through eliminating this trade-off.

Therefore, an important issue is to analyze to what extent these assumptions are reasonable. Accordingly, the overall purpose of this research is to explore what kinds of organizations are receptive to new management accounting and control ideas (and, in particular, to the Beyond Budgeting ideas).

1.2 Problem statement

The problem statement of this study is to explore the following:

³ The BBRT defines itself as “an independent, international research and shared learning network of member organizations with a common interest in transforming their management models to enable sustained, superior performance. It was established...in response to growing dissatisfaction, indeed frustration, with traditional budgeting.” (Beyond Budgeting Roundtable [BBRT], 2011a). According to Libby and Lindsay (2010), members of the BBRT are organizations that are interested in managing without budgets.

What kinds of organizations are receptive to new ideas in management accounting and control and, in particular, to the Beyond Budgeting ideas?

In order to answer this problem the following research questions are raised:

1. What are the main variables associated with organizations' interest in and receptiveness to new management accounting and control ideas, according to prior research?
2. Could at least some of these variables also be associated with organizations that either have showed their interest in the Beyond Budgeting ideas by their membership in the Beyond Budgeting Roundtable or have been discussed in the Beyond Budgeting Roundtable exemplar cases?

The results of this study should serve as a first contribution towards a database about organizations that are interested in control systems without budgets. Furthermore, this thesis seeks to hypothesize about the possible explanations for the observed variables (characteristics) of the analyzed organizations.

1.3 Relevance

During the last decades a number of researchers have investigated the factors associated with the adoption of specific management accounting systems and innovations (especially, ABC), but with rather inconsistent findings due to different approaches in identifying contextual variables and their measurements (Drury & Tayles, 2005). Analogously, Ax and Bjørnenak (2007) argue that the results of empirical research of company characteristics (variables) which might be associated with the adoption of management accounting innovations are limited and somewhat controversial.

The Beyond Budgeting concept can be considered as one of the latest management accounting innovations since it has attracted the interest of the research community only in recent years, after its emergence in 1997 (Hammer, 2010). For that reason, academic researchers have relatively less explored the Beyond Budgeting ideas, both from a general theoretical perspective and in particular settings. Furthermore, little is known about the

specific financial, environmental, or organizational characteristics of the organizations that are members of the Beyond Budgeting Roundtable⁴, and whether these characteristics can be derived from the prior research of the adoption of management accounting innovations.

Chenhall (2003) argues that prior research has provided a basis for possible propositions about elements of management control systems and environment. According to Emsley (2005), one way to identify explanatory variables that are likely to be significant in management accounting settings is to analyze the findings of previous studies, although it should be taken into account that factors that are important for one management accounting innovation may not be important for other innovations. He also argues that the inconsistencies in the findings of prior studies demonstrate that the existing theory should be further improved and tailored to the needs of management accounting research.

The aim of this thesis is, therefore, to provide further insight into the main variables associated with organizations that might be receptive to new management accounting and control ideas, and explore if at least some of these variables may also be associated with the members of the Beyond Budgeting Roundtable. This paper aims to mobilise the results of the prior management accounting research rather than provide an in-depth criticism of its assumptions or limitations. It also needs to be recognized that the design of this study does not permit statements of causation to be made.

1.4 Structure of the study

In order to answer the problem statement and the research questions of this study, one should examine both theoretical views and practice. Correspondingly, this report consists of five chapters. The first chapter of this report is the introduction. The second chapter presents and discusses the theoretical views that this study is built on. The third chapter describes research design and approach, and discusses the validity and reliability of the study. The fourth chapter contains the empirical data description and analysis. Finally, the fifth chapter is the

⁴ If the opposite is not stated specifically, here and further in this work the term ‘BBRT members’ (or analogous) includes also the companies from the BBRT exemplar cases.

report conclusion with a summary of the main findings and some suggestions for further research.

2. Theoretical perspective

This chapter presents and discusses the theoretical views that this study is built on, such as theories of innovations and their diffusion, theories of adoption of management accounting innovations, as well as main variables associated with the adoption of management accounting innovations. The chapter also discusses some aspects of budgeting, its criticism, and the Beyond Budgeting innovation movement.

The aim of this chapter is to develop a concrete set of variables for subsequent analysis.

2.1 Management accounting innovations research

2.1.1 Diffusion of innovations theory and management accounting innovations

As mentioned earlier, innovation is “an idea, practice or object that is perceived as new by an individual or other unit of adoption” (Rogers, 2003, p. 12)⁵. Diffusion of innovations is “the process by which an innovation is communicated through certain channels over time among the members of a social system” (Rogers, 2003, p. 5). According to Copeland and Shank (1971), accounting methods can also be considered as innovations, and accounting change, consequently, is subject to the diffusion of innovations theory.

Gosselin (1997) argues that the innovation process consists of four stages: *adoption*, *preparation*, *implementation*, and *routinization*. During the adoption stage, the company identifies the need for change and decides to adopt or reject the innovation; a number of specific contextual factors may affect this decision. The preparation stage includes employee training, extensive use of consulting services, and purchasing of computer software. During this stage, the company might modify its previous decision and even stop the installation

⁵ It is not the only definition of innovation. For instance, Van de Ven (1986) defines innovation as “a new idea, which may be a recombination of old ideas, a scheme that challenges the present order, a formula, or a unique approach which is perceived as new by the individuals involved . . . even though it may appear to others to be an imitation of something that exists elsewhere”. This definition, in author’s opinion, has something in common with the above-mentioned arguments of Ax and Bjørnenak (2007) that Beyond Budgeting might be considered a ‘housing’ of ideas from some other innovations.

process. The implementation stage consists of introducing the innovation and evaluating its effects. During the routinization, the innovation turns into regular practices of the firm.

Besides the above-mentioned classification, a so-called *ambidextrous* model of innovation process is also used in some research settings. This model distinguishes between the *initiation* stage (similar to adoption) and *implementation* stage (from preparation to routinization). The model predicts (Gosselin, 1997) that the initiation of innovations is easier in organic organizations whereas implementation is facilitated in mechanistic organizations (mechanistic firms are more centralized, vertically differentiated, and formalized than organic firms).

Rogers (2003) identifies the following characteristics of any innovation: perceived relative advantage, compatibility, complexity, trialability, and observability. Copeland and Shank (1971) argue that these characteristics can also be used in the analysis of the adoption of changes in accounting methods⁶.

Relative advantage is the degree to which an idea is perceived to be superior to the idea it replaces (in the terms of economic benefits, social prestige etc.). In other words, the term ‘innovation’ denotes something that is new and better than what was used before (Copeland & Shank, 1971). For example, some researchers argue that the adoption decision of any management accounting system is to a great extent based on the evaluation of its costs and benefits (King et al., 2010). As Copeland and Shank (1971) note, one can even view compatibility, complexity, trialability and observability together as a subset of relative advantage when advantage is interpreted broadly.

Compatibility is the degree to which an innovation is consistent with the existing values and past experience of the potential adopters. Compatible innovations are more readily adopted than incompatible ones. For example, in the case of the Beyond Budgeting adoption, a certain amount of ambiguity may be associated with changing from traditional budgeting methods.

⁶ Copeland and Shank (1971) in their paper refer to the earlier (1962) edition of this Rogers’ work, which uses somewhat other definitions of these characteristics (perceived relative advantage, compatibility, simplicity, divisibility, and communicability), but with essentially the same meanings.

Complexity is the degree to which an innovation is relatively difficult to understand and use as perceived by its potential user. For instance, according to Walley, Blenkinsop, and Duberley (1994), managers might resist accounting change because of its perceived complexity.

Trialability is the degree to which an innovation may be tried on a limited basis. According to Copeland and Shank (1971), accounting innovations are often quite trialable (divisible) in this sense.

Observability is the degree to which an innovation can be easily explained to others. Copeland and Shank (1971) suggest that management accounting innovations can be communicated, for example, through articles and business school courses.

The Rogers' model of the diffusion of innovations was applied to the analysis of changes in accounting methods as early as in the 1970s. For example, Tritschler (1970) examines the adoption of the LIFO ('last in – first out') accounting method⁷ and concludes that the adoption or rejection of this accounting innovation was not based simply on a criterion of profit maximization. Accordingly, he argues that LIFO was not compatible with the cultural values of management, that it was rather difficult to understand and implement, and that it was difficult to communicate because of its relatively negative impact on reported profits. Furthermore, Tritschler (1970) argues that *perceived* (rather than *actual*) relative advantage is indeed an important predictor of rate of adoption and that the advantages of LIFO method were not fully perceived by potential adopters.

Similarly, in a more recent study, Askarany and Yazdifar (2007) suggest that managers may remain simply unconvinced that ABC systems are superior to traditional costing techniques.

As mentioned before, the Beyond Budgeting initiative may also be considered as a kind of management accounting innovation. According to Granlund (2001), several researchers have claimed that accounting systems not only *can* change, but they *must* change in order to keep pace with other technological and business trends. However, it is often observed that

⁷ It should be mentioned, however, that the LIFO formula is no longer allowed (International Accounting Standard IAS 2 "Inventories"). Nevertheless, in the 1970s it was considered as an innovation.

management accounting change is difficult to implement. As Scapens (1994, p. 317) points out, "...it is probably reasonable to say that accounting practices are generally rather slow to change. An interesting question is: why?"

In this connection, Becker, Messner, and Schäffer (2011) argue that the Beyond Budgeting idea:

is perceived as a *radical* change and for that reason might have *low compatibility* with existing models of management,

has *high complexity* of the concept (with no promise of quick positive results),

has *low trialability* because it might be difficult to experiment with Beyond Budgeting approach on a limited basis (since to abandon something is a more radical experiment than to add some new details to an old system),

has *low perceived relative advantage* in comparison with traditional budgeting in terms of cost control, responsibility, or coordination,

has *low observability* since its potential benefits are difficult to observe.

In short, the application of Rogers' framework to the Beyond Budgeting case may at least partially explain the relatively low diffusion of the Beyond Budgeting concepts⁸.

2.1.2 Typology of management accounting change

Sulaiman and Mitchell (2005) describe the following typology of management accounting change:

addition (introduction of extensions to the existing management accounting system, for example, the introduction of a non-financial performance measures),

⁸ As it will be described in detail in the following chapters, this thesis analyses 183 firms from all over the world, which are members of the Beyond Budgeting Roundtable (BBRT), or are presented in its exemplar cases. While it is a rather large number by itself, it may be considered relatively small on a world scale. Hammer (2010), apropos, believes that the BBRT membership fee might be regarded by some potential BBRT members as relatively high.

replacement (introduction of alternatives for an existing part of the management accounting system, for instance, the replacement of a fixed budgeting system with flexible budgets),

output modification (amendments in the information output of the management accounting system, for instance, the preparation of weekly as opposed to monthly reports),

operational modification (technical adjustments in the management accounting system, for example, the use of another method of separating fixed and variable costs),

reduction (removal of a management accounting technique with no replacement).

According to Sulaiman and Mitchell (2005), the abandonment of budgeting discussed in this thesis is an example of *reduction* in management accounting. However, Becker et al. (2011) argue that the title ‘Beyond Budgeting’ itself might be misleading in this sense since it can raise interest only among financial professionals, whereas one of the main messages of the Beyond Budgeting concept is not only the abandonment of budgets, but also the total transformation of the existing management model. Perhaps, this “unfavourable identity” (Becker et al., 2011) of Beyond Budgeting and low interest in this concept among top executive officers can also be considered as important explanations of its rather low diffusion rate.

2.1.3 Rationality and opportunism in management accounting change

As discussed earlier, an important focus of management accounting research in recent years has been the analysis of the adoption and implementation of particular (new) management control systems (King et al., 2010). One of the arguments in this research is that an adoption decision of any system (for instance, budgeting) is *rational* and based on evaluation of the *costs* and the *benefits* of the innovation. King et al. (2010) argue that although some of these costs can be calculated relatively straightforwardly, other costs are vague and not easily measured since, as discussed earlier, budgets can create inflexibility, limit creativity, facilitate short-term behaviour and gaming, and de-motivate employees. Moreover, the benefits and costs of budgeting might be dependent on some company-specific factors and because of that might be rather diverse for different companies. King et al. (2010) conclude that adoption of a formal budgeting practice might not be reasonable for all businesses.

However, Baird, Harrison, and Reeve (2004) argue that regardless of the stated benefits of ABC systems, many studies that have examined the extent of the adoption of ABC have revealed various, sometimes rather low adoption rates. One explanation for the low adoption rates might be ‘*accounting lag*’ (Kaplan, 1986), that is, the time between the emergence of theoretical ideas and their practical implementation (Emsley, 2005). Granlund (2001) names this characteristic of management accounting systems as their ‘stability’ or ‘continuity’.

Kaplan (1986) suggested several explanations for the management accounting lag including the widespread use of computer-based accounting systems, the emphasis on financial accounting, and the fact that top management does not pay attention to the improvement of management accounting systems. Nevertheless, alternative explanations are also possible since significant variation in adoption rates has been observed even across studies conducted at similar points in time. Askarany, Smith, and Yazdifar (2007) suggest that the slow diffusion of cost and management accounting innovations might simply link to the shortcomings of new techniques. Baird et al. (2004) believe that the diversity of observed results may be caused also by variations in terms used in studies as well as by different levels of ABC adoption. In the same vein, Gosselin (1997) argues that ABC implementation consists of a sequence of decisions and that managers may adjust their initial choices during the adoption process. King et al. (2010) argue also that a lag between the need for and the use of a particular budgeting practice should be expected since organizations are moving towards optimal management accounting practice in larger rather than smaller increments.

Baird et al. (2004) also make a highly relevant remark that businesses are expected to adopt a new management accounting system only if the information generated by this system will be *useful for decision-making*. As Krumwiede (1998, p. 33) points out, “even if ABC will reduce cost distortions substantially, it probably will not be implemented unless a company can use the better cost in its decision making”.

Furthermore, Emsley (2005) argues that the benefits of management accounting innovations are likely to be highly uncertain since their outcomes are difficult to observe beforehand. Moreover, better accounting information as such is not a sufficient condition for increased competitiveness (Waeytens & Bruggeman, 1994). Therefore, managers tend to spend much time evaluating the effectiveness of such innovations, which leads to the accounting lag.

However, this process might be shortened if a manager can trust the management accountant's opinion, especially in the case of radical innovations (Emsley, 2005).

Walley et al. (1994) argue that this lag between the theory and practice can be explained partially by *organisational reasons* that might be rather *opportunistic*. For instance, owners-managers tend to keep their financial information as confidential as possible and, therefore, adopt rather simple designs of accounting, which are unlikely to be changed; some managers might resist accounting change because of its perceived complexity.

Seal (2010) also argues that some management accounting practices may conflict with the interests of senior managers. In such cases, managers might prefer a method that may be theoretically deficient but practically advantageous for them; or they might even adopt an advanced approach but apply it in an incomplete and rhetorical manner.

Similarly, Foster and Ward (1994) argue that resistance to management accounting innovations exists due to the presence of an internal labour market for managerial talent within hierarchical organizations (a stable management accounting system is more advantageous for the internal labour market participants while radical accounting innovations may be viewed as a breach of social contracts). Their analysis suggests that managers resist management accounting innovations more in older, established organizations than in younger organizations. These researchers call this resistance '*perpetual management accounting innovation lag*' and indicate that it, however, might not be necessarily dysfunctional to the company. Only considerable benefits from the management accounting innovation can outweigh costs associated with disturbance of the internal labour market. In the same vein, Granlund (2001) argues that resistance to management accounting change cannot be viewed as being synonymous with *irrationality*; he even argues that some continuity may be necessary to enable change.

Granlund (2001) is rather sceptical to research efforts made in order to understand factors involved in the implementation of new management accounting systems (like ABC). First, he argues that such studies have not come to radically new conclusions, as many similar factors (for instance, the use of external consultants and top management support) were identified as early as in the 1970s in the information technologies implementation research. Second, he suggests that the number of factors affecting the implementation of management

accounting systems might be unlimited (however, the relative importance of certain factors can probably be established). Third, the research fails to capture the interrelationships between the factors as well as different personal ambitions.

In the author's opinion, the above-mentioned rational and irrational factors may also be relevant to the adoption of the Beyond Budgeting initiative. This can partially explain the fact that not so many companies – which are the subject of examination in this thesis – have explicitly shown their interest in these ideas. In the following section, the concept of budgeting, its criticism, and the emergence of the Beyond Budgeting initiative will be discussed in more detail.

2.2 Budgeting, Beyond Budgeting and their criticism

Buckley and McKenna (1972) explain that *budgetary control* consists of planning, controlling, coordinating, and motivation through money values and departments within an organisation. A budget is a quantitative plan, usually for one year, which influences management behaviour by allocating resources, establishing performance criteria, setting goals and controlling their attainment. King et al. (2010) emphasize that budgets are not only one of the main management control systems in organisations, but also are found to be the earliest management control system that a business adopts.

As mentioned above, budgeting in large bureaucratic multi-divisional companies has been used since the beginning of the 20th century, ensuring certainty and managerial responsibility (Frow, Marginson, & Ogden, 2009). A budget is a financial representation of a company's business plan and works reasonably effectively in a rather stable environment (Otley, 2001), whereas in today's unstable environment, firms try to attain competitive advantage through innovation, learning, flexibility, and adaptation (Frow et al., 2009).

Many researchers (in particular, Hansen, Otley, & Van der Stede, 2003; Hope & Fraser, 2003) discussed the incompatibility of the modern unpredictable business contexts with traditional budgeting. Annual budgetary goals are considered to limit managers' flexibility and hinder co-ordination, innovativeness, and creativity. According to Libby and Lindsay (2010), several prior surveys report a growing dissatisfaction among organizations with their

budgeting systems. Budgeting has been considered “a thing of the past” (Gurton, 1999), or an “unnecessary evil” (Wallander, 1999).

Ihantola (2006), on the other hand, examines the concept of ‘budgeting climate’ within an organization, which is defined as “a collective attitude to budgeting”. She argues that in a favourable organizational climate budgeting helps to define goals and allocate resources, clarify managerial responsibility, facilitate integration and coordination of decision-making, create conversation environment, serve as an important source of information, and motivate employees. On the contrary, in an unfavourable climate, budgeting can cause nervousness, lead to budgeting bias in the hope of receiving more resources or rewards, and waste resources. In some companies, argues Ihantola (2006), budgets represent a significant source of change, whereas in others, budgeting is only a meaningless ritual, and budgets constitute a barrier to change.

Correspondingly, Libby and Lindsay (2010) subdivide the criticism of budgeting into two main streams: some researchers argue that the problems with budgeting stem from the way budgets are used (consequently, some improvements are possible), while others argue that budgeting processes are fundamentally imperfect. Hope and Fraser (2003), for example, argue that budgets should be completely abandoned (the Beyond Budgeting initiative) with the focus on managers’ responsibility for performance and customer needs, cross-company coordination, and information sharing.

The following citations can give clear examples of the two opposite attitudes to budgeting:

“I believe that budgeting provides managers with a wonderful opportunity to rejuvenate their organizations. There is no other managerial process I am aware of that translates qualitative mission statements and corporate strategies into action plans, links the short term with the long term, brings together managers from different hierarchical levels and from different functional areas, and at the same time provides continuity by the sheer regularity of the process” (Umapathy, 1987, p. xxii);

“Not to beat around the bush, but the budgeting process at most companies has to be the most ineffective practice in management. It sucks the energy, time, fun and big dreams out of an organization. It hides opportunity and stunts growth. It brings out the most unproductive

behaviors in an organization, from sandbagging to settling for mediocrity. In fact, when most companies win, it is in spite of their budgets, not because of them” (Welch, 2005, p.189).

Hope and Fraser (2003) argue that budgeting systems are isolated from strategy, uncoordinated with competitive requirements, and often result in dysfunctional behaviour and consume large amounts of management time. They regard budgets as “fixed performance contracts” that “force managers at all levels to commit to delivering specified outcomes, even though many of the variables underpinning those outcomes are beyond their control” (Hope & Fraser, 2003, p. xx). If actual performance meets or exceeds a pre-specified budget target, this will likely result in reward. This ‘performance trap’ (Hope & Fraser, 2003) does not allow managers to respond flexibly to unexpected changes in today’s competitive environments. Consequently, Hope and Fraser (2003) propose that the “tyranny” of the “fixed performance contract” should be replaced with a “relative improvement contract”, by which managers are “evaluated and rewarded after the event according to how they performed in the light of the circumstances that actually prevailed and, perhaps more importantly, how they performed against their peers” (p. 42). They advocate that performance should be “evaluated and rewarded against world-class benchmarks, peers, competitors, and even prior periods” (p. xix). Moreover, Hope and Fraser (2003) also argue for the shift of “power and authority from the centre to operating managers, vesting in them the authority to use their judgement and initiative to achieve their goals without being constrained by some specific plan or agreement” (p. 42). This decentralisation is claimed to allow managers to “foster innovation and responsiveness” and “increase adaptability” (p.158).

Nevertheless, budgeting is still widely used in practice for the purposes of cost control and prediction of financial performance (Frow et al., 2009). As Libby and Lindsay (2010) note, “It seems difficult to accept that so many organizations would continue to use budgeting for control purposes (i.e., for managerial motivation and performance evaluation) if it was fundamentally flawed”. Moreover, even highly successful and innovative firms (for example, *Johnson & Johnson*) use budgeting for planning and control purposes, while a BBRT member and its exemplar case *Handelsbanken* relates to a rather predictable banking industry (Libby & Lindsay, 2010).

According to Libby and Lindsay (2010), there is very little recent research about whether and how firms are adapting their budgeting systems. For example, Frow et al. (2009) in their case study analysis of a large multinational technological company, introduce the concept of ‘continuous budgeting’ as a way in which an organization can bring together the need to meet budgeted financial targets, and the need for flexibility and innovation in the changing technological and market environment. Continuous budgeting gives managers the possibility to modify plans and reallocate resources in order to meet strategic goals, while maintaining managers’ accountability for the company’s financial targets (Frow et al., 2009).

The paper of Frow et al. (2009) also provides criticism to the ideas of the total abandonment of budgets. First, they argue that the above-mentioned managers’ responsibility, coordination, and information sharing in the Beyond Budgeting approach are quite similar to the ‘continuous budgeting’ framework, which means that those characteristics can easily exist alongside the budget system.

Second, Frow et al. (2009) argue that the Beyond Budgeting ideas are not quite clear. In particular, it is not obvious how in practice managers’ flexibility is to be balanced against the financial performance of divisions (or a company as a whole). It is also not apparent who should make the everyday judgements about such balance in any particular situation. While Hope and Fraser (2003) argue that additional resources should be available to managers when required, it is not clear what criteria should be used to distribute these resources between competing claims, and who should make such allocating decisions. As Frow et al. (2009) critically note, “Anyone can manage with an unlimited budget”.

Third, Frow et al. (2009) do not support the view of ‘relative’ performance evaluation since it may be rather difficult to obtain precise information about competitors. Frow et al. (2009) also doubt that without budgets “people will use their best endeavours to continuously improve performance” (Hope & Fraser, 2003, p. xxii) since such a view, according to the agency theory, does not take into account possible risk of self-interested behaviour.

Overall, Frow et al. (2009) argues that the abandonment of budgeting even for companies operating in unstable and competitive environments might not be the only possible option to follow.

Marginson and Ogden (2005) argue that since the work of Argyris (1952), the main perspective in the budgeting literature has been rather critical. They examine the prior studies of budgeting issues and conclude that the previous research has been mostly concentrated on the following negative aspects of budgets:

- budgets hinder innovation and learning;
- high emphasis on budget targets creates dysfunctional behaviour (short-termism, data manipulation, conflicts between departments, tension, and budgetary gaming in order to increase the probability of receiving positive performance evaluations and associated rewards).

Analogously, Hansen et al. (2003) have summarized the criticism of budgeting as follows:

- budgeting consumes a lot of managerial time, so the benefits may not be worth the cost;
- budgets are fixed and inhibit adaptation to changes in a timely manner;
- the budgeting process is disconnected with strategy and competitive demands;
- a budget is used as a fixed performance contract, which leads to budget gaming and unreliable performance evaluation.

Marginson and Ogden (2005) in their study, contrary to the prior research, focus on positive effects of budgeting. They appeal to the human relations movement in accounting and, in particular, to the path-goal theory of financial controls, which suggests that where managers (especially senior managers) do not have obvious paths and clear goals (that is, in the situations of role ambiguity), they will welcome accounting-based controls such as budgets for the structure and certainty they provide. Tight budgetary targets, therefore, are positively accepted because managers are strongly motivated and satisfied by clear goals and by a performance evaluation system that is focused on the achievement of these goals. Marginson

and Ogden (2005) argue that managers commit to meeting budgetary targets, not because of accountability or rewards, but because of a sense of clarity and security. Consequently, Marginson and Ogden (2005) find the abandonment of traditional budgets argued by Hope and Fraser (2003) a rather extraordinary idea.

In the same vein, Libby and Lindsay (2010) in their recent survey of mid- to large-sized North-American organizations (in the USA and Canada) find that, despite all criticism, budgets continue to be widely used for control purposes and are perceived to be value-added (that is, the benefits of budgeting outweigh its costs). The researchers argue that problems with budgets do exist, but companies try to adapt budgeting systems rather than to abandon budgets altogether. For instance, firms tend to make some changes in their budgeting processes, such as bottom-up orientation of budgeting, use of rolling forecasts and less detailed budgets.

Libby and Lindsay (2010) also respond to the above-mentioned budgeting criticism of Hope and Fraser (2003). First, they discuss the suggestion that budgets take too much time to prepare. In their survey, they find that the annual formalized budgeting process in a business unit takes usually six to ten weeks to complete. The median amount of manager time spent on budgeting-related tasks (developing the budget, revisions, reports, and variance analysis) was found to be three to four weeks per year (that is, six to eight percent of the average manager's time). The results of Libby and Lindsay (2010) are significantly less than the data reported by Hope and Fraser (2003) (12 – 20 weeks and 20 – 30 % of managers' time).

Second, Libby and Lindsay (2010) analyze the proposition that budgets hinder companies' adaptability to market conditions. They find that for a significant number of firms this assumption is valid: the business environment is rather unpredictable and budgets quickly become out of date. Nevertheless, the researchers argue that it would be a mistake to generalize such an assumption to the majority of companies. They also find that the most of respondents try to use budgets in order to adapt to market changes, although they regard budgets as rather weak in this role. To mitigate this concern, many companies tend to use budget revisions, reviews and adjustments during the year, and even employ rolling budgets.

Third, Libby and Lindsay (2010) examine whether budgets are disconnected from firm strategy. This criticism has not been supported in their research study. Rather the opposite,

the budgeting process is used in many firms to promote strategic behaviour, and in the majority of firms surveyed, the budget process is explicitly linked to strategy implementation.

Fourth, Libby and Lindsay (2010) analyze if budgets are used in companies as fixed performance contracts. In their survey, less than 10 % of respondents have a fixed performance contract where actual financial performance is compared only against the pre-specified budget targets without taking into account any changes in the competitive environment during the year. This means that the fixed performance contract is much less common than it is suggested by the BBRT. Rather the opposite, many firms adjust budget targets subjectively in order to account for unexpected changes in the external environment, or use both budget targets and other subjective factors to evaluate performance. Some firms even use a specific pre-established formula for such adjustments.

Interestingly, these findings are not new. According to Govindarajan (1984), as early as in the 1970s, researchers subdivided performance evaluation styles into the following three groups: formula-based style (evaluation is strictly based on a formula tied to financial performance), subjective style (the superior disregards financial data and relies only on his (her) subjective judgments), and a combination of the two.

Finally, Libby and Lindsay (2010) analyze budget gaming and find that it is indeed very widespread. The most frequent games are deferring necessary expenditures to future periods and negotiating easier targets (up to 80 – 90 % of all respondents). The researchers also point out that gaming negatively affects both long-run business unit performance and value of the budgeting system. So, only these results have been found consistent with the prior criticism of budgets.

Thus, the findings of Libby and Lindsay (2010) show that that budgeting continues to play an important role in management control systems, and that most companies have no plans to abandon budgeting, although many firms seek to improve it. The researchers also argue that the assumptions of Hope and Fraser (2003) are over-generalized and cannot be applicable to an average firm. For instance, Maiga and Jacobs (2007) argue that Hope and Fraser's (2003) assumption of "discontinuous change, unpredictable competition, and fickle customers" is not relevant to the same degree for all companies (and business units). Only a few

respondents in the survey of Libby and Lindsay (2010) declare no value from their budgeting systems, so the researchers believe that such firms may be quite receptive to the Beyond Budgeting message.

Overall, Libby and Lindsay (2010) conclude that one should not take an “either/or” focus (that is, the Beyond Budgeting initiative vs. the improvement of traditional budgeting, or ‘activity-based budgeting’) since both approaches have been used in practice by successful firms. Further, some factors and approaches used across the two models are rather similar. As Kilfoyle and Richardson (2010) point out, the common idea in both of these models is to remove budgeting from hierarchical processes (the principal/agent relationship) either to focus on operational processes (activity-based budgeting) or to focus on empowerment and self-control (Beyond Budgeting). Both of these suggestions consider budgets as the means of stimulating local knowledge, and advocate using benchmarks to evaluate performance.

Finally, Hansen and Van der Stede (2004) underline that budgets in organizations have multiple uses. They discuss four reasons-to-budget: operational planning, performance evaluation, communication of goals, and strategy formation, and conclude that there is no universal set of budgeting characteristics, which positively affects each reason-to-budget. They also make a very important remark that the effect of *any one* organizational practice (budgeting in this case) on organizational performance is likely to be small *by itself*. This closing statement can serve as a conciliatory conclusion to the foregoing discussion.

Having discussed the existing challenges in management accounting innovations and budgeting research, as well as some possible explanations for the relatively low observed diffusion rate of Beyond Budgeting, we are going to describe the main tendencies, perspectives, and approaches in management accounting research.

2.3 Approaches in management accounting research

2.3.1 General perspectives in management accounting research

Emsley (2005) reports that most management accounting innovation studies use a *demand-side* (adopter) perspective. Such studies assume that innovations develop because of an organization’s need for them. However, a *supply-side* view is also quite important since it

can provide an alternative explanation for the implementation rate of management accounting innovations. Ax and Bjørnenak (2007) express the similar suggestions.

According to Emsley (2005), *demand-side* research can be split into *process* and *content* studies. The *process* studies examine ‘how’ and ‘why’ innovations develop. They do not consider the adoption of management accounting innovations as a fully rational process driven only by the perceived benefits of these innovations. These studies use, in particular, the *institutional theory*⁹ to explain management accounting innovations. On the other hand, the *content* studies believe that innovation is, basically, a rational process, and analyze the relationship between different explanatory variables and innovations. This type of research can be split, in turn, into two streams: the *diffusion of innovation* research and the *organizational innovativeness* research. Diffusion of innovation research examines the diffusion (or rate of adoption) of a single innovation at a national or international level. Organizational innovativeness research explores the explanatory variables that are associated with the adoption of innovations and uses the *contingency approach*.

According to Malmi (1999), however, both diffusion of innovation studies and organizational innovativeness studies have been criticized. First, they place too much emphasis on the demand-side and not enough on the supply-side of diffusion, although consulting firms, business schools and mass media tend to promote managerial innovations quite actively. Second, these studies have a ‘pro-innovation bias’ that implies that any management accounting innovation should be diffused and adopted rather rapidly.

Now we are going to discuss more closely the above-mentioned basic theoretical approaches used in management accounting (and budgeting) research.

2.3.2 Contingency-based approach in management accounting research

Principles of contingency-based management accounting research

According to Chenhall (2003), the term ‘contingency’ means that something is true only under some particular conditions.

⁹ Interestingly, Ax and Bjørnenak (2007) regard some of these studies as related to the *supply-side* view – for instance, studies employing the fashion perspective developed by Abrahamson (1991).

Otley (1980) notes that the contingency approach emerged in organisation theory literature in the 1960s and has been used in the accounting research since the 1970s. Before that, the main theoretical work in management accounting and budgeting had been that of Hofstede (1968). This work assumes managers to have ‘dysfunctional behaviour’ that should be eliminated; it is also considered *universalistic*, that is, it seeks ‘one best way’ of designing control systems (Otley, 2003). Such universalistic rhetoric, apropos, can also be traced in the Beyond Budgeting initiative (Libby & Lindsay, 2010). Hope and Fraser (2003), for example, also consider the effect of fixed budgets on managers’ behaviour to be dysfunctional and recommend the abandonment of budgeting with a view of improving management control processes or, as Otley (2003) expresses these ideas, the role of budgeting should be reduced to back-office financial planning¹⁰.

The contingency-based approach in management accounting research, as opposed to universalistic approach, assumes that managerial behaviour depends on a wide variety of firm elements (Silvola, 2008), and that there is no universal management control system appropriate for all companies in all circumstances. As Abdel-Kader and Luther (2008) put it, management accounting systems “evolve partly in response to the firm-specific and environmental contingencies confronted by individual firms”. Chenhall (2003) also notes that contingency-based research follows a rather *traditional* view that management control systems are only a *passive* tool for providing necessary data for managers’ decision making (as opposed to sociologically-oriented research which suggests that management control systems support employees in attainment of their own goals).

The contingency-based approach has affected a significant stream of management accounting research (Abdel-Kader & Luther, 2008). For example, Tillema (2005) explains that many organisations have not adopted the ‘advanced’ management accounting techniques because “the appropriateness of using sophisticated techniques may depend on the circumstances in which these techniques are being used (and this) ... gives rise to the need to

¹⁰ As mentioned above, Becker et al. (2011) believes that such an understanding might be misleading since one of the main messages of the Beyond Budgeting concept is not only the abandonment of budgets, but also the total transformation of the existing management model.

adopt a contingency theory perspective” (p. 102). As Abdel-Kader and Luther (2008) point out, the “sophistication” of a management accounting system denotes its capability “to provide a broad spectrum of information relevant for planning, controlling, and decision-making all in the aim of creating or enhancing value”.

The contingency approach suggests that the elements (design) of an appropriate accounting, planning and control system depend on the particular circumstances in which an organisation finds itself (in other words, this design is situationally specific). Otley (1980) suggests that the evolution from a universalistic approach to a contingent approach in management accounting has been to a certain extent influenced by the need to explain inconsistent findings of previous researchers.

Drazin and Van de Ven (1985) identify the following forms of contingency approach – the *selection*, *interaction* (‘fit’) and *systems* approaches. The selection approach analyzes contextual factors without examining their effect on performance; the interaction approach also seeks to analyze organizational performance; systems models analyze the ways of combination of controls systems and context in order to enhance performance.

The ‘fit’ of a specific management control system is argued to be dependent upon particular contextual characteristics (factors) of a company (King et al., 2010). For example, Abernathy, Lillis, Brownell, & Carter (2001), having found in their research a fairly high level of satisfaction with the costing systems, attribute this to the ‘fit’ between the level of complexity of the costing system and such factors as cost structure and product diversity. ‘Fit’ means that the company use management accounting practices (for example, budgeting) which have a positive impact on performance in comparison with alternative possible practices. If a company *uses* budgeting without good reasons to do so, it might spend its resources without obtaining additional benefits. On the other hand, if a company *does not use* budgets to a proper extent, its performance might also suffer because of co-ordination problems (King et al., 2010).

It should be mentioned that ‘fit’ is a necessary but not sufficient condition for organizational success; that is, even though a firm has aligned its management accounting system with environmental contingencies, this does not guarantee optimal performance (Kilfoyle & Richardson, 2010).

According to Al-Omiri and Drury (2007), most management accounting control systems research has adopted the *selection* approach, on the assumption that rational managers use only accounting systems that facilitate performance improvement. However, despite the assumption of rational choices, the contingency approach has also analyzed some factors beyond rational self-interest, such as the effect of national cultures on the design of control systems (Kilfoyle & Richardson, 2010).

The contingency approach seeks to explore which specific characteristics of an accounting system are associated with certain circumstances and reveal an appropriate matching between them. However, the results of contingency-based research has not provide consensus on what specific contingencies should result in specific design of accounting systems. Moreover, the definition and measurement of the variables have been quite challenging. Nevertheless, the three general contingent variables (variously defined) of *technology*, *organisation structure*, and *environment* have been broadly used to explain the variety of the design and use of accounting systems. In particular, environment and technology are seen as affecting organisational structure that, in turn, affects the design of an accounting information system (Otley, 1980).

Production technology

According to Chenhall (2003), *production technology* is the way of operation of work processes, which includes machines, materials, people, software, and knowledge. Technology (unit, batch, mass production etc.) has traditionally been considered as an important influencing factor in the design of accounting systems since the manufacturing process is, essentially, the starting place of company's costs (Otley, 1980). For instance, Chenhall (2003) argues that standardized and automated processes might require more formal controls and traditional budgets. In the same vein, many scholars argue that new management accounting techniques have been designed to support modern technologies and management practices like total quality management (TQM) and just-in-time (JIT) production systems (Abdel-Kader & Luther, 2008).

According to Askarany et al. (2007), in many studies technological changes have been found among the main factors responsible for criticizing traditional management accounting techniques. On the other hand, Walley et al. (1994) in their survey of twenty manufacturing

firms argue that the prior research might have placed too much emphasis on the influence of technology as an agent of management accounting change. They report that personal characteristics of owners, strategies adopted by firms, as well as the external environment appear to be most influential upon the decision about the adoption or non-adoption of costing systems. According to their study, the adoption of new accounting methods tends to stem from external pressure, whereas most reasons for non-adoption come from within an organization.

Organizational structure

The *structure* of a business is the formal description of functions of organisational members (Chenhall, 2003). Organizational structure has been found to influence the ways accounting and budgetary information is used. For example, according to Hopwood (1972), some companies employ a *non-accounting style* of performance evaluation (where budget data play a relatively unimportant part in the evaluation of subordinates' performance), some use a *budget-constrained style* (where meeting the budget is the single key factor in employee evaluation), and others employ a *profit-conscious style* (where longer-run effectiveness is also taken into account). The contingent approach, correspondingly, suggests that there can be no universal recommendations, and that an appropriate style of budgetary information use depends, particularly, on the degree of interdependence between the business units. With high interdependence, managers will tend to use budgetary information in a more flexible way. The degree of interdependence, in turn, depends on both the production technology and the organisational structure, which, therefore, may be seen as important factors of the accounting systems design (Otley, 1980). To put it into other words, the contingency approach assumes that there is no unique best structure to all organisations under all circumstances, and a company's accounting system, being an element of its organisational structure will depend upon the circumstances (Abdel-Kader & Luther, 2008). Hansen and Van der Stede (2004) in their study of budgeting roles in organizations classify organizational structure as functional, divisional, or matrix (or other). A widely accepted proxy for organizational structure in management accounting research is the degree of *centralization* (Gosselin, 1997).

In this connection, it should be interesting to note that, according to Otley (2003), the Beyond Budgeting movement argues for more powerful middle management structure.

Environment

The effect of *environment* has also been identified as a factor explaining diversity in accounting systems. Chenhall (2003) in his literature review notes that among environmental variables analyzed in prior research one can find uncertainty, turbulence, hostility, diversity (variety in products and customers), dynamism, timely information, subjective performance evaluation style etc. For example, the level of the competition and even the different types of competition (price or product competition) can affect the complexity of management accounting systems and the extent of use of accounting and budgetary information (Otley, 1980). According to Abdel-Kader and Luther (2008), many researchers argue that modern management accounting practices (like ABC or BSC) have been designed to assist companies in their striving for a competitive advantage in today's global markets. Bruns and Waterhouse (1975) suggest that a decentralised organisation operating in a stable environment might be more interested in the use of budgetary control.

It might be interesting to note that, according to Amigoni (1978), the adaptation to the growing *structural* complexity of a company may be achieved just by *adding* new accounting tools to those in use, which retain their role, whereas increasing *environmental* difficulties might require the complete *replacement* of old obsolete accounting tools by new ones.

Contingency-based management accounting research: criticism and conclusions

Contingency-based research has been criticised. Contingency has not been considered as a theory since “there is no a priori intuition of its own as to what the pertinent factors are and as to their likely consequences” (Spekle, 2001). Since individuals are supposed by sociological theory to be boundedly rational, an adoption decision is rational only to a certain extent, not to mention the personal incentives of the managers concerned. It means that even businesses facing the identical contextual factors may choose different management control systems (King et al., 2010).

Al-Omiri and Drury (2007) suggest that the findings from this type of research may be spurious, and the methods adopted may use poor measures with measurement error and bias. For example, a contingency-based study may report that formal budget systems are inappropriate in uncertain business environment due to their inflexibility. Nevertheless, there is some evidence that successful companies operating in uncertain conditions extensively employ formal budgets provided they use them together with informal communications between managers: the budgets support planning, while the informal contacts ensure necessary information and flexibility (Chenhall, 2003).

Moreover, Emsley (2005) argues that the explanatory variables used in contingency-based management accounting research have been obtained from the organizational literature, without taking into account their probable significance for management accounting. According to Emsley (2005), the existence of accounting lag indicates that there might be something specific in management accounting settings that creates obstacles to management accounting innovations; consequently, this assumption can explain some inconsistencies in the findings of different researchers. Furthermore, Emsley (2005) argues that the existing organizational theory in this field should be developed to meet the needs of management accounting research.

Nevertheless, the contingency approach has been actively used where researchers have a priori intuition based on other organisational, economic, and sociological theories. For example, Chenhall (2003) in the review of management control system research argues that *technology, structure, environment, and size* are “the descriptors of the fundamental generic elements of context”. Another significant factor that has been found to influence the design of management control systems is *strategy* (King et al., 2010). As Chenhall (2003) points out, strategy differs from other contingency variables since it is not an element of context, rather it is the way to influence the environment, technologies, structure, and management control systems of a company. Hansen and Van der Stede (2004) analyze four contextual factors (strategy, structure, environment, and size) as possible ‘antecedents’ to reasons-to-budget; Cadez and Guilding (2008) find the fit between strategy, size, market orientation, and strategic management accounting.

Drury and Tayles (2005) argue that early management accounting researchers explored the importance of the environment, technology, structure, and size on the design of management control systems. More recently, contingency methodology has been used to investigate the factors influencing the adoption of ABC systems, but with somewhat inconsistent findings due to different approaches in identifying contextual variables and their measurements.

Overall, even though the results of contingency research have not always been consistent, this approach has provided a convenient analytical framework (Abdel-Kader & Luther, 2008). The important findings of contingency-based management accounting research claim that companies delegating more authority to lower levels of management have a greater need for control mechanisms to monitor subordinates; businesses with a cost leadership strategy need stricter controls to maintain profitability; the more predictable the external environment, the more willingly resources will be committed to planning (King et al., 2010).

Contingency-based approach in budgeting research

The contingency-based approach in *budgeting research*, according to Kilfoyle and Richardson (2010), seeks to maximize organizational performance by ensuring correspondence between budgeting systems and environmental and organizational contingencies; its purpose is to understand under what conditions a rational agent would include a formal budgeting system within management accounting and control systems.

For instance, Libby and Lindsay (2010) in their study of budgeting practices in North-American organizations examine the association of several contextual factors (size, strategy, structure, and predictability of the environment) with perceived budget value. Interestingly, they find that neither the *size* (revenues) of a business unit nor the *strategy* (cost leader vs. differentiator) were significantly correlated with budget value. The business unit *structure* (stand-alone unit or division of a larger organization) was somewhat correlated with budget value indicating that stand-alone business units derived greater value from budgets. The correlation between *predictability* and budget value was found to be negative.

King et al. (2010) analyze the association between budgeting practices in small Australian healthcare businesses and factors identified from contingency-based research, such as *size*,

*structure, strategy, and perceived environmental uncertainty*¹¹. They found that larger and more decentralised businesses are more likely to adopt written budgets. That is, size and structure of a company are associated with the initial decision to adopt formal budgets. They also found that if a company used written budgets then the number of budgets and the frequency of their use are positively associated with structure (decentralisation) and strategy (cost leadership), and negatively associated with perceived environmental uncertainty (dynamic nature of the environment). Thus, once a business has reached a critical size and has begun to use a budget, size is unlikely to play a significant further role in the determination of budgeting practice. However, as the business becomes more differentiated, decentralisation as well as the need for formal management control systems increase. Business strategy and perceived environmental uncertainty are supposed to influence the willingness to pay additional costs associated with a greater extent of budget use. King et al. (2010) also find the positive association between the 'fit' (of the contingency factors and the extent of budget use) and business performance. Their findings are consistent with the results of the prior contingency-based management accounting research, which means that the factors identified by contingency-based research may be useful for predicting the adoption and extent of budget use.

2.3.3 Institutional-based approach in management accounting research

Another important stream of management accounting research is based on the *institutional theory*. This theory assumes that organizations use their specific practices and systems in order to conform to the institutional (legal, socio-political, and regulatory) environment. Institutional-based management accounting research suggests that management processes are not guided only by principles of economic rationality, examines how organizations attempt to comply with external rules and beliefs, and explores various forms of resistance to change. In short, organizations are supposed to react to external expectations in order to survive in a particular environment (Boland, Sharma, & Afonso, 2008).

¹¹ Interestingly, a considerable number of the Beyond Budgeting Roundtable members, as it will be shown later in this thesis, are various healthcare organizations (hospitals).

Institutional theory is also concerned with similarities, or isomorphism, of organizational practices (for instance, budgeting) in organizations with different characteristics (Kilfoyle & Richardson, 2010). These similarities may be *competitive*, *coercive*, *normative*, or *mimetic*¹². Competitive isomorphism means that organizations adopt the most efficient procedures in the face of market competition. Coercive institutional pressures stem from formal or informal demands of headquarters, national or international organizations, or business partners. Normative pressures come from within the company itself when the professionals with specific education and national and corporate cultures carry out specific practices. Mimetic processes come from outside the company and can be driven by consultants (Boland et al., 2008), since companies in uncertain conditions tend to imitate other organizations (Kilfoyle & Richardson, 2010). Boland et al. (2008) argues that mimetic processes should be considered as particularly significant for management accounting research since, basically, there are not so many methods of management accounting practices, and there are only few leading consulting firms. Moreover, due to competition, these consulting firms may promote rather similar techniques. Many adopters of new practices also have a tendency to copy ‘good organizations’ and not ‘good solutions’, without deep evaluation of new offers.

In the same vein, Seal (2010) argues that while academics may wish that practitioners would select new management accounting concepts based on logical rigour and empirical validity, managers may claim that they use certain concepts because of their efficiency and profitability. Actually, however, many practitioners are influenced by ideas from consultants, ‘management gurus’, and professional journals (as opposed to academic literature). Similarly, Nørreklit (2003) as well as Ax and Bjørnenak (2005) argue that an effective rhetoric and communication facilitate the implementation of new management accounting techniques (like BSC). Likewise, the implementation of ABC is also associated with the active use of consultants (Bjørnenak, 1997).

¹² Emsley (2005) argues that these concepts of isomorphism are similar to the framework of *efficient choice*, *forced choice*, and *fad/fashion* perspectives developed by Abrahamson (1991).

Thus, budgeting processes may become similar across various organizations, for example, due to common regulatory processes, the same pattern of behaviour in uncertain situations or the identical professional knowledge (Kilfoyle & Richardson, 2010).

Institutional-based approach in management accounting research has also been criticized. This approach does not take into account the issues of internal efficiency, it does not provide a clear description of the replacement of old rules, and it tends to entirely ignore power and control issues (Boland et al., 2008).

The institutional-based approach in *budgeting research*, according to Kilfoyle and Richardson (2010), examines how the design of a budgeting system can meet coercive, normative, and mimetic pressures and comply with the social norms. This research is also interested in the role of budgets in interactions between diverse interest groups within a company. For example, self-interested behaviour from the key organizational players can entail adopting budgets that are not necessarily rational from an economic perspective.

As for the Beyond Budgeting initiative, the author of this thesis believes that so far its ideas have been disseminated, mostly, due to the *competitive* factors (the *efficient choice* reasoning)¹³. The Beyond Budgeting ideas might be considered as relatively young (the Beyond Budgeting Roundtable itself has existed for only 13 years) and companies do not make haste in using these new concepts. That is why the author believes that the ‘early’ adopters (those who have already decided to abandon budgets or, at least, have shown some interest in this issue) may have done so in order to increase their efficiency and competitiveness. Consulting companies, in the author’s opinion, might also be interested in the Beyond Budgeting ideas (like in other management accounting innovations) in order to keep themselves informed and to be potentially able to put on the market the corresponding solutions for their clients¹⁴.

¹³ The above-mentioned relatively small number of the BBRT organizations may support this view.

¹⁴ As it will be shown later, about one fourth of the all ‘Beyond Budgeting’ companies analyzed in this thesis belong to consulting and software sectors and provide various services within accounting, ABC, BSC, and business intelligence solutions. So, the mentioned potential interest of such companies in the Beyond Budgeting ideas may be considered as supported by the data.

2.3.4 Other approaches in management accounting research

The two described approaches (contingency-based and institutional-based) are not the only ones employed in management accounting and budgeting research. For instance, *agency theory* and its behavioural issues have also been used in this type of research (agency theory regards budgeting procedures as a process of interaction between principals and agents in order to establish mechanisms of monitoring and compensation in the situations of information asymmetry). Alcouffe, Berland, & Levant (2008) in their study use *actor-network theory* (ANT) and discuss how interactions between actors can lead to success or failure of management accounting innovations diffusion. Some studies have also analyzed the combined effect of psychological, social, and economic theories on budgeting processes (Kilfoyle & Richardson, 2010).

2.4 Findings of prior management accounting innovations research: main contextual variables

2.4.1 An overview of management accounting research results

General remarks

Many researchers have examined the adoption and benefits of traditional and new management accounting practices both all over the world and in specific countries (Angelakis, Theriou, & Floropoulos, 2010). However, Drury and Tayles (2005) as well as Al-Omiri and Drury (2007) in their literature reviews argue that one of the most significant management accounting research streams over the last two decades has been the contingency-based research of adoption and non-adoption of ABC systems. In the same vein, Chenhall (2003) notes that there has been a rather limited amount of contingency-based publications about other innovations (the balanced scorecard etc.).

ABC research

Activity-based costing (activity-based management) (ABC/ABM) was developed in the 1980s with the intention to overcome some of the shortcomings of traditional cost accounting (Gupta & Galloway, 2003). The academic research of ABC systems has been so

extensive that, for instance, Carmona and Gutiérrez (2003) have even labelled it a 'research fashion in management accounting'.

ABC, in general, is regarded as an innovative management accounting practice, although not in all countries (Carmona & Gutiérrez, 2003). Drury and Tayles (2005) emphasize that the previous researchers of ABC adoption have defined the term 'adoption' in various ways: not only as actual ABC implementation, but sometimes also as an interest in doing so. Drury and Tayles (2005) find that the following contextual variables have been used in prior studies of ABC adoption:

- size (annual sales turnover),
- product diversity (the number of products/product lines/product variants),
- degree of customization (mass, batch, single-product or process producers; made-to-order or made-to-stock; customized or standard products),
- level of competition (percentage of sales exported; number of competitors; perceived change in competition; price-makers or price-takers),
- cost structure (overhead costs as a percentage of total cost; capital costs as a percentage of total costs),
- the number of cost pools and allocation bases,
- use of advanced manufacturing technologies (AMT), just-in-time (JIT), total quality management (TQM), lean production and automation,
- competitive strategy,
- organizational structure,
- industry,
- quality of information technology.

Drury and Tayles (2005) in their review of ABC adoption research report that in several prior studies, size, product diversity, degree of customization and level of competition were

found as significant variables in distinguishing between ABC adoption and non-adoption. Baird et al. (2004) argue that the different results of studies that have examined the impact of organizational factors (size, structure, strategy and decision usefulness of cost information) on the adoption of ABC systems might be caused by the variety of *terms* used in prior studies (activity-based costing, activity-based management, activity accounting etc.), as well as by the different *levels* of ABC adoption. In the author's opinion, the last observation is of considerable importance for this thesis since it deals exactly with characteristics of organizations that might be positioned at various levels of the Beyond Budgeting adoption: they might either have abandoned budgets or, perhaps, just shown their interest in the Beyond Budgeting ideas.

Drury and Tayles (2005) also emphasize that an important problem with this kind of research is to find proper *measures* for the contextual factors (variables) since for some of the variables only proxy measures have to be used. Moreover, Drury and Tayles (2005) and Al-Omiri and Drury (2007) suggest that there might be several *omitted organizational variables* such as top management support, resistance to change from the staff, lack of relevant skills, lack of appropriate information technology, and the lack of a perceived need to develop more complex management accounting systems.

BSC research

Malmi (2001) have found the following reasons for adoption of the balanced scorecard (BSC) in Finnish firms:

- the BSC helps companies to translate strategy into action, to tie strategy and operations together;
- the BSC is a tool for quality management; it allows companies to score high points in self-assessment for various quality programs (like TQM) and quality awards;
- the BSC helps to support other changes (new value chain concepts, process management, post-merger management);
- managerial fads and fashions (ideas from consultants, seminars and workshops);

- and abandonment of traditional budgeting (eliminating of budgets requires another control mechanism, such as the BSC).

Cost system complexity research

In their research of the level of cost system complexity (that is, the method of assigning indirect costs to cost objects), Drury and Tayles (2005) examine the following factors:

- size of the organization (annual sales turnover);
- corporate sector (manufacturing, service, financial and commercial, retail, conglomerate and other)¹⁵;
- product diversity;
- degree of customization;
- competitive environment;
- cost structure;
- and importance of cost information for decision-making.

Drury and Tayles (2005) find that *size*, *product diversity*, *degree of customization* and *corporate sector* (specifically, finance and commercial sector and service sector) are significant independent variables in the assessment of the level of cost system complexity. All the variables are positively associated with the level of cost system complexity, except for the degree of customization, which is negatively associated. Moreover, size and corporate sector were found to be of higher relative importance to the dependent variable than other independent variables.

Likewise, Al-Omiri and Drury (2007) analyze the levels of cost system sophistication and find that they are positively associated with the *importance of cost information*, *extent of use of other innovative management accounting techniques*, *intensity of the competitive*

¹⁵ In this thesis, the author uses a similar, but more detailed corporate sector classification.

environment, size (annual sales turnover), extent of the use of JIT/lean production techniques and the type of business sector. No association was found between the level of cost system sophistication and cost structure (indirect costs as a percentage of total costs), product diversity, and quality of information technology.

Abdel-Kader and Luther (2008) explore the influence of ten external, organisational, and manufacturing characteristics (variables) on the use of thirty-eight different management accounting practices in the UK. Two of the variables (product perishability and customer power) were new since they had not been examined by prior research. Their results indicate that differences in management accounting system sophistication may be explained by *perceived environmental uncertainty, customer power, decentralisation, size, and use of advanced manufacturing technology (AMT), just-in-time (JIT) and total quality management (TQM)*. However, the researchers did not find an association between the level of management accounting sophistication and adopted competitive *strategy, processing system complexity, and product perishability.*

Management accounting change research

Libby and Waterhouse (1996) identify four economic and organizational factors associated with the adoption of changes in management accounting systems: intensity of competition, degree of decentralization, size, and organizational capacity to learn (the number of systems that existed in the organization). They hypothesize a positive relationship between all these factors and management accounting change (however, large firms tend to have a larger degree of bureaucracy that, in turn, may act as an obstacle to management accounting change). The results of their research on a sample of medium-sized Canadian manufacturers showed that firms operating in competitive environments indeed tended to use a greater number of management accounting systems. However, only organizational capacity to learn had a statistically significant effect on the number of accounting changes.

Laitinen (2001) in the study of management accounting change in small technology companies used the following variables to measure organizational characteristics:

- dependence on a group of companies (centralization);
- sector (manufacturing or service);

- size (logarithm of previous year's net sales);
- full-time accountants as a percentage of all employees (as a proxy of organizational capacity to learn);
- growth (average rate of growth in net sales during last 5 years);
- profitability (average return on investment ratio during last 5 years);
- intensity towards international markets (export as a percentage of last year's net sales);
- tendency to compete through innovation and product development (research and development (R&D) expenditure as a percentage of last year's net sales);
- strategy (customization or mass producer);
- customer intensity (a subcontractor or a company with a large number of customers);
- level of competition;
- number of decision levels.

Now we are going to discuss in detail the main contextual variables identified by prior management accounting research.

2.4.2 Main contextual variables

Company size

Drury and Tayles (2005) underline that many researchers have found a positive relationship between company *size* and the adoption of innovations, the adoption of more complex administration systems and the sophistication of management accounting systems, since larger organizations are more likely to have a larger and more diversified range of products.

King et al. (2010) argue that size of a company is a sign of complexity and availability of resources; while *small* firms can often be managed mainly with informal oral mechanisms, *large* companies not only call for more formal controls, but also have better resources to do

so (to purchase software, to develop skills etc.). For example, several surveys have indicated that a significant factor limiting the implementation of complex management accounting systems is their high cost (Drury and Tayles, 2005). International studies have found that most of the large firms use formal budgets (Horngren et al., 2006). In the same vein, Davila and Foster (2005; 2007) in their longitudinal studies of start-up businesses find that size influences the decision to adopt operating budgets (larger firms adopt budgets sooner).

According to Bjørnenak (1997), larger firms have broader contacts and communication channels and are therefore more likely to adopt management accounting innovations. Al-Omiri and Drury (2007) in their analysis of seven prior ABC adoption studies find that size has been reported as the only consistently significant variable.

Baird et al. (2004) also confirm that a number of studies have supported a link between size and the adoption of modern management accounting practices such as activity management. They provide the following reasons for that:

- demand for planning, control and coordination of activities is greater in larger organizations;
- larger businesses are more likely to have sufficient resources for the development and implementation of new practices;
- the more resources are used for the implementation of practices, the better those practices are likely to be and the higher their perceived benefits.

On the other hand, Silvola (2008) argues that many *small* firms may need management control systems even more than many *large* firms do. The reason is that small firms operated earlier in rather predictable and stable environments where sophisticated management control systems were not needed. However, the current unstable environment in the high technology industry may have affected even smaller firms and their design of management control systems. Laitinen (2001), however, suggests that many management accounting systems used in *large* organizations, including short-term budgeting, may be ineffective in *small* technology companies and underlines that many companies operating in complex environments do not prepare traditional annual budgets.

Chenhall (2003) in his literature review reports that there have been several ways of estimating size: the *number of employees* (the most popular measure)¹⁶, *profits*, *sales volume*, *assets*, and *share valuation*. He argues that the accurate measure of size might depend on the aspect of management control systems being studied. For example, if a study analyzes effectiveness of budgets for employee coordination, then the number of employees may be suitable.

Similarly, King et al. (2010) suggest that size factor can be analyzed using either the *revenue* of a company, or the number of full-time equivalent *employees*. Their research shows that the results appear to be sensitive to the choice of proxy, since revenue structure (gross medical fees in their study) might allow a company with few staff to earn the same revenue as a company with a many full-time employees. King et al. (2010) argue that revenue might capture only resource availability while the number of employees is expected to capture both resource availability and complexity of a firm.

Strategy

Business *strategy* can be defined as a way that “a business chooses to compete within its particular industry” (King et al., 2010). Specific types of management control system are considered more suitable for particular strategies. For instance, many researchers use the classification of strategies into cost leadership and product differentiation, developed by Porter (1980). Cost leadership strategy is argued to require budgets for clear goal-setting and cost control (Chenhall & Morris, 1995). On the other hand, product differentiator strategy is argued to require more externally focused management control systems to accumulate competitors’ information on for planning purposes (Simons, 1987).

Gosselin (1997) in his study of activity management practices in Canadian manufacturing firms also argues that organizations that adopt and implement activity management have specific characteristics in terms of their business strategy and organizational structure. He argues that strategy plays an important role in the diffusion of innovations. He uses the typology of strategic positions developed by Miles and Snow (1978) – prospectors,

¹⁶ It should be mentioned that, for example, Libby and Waterhouse (1996), Gosselin (1997), Baird et al. (2004), and Hansen and Van der Stede (2004) measure size as a logarithm of the number of employees.

defenders, analyzers and reactors – and suggests that the decision to adopt activity management practices depends on the company's perceived need to have better accounting information. Prospectors are likely to be interested in innovations and have structures that facilitate the adoption of innovations. Gosselin (1997) believes that this typology is highly relevant for management accounting innovations research since the ability of an organization to innovate is the fundamental aspect of the typology.

Other models of strategic choices, which have been employed in contingency-based management accounting research, are the build-hold-harvest model developed by Gupta and Govindarajan (1984) and the entrepreneurial-conservative model of Miller and Friesen (1982).

According to Chenhall (2003) and Abdel-Kader and Luther (2008), all above-mentioned classifications are not significantly different and can be analyzed jointly, with entrepreneurs/prospectors/builders/product differentiators at one end of a scale and conservators/defenders/harvesters/cost-leaders at the other end. According to Chenhall (2003), conservative strategies are more associated with formal, traditional management control systems with rigid budget controls, than entrepreneurial strategies. At the same time, entrepreneurial strategies also may use formal, traditional management control systems, but together with active communications.

Abdel-Kader and Luther (2008) report that prior studies suggest that the entrepreneurial strategies do require sophisticated information systems, while conservative strategies do not. However, Chenhall and Langfield-Smith (1998) have found that activity-based techniques are associated with both product differentiation and low cost strategies.

Organizational structure

Chenhall (2003) suggests that large organizations with complex technologies, high diversity and more decentralized structures are associated with more formal, traditional management control systems (such as budgets). He also notes that formalization increases with size but at a declining rate; consequently, it is possible that different types of controls will be appropriate within large firms, depending on their size. Similarly, King et al. (2010) argue

that highly centralised businesses (those with high concentration of decision-making authority) have few administrative controls and less sophisticated budgets than decentralised businesses. Khandwalla (1972; 1977) found that large decentralized companies use sophisticated controls alongside with high levels of human relations coordinate activities.

In the study of Gosselin (1997), high vertical differentiation was found to be associated with the initial adoption of activity-based costing, whereas the actual implementation of ABC after its adopting was found to be associated with such organizational factors as centralization and formalization. In addition, these results provide a certain support for the relevance of the above-mentioned ambidextrous model in managerial accounting research.

Gosselin (1997) finds that a mechanistic structure of a company (more centralized and formal) is positively associated with ABC-adopters because mechanistic characteristics favour the adoption and implementation of administrative innovations (like ABC). He regards ABC systems as an administrative innovation since their implementation may lead to new administrative procedures and organizational structures. These results imply that ABC adopters and implementers tend to be bureaucratic organizations. Furthermore, decentralized and less formal organizations may have greater flexibility to stop the ABC implementation process if they believe it would be appropriate to do so. Gosselin (1997) considers these findings as highly important since centralization has usually been used in management accounting research as a proxy for organizational structure.

Corporate sector (industry)

Corporate sector is also believed to be associated with the design of cost accounting systems (Drury & Tayles, 2005). Shields (1997) argues that the design and effectiveness of cost accounting information and systems are conditional on characteristics of industries. As we discussed earlier, the literature about diffusion of innovation suggests that organizations may imitate other organizations within an industry sector in their adoption of innovations in order to maintain a competitive advantage ('fad perspective'). In other words, companies might be a subject to 'bandwagon pressures' (Abrahamson & Rosenkopf, 1993) when they adopt an innovation not because of their own judgment of its efficiency, but because of a large number of other companies that have already adopted it (the above-mentioned 'mimetic isomorphism'). Kaplan and Cooper (1998), for example, suggest that many service sector

companies are expected to be among prospective ABC-adopters either because most of their costs are fixed and indirect, or because such companies have only recently begun to consider the implementation of management accounting system after the processes of privatisation and deregulation.

Carmona and Gutiérrez (2003) note, in this connection, that the cross-national diffusion of management innovations shows that organizations tend to be late adopters at the global level (in order to enjoy the benefits of the ‘bandwagon effect’) and early adopters at the domestic level (in order to enjoy the local advantages of early adoption).

Abdel-Kader and Luther (2008) also report that industry-specific issues might affect the design of management accounting systems. Anderson and Lanen (1999) have attributed changes in management accounting practices, in particular, to the scope of firm’s operations (*domestic* or *international*). Groot (1999) concludes that in the adoption of ABC, the industry-specific characteristics are more pronounced than international differences.

National and organizational culture

As Chenhall (2003) points out, due to the expansion of multinational companies, *national culture* has also been recognized as an important variable in management accounting research. The fundamental proposition is that different countries have different cultural characteristics; therefore, their response to new management control systems may also be different. According to Chenhall (2003), the prior research in this field has provided rather mixed results since the scholars have examined different combinations of cultural dimensions.

The most popular cultural dimensions used in management accounting research, according to Chenhall (2003), have been those of Hofstede (1984) and Hofstede and Bond (1988): power distance, individualism vs. collectivism, uncertainty avoidance, masculinity vs. femininity, and long-term vs. short-term orientation. Chenhall (2003), however, suggests that anthropological and sociological theories might be even more suitable to understanding how different individuals respond to management control systems. He also believes that a strong *organizational* culture may dominate *national* culture in particular work situations.

Consistently with the last proposition, Baird et al. (2004) have examined the association between the extent of adoption of activity management practices on different levels (activity analysis, activity cost analysis and activity-based costing) and two types of factors:

- *organizational factors* (size (the number of equivalent full-time employees, logarithmically transformed), usefulness of cost information for decision-making purposes, level of overheads and product diversity),
- *organizational culture (business culture) factors* (innovativeness, outcome orientation, and tight cost control).

Baird et al. (2004) use three dimensions of business culture (innovation, outcome orientation, and tight cost control) in order to explore the separate influence of these dimensions on the extent of activity management adoption. Innovation refers to business receptivity, adaptability to change, and willingness to experiment (as opposite to resistance that, as discussed above, is considered as a major source of problems for adoption of new management accounting systems). Outcome orientation represents company's striving for achievement, results, performance, and competitiveness. Tight cost control is associated with "an extremely detailed planning, budgeting and reporting system" (Merchant & Van der Stede, 2003, p. 133).

In general, all the factors in the study of Baird et al. (2004) were found to be associated with one or another of the activity management practices. Baird et al. (2004) emphasize that their study is *exploratory*, as there is *no developed theory* to associate the specific organizational and cultural factors with the extent of adoption. They also underline that the factors being analyzed were not chosen as comprehensive, but rather as examples of factors that have been suggested or found to affect adoption of activity management generally. For example, size and decision usefulness of cost information have been previously found to be associated with activity management, whereas culture has been proposed as a factor with considerable potential to affect adoption of activity management. In the author's opinion, these statements are of considerable importance for this thesis, taking into account that it also explores the

main variables that, according to the prior research, have found to be associated with organizations' interest in new management accounting and control ideas.

Perceived environmental uncertainty

According to King et al. (2010), *perceived environmental uncertainty* means that company's managers perceive some aspects of the environment as uncertain. For example, the dynamic nature of the environment (dynamism) makes planning and control in large companies more difficult; static budgets become useless. As a result, greater informal communications become essential for decision-making, whereas formal controls become appear to be less valuable. On the other hand, businesses facing higher competition tend to use more formal controls and budgets. The analogous research for *small* businesses, however, has found that both increased dynamism and increased competition lead to the decrease in planning complexity since in both cases the managers are reluctant to spend limited resources on budget preparing without being sure of future positive effects of it (Matthews & Scott, 1995).

As Chenhall (2003) points out, the prior research in this field has found that uncertainty tends to be associated with more open, externally focused, and non-financial management control systems. However, hostile and turbulent environment has been frequently associated with formal control and budgeting. Consequently, organizations are argued to employ tight control initially for the purpose of short-term survival and then adopt controls that are more flexible. As mentioned above, effective organizations are supposed to combine formal controls with informal communication system.

Other variables

Davila (2005) in his study of the adoption of human resource management systems in small growing high-technology firms finds that the emergence of management control systems is driven by such variables as the *size* of the organization, its *age*, the *replacement of the founder by a new chief executive officer (CEO)*, and the *existence of outside venture investors*. Size reflects both the complication of coordination within the firm and the complexity caused by new markets and new products. Firm's age implies learning and experience that, in turn, can be transformed into adoption of improved management

accounting systems. The replacement of the firm's founder implies that the firm's processes begin to be more formalized. Venture capitalists do not only provide financial resources to firms, but also encourage them to use successful business techniques (including management accounting systems).

Similarly, Naranjo-Gil, Maas and Hartmann (2009) argue that individual differences between *chief financial officers (CFOs)* can also influence the organizations' use of innovative management accounting systems.

Silvola (2008) in the study of Finnish firms has found the association between the two contingency factors (life-cycle stage of a firm and the existence of venture capital investors) and the use of business planning and management control techniques, while the budgeting has been found to be quite similar despite the influence of these two factors.

Silvola (2008) argues that the organizational *life-cycle stage* has a significant (especially for growing firms) influence on the management control systems employed by the firm. Prior research suggests that as a firm goes through its life cycle stages (birth, growth, maturity, revival, and decline, after which the firm can renew itself or close up), the structures and decision-making tend to become more complex. At the birth stage, firms usually employ rather simple accounting systems. A growth firm begins to use reporting, budgeting, and a follow-up system. Mature firms place even more emphasis on formal practices, including quality control and environmental control. In revival firms, formal planning and control become even more essential. In the decline stage, formal systems are simplified, become narrower and less formal. The results of Silvola (2008), however, are contradictory to the prior research and indicate that budgeting, irrespective of the stage of the life-cycle, helps firms to achieve their goals, motivates employees, specifies responsibilities and organizational structures and is an important source of financial information in all firms. Nevertheless, Silvola (2008) has concluded that the most authoritarian budgeting is used in the mature stage.

According to Silvola (2008), the earlier studies have also found that *the presence of venture capital investors* has a positive association with the selection and number of management

control systems in small firms, since these investors pay a great attention to financial reports, budgetary control, and the cost-effectiveness of the firms in which they have invested. Nevertheless, the results of Silvola (2008) do not support the argument that budgeting is more regularly used in firms having venture capital investors as opposed to firms that do not have those.

It should also be mentioned that, according to Davila, Foster and Li (2009), some organizational characteristics, such as *size*, *age*, *strategy*, and *life-cycle stage* of a company, are covariates in many studies.

2.5 Summary and conclusions

Thus, prior research has found a number of various organizations' characteristics associated with the organizations' interest and receptiveness to management accounting innovations. Having discussed the main findings of contemporary management accounting research, the author chooses to focus for each analyzed BBRT company on the following contextual variables identified by prior studies:

- company size (annual sales, operating profit, net profit, total assets, number of employees),
- company age (year of foundation),
- nationality of the company (headquarters address),
- corporate sector (industry), main types of products and services,
- data about ownership structure and organizational structure,
- data about recent replacement date (year) of chief executive officer (CEO) and/or chief financial officer (CFO) of the company, and his (her) age.

The list of variables is based on the relative *significance* in prior research and/or relative *accessibility* from open sources (companies' Internet sites, financial reports, and press releases). The reasons for such choice will be discussed in the next chapter.

3. Research methodology

This chapter describes the research design, research approach, and the information gathering techniques used in this study. The reliability, validity, and generalisability of the research findings are discussed as well. The chapter also describes some general challenges with the data collection process.

3.1 Field of study

As described earlier, the objective of this study is to explore what kinds of organizations are receptive to new ideas in management accounting and control and, in particular, to the Beyond Budgeting ideas. More precisely, the purpose of this thesis is to examine the association between organizational characteristics and organizational receptiveness to the new management accounting models. The receptiveness is operationalized by the membership in the Beyond Budgeting Roundtable (BBRT) and, additionally, by the fact of companies' cases description in the Beyond Budgeting literature¹⁷.

The research objects are, consequently, the organizations¹⁸ that are members of the BBRT. These companies have either actually abandoned budgets or, at least, shown their interest in the Beyond Budgeting ideas. Taking into account the relatively large (for research purposes) number of BBRT members (175 firms, according to the current membership lists of the global BBRT and of its North-American and Germanic branches¹⁹), it has been decided to concentrate on the officially available sources, such as financial reports, press releases etc. As mentioned above, the results of this study may serve as a first contribution towards a database about organizations that are interested in control systems without budgets.

¹⁷ Mostly, the companies being discussed in the Beyond Budgeting literature are those mentioned in the Beyond Budgeting Roundtable lists. Nevertheless, some other companies have also been found during the literature review.

¹⁸ The words 'organization', 'company', and 'firm' describing the research objects are used in this thesis interchangeably.

¹⁹ In addition to this number, 8 organizations' cases have been taken from the Beyond Budgeting literature. The total number of the analyzed organizations is, therefore, 183. The author admits the fact that this list might not be fully comprehensive. However, it is large enough to conduct analysis and draw conclusions.

As Emsley (2005) argues, one way to identify basic explanatory variables is to examine previous studies and combine their main findings. Prior management accounting research, as discussed above, has indeed identified a number of such characteristics. However, as it was mentioned before, any chosen set of factors cannot be regarded as sufficient and comprehensive (Baird et al., 2004). Furthermore, not all data can be found in officially available sources, and factors that have been found significant for one particular management accounting innovation may not be important for other innovations (Emsley, 2005). It should also be emphasized that there is no developed theory to link particular factors to the extent of management accounting innovations adoption (Baird et al., 2004).

Despite these limitations, this thesis seeks to define the main contextual variables that have been found as associated with interest in (and with early adoption of) management accounting innovations and examine if these variables can also be associated with the BBRT members. To our knowledge, academic researchers have not addressed the issue of the Beyond Budgeting diffusion. This makes the research both interesting and challenging since the author has neither theoretical nor empirical pre-formed views on the processes and premises of the Beyond Budgeting adoption.

In brief, this thesis seeks to systematize and apply to a new field of study the results of prior management accounting research.

3.2 Research design

This study seeks to collect data about observable reality and objectively analyze them. Such work is mostly quantitative, highly structured, and allows future replications. The researcher can be seen as completely independent of the subject of the research (Saunders, Lewis, & Thornhill, 2009).

Firstly, this thesis will analyze the theoretical and empirical results of the prior management accounting research, and try to identify the main variables that have been found as associated with companies' interest in management accounting innovations. As discussed earlier, there has been rather limited *direct* 'Beyond Budgeting'-related research on this topic. For that reason, the author will be able to identify only variables associated with some *other*

management accounting innovations (first of all, ABC). This task requires a thorough examination of the relevant literature both on the diffusion of innovations in general, and on the diffusion and adoption of management accounting innovations, in particular.

Secondly, due to the obvious time, resource, and data constraints, only some of these variables should be selected for the future analysis, taking into account that the variables to be chosen should have been found as *significant* in prior research and/or be quite easily *accessible* from open sources (companies' Internet sites, financial reports and press releases).

Thirdly, the collected companies' actual data according to the chosen variables can give the author the opportunity to make some conclusions about the extent of the potential applicability of the previous research findings to the new field (namely, the interest in the Beyond Budgeting adoption). However, there will be no comprehensive statements of causality between the examined variables and the interest in the Beyond Budgeting ideas since this task lies beyond the scope of this thesis.

Research approach can be either deductive or inductive (Saunders et al., 2009). Consequently, this study will employ the *inductive* approach, but informed by theory and prior research.

This research will employ an *exploratory* design (Cooper & Emory, 1995). Exploratory studies try to explore new areas, to find out what is happening and to assess facts in a new light. An extensive search of the relevant literature is one of the ways of conducting such studies. The focus of an explorative study may be rather broad initially, but it becomes narrower as the study proceeds (Saunders et al., 2009). As it can be seen, that is essentially the description of this thesis's scope and progress.

Therefore, this thesis intends to explore a new field of knowledge, theorize on it by developing theoretical models, and analyze relevant empirical data in order to confirm, reject, or modify the developed theory.

3.3 Information gathering

In order to answer the overall problem statement and the specific research questions of this thesis, the author has organized her work as follows.

First, the author has made an extensive search and thorough examination of the relevant literature in several fields, such as:

- general theoretical views on innovations and their diffusion;
- major theories explaining the diffusion and adoption of management accounting innovations;
- key contextual factors (variables) associated with the adoption of management accounting innovations;
- use of budgeting in companies, its criticism and the emergence of the Beyond Budgeting movement;
- current criticism of the Beyond Budgeting ideas and premises.

In order to make an adequate literature review, the author has decided to use relevant textbooks as well as the Academic Journal Quality Guide (Association of Business Schools, 2010) that provides current ratings of business academic journals. The Guide's most relevant research fields for this thesis, as it can be seen from the research questions, are *Accountancy*, *General Management*, and *Innovations*. Correspondingly, the special emphasis has been laid on textbooks and high-ranked academic journals from the above-mentioned fields of study, such as *Accounting, Organizations and Society*; *Management Accounting Research*; *Scandinavian Journal of Management*; *Technovation* etc. In the process of the literature search, the following sources have been used:

- the library of *Norges Handelshøyskole (NHH)* and its electronic databases – *BIBSYS* and *Business Source Complete*;
- scientific database *ScienceDirect*.

The author has mostly concentrated on rather recent (years 2000 – 2010) research articles (especially on Beyond Budgeting issues and management accounting innovations studies), but has also studied some previous research in order to better understand the development of theoretical views and be aware of their current criticism.

Initially, only some basic key words were used in the electronic search, such as “budgeting”, “beyond budgeting”, “innovation”, “diffusion”, “management accounting”, “management control”, “activity-based costing (ABC)”, and “the balanced scorecard (BSC)”. Later, the author also looked for several closely related or synonymous expressions as “management accounting change”, “adoption”, “implementation”, “dissemination”, “contingency”, “institutional theory”, “Hope” and “Fraser” (the names of the ideologists of the Beyond Budgeting movement), etc. Particular attention was given to repeating citations and references in articles, which, hopefully, extended of the scope and the depth of the theoretical perspective of this thesis.

The overall findings of the literature review have been presented in the previous chapter.

Second, the concrete set of variables for the subsequent analysis has been selected. As mentioned earlier, based on the relative *significance* in prior research and/or relative *accessibility* from open sources, the author chooses to focus on the following variables for each analyzed firm: company size, its age, industry, nationality, ownership, organizational structure, and certain data about chief executive officer (CEO) and/or chief financial officer (CFO) of the company.

Third, the data about the companies that are members of BBRT, have been collected accordingly to the selected variables. In order to do that, the author has obtained the list of current members of the BBRT and taken steps to get as much official information about them as possible. The main data source are the Internet sites of the companies where they publish their financial statements and press releases; that is, *secondary* data (Saunders et al., 2009). Taking into account a relatively large number of analyzed companies, volume of official reports, and several selected variables, it has been decided to pay particular attention to the most recent companies’ reports (of year 2010). The result of this work will be a primary database of certain characteristics of these organizations, which will be described in more details in the following chapters.

Fourth, the author has sought to find some possible common patterns in this database and make certain conclusions about the potential applicability (or non-applicability) of the previous management accounting research findings to the Beyond Budgeting area, in order to answer the problem statement and research questions.

3.4 Evaluation of methodology

Many researchers (for instance, Robson, 2002; Saunders et al., 2009) emphasize that a great attention should be paid to the reliability and validity of the selected research design.

The degree of *reliability* indicates the extent to which a research study supplies consistent results (Cooper and Emory, 1995). Easterby-Smith, Thorpe and Lowe (2002) argue that reliability can be assessed by answering the following question: Is it clear how the raw data are analyzed, and whether the same results can be reached by other researchers and in other occasions?

In the author's opinion, the design of this study is rather straightforward. As mentioned above, this thesis analyzes secondary, highly structured, and mostly quantitative data, which allows future replications of the study. The researcher acts as outsider and is independent of the subject of the research. Thus, the process of data analysis is quite clear and other researchers can easily reach the similar results. Nevertheless, there might be some threats to reliability, such as observer error and observer bias if the researcher collects and interprets the information in a certain way.

First, we limit our research to a certain number of variables. As discussed above, any chosen set of factors cannot be regarded as complete. Another researcher can select, for some reason, other variables (for example, due to the better access to the companies' internal data). Second, other researchers can employ a longitudinal approach and use the broader range of data (for instance, several annual reports of each firm), which might provide somewhat different conclusions. Third, some threats for reliability have become visible only during the process of the data collection (will be discussed further).

The degree of *validity* indicates whether the findings of a study "are really about what they appear to be about" (Saunders et al., 2009, p. 101). The author of this thesis believes that the

validity and credibility of her findings should be quite high since the study uses secondary data from official and open sources that are supposed to be prepared according to certain rules. Nevertheless, as the analyzed companies are located in various parts of the world, some international differences in accounting rules (for example, revenue recognition practices) are inevitable, so the final database numbers may be rather mixed and incompatible (moreover, they are presented in various currencies); more comprehensive research should consider these facts. Besides, the identification of the variables might be somewhat ambiguous, and the definition and measurement of variables can vary (for example, other researchers can variously define the term ‘nationality of a company’ or ‘corporate sector of a company’ and have good reasons for that). Moreover, this thesis chooses the BBRT membership as a proxy for organizational receptiveness to the new management accounting models; the validity of such a proxy might also be questioned. In the following section, the author attempts to explain and support her choice.

The author cannot argue that the obtained results will be of any *generalisability*, or *external validity*, since this thesis is not going to make any statements of causality between the examined variables and the interest in the Beyond Budgeting ideas. Moreover, as mentioned above, there is no corresponding well-established theory on these issues. However, the scope of this thesis permits the author to theorize by means of developing theoretical models and to conduct the subsequent analysis of relevant empirical data.

Despite all these limitations, the author will try to do her best in order to make the first step towards the database about organizations that are interested in control systems without budgets, and to give adequate answers to the problem statement and the research questions.

3.5 Collection of the empirical data

3.5.1 The sample

In order to give answers to the problem statement and research questions of this study, the examination of the relevant literature and the selection of the set of variables for the subsequent analysis have been carried out. The results of this work have been discussed in

the previous chapter where the author has theorized in a new field of knowledge on the base of the prior research in the closely related scientific fields.

The next step of the research is to collect and analyse the relevant empirical data in order to confirm, reject, or modify the developed theoretical views.

First of all, the methods and results of empirical data collection should be described. As mentioned earlier, this research includes the review of financial reports and press releases of the companies that are interested in the Beyond Budgeting ideas, and the preparing of the database of the companies' data according to the pre-selected variables. The challenging task, in this connection, is to decide which companies should be analysed:

- companies that are *current* members of the Beyond Budgeting Roundtable (BBRT);
- companies that have been *current* or *former* members of the BBRT;
- companies that have been *current* or *former* members of the BBRT, as well as companies that are *interested* in 'beyond budgeting' practices (and, may be, have already moved away from budgeting), but have never been members of the BBRT.

In the author's opinion, the broadest and fullest dataset could be created using the most comprehensive data source, that is, the data from current members of the BBRT, former members of the BBRT, as well as all other companies that are interested in 'beyond budgeting' practices. However, the preparation of such a dataset not only encounters time and resource constraints, but also may be considered unachievable since the author, for the obvious reasons, is not able to find out the whole list of all these firms (especially, firms that might be interested in the Beyond Budgeting ideas, but have never been members of the BBRT).

The author tried to get officially from the BBRT the whole list of companies that have been its current or former members. However, the BBRT in its official letter has refused to provide such information.

Thus, the only possible way to conduct this research and to give answers to the problem statement and research questions was to use the lists of current members of the BBRT. Such lists are provided on the official Internet page of the Global BBRT as well as on the Internet

pages of its North-American and Germanic branches. In total, there are three lists of the BBRT organizations, but some companies' names can be found at the same time in several of the lists. Moreover, during the process of the data collection the author found that some of the organizations from these lists had been liquidated, acquired, or re-named; that is, some evidently former members of the BBRT have not been deleted from the BBRT official lists. It means that the lists actually provide the names not only of current, but also of at least some of the former members. In the author's opinion, this fact, on one hand, allows the creation of a better and more comprehensive database of the organizations, but on the other hand, makes the author believe that the so-called BBRT "current" membership lists might be somewhat inaccurate.

The author has also compared the collected data with those of Hammer (2010) in order to create the more complete and correct list of organizations. In addition, some companies' names have been obtained from the published examples of successful managing without budgets (for instance, Player 2003, 2007).

The compiled membership list (the analyzed sample) consists of 183 organizations:

- 81 firms have been taken from the global BBRT list,
- 94 firms have been taken from the local BBRT lists,
- 4 firms' cases (*Borealis*, *Guardian Industries*, *SlimFast*, and *Rhodia*) have been found in the published Beyond Budgeting articles,
- 4 firms (*PriBa*, *SpecChem*, *Semco*, and *Carnaud Metal box*) have been mentioned in Hammer's (2010) study (also based on the publications in the Beyond Budgeting literature)²⁰.

The compiled list of the analyzed organizations is presented in Appendix.

²⁰ Interestingly enough, the author of this thesis was not able to find any other information about these four companies in the available open sources, but decided to include these firms into the sample for consistency reasons.

In this thesis, the names of the organizations are given as they are provided on the BBRT Internet pages (or in other mentioned sources), whereas the actual companies' names provided on their own Internet pages might be somewhat different or might have even been changed. In such cases, the notice about the name change will be given.

3.5.2 Challenges with the data collection

With the list of current members of the BBRT, it was possible to proceed and to get as much relevant official information about them as possible. The main data source was the Internet sites of the organizations where they publish their financial statements, press releases, and other information. Some other sources have also been used, such as electronic database *Orbis* at the library of *Norges Handelshøyskole (NHH)*. This database contains financial information of companies from all over the world. As discussed before, the variables under consideration have been company size, its age, industry, nationality, ownership, organizational structure, and data about CEO and/or CFO of the company.

As explained earlier, it has been decided to pay particular attention to the most recent companies' reports, that is, those of year 2010. For that reason, the collection of the data was conducted in April – May 2011, after the official publishing of the organizations' annual reports. This work was rather successful and allowed to collect a broad data about performance of many of the companies in year 2010, together with other variables under consideration²¹. However, the author was not able to obtain all relevant data of year 2010 for all analyzed companies since:

- some organisations (for instance, *Mars Confectionery*) are privately-held and for that reason do not provide any official reports. Nevertheless, in several cases the author was able to obtain some data (such as number of employees, annual sales, or information about CEO and/or CFO) from the Internet pages of such organizations;
- some organisations either are divisions of other organizations (for instance, *DNV Business Assurance* is a business unit of *DNV*) or have been acquired recently (like

²¹ Some of the obtained data (such as information about CEO and/or CFO of several organizations) are even more recent (of year 2011) in the case if the management teams of these organizations have been replaced lately (the author would say that companies tend to provide the data mostly about their current management teams and not about the previous ones).

Cadbury Schweppes that has been acquired by *Kraft Foods*) and for that reason do not provide any information at all²². Sometimes even the corresponding Internet site addresses given on the BBRT pages do not exist (for instance, for *Cognos*);

- some organisations (for instance, *University of Plymouth*) have a specific end of reporting period (other than December, 31) and for that reason provide annual reports for the corresponding period (for instance, 2009/2010). In such cases, the author used data from the most recent annual reports;
- some organisations (for example, *BDO Visura*²³) have only published their latest data for year 2009. In such cases, the most recent existing data have been used.

While for some of the analyzed organisations, the BBRT provides their Internet addresses, for the most of the organizations it does not. In such cases, the author used common Internet search engines (*Google*, *Forbes* and *Yahoo!Finance*) in order to find out the official Internet addresses or other data about the companies (for instance, information about CEO and/or CFO). Mostly, the firms' Internet addresses are quite similar to the firms' names that are given on the BBRT Internet pages, but sometimes they are not. For instance, the data about *Resorts World Bhd* were found on the *genting.com* due to the organization's name change²⁴.

Despite all efforts, the author was not able to identify six organizations from the BBRT lists. These are *Dr Michael Sonntag*, *eNiklas*, *Housing Associations*, *TPG*, *Hyperion*, and *Valcon* (in all cases the search engines provided several links to different Internet addresses). Correspondingly, no data have been obtained about these organizations. Hammer (2010) defines the nationalities of the first five organizations as Germany, Sweden, the UK, the USA, and the USA, respectively. *Valcon* is not mentioned in the work of Hammer (2010), so this firm might be a new member of the BBRT.

²² Interestingly, some of the BBRT companies have been acquired by other BBRT companies. However, *Kraft Foods*, to author's knowledge, is not a BBRT member.

²³ This organization, according to its Internet page, has changed its name to *BDO*.

²⁴ This organization, according to its Internet page, has changed its name to *Genting Malaysia Berhad*.

Furthermore, the author of this thesis was not able to identify four companies discussed in Hammer's (2010) work, namely, *PriBa*, *SpecChem*, *Semco*, and *Carnaud Metal box*.

Another challenge is linked to *HNI Industries* and *HNI Group*. The former is mentioned in the Global BBRT list and in the North-American branch list, while the latter is mentioned only in the Germanic list. Hammer (2010) mentions both of the companies in his work as US firms, but includes only *HNI Group* in his compiled list (p. 86). The Internet search was not able to identify companies with precisely such names; instead, *HNI Corporation* and *HNI Group Holdings* have been found. However, the author was able to identify *HNI Industries* since its Internet address was provided on the BBRT Internet page²⁵.

The total number of wholly unidentified companies is equal to eight (*Dr Michael Sonntag*, *eNiklas*, *Housing Associations*, *TPG*, *Hyperion*, *Valcon*, *HNI Group*, and *Carnaud Metal box*); the data about companies *PriBa* and *SpecChem* consist only of their nationality and corporate sector, the data about *Semco* include only its nationality (from Hammer's (2010) study based on the Beyond Budgeting literature).

Therefore, the sample under consideration consists of 175 organizations (183 minus 8) with defined nationality. Different (particularly, financial) data about the companies from the sample are also missing, as explained above. Therefore, the sample size may be even lower for some particular variables; in such cases, the notice will be given.

There have also been some language difficulties. Almost all analyzed Internet pages are written in English. However, the Internet sites of several organizations with name *Dr Michael Sonntag* are written in German, the pages of *gruppoSTI* are written in Italian, and the Internet data about *Bintech* are provided in Spanish (however, according to *Bintech*'s Internet site, its corporate headquarters are located in the USA). In all these cases, the author was not able to find out relevant data – not only because of the evidently private ownership of these companies, but also because of the language²⁶.

²⁵ The corresponding link gives the Internet address of *HNI Corporation*.

²⁶ The author of this thesis masters Russian, English, and Norwegian.

Having described the method used in this thesis, as well as some general challenges of the data collection process, which might influence the reliability of the research findings, we can proceed further with the analysis of the collected data.

4. Empirics and analysis

The aim of this chapter is to provide a detailed explanation of the empirical data collection process, as well as describe the analytical methods and the results of the data analysis. First, the results as well as some particular challenges of the data collection process will be discussed. Second, the challenges and detailed results of the data analysis will be discussed.

4.1 Results of the data collection

4.1.1 Nationality of the organizations

The most obvious of the variables under consideration was the nationality of companies, that is, their headquarters' addresses. These data could be easily found in the official Internet sites of the firms. Nevertheless, in five cases it was not possible to identify organizations' nationality clearly, namely:

- *ABB* company (the headquarters is located in Switzerland) was formed only in 1987, while its predecessors were located in Switzerland and Sweden from the 19th century. Hammer (2010) argues for double nationality for this company (Sweden and Switzerland);
- *Unilever* provides two official addresses in its reports: Netherlands and the UK. Hammer (2010, p. 50) argues both for double nationality for this company (Netherlands and the UK) and for the UK nationality (p. 86);
- *DHL* was founded in the USA, but since 2002 it has been a part of German *Deutsche Post*. Hammer (2010) provides the latest nationality for this company (Germany);
- *Accenture* has changed its headquarters' address for several times (the USA, then Bermuda, now Ireland). Hammer (2010) provides the latest nationality for this company (Ireland), while the author of this thesis believes that these changes might have been done mostly for some taxation reasons;

- *De Beers* has changed its headquarters' address (South Africa, now Luxembourg), probably, also for some taxation reasons. Hammer (2010) provides the historical nationality for this company (South Africa).

All these five specific cases are presented in this thesis separately.

There have also been some other challenges, namely:

- *KPMG Consulting*, according to its Internet site, defines itself as an “a Swiss entity” (Switzerland), whereas Hammer (2010) describes its nationality as Dutch (Netherlands);
- *Centrotherm Photovoltaics*, according to its Internet site, has its headquarters in Germany, whereas according to Hammer (2010), it is located in Denmark;
- *ALG Software/Business Objects*, according to its Internet site, is located in Australia, whereas Hammer (2010) defines its nationality as the USA;
- *Clarity Systems* was a Canadian firm acquired in 2010 by IBM. Hammer (2010) defines its nationality as the USA;
- *Alcan Packaging* provides on its Internet site only the information that the company was sold in 2010. No other company's data present there. According to Hammer (2010), the headquarters of the firm were located previously in the USA;
- *PriBa* is described in Hammer's (2010) work as a Swiss bank. The author of this thesis was not able to find out any additional information about this firm;
- *SpecChem* is described in Hammer's (2010) work as an Austrian petrochemical company. The author of this thesis was not able to find out any additional information about this firm;
- *Semco* is described in Hammer's (2010) work as a Brazilian company. The author of this thesis was not able to find out any additional information about this firm;
- *Carnaud Metal box* is mentioned in Hammer's (2010) work. The author of this thesis was not able to find out any additional information about this firm;

- *International Fund for Agricultural Development (IFAD)* is located in Italy. *The World Bank* and *International Financial Corporation (IFC)* are situated in the USA; *European Bank for Reconstruction and Development (EBRD)* is located in the UK. In the author's opinion, these facts do not provide any specific analytical information since all these organizations are intergovernmental ones that work on a *global* scale in order to help developing countries in various parts of the world.

In other cases, the nationality of the analyzed companies could be defined easily, straightforward, and without any challenges (with the exception of the above-mentioned eight unidentified organizations). In the cases of significant differences between the author's findings and Hammer's (2010) study (like in the mentioned case of *KPMG Consulting* nationality), the author has decided to use her own data.

4.1.2 Financial data of the organizations

The next part of the data was the financial data of the companies, describing their size, such as annual sales, operating profit, net profit, total assets, and book equity. All these data could be easily found in the official Internet sites and annual reports of the firms (with the exception of the above-mentioned privately-held companies or divisions of larger organizations). The main challenge for the comparison is 11 various currencies used by different firms, such as USA dollars, Euros, British pounds, Norwegian kroner, Swedish kroner, Danish kroner, Swiss francs, Japanese yens, New Zealand dollars, Malaysian ringgits, and Russian roubles. While it is possible to recalculate all the financial indices into one currency (for instance, USA dollars), it would be a rather cumbersome and approximate calculation not only because of the exchange courses volatility, but also, as discussed above, because of the different reporting periods of different companies. The author decided to calculate the following financial indices instead: *return on equity* (net profit divided by book equity), and *leverage* (book equity divided by total assets). However, the proposed recalculation of the financial data into one currency (and, possibly, for several years) may be considered as a possible suggestion for further research.

4.1.3 Number of employees of the organizations

Another important size indicator is the number of employees. These data could also be found in the official Internet sites and annual reports of the firms (with the exception of privately-held companies or divisions of larger organizations). However, while in some cases the data are provided extremely precisely (for instance, the accurate number of the full-time employee equivalents), in other cases, it is only a ‘headcount’ (more or less accurate) or even obviously an approximate number – for instance, ‘more than 20,000 talented people’ at *Diageo* (Diageo, 2011). In many cases, it was not possible to find any employee data at all.

The author sought to find the most accurate number of employees for each analyzed organization and used the approximate figures only as a last resort. Nevertheless, in the author’s opinion, even an approximate number can describe the size of a company pretty well since the analyzed companies can be divided into certain size groups according to their accurate or approximate number of employees (which will be described further).

4.1.4 Age of the organizations

The next variable is the age of organization, defined as the year of the organization foundation. As mentioned above, Davila (2005) finds age as a significant variable in his study of small growing high-technology firms. The data collection process for the present research has shown that a company’s age might be a rather vague concept. While it might be defined relatively straightforward for small growing firms (like in Davila’s (2005) study) or for stable companies, it might be difficult to define the age for large mature firms with long history and a number of mergers and acquisitions. Some examples of the occurred challenges will be provided below. Moreover, some firms do not provide information about their historical timeline, so the author was not able to define their age properly.

For instance, *DFW International Airport* was founded in 1968. It is simple and straightforward data. The similar facts data could be obtained for various consulting and software firms that have been established only during the recent decades.

According to *Orkla* Internet page, its history began as early as in 1654 when a copper pyrite mine was started, though the company itself (*Orkla Grube-Aktiebolag*) was founded only in 1904. *American Express* counts its history from 1850 when express mail company started,

while now this company provides only financial services (payment processing, credit cards and cheques). *Clariant International* was formed in 1995 as a spin-off from the chemical company *Sandoz* that, in turn, was established as early as in 1886. *Novartis* was founded in 1996 through the merger of *Ciba-Geigy* and *Sandoz*. *Diageo* was created through the merger of *Grand Metropolitan Public Limited Company* and *Guinness PLC* only in 1997, while wine merchants *Justerini & Brooks* were formed in 1749. *UBS AG* was formed in 1998 after the merger between two old and mature banks – *Union Bank of Switzerland* and *Swiss Bank Corporation*. *Royal Mail* site says that the company was established in 1516 (which is wholly understandable, taking into account the importance of postal services for society).

In the author's opinion, the 'official' age of a company (that is, its date of foundation and its historical background) can be explained to a certain degree by the image that this company seeks to create. For instance, if a firm would like to emphasize its innovativeness, it might prefer a relatively younger age (for example, a 'young' pharmaceutical company *Novartis* that was founded in 1996, but after the merger of two mature firms). On the other hand, if a firm would like to show its experience, loyalty to traditions and stability, it might prefer to underline its long and wide historical background (for instance, *Orkla* or *Royal Mail*). Of course, for some companies their 'young' age may indeed be a good indicator of their real experience (first of all, for small consulting and software firms). It should be mentioned that these author's suggestions are no more than an attempt to theorize on the collected empirical data, but in the author's opinion, the collected data do support such theoretical views.

4.1.5 Corporate sector of the organizations

The data collection process has shown that the organizations under consideration show a great diversity and belong to various industries and corporate sectors. Some of the industries are rather uncommon for the analyzed sample (for example, only one company from the sample (namely, *Pentland Group*) belongs to 'clothing and footwear' industry). Other industries, on the opposite, include many companies from the sample (for instance, such industries as consulting, machinery and technology, health, and financial services).

For analytical purposes, the author decided to subdivide all the companies from the sample them into the following 34 larger groups (in alphabetical order)²⁷:

- certification (*DNV Business Assurance*²⁸);
- chemical industry (various chemicals, coatings, plastics, lubricants, colours, cement and lime, glass etc.²⁹);
- clothing and footwear (*Pentland Group*);
- communications (fixed line phone service, mobile phone service, wireless services etc.);
- consulting;
- consumer goods, machinery and technology, and financial services (*Orkla*);
- distribution of equipment (*Jernia*);
- energy (energy generation and delivery);
- financial services (banks, investment companies, payment processing, brokerage, credit union, insurance, corporate pensions, mortgages etc.);
- food, beverages, tobacco (various food, sausages, confectionary, beer, cider, spirits, cigarettes);
- food, personal care and home care (*Unilever*);
- furniture (*HNI Industries*);

²⁷ The author believes that it is a rather big number by itself, especially for only 174 organizations for which it was possible to define their corporate sector. However, it can be explained by a high diversity of the analyzed sample.

²⁸ The names of companies here and further in this list are given in the cases of high exceptionality of the corresponding industries.

²⁹ The enumeration here and further in this list describes the types of companies, as well as their products and services, which have been included into the corresponding industries.

- health (hospitals, paediatric services, obstetric care, cancer centre, mental health);
- healthcare products (catheters, bandages, orthopaedic products, surgical instruments);
- information agency (*Thomson*);
- international organization (assistance to developing countries);
- leisure and hospitality (*Resorts World Bhd*);
- machinery and energy (company *Alstom* – transport infrastructure and signalling, maintenance equipment, trains, as well as power generation and transmission);
- machinery and technology (tools and equipment for heating and refrigeration, for life science industry, electrical engineering and electronics, rolling bearings, fasteners and latches, semiconductors etc.);
- mail services (*Royal Mail* and *DHL*);
- marketing research (*ACNielsen*);
- natural resources (oil, gas, coal, forestry, diamonds);
- office products (*ACCO Europe*);
- packaging;
- professional body (*CIMA – Chartered Institute of Management Accountants*);
- property company (*Akademiska Hus*);
- public service and regional development;
- research and education;
- retail trade;
- software and information technologies;

- supply chain management services (organization *VHA Inc.* – member-based health alliance that provides supply chain management services);
- tableware (*Libbey*);
- transport and infrastructure (airport, port, railways);
- utilities (*Thames Water*).

Thus, 16 industries (almost half of 34) are presented by no more than one organization each, which demonstrates a great corporate sector variety among the Beyond Budgeting organizations.

4.1.6 CEO and CFO data

It should be mentioned that almost all of the analyzed organizations provide at least some information about their management teams and boards of directors. Nevertheless, the amount of the data may be rather different. Some companies provide almost all biographical data about their managers, including the date of birth, education, detailed previous work experience, and personal hobbies, while other companies limit themselves to very short texts. The author was interested in the age of the CEO/CFO and the year of his (her) appointment to this position. Some relevant information, in addition to the companies' Internet pages and annual reports, was found on *Forbes* and *Yahoo!Finance* Internet sites.

Nevertheless, despite all efforts, the author was not able to identify the above-mentioned variables for many of the analyzed companies. Correspondingly, the companies can be subdivided into the following groups:

- the complete data (both age and the year of their appointment) about the CEO and the CFO have been found;
- the complete data only about one of the executives have been found;
- only partial data (either age or the year of appointment) of the CEO/ CFO have been found;
- no relevant data have been found at all.

4.1.7 Ownership structure

The ownership patterns of the analyzed organizations show a great variety and can be described as follows:

- public limited companies;
- private limited companies;
- non-for-profit organizations;
- public-owned and governmental organizations;
- intergovernmental organizations;
- divisions of other (larger) organizations.

The detailed description and analysis of the ownership patterns in the sample will be provided further.

4.1.8 Organizational structure

The organizational structure of the analyzed organizations can be described as follows:

- local organization (an organization that has its offices in one or several locations over one country);
- multinational organization (an organization that has its offices in different locations all over the world).

In other words, the members of the BBRT show a great variety in their organizational structures too.

Now we shall proceed to the analysis of the collected data.

4.2 Data analysis

4.2.1 Nationality of the organizations

As discussed above, the nationality of the most analyzed organizations can be found out rather easily. Only the above-mentioned eight organizations have remained unidentified; two companies (*ABB* and *Unilever*) can be considered as ‘bi-national’, consistently with Hammer (2010); and three companies (*Accenture*, *DHL*, and *De Beers*) have changed their headquarters’ addresses.

The total amount of countries that have at least one of the companies from the sample is equal to 26 (for instance, Luxembourg and South Africa describe only *one* company (*De Beers*), but have been considered as *two* countries). The analysis of the nationality of organizations shows that 74 of the companies (40 %) are situated in the USA, 40 firms (22%) are located in the UK, and the rest 69 organizations (38 %) are from all over the world (including 8 unidentified organizations). The last category is illustrated in detail in figure 4.1³⁰.

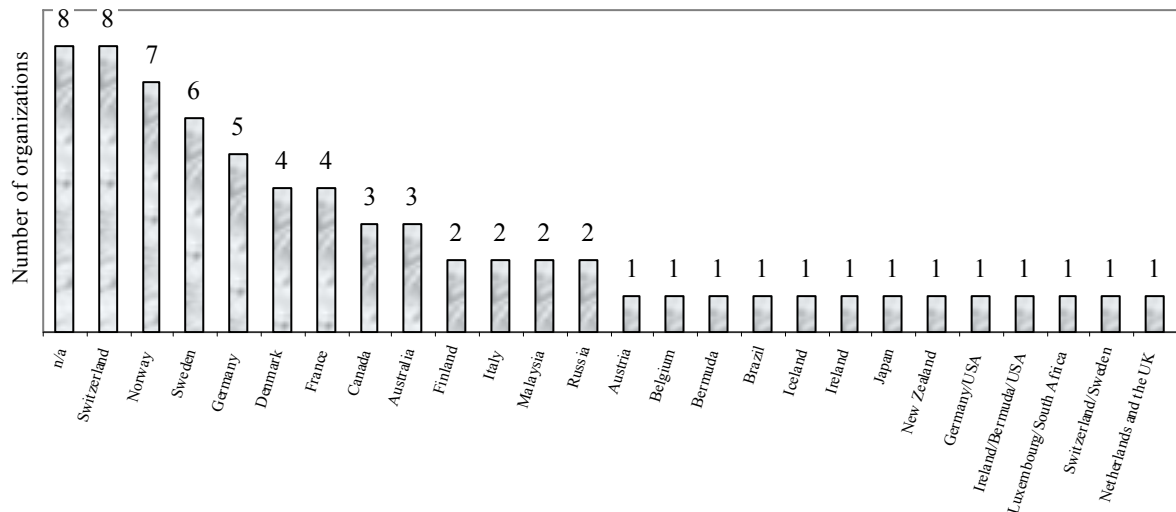


Figure 4.1. Nationality of the analyzed organizations (other than the USA and the UK)

³⁰ “n/a” on figure 4.1 (and further in this thesis) refers to the organizations the data for which are “non-accessible”; “Germany/USA” refers to *DHL*, “Ireland/Bermuda/USA” refers to *Accenture*, “Luxembourg/South Africa” refers to *De Beers*, “Switzerland/Sweden” refers to *ABB*, and “Netherlands and the UK” refers to *Unilever*, as discussed above.

As it could be seen from figure 4.1, a considerable number of the companies are of the Scandinavian origin; the fact that is discussed by Hammer (2010). Indeed, the total number of Danish, Icelandic, Norwegian, and Swedish companies in the sample, according to figure 4.1, is equal to 18³¹, that is, almost 10 % of the total number of the companies under consideration (183). The Germanic companies are also actively presented: the total number of firms from Austria, Germany, and Switzerland is equal to 14³², or almost 8 % of the total sample. France (4 companies) can also be considered as a relatively significant participant of the Beyond Budgeting movement.

Other countries (and even regions) of the world are presented rather modestly, or not presented at all. For example, there are no organizations from China, India, Central and Eastern Europe, Spanish-speaking countries in Europe and South America, the republics of the former Soviet Union³³, Africa³⁴, and Middle East in the sample. The absence of Middle East companies seems interesting, taking into account that the Beyond Budgeting Roundtable has a regional branch there (according to the BBRT Internet page). Overall, the Beyond Budgeting ideas seem to be more popular in highly developed countries.

4.2.2 Corporate sector of the organizations

As discussed above, the author decided to divide all 183 companies (with the exception of nine firms, namely, *Carnaud Metal box*, *Dr Michael Sonntag*, *eNiklas*, *HNI Group*, *Housing Associations*, *Hyperion*, *Semco*, *TPG*, and *Valcon*³⁵) into 34 corporate sectors.

The most frequent corporate sectors in the sample are listed in table 4.1.

³¹ Even 19, if one also takes into consideration company *ABB*.

³² Even 16, if one also takes into consideration companies *DHL* and *ABB*.

³³ With the exception of two companies from Russia.

³⁴ With the exception of *De Beers* company (Luxembourg/South Africa).

³⁵ As explained above, eight organizations from the sample have not been identified at all, and one organization (*Semco*) has been identified only partially (it is a Brazilian company, but its corporate sector remains unknown to the author).

Corporate sector	Number of the organizations from the sample	Percentage of the total sample (183 organizations)
Consulting	23	12,6 %
Software and information technologies (IT)	23	12,6 %
Financial services	19	10,4 %
Machinery and technology	17	9,3 %
Health	12	6,6 %
Food, beverages, tobacco	11	6,0 %
Chemical industry	8	4,4 %
Communications	8	4,4 %
Healthcare products	5	2,7 %
International organization	5	2,7 %
Natural resources	5	2,7 %
N/A	9	4,9 %
Other 23 industries	38	20,8 %
Total	183	100,0 %

Table 4.1. Corporate sectors of the analysed organizations

As it could be seen from table 4.1, only 11 industries (out of 34) include almost 75 % of all sample organizations. About 25 % of all the companies (46 firms) from the sample belong to consulting, software and IT services. The following citation from the Internet page of US software and IT company *Applied-Analytix*³⁶ can provide a good insight into this fact:

³⁶ As explained before, the companies' names are provided by the author of this thesis as they are given on the BBRT Internet pages. The companies' names provided on the companies' own Internet pages might be somewhat different, as it is in the case of *Applied-Analytix*.

“Applied Analytix is a member of the “Beyond Budgeting Round Table” Network... The goal is to learn from world-wide best practices studies, case studies of successful implementers, and interviews with CFOs from “best-in-class” corporations.

... The obvious advantage to our customers is the much wider range of experience we can bring to their specific financial challenges, which will help them benefit from resources far beyond their normal reach. Through BBRT, Applied Analytix continues our commitment to being at the top of our class in providing Business Performance Management solutions” (Applied Analytix, 2011).

Other companies that explicitly show their partnership with the BBRT on their Internet pages are Swedish consulting firm *Ekan* and US consulting firms *Bintech*, *eCapital Advisors*, and *The Player Group* (it should be mentioned that the founder of *The Player Group*, according to its Internet page, is Steve Player, a propagator of Beyond Budgeting). In the same vein, *Palladium Group* emphasizes that its founders include well-known management accounting innovations propagators – Drs. Robert S. Kaplan and David P. Norton.

Other industries that are presented relatively frequently (not mentioned in table 4.1) are energy (4 companies), research and education (4 organizations), retail trade (4 firms), public service and regional development (3 organizations), and transport and infrastructure (3 companies).

Interestingly, the corporate sector of the most of the analyzed organizations could be defined rather easily and straightforward. Only two companies from the sample can be described as a kind of ‘industrial conglomerates’ since their products belong to several industries. These are Norwegian *Orkla* (consumer goods, machinery and technology, and financial services) and ‘bi-national’ (Netherlands and the UK) *Unilever* (food, personal care and home care).

16 industries (almost half of 34) are presented by no more than one organization each (including the above-mentioned cases of *Orkla* and *Unilever*).

The author has decided to divide the industries under consideration into two larger groups, namely, ‘productive’ and ‘non-productive’ ones. ‘Productive’ industries are those with large, sophisticated, and diversified production process and large amount of equipment and other

fixed assets, which produce material wealth, tangible products and/or complex physical and engineering services (like utilities or telecommunications). All other industries are considered as ‘non-productive’ since they provide non-material wealth and intangible assets (such as consultancy services, software applications, health care, education, hospitality, financial services, or information).

According to this subdivision, 12 industries – “consulting”, “software and IT”, “financial services”, “health”, “international organization”, “research and education”, “public service and regional development”, “certification”, “information agency”, “leisure and hospitality”, “marketing research”, “professional body” – have been considered by the author as ‘non-productive’ (94 organizations)³⁷. Other 22 industries have been regarded as ‘productive’ (80 companies)³⁸. The corporate sector of 9 companies has not been identified by the author. Thus, the dissemination of the Beyond Budgeting ideas has been found to be somewhat higher in the ‘non-productive’ sector.

Nevertheless, the collected data illustrate that the ‘productive’ industries (machinery and technology; food, beverages and tobacco; chemical industry; communications; natural resources; energy; transport and infrastructure; etc.) also show a big interest in the Beyond Budgeting ideas. In the author’s opinion, this interest may be understandable since such companies may tend to use sophisticated planning, controlling, and budgeting systems (as discussed above) and may pay a greater attention to new management accounting and control ideas in order to improve these systems.

The high interest of the software and consulting firms to the Beyond Budgeting initiative may also be understandable and can be explained by the citation above as well as (to some extent) by the founders’ names of some of these firms. However, the attractiveness of the Beyond Budgeting ideas for other ‘non-productive’ firms, like financial firms (19 organizations), health companies (12), international organizations (5), and public service and

³⁷ The author admits the fact that this classification might be somewhat inaccurate, and that other researchers might propose other possible classifications.

³⁸ The corporate sector “consumer goods, machinery and technology, and financial services” (Norwegian company *Orkla*) has been regarded as ‘productive’ since the company’s amount of financial services, according to its annual reports, has been considered by the author as relatively low.

regional development (3 organizations), seems to be a remarkable finding and is worth further investigation.

As discussed above, such financial sector industry as banking is considered by some researchers as rather predictable, that is why these researchers may doubt that the Beyond Budgeting approach is necessary for banks. However, in the author's opinion, banks are commercial organizations that are interested in their profit maximization, and from this point of view, they might also be interested in new management accounting and control methods. Moreover, the sample comprises not only banks, but also other financial organizations (payment processing firms, pension companies, mortgage organizations, etc.) that might be working in more unpredictable environment than banks. However, some of the financial organizations from the sample describe themselves as 'non-for-profit' (credit union *Mutual First Federal Credit Union* and health insurance organization *Priority Health*); therefore, their participation in the Beyond Budgeting initiative is worth mentioning (the detailed description of the ownership patterns of the analyzed organizations will be provided further).

Three (out of five) of the international organizations from the sample are the well-known ones: *The World Bank*, *IFAD* (International Fund for Agricultural Development) and *IFC* (International Financial Corporation). Moreover, two other international organizations (*British Council* and *Sightsavers International*) describe themselves as 'charities'. Within the sector "public service and regional development" *Welsh Assembly Government* (the government for Wales, UK) can be considered as a notable participant. The interest of such non-profit organizations in the Beyond Budgeting initiative seems to be noteworthy.

In conclusion, the industrial structure of the BBRT members may be considered as very broad. Not only big 'productive' companies that may indeed have various above-mentioned problems with budgeting (that is, their budgets might be isolated from strategy, be time-consuming and entail high dysfunctional behaviour, etc.), but also many 'non-productive' organizations have shown their interest to Beyond Budgeting. The detailed study of the 'Beyond Budgeting' motivation of all these companies lies beyond the scope of this thesis. However, the author discusses some potential explanations for the observed characteristics of the analyzed organizations.

4.2.3 Nationality and corporate sector of the organizations: cross-analysis

After discussion of nationality and corporate sectors of the companies, it seems interesting and logical to explore these issues further and to analyze these two variables simultaneously (across the selected 26 countries and 34 industries).

Various countries in the sample are presented by various industries. For instance, 40 UK companies from the sample are presented by 22 different industries (out of 34), 74 US companies are presented by 19 industries, 7 Norwegian firms – by 7 industries, 8 Swiss firms – by 6 industries, 6 Swedish firms are presented by 5 industries. Denmark, Germany, and France are presented by 4 industries each. In other words, the organizations from these eight countries are the most active participants of the Beyond Budgeting movement, and three of these ‘active’ countries are Scandinavian (Norway, Sweden, and Denmark). The rest 18 countries from the sample are presented by only 1 – 3 industries each (and by 1 – 3 companies each).

The further analysis shows that the most frequently presented types of companies are the following:

- 14 US firms in software and IT;
- 12 US firms in consulting;
- 10 US firms in health;
- 8 US firms and 5 UK firms in financial services;
- 6 US firms in machinery and technology;
- 5 UK firms and 4 US firms in food, beverages and tobacco;
- 3 US firms in energy;
- 3 UK firms in public service and regional development.

The total amount of the mentioned ‘nationality – industry’ combinations is, therefore, equal to 70, or 38 % of the whole sample (183 organizations).

All other combinations of the countries and industries either do not exist in the sample, or can be met for no more than one or two times.

Thus, it is possible to underline a relatively high attractiveness of the Beyond Budgeting ideas for US software firms, US consulting companies, US health organizations, US and UK financial firms, and UK public service and regional development, which seems to be an interesting finding.

The author has also conducted the cross-analysis of the dimensions “nationality” and “productive vs. non-productive industries”. The corresponding results are presented in table 4.2.

Nationality of the organizations	‘Productive’ industries	‘Non- productive’ industries	n/a	Total
Australia		3		3
Austria	1			1
Belgium	1			1
Bermuda		1		1
Brazil			1	1
Canada		3		3
Denmark	3	1		4
Finland	2			2
France	3	1		4
Germany	3	2		5
Germany/USA	1			1
Iceland	1			1
Ireland	1			1
Ireland/Bermuda/USA		1		1
Italy		2		2
Japan	1			1

Nationality of the organizations	'Productive' industries	'Non- productive' industries	n/a	Total
Luxembourg/South Africa	1			1
Malaysia	1	1		2
n/a			8	8
Netherlands and the UK	1			1
New Zealand	1			1
Norway	4	3		7
Russia	1	1		2
Sweden	3	3		6
Switzerland	3	5		8
Switzerland/Sweden	1			1
UK	21	19		40
USA	26	48		74
Total	80	94	9	183

Table 4.2. The presence of 'productive' and 'non-productive' industries in the countries from the sample

As it can be seen from table 4.2, the USA is mostly presented in the 'non-productive' sector. Actually, more than a half of all 'non-productive' organizations from the sample (48 out of 94) are located in the USA. The situation with the 'productive' sector is opposite: only about one third of all of the US organizations (26 out of 80) belong to the 'productive' sector. 51 'productive' companies (almost 64 % of 80 firms) are located in Europe³⁹. Thus, the important conclusion is that the Beyond Budgeting ideas in Europe and other countries (except the USA) are spread mostly among 'productive' industries, whereas in the USA the

³⁹ This number includes *DHL* (Germany/USA) and *De Beers* (Luxembourg/South Africa).

scope of the Beyond Budgeting dissemination can be described as mainly ‘non-productive’. Indeed, 14 (out of 23) software firms from the sample are of the US origin; 12 (out of 23) consulting firms, 10 (out of 12) health organizations and 8 (out of 19) financial organizations are also from the USA. In total, 44 US companies (out of 74, or almost 60 %) belong to software, consulting, health, and financial services. In the author’s opinion, these data demonstrate that US consulting firms show a great interest in the potential ‘Beyond Budgeting’ propagation to their clients (the example of the above-mentioned ‘*supply-side*’ perspective of management accounting innovations diffusion).

The presence of several US health organizations (hospitals) in the BBRT lists is also a remarkable fact. In this connection, it should be mentioned that one of the BBRT members (US consulting company *eCapital Advisors*) presents on its Internet pages a case of another BBRT member (US non-for-profit health organization *Park Nicollet Health Services*). Interestingly enough, the problems with budgeting in *Park Nicollet Health Services* had been the same as it was discussed in the theory chapter of this thesis, that is: budgets take too long time to prepare, they cost too much, they cause gaming that erodes the company’s ethics, they entail unnecessary spending, etc. 2005 was a ‘parallel year’ in *Park Nicollet Health Services* – with budgets and forecasts at the same time, and 2006 was year one without a budget (Cooke, n.d.). This story demonstrates that US health organizations (even non-for-profit ones) might experience the same budgeting problems as industrial private firms.

As Bergstrand (2009) points out, the US hospital care market differs from the European one. Namely, in Europe many hospitals are financed through government budgets, whereas in the USA health organization are mostly private and depend on patients payments and reimbursements from insurance companies. Perhaps, these differences in financing policies have entailed the observed interest of US health organizations to the Beyond Budgeting ideas. However, this finding as well as its possible explanations may be worth further investigation.

There are 40 UK companies in the analyzed list, which, as mentioned earlier, are presented by 22 different industries (out of 34 industries). Moreover, the UK companies are presented relatively equally in both ‘productive’ and ‘non-productive’ sectors (table 4.2). It

demonstrates that the UK participation in the Beyond Budgeting initiative can be considered as rather active and diverse.

The Scandinavian organizations (the companies from Denmark, Iceland, Norway, and Sweden) are presented by 18 companies of 13 various industries, and are mostly ‘productive’ (8 industries out of 13; 11 firms out of 18). The most ‘active’ Beyond Budgeting industries from the Scandinavian countries are the following: three of the Scandinavian firms belong to the machinery and technology sector, two firms produce healthcare products, two companies are financial, and two firms provide consulting services.

4.2.4 Age of the organizations: main groups and their comparative characteristics

The challenges with the age (the year of foundation) data collection have been described earlier. The author was not able to identify the age of 32 organizations from the sample (including 8 completely unidentified firms), or 17,5 % of their total amount (183). Therefore, the analyzed sample consists of 151 companies (183 minus 32).

The author would subdivide these companies into the following four age groups:

1. The oldest organizations (those established before 1800):

- *Port of Tyne Authority* (port operator; UK) – the port itself was established as early as in the second century; in 1968 Port of Tyne Authority was founded⁴⁰;
- *Royal Mail* (mail services, UK) – the mail service was established in 1516;
- *Orkla* (consumer goods, machinery and technology, and financial services; Norway) – in 1654 a copper pyrite mine was started, in 1904 *Orkla Grube-Aktiebolag* was founded;
- *Anheuser Busch* (food, beverages, tobacco; Belgium) – the brewery was founded in 1366;

⁴⁰ The author admits the fact that the precise definition of this company’s age might be a difficult task. The similar challenges also exist with some other companies from the analyzed sample (like *Diageo* a few lines below).

- *Interbrew UK* (food, beverages, tobacco; UK) – the brewery was founded in 1742;
- *Diageo* (food, beverages, tobacco; UK) – in 1749 *Justerini & Brooks* was founded, in 1997 *Diageo* (spirits, beers, and wine company) was created through the merger;
- *Coors Brewers (UK)* (food, beverages, tobacco; UK) – the brewery was founded in 1777.

As we can see, these firms are mostly beer and spirits producers that were founded several hundred years ago. Other old firms from the sample are the port and the mail service organization that have also been used by people from the old times. *Orkla* with its high modern diversity began its story from a mine.

The total number of the oldest companies from the sample is equal to seven (5 % of 151 companies under consideration). Interestingly, all the old firms are ‘productive’ and almost all of them (5 out of 7) are of the UK nationality.

2. The mature organizations (those established in 1801 – 1900, that is, in the 19th century) are presented by a wide range of industries. For instance, *Telenor* (communications, Norway) counts its history from 1855 when *The Norwegian Telegraph Administration* was founded. *American Express* (financial services, USA) counts its history from 1850 when an express mail company started. Several banks from the sample were founded in this period (*Svenska Handelsbanken*, Sweden; *CIBC (Canadian Imperial Bank of Commerce)*, Canada; *Deutsche Bank*, Germany, etc.). Machinery and technology companies *Ahlsell* (Sweden) and *Ingersoll Rand* (Ireland), transport company *Kansas City Southern* (USA), and tableware firm *Libbey* (USA) were also established in those times.

The total number of the mature companies from the sample is equal to 33 (22 % of 151 organizations); from which 19 companies are ‘productive’ and 14 are ‘non-productive’. The most frequent industries are financial sector (9 organizations), and machinery and technology (6 companies). Chemical and communications sectors are also presented. Such an industrial structure can characterize the industrial revolution and fast technical, economic, and financial progress of that time.

13 of the mature firms are of the UK nationality, 7 of the mature firms are of the US origin. There are also 4 companies from Scandinavia (two from Norway and two from Sweden), 2 firms from Germany, and 2 organizations from Switzerland.

3. The younger organizations (those established in 1901 – 1980). The total number of such companies is 53 (of 23 industries and 15 nationalities), or 35 % of 151 organizations. The most frequent industries are the following:

- machinery and technology (8 companies);
- international organization (5 organizations);
- health (7 organizations);
- food, beverages, tobacco (4 companies);
- financial services (4 companies);
- healthcare products (3 companies);
- software and IT (3 firms).

There are 30 US companies, 6 UK companies, and 6 Scandinavian firms in this age category. 29 companies are ‘productive’ and 24 organizations are ‘non-productive’.

4. The youngest organizations (those established in 1981 and later). Despite the shortest time period (about three decades), the total number of such organizations is the largest – 58 companies (of 16 industries and 15 nationalities), or 38 % of 151 organizations. The most frequent industries are the following:

- software and IT (17 firms);
- consulting (12 firms);
- communications (5 companies);
- financial services (4 companies);

- health (3 organizations);
- public service and regional development (3 organizations).

There are 26 US companies, 12 UK companies, and 7 Scandinavian firms in this age category. Only 17 companies are 'productive', whereas other 41 organizations are 'non-productive'.

Thus, many of the Beyond Budgeting organizations are relatively 'young'. Among the older companies that are interested in the Beyond Budgeting initiative there are many UK companies, whereas the younger ones are mainly of the US origin. The most of the Scandinavian participants of the Beyond Budgeting Roundtable are also of relatively younger age. The younger Beyond Budgeting participants tend to be 'non-productive', whereas the older ones belong primarily to the 'productive' sector. This fact is rather understandable since many consulting and software firms have been established only during the recent decades ('computerization era').

4.2.5 Number of employees of the organizations: size groups and their characteristics

As discussed above, the number of employees is considered an important characteristic of a company size. The author of this thesis was able to identify this variable only for 103 organizations from the sample (56 % of 183 organizations). For the other 80 organizations, the author was not able to find the corresponding data. Many of the small private companies from the sample do not provide any information about their employees. Some other challenges with the data collection (many approximate numbers of employees) have also been discussed above.

These 103 companies under consideration are very different in their size (measured as the number of their employees). The smallest ones are US software firms *Akili* and *Adaptive Planning* with 36 and 65 employees, respectively, and the largest ones are *Siemens* (machinery and technology, Germany) with 405,000 employees and *Target Corporation* (retail trade, USA) with 351,000 employees. The results of the organizations grouping are presented in table 4.3.

Number of employees	Number of companies	Percentage of the analyzed sample (97 organizations)
lower than 100	3	2.9%
101 – 1,000	8	7.8%
1,001 – 2,000	13	12.6%
2,001 – 3,000	6	5.8%
3,001 – 4,000	4	3.9%
4,001 – 5,000	3	2.9%
5,001 – 8,000	9	8.7%
8,001 – 10,000	4	3.9%
10,001 – 15,000	8	7.8%
15,001 – 20,000	8	7.8%
20,001 – 50,000	11	10.7%
50,001 – 100,000	13	12.6%
100,001 – 200,000	10	9.7%
more than 200,000	3	2.9%
Total	103	100,0 %

Table 4.3. The number of employees of the analyzed organizations

As it can be seen from table 4.3, about a half of these 103 companies has fewer than 10,000 employees and another half of the companies has more than 10,000 employees.

11 *smallest* firms form the sample (with fewer than 1,000 employees) are presented mostly by software and consulting branches, but there are also international institutions, a regional development company, a transport infrastructure organization (port), a property management company, and a professional body. Mostly, these organizations are from the UK and the USA. Only two of the smallest companies belong to the ‘productive’ sector.

39 *bigger* companies (between 1,001 and 10,000 employees) belong to 17 various industries and include 20 companies of the ‘productive’ sector. Among the organizations from this group, there are 6 health organizations, 5 machinery and technology firms, 5 financial companies, and 3 international organizations. Mostly, these bigger organizations are from the USA and the UK.

16 large organizations with 10,001 – 20,000 employees belong to 10 various industries and include 9 companies of the ‘productive’ sector. There are 3 chemical companies and 3 financial firms in this group. Mostly, these large organizations are from the USA.

37 largest organizations (with more than 20,000 employees) belong to 13 industries and include 26 companies of the ‘productive’ sector. There are 8 machinery and technology companies of this size, 5 financial organizations and 4 consulting firms. 10 of the organizations are from the USA, and 5 organizations are from the UK. There are also three Swiss and three Norwegian companies in this category.

Thus, 57 companies (out of 103), or 55 %, belong to the ‘productive’ sector, whereas within the whole sample (183 organizations) the ‘non-productive’ sector is presented higher, as discussed above (94 organizations out of 183). It entails the logical conclusion that the ‘non-productive’ organizations from the sample tend not to provide their employee data in the existing open sources. The ‘productive’ firms also tend to be larger than ‘non-productive’ ones in terms of the number of their employees (according to the obtained data about these 103 analyzed companies).

80 companies for which the employee data have not been obtained belong to many various industries. Only 32 companies in the group are ‘productive’⁴¹. There are also 18 software firms, 16 consulting firms and 6 financial firms in this group. These facts support the above-mentioned conclusion that ‘non-productive’ firms tend not to publish much information on their Internet pages.

⁴¹ Some of them are either private or (like *Cadbury Schweppes*) have been acquired recently, and for those reasons do not provide much data.

If one compares the size (measured as the number of employees) and corporate sector of these 103 organizations, one will again find a great diversity within the analyzed sample. For instance, the chemical companies from the sample are of various size from 5,000 to 18,000 employees; communications sector firms have 2,000 – 96,000 employees; consulting firms have 500 – 204,000 employees; financial firms have from 1,300 (a small private investment company) to 147,000 (a large bank) employees⁴²; etc. These figures again underline a great variety of organizations that have shown their interest in the Beyond Budgeting ideas, which can be regarded as a noteworthy finding.

4.2.6 Ownership structure of the analyzed companies

As described above, the ownership patterns of the sample organizations show a great diversity and belong to the following groups:

- public limited companies (mostly, these are large listed organizations with many shareholders, which publish official annual reports and provide various data on their Internet pages⁴³);
- private limited companies (small and large privately-held or family companies that do not publish official reports and provide a limited amount of data on their Internet pages)⁴⁴;
- divisions of other (larger) organizations (including companies that have been acquired by other companies);
- non-for-profit organizations (some organizations from the sample define themselves as ‘non-for-profit’ or ‘non-profit’ organizations);

⁴² The author has rounded all these numbers for simplicity reasons.

⁴³ However, *Pentland Group* does not publish any reports on its Internet page despite its “public limited company” (*plc*) status.

⁴⁴ In their official names, such companies may have abbreviations “*Ltd*”, “*LLC*”, “*Inc.*”, or “*OOO*” (the Russian analogy for the “limited liability company”). Some of such firms are small, but some may be very large (for instance, *Mars Confectionary* with 65,000 employees).

- public-owned and governmental organizations (public sector companies and governmental bodies);
- intergovernmental organizations (according to their Internet pages, they have been founded by governments of several countries).

The author was not able to identify the ownership structure of 11 organizations from the sample, namely, *Carnaud Metal box*, *Dr Michael Sonntag*, *eNiklas*, *HNI Group*, *Housing Associations*, *Hyperion*, *PriBa*, *Semco*, *SpecChem*, *TPG*, and *Valcon*. The analyzed sample consists, therefore, of 172 companies.

The ownership patterns of the BBRT organizations are illustrated in figure 4.2. The data in figure 4.2 show the number of the organizations in each group and the percentage of the total sample (183 organizations).

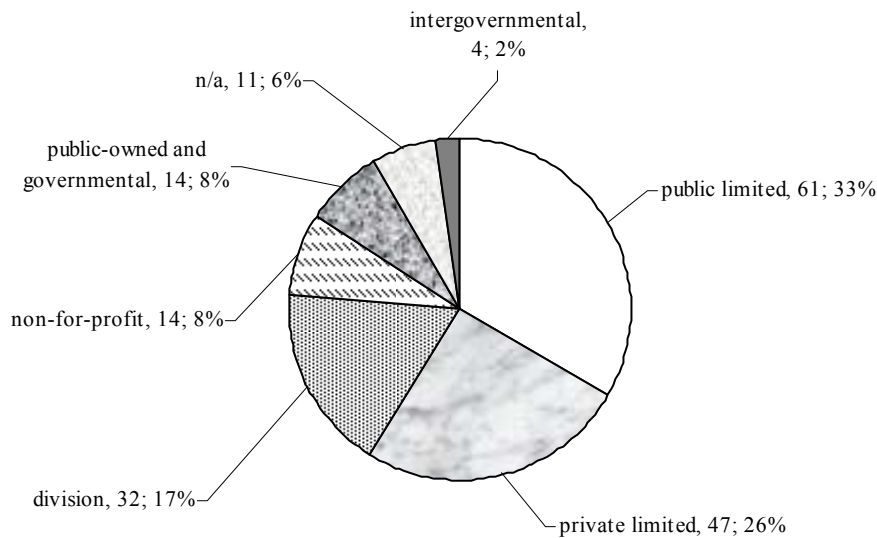


Figure 4.2. Ownership structure of the analyzed organizations

As it can be seen from figure 4.2, 61 companies (33 % of 183) are public limited, 47 firms (26 %) are private limited, and 32 organizations (17 %) are divisions of other firms or have

been acquired recently. These types of organizations comprise about 77 % of the total sample (183 organizations).

The author would like to emphasize that a ‘division’ may essentially be considered as an element of *organizational structure* than that of *ownership*. However, the ‘divisions’ from the sample (which might be otherwise regarded as public limited or private limited firms) are analyzed in this (‘ownership-related’) part of the thesis since the author seeks to demonstrate their relatively great number within the BBRT. On the other hand, the local representatives of large international consulting networks like *BDO (BDO Visura, Switzerland)* and *BearingPoint (BearingPoint OOO, Russia)* are classified in this thesis as private limited firms since they are independent legal entities in their respective countries⁴⁵.

If one makes a closer look at 32 ‘divisions’, one will find that 21 of them have been acquired lately, and only 11 are stated to be ‘business units’ (the author admits the fact that these ‘business units’ might have been acquired as well, but does not have enough information to support or reject this suggestion). According to the data collected, four of the companies from the list have been acquired by *International Business Machines Corp. (IBM)*; these are *Applix, Cognos, Clarity Systems, and IBM Business Consulting Services*⁴⁶. Interestingly, *Applix* was acquired by *Cognos*, and *Cognos* itself was acquired by *IBM*. *Stratature* is now a subsidiary of *Microsoft*. However, *IBM* and *Microsoft* themselves are not listed as BBRT members.

The author has also included company *Alcan Packaging* into the ‘division’ group since it has been sold recently to *Arcor* and to *Bemis Company* (which are not BBRT members). Similarly, *Kraft Foods* (which is not a BBRT member) has acquired *Cadbury Schweppes*.

On the other hand, *Interbrew UK* is now a subsidiary of *Anheuser-Busch InBev*; but both of the companies are listed as the members of the BBRT. Similarly, the above-mentioned consulting firm *Palladium Group* has acquired *ThinkFast Consulting*, but both of the firms are mentioned in the BBRT lists. Besides, *Unilever* acquired *SlimFast* (*Unilever* is stated as

⁴⁵ As mentioned above, *BDO Visura* has changed its name to *BDO*, but throughout this thesis, the author is using only the names given on the BBRT Internet pages or in the BBRT literature (for consistency reasons).

⁴⁶ Company *IBM Business Consulting Services* got this name after the acquisition.

a BBRT member, while the *SlimFast* case was taken from the Beyond Budgeting literature)⁴⁷. All these sold and acquired companies have been classified as ‘divisions of other companies’ for consistency reasons.

The author has identified company *Andersen* from the BBRT list as a private limited firm *Arthur Andersen*⁴⁸ that exists now only nominally due to its reputation damages after the famous *Enron* case. Nevertheless, *Andersen* is also mentioned as a member of the BBRT.

All these facts make the author believe that the BBRT so-called “current” membership lists might be to some extent inaccurate. Many of evidently former members of the BBRT have not been deleted from its official lists. If one excludes all acquired and liquidated companies from the BBRT lists, the current membership will decrease substantially, which, in the author’s opinion, might not be in the best interests of the BBRT.

The data also show a significant interest of various governmental, intergovernmental, and non-for-profit organizations to the Beyond Budgeting ideas. There are 32 such organizations in the sample (17 % out of 183)⁴⁹. They belong to various corporate sectors. Mostly, these are US health organizations (for instance, *Kaiser Permanente* and *Baycare*), but there are also international organizations (*The World Bank*); public service organizations (*Welsh Assembly Government*) and financial organizations (credit union *Mutual First Federal Credit Union* and health insurance organization *Priority Health*).

4.2.7 Organizational structures of the analyzed companies

The companies from the analyzed sample, as it could be seen from the discussion above, show a great variety in their size, corporate sector, history, and a number of other characteristics. The organizational patterns of the companies are also different.

⁴⁷ The author admits the fact that not all these data about mergers and acquisitions might be correct and comprehensive, but all of them have been obtained from the available open sources.

⁴⁸ The author hopes that it has been a correct identification considering that these names are somewhat different.

⁴⁹ It should be mentioned that *CSIRO Livestock Industries* (a BBRT member) is actually a division of *The Commonwealth Scientific and Industrial Research Organisation (CSIRO)*, Australian government body for scientific research. However, the author has classified it as a governmental organization since, in author’s opinion, such classification is more relevant in this particular case (the author believes that it is more significant that this organization is *governmental* than that it is a *division* of another governmental organization).

Some organizations consist of a few *similar* divisions (for instance, several hospitals), whereas other organizations include a large number of *different* divisions and subsidiaries with various tasks, products and services. Many of the firms are themselves divisions of other companies, as discussed above. Some of the firms may be considered as *local* (such organizations have their offices in one or several locations over one country), while others may be regarded as *multinational* (such organizations have their offices all over the world). Again, for many small organizations (for instance, local consulting firms) it was not possible to obtain clear data about their organizational structure. In general, the author would say that the larger is an analyzed organization, the more of its various analytical data are accessible from the open sources.

Several examples of the *local* participants of the BBRT are given below. For instance, *Baycare* (USA) is a network of 10 not-for-profit hospitals. *Cook Children's Health Care System* (USA) consists of 8 health companies and 60 clinics. UK health organization *Mencap* is a federation of over 600 affiliated local groups. Retail trade *Target Corporation* has 1740 stores in the USA. These are local organizations with several similar divisions.

US energy company *Exelon Corp* includes several divisions with various, although interrelated, products and services: *Exelon Generation*, *Exelon Transmission Company*, *Exelon Business Services Company*, etc. Similarly, *Park Nicollet Health Services* (USA) includes a hospital, a clinic, a foundation, and an institute that together render various medical services. These are local organizations with several different, but interconnected, divisions.

One of the interesting examples of the local BBRT members is *VHA Inc.*, a member-based health alliance (provider of supply chain management services) with 1,400 not-for-profit hospitals and more than 24,000 health care organizations over the USA.

According to Gooderham and Nordhaug (2005), multinational companies tend to pay more attention either to their *local* responsiveness (a so-called '*multi-domestic*' company) or to the

degree of *global* integration (a ‘*global*’ company)⁵⁰. In the author’s opinion, both multi-domestic and global types of multinational companies can be found among the BBRT members. Moreover, even the well-known company *ABB* (machinery and technology firm, Switzerland/Sweden) with its specific, so-called ‘*matrix*’, organizational structure (Gooderham & Nordhaug, 2005), is also mentioned in the BBRT list.

There are also several examples of the *multinational* participants of the BBRT. Transport company *Kansas City Southern* (USA) has its railroads in the USA, Mexico and Panama, and can be considered as an example of a *multi-domestic* company.

Deutsche Bank (Germany) has its branch offices in 74 countries. *EBRD* (*European Bank for Reconstruction and Development*) is located in 29 countries. *KPMG Consulting* is presented in 150 countries, *Ernst & Young* offices can be found in 140 countries. Multinational retail trade companies from the BBRT lists are also very large: *HEB* has 315 stores in the USA and Mexico, and *Kingfisher* has 860 stores in 8 countries. French chemical company *Rhodia* has 11 Global Business Units and 65 production sites worldwide. These are examples of *global* multinational companies.

The Global BBRT list members *BDO Visura* (Switzerland) and *BearingPoint OOO* (Russia) are the local representatives of large international consulting networks *BDO* and *BearingPoint*, respectively. This fact is noteworthy since unlike the above-mentioned consulting firms *KPMG Consulting* and *Ernst & Young* that are included into Germanic BBRT list, companies *BDO* and *BearingPoint* themselves do not participate in the Beyond Budgeting movement. However, their local representatives (*BDO Visura* and *BearingPoint OOO*) do.

One of the interesting examples of the multinational BBRT members is Norwegian company *Orkla* that has its branches in a number of countries and is presented by several completely different industries (consumer goods, aluminium solutions, renewable energy, materials, and financial investment sectors).

⁵⁰ Some companies seek to overcome the contradictions between the *local* responsiveness and flexibility and *global* competitiveness and efficiency. They are classified in theory as ‘*transnational*’ (Gooderham & Nordhaug, 2005). However, such a discussion lies beyond the scope of this thesis.

Not surprisingly, *small* consulting, software, financial, and health organizations from the BBRT lists are mostly local firms, while many *large* industrial, financial, and consulting firms are multinational. There are also several international organizations (like *The World Bank*) that are presented in many locations all over the globe.

In conclusion, the author would like to underline that the organizations that have shown their interest in Beyond Budgeting by their membership in the BBRT (or, at least, by their mentioning in the Beyond Budgeting literature) are very different in their organizational structures. These structures might be dependent on the companies' size, corporate sector, scope of international operations, and other factors. The corresponding analysis lies beyond the scope of this thesis, although may be regarded as an interesting topic for further research.

4.2.8 CEOs and CFOs of the analyzed companies

As discussed earlier, the author tried to collect the data about the age and the date (year) of appointment of chief executive officers (CEOs) and chief financial officers (CFOs) of the analyzed companies. It is a rather challenging task since many companies provide rather limited data about their key persons. Nevertheless, for the most of the companies it was possible to get at least some of the necessary data.

The data about CEOs' appointment date have been obtained only for 90 of the organizations from the sample (49 % of 183 organizations). Only 3 of the CEOs began their work as early as in the 1970s⁵¹, 12 CEOs started in this position in the 1990s, 32 CEOs began in 2000 – 2005, 29 of the CEOs began in 2006 – 2009, and 14 CEOs have worked since 2010 – 2011. Thus, the top management of the companies is rather 'young' (in the sense that the CEO's experience in this position at each particular company from the sample is mostly short). It should be mentioned, however, that many of the CEOs have a large experience from similar positions at other companies and/or have been working for their companies during a long period in different positions. Yet, for another half of the sample (93 organizations) no relevant data have been found at all.

⁵¹ These are the CEOs of *HEB* (retail trade, USA), *Promega Corp* (machinery and technology, USA), and *SAS Performance Management* (software and IT, USA).

The data about CEOs' age have been obtained only for 59 of the analyzed organizations (32% of 183 organizations). The youngest one (38 years old) is the CEO of Russian natural resources firm *OJSC Siberian Coal Energy Company (SUEK)*. Only 10 of the CEOs are 41 – 49 years old. 28 CEOs are 50 – 55 years old, 13 CEOs are 56 – 60 years old, and 6 CEOs are 62 – 68 years old. The oldest one (75 years old) is the CEO of *M D Anderson Cancer Center* (health sector, USA). Thus, the CEOs of the analyzed companies are mostly experienced people in their 50 – 60 years. However, for 124 organizations (68 % of 183) the author was not able to obtain any relevant data.

To find the data about the companies' CFOs was even more difficult. The author was able to obtain the information about the date of CFOs' appointment only for 62 organizations (34 % of 183). Only 4 of the CFOs has been working since 1989 – 1999, 17 CFOs began in 2000 – 2005, 30 CFOs began in 2006 – 2009, and 11 CFOs have worked for their companies since 2010 – 2011. Again, the CFO's experience in this position at each particular company may be considered as relatively short; however, many of the CFOs have a large experience from other companies and/or have worked for their companies for a long period in other positions.

The CFOs' age was collected only for 45 organizations (25 % of 183). The youngest one (40 years old) is the CFO of Finnish machinery and technology company *Vaisala Oy*. 19 of the CFOs are 41 – 49 years old, 19 CFOs are 50 – 55 years old, 1 CFO is 57 years old, and 5 CFOs are 60 – 65 years old. The oldest one (65 years old) is the CFO of *Sun Healthcare Group* (health sector, USA). Thus, the CFOs of the analyzed companies are mostly experienced people in their 40 – 50 years, that is, a little younger than the CEOs.

While the collected data do show some age and experience patterns, their validity and credibility might be questioned since the data have been obtained for a relatively small number of the analyzed organizations. For 84 companies no CEO/CFO data have been found at all (including the above-mentioned unidentified firms, divisions, liquidated or acquired companies, and a number of small private firms, governmental, intergovernmental and non-for-profit organizations). For that reason, it might be difficult to do a valid and reliable cross-research between the CEO/CFO variables and other variables under consideration.

4.2.9 Financial characteristics of the analyzed companies: return on equity and leverage

Finally, having described various aspects of the organizations under consideration, we can proceed further and analyze their financial characteristics in order to make some possible conclusions about the financial position of these companies.

As discussed above, the collected financial data of the companies include five main indicators: annual sales, operating profit, net profit, total assets, and book equity.

The author was able to obtain at least some of the basic financial indicators only for 91 of the analyzed companies. For large public limited companies, it was rather straightforward since they publish their official annual reports on their Internet pages. For smaller companies, only some of the data (mainly, *revenue* data) have been obtained from electronic database *Orbis* at the library of *Norges Handelshøyskole (NHH)*. For 32 above-mentioned ‘divisions’ of other companies it was not possible to get any information at all.

All five indicators under consideration have been obtained only for 76 companies (out of 183). In order to compare the financial position of the firms from different countries with different currencies, the author decided to calculate the following financial indices: *return on equity* (net profit divided by book equity) and *leverage* (book equity divided by total assets). Three companies from the list (*BT Group*, *Rhodia*, and *Royal Mail*) have negative equity amounts in their balance sheets. For those firms the financial indices have not been calculated in order to avoid unnecessary confusion. Thus, the financial indices have been calculated only for 73 organizations (40 % of 183).

Return on equity

11 organizations (out of 73) report negative net profits; therefore, the calculated returns on their equity are also negative. The lowest returns on equity (approximately minus 100 % and even lower) have been found for the following three UK organizations: *Forestry Commission* (forestry industry), *South East England Development Agency* (regional development company), and *Scottish Enterprise* (regional development company). The reason is that all these organizations have big losses for the last reporting period, which are

higher than their equity amounts (funding). All these companies are public-owned and, in the author's opinion, might receive a large financial support from the government.

Among other organizations with negative returns on equity, there are also public-owned and governmental organizations *British Council* and *DFW International Airport*, a non-for-profit health organization *Mencap*, and such intergovernmental organizations as *IFAD (International Fund for Agricultural Development)* and *The World Bank*.

Among *commercial* organizations for which it was possible to find the relevant data, only machinery and technology firm *IES (USA)*, conglomerate *Orkla (Norway)* and health company *Sun Healthcare Group (USA)* have negative returns on equity (minus 32 %, minus 2 %, and minus 1 %, respectively).

Other 63 companies report positive returns on their equity:

- the lowest returns (about 2 %) have been reported by UK public-owned company *Port of Tyne Authority* (transport and infrastructure) and UK non-for-profit organization *Oxleas NHS Foundation Trust* (health);
- *Deutsche Bank* (financial services, Germany), *Thomson* (information agency, USA), and *Navigant Consulting* (consulting, USA) have reported returns on equity around 5 %.
- 16 companies (from 14 various industries) have reported returns on equity about 6 – 10 %;
- 17 companies (from various industries, but mostly from financial sector, as well as from machinery and technology sectors) have returns on equity about 10 – 15 %;
- 13 companies (mostly, firms in financial sector, natural resources, communications and healthcare products) show returns about 15 – 25 %;
- 8 firms (natural resources, communications, machinery and technology, financial services, healthcare products, food, beverages, tobacco, and conglomerate Unilever) have returns on equity about 26 – 36 %;

- consulting firm *Accenture*, software company *Verisign* and tableware producer *Libbey* have very high returns on equity (73 %, 123 % and 622 %). They have either rather low book equity or high net profit (due to both high operational profit and high financial income).

Thus, the BBRT members have rather low returns on their equity. 11 organizations have even negative returns. 21 companies have positive returns no higher than 10 %. The highest returns have been found for firms in financial sector, natural resources, machinery and technology, communications, and healthcare products. It should be mentioned, however, that returns on equity have not been calculated for 110 organizations (private limited companies, non-for-profit organizations, and divisions) because of the lack of the data.

Leverage

Leverage levels of the analyzed 73 firms also show a great variety. The lowest leverage has been found for tableware producer *Libbey* (about 1.5 %) due to company's low equity amount and large retained equity deficit. With this exception, the low levels of leverage are more typical for financial organizations: ten financial firms from the sample have leverage about 3 – 10 %.

Machinery and energy firm *Alstom* (France) has leverage level of 14 %. Ten various organizations from different industries have leverage about 20 – 30 %.

16 firms have leverage about 30 – 40 %. Among them, there are machinery and technology firms, natural resources firms and communications companies. 15 firms have leverage about 40 – 50 %. These are machinery and technology firms, natural resources firms, healthcare product companies, and transport organizations, among others. 9 various firms have leverage about 50 – 60 %. 8 various organizations have leverage about 60 – 80 %.

The highest leverage levels have been found for *South East England Development Agency* (public-owned), *IFAD* (intergovernmental), and *Oxleas NHS Foundation Trust* (non-for-profit): 82 %, 87 %, and 100 %, respectively.

Thus, the BBRT members have rather high leverage. Higher leverage levels are more typical for public-owned organizations, low leverage levels are more typical for financial

companies. These facts, in the author's opinion, are easily understandable. Public-owned companies are financed by governmental budgets and do not have much liabilities and long-term debt in their balance sheets. Financial companies (banks), on the other hand, concentrate large amounts of money as their liabilities. It should be mentioned again, however, that leverage has not been calculated for 110 organizations because of the lack of the data.

4.2.10 Summary

In the previous sections, the author sought to outline the primary database about the BBRT members and analyze the collected data in order to find out some possible patterns and provide their potential explanations. The following basic characteristics of 183 organizations have been collected, described, and analyzed: size, age, nationality, corporate sector, ownership and organizational structure, financial indicators, and some data about chief executive officers and chief financial officers of the companies. The results of the analysis and corresponding conclusions will be presented in the next chapter together with the answers to problem statement and research questions and some suggestions for further research.

5. Conclusion

The problem statement of this study has been the following:

What kinds of organizations are receptive to new ideas in management accounting and control and, in particular, to the Beyond Budgeting ideas?

This chapter includes the summary of the main findings, the answer to the problem statement and research questions, as well as some suggestions for further research.

5.1 Main findings: analysis and discussion

5.1.1 General remarks

In this thesis, the author has sought to answer the following research questions:

1. What are the main variables associated with organizations' interest in and receptiveness to new management accounting and control ideas, according to prior research?
2. Could at least some of these variables also be associated with organizations that either have showed their interest in the Beyond Budgeting ideas by their membership in the Beyond Budgeting Roundtable or have been discussed in the Beyond Budgeting Roundtable exemplar cases?

During the work on this thesis, the author has prepared a preliminary electronic database about the basic characteristics of the Beyond Budgeting Roundtable organizations. As discussed above, this database cannot be considered as full and comprehensive. The chosen basic characteristics should be regarded rather as examples of factors that have been suggested or found to affect adoption of activity management generally. Nevertheless, the prepared database allows making some initial insights into the diffusion and, possibly, adoption of the Beyond Budgeting ideas. In addition, the author sought to give some probable explanations for the observed characteristics of the analyzed organizations.

Below, the answers to the both research questions are given. Together, they form the answer to the overall problem statement of this thesis.

5.1.2 What are the main variables associated with organizations' interest in and receptiveness to new management accounting and control ideas, according to prior research?

Prior research has found a number of various organizations' characteristics associated with the organizations' interest and receptiveness to management accounting innovations. Having examined previous studies on management accounting innovations diffusion and adoption (ABC, BSC, etc.), the author decided to subdivide the contextual variables discussed in them into the following 26 categories (in alphabetical order):

- age of the organization;
- corporate sector (for instance, manufacturing, service, financial, retail, conglomerate and other);
- cost structure (overhead costs as a percentage of total cost; capital costs as a percentage of total costs; the number of cost pools and allocation bases);
- customer intensity (a subcontractor or a company with large number of customers);
- degree of centralization/decentralisation;
- degree of customization (mass, batch, single-product or process producers; made-to-order or made-to-stock; customized or standard products);
- existence of outside venture investors;
- full-time accountants as percent of all employees (as a proxy of organizational capacity to learn);
- growth (average rate of growth in net sales during the last years);
- importance of cost information for decision-making;
- intensity towards international markets (export as percent of sales);
- level of competition (number of competitors; perceived change in competition; price-makers or price-takers);

- managerial fads and fashions (ideas from consultants, seminars and workshops);
- number of decision levels;
- organizational culture (business culture) factors (innovativeness, outcome orientation, and tight cost control);
- perceived environmental uncertainty;
- product diversity (the number of products/product lines/product variants);
- product perishability;
- profitability (average return on investment ratio during the last years);
- quality of information technology;
- size (annual sales turnover or its logarithm; the number of employees or its logarithm; profits; assets);
- strategy of the company;
- tendency to compete through innovation and product development (research and development expenditure as percent of sales);
- top management characteristics (replacement of the founder by a new chief executive officer, individual characteristics of chief financial officers);
- use of advanced manufacturing technologies (AMT), just-in-time (JIT), total quality management (TQM), lean production and automation;
- use of other innovative management accounting techniques.

Having discussed the main findings of contemporary management accounting research, the author chose to focus for each analyzed BBRT company on the following contextual variables identified by prior studies:

- company size (annual sales, operating profit, net profit, total assets, number of employees),
- company age (year of foundation),
- nationality of the company (headquarters address),
- corporate sector (industry), main types of products and services,
- data about ownership structure and organizational structure,
- data about recent replacement date (year) of chief executive officer (CEO) and/or chief financial officer (CFO) of the company, and his (her) age.

The list of variables is based on the relative *significance* in prior research and/or relative *accessibility* from open sources (Internet sites, financial reports, and press releases).

5.1.3 BBRT members: main findings and analytical results

Nationality and corporate sector

The analysis of the collected data has shown a great variety in these basic characteristics between the BBRT members. First of all, the companies (their headquarters) are located in 26 different countries all over the world. However, some countries and regions are presented more broadly. 74 of the companies (40 %) are situated in the USA, 40 firms (22%) are located in the UK, and the rest 69 organizations (38 %) are from all over the world (including 8 organizations with unidentified nationality). A considerable number of the companies are of the Scandinavian origin; the total number of Danish, Icelandic, Norwegian, and Swedish companies in the sample is about 10 % of the total number of the companies under consideration (183). The Germanic companies are also actively presented: the total number of firms from Austria, Germany, and Switzerland is about 8 % of the total sample. France (4 companies) can also be considered as a relatively significant participant of the Beyond Budgeting movement. Overall, the Beyond Budgeting ideas seem to be more popular in highly developed countries.

Other countries (and even regions) of the world are presented rather modestly, or not presented at all. There are no organizations from China, India, Central and Eastern Europe, Spanish-speaking countries in Europe and South America, republics of the former Soviet Union (except Russia), Africa (except South Africa), and Middle East in the sample. The absence of Middle East companies seems interesting, taking into account that the Beyond Budgeting Roundtable has a regional branch there.

The BBRT members belong to various industries and corporate sectors. Only two companies from the sample can be described as a kind of ‘industrial conglomerates’ since their products belong to several industries.

The author has subdivided all the companies from the sample into 34 industrial groups. The following 11 industries are especially frequent among the BBRT members: software and IT; consulting; financial services; machinery and technology; health; food, beverages, tobacco; chemical industry; communications; healthcare products; international organization, natural resources. These 11 industries include almost 75 % of all sample organizations. About 25 % of all the companies (46 firms) from the sample belong to software, IT, and consulting services.

The author has also subdivided all the industries from the sample into two larger groups, namely, ‘productive’ and ‘non-productive’ ones. The collected data illustrate that the ‘productive’ industries (machinery and technology; food, beverages and tobacco; chemical industry; communications; natural resources; energy; transport and infrastructure; etc.) show a big interest in the Beyond Budgeting ideas. In the author’s opinion, this interest may be understandable since such companies may tend to use sophisticated planning, controlling, and budgeting systems and may pay a greater attention to new management accounting and control ideas in order to improve these systems.

However, the author has found that the dissemination of the Beyond Budgeting ideas is somewhat higher in the ‘non-productive’ sector (software and IT, consulting, financial services, health, international organizations, research and education, public service and regional development, certification, information agency, leisure and hospitality, marketing research, professional body). There are 94 ‘non-productive’ and only 80 ‘productive’ organizations in the sample (the corporate sector of 9 companies has not been identified).

The high interest of the software and consulting firms to the Beyond Budgeting initiative may be explained from the supply-side perspective. However, the attractiveness of the Beyond Budgeting ideas for other ‘non-productive’ firms, like financial firms, health companies, international organizations, and public service and regional development organizations, seems to be a remarkable finding and is worth further investigation.

As discussed above, such financial sector industry as banking is considered by some researchers as rather predictable, that is why these researchers may doubt that the Beyond Budgeting approach is necessary for banks. However, in the author’s opinion, banks are commercial organizations that are interested in their profit maximization, and from this point of view, they might also be interested in new management accounting and control methods. Moreover, the sample comprises not only banks, but also other financial organizations (payment processing firms, pension companies, mortgage organizations, etc.) that might be working in more unpredictable environment than banks. However, some of the financial organizations from the sample describe themselves as ‘non-for-profit’; therefore, their participation in the Beyond Budgeting initiative is noteworthy.

There are also several well-known international organizations, charities, public-owned organizations and even the government for Wales (UK) in the sample. The interest of such non-profit organizations in the Beyond Budgeting initiative is also noteworthy.

Various countries in the sample are presented by various industries. The most active Beyond Budgeting participants are the UK, the USA, Norway, Sweden, Denmark, Switzerland, Germany, and France. Each of these countries is presented by many different industries. The rest 18 countries from the sample are presented by only 1 – 3 industries each.

The USA is mostly presented in the ‘non-productive’ sector. More than a half of all ‘non-productive’ organizations from the sample (48 out of 94) are located in the USA. The situation with the ‘productive’ sector is opposite: only about one third of all of the US organizations (26 out of 80) belong to the ‘productive’ sector. Almost 64 % of 80 ‘productive’ firms from the sample are located in Europe. Thus, the Beyond Budgeting ideas in Europe and other countries (except the USA) are spread mostly among ‘productive’ industries, whereas in the USA the scope of the Beyond Budgeting dissemination can be described as mainly ‘non-productive’. Indeed, many software and consulting firms, health

and financial organizations from the sample are located in the USA. In total, 44 US companies (out of 74 US firms, or almost 60 %) belong to software, consulting, health, and financial services.

In the author's opinion, the collected data demonstrate that US consulting firms show a great interest in the potential 'Beyond Budgeting' propagation to their clients (the supply-side perspective of management accounting innovations diffusion).

The active participation of several US health organizations (hospitals) in the BBRT lists is also remarkable. While in Europe many hospitals are financed through government budgets, in the USA health organization are mostly private. Perhaps, these differences in financing policies have entailed the observed interest of US health organizations to the Beyond Budgeting ideas. However, this finding as well as its explanations may be worth further investigation.

Age

As discussed above, the author believes that the age of a company can be explained to a certain degree by the image that this company seeks to create (for instance, whether it would like to emphasize its innovativeness or, on the contrary, to show its loyalty to traditions).

Many of the Beyond Budgeting organizations are relatively 'young'. Among the older companies that are interested in the Beyond Budgeting initiative there are many UK companies, whereas the younger ones are mainly of the US origin. The most of the Scandinavian BBRT participants are also of relatively younger age. The younger Beyond Budgeting participants tend to be 'non-productive' (for instance, consulting and software companies), whereas the older ones belong primarily to the 'productive' sector.

Size

The analyzed companies are very different in their size (measured as the number of their employees). The employee data have been found for 103 companies from the sample; about a half of them have fewer than 10,000 employees and another half has more than 10,000 employees. The smallest firms have less than 100 employees and the largest ones have 200,000 – 400,000 employees. The employee data has been obtained mainly for public

limited, ‘productive’ organizations. Privately-held, ‘non-productive’ organizations from the sample tend not to provide their employee data in the existing open sources.

The comparison of the size (measured as the number of employees) and corporate sector of these 103 organizations has shown a great diversity within the analyzed sample. These data again underline a great variety of organizations that have shown their interest in the Beyond Budgeting ideas, which can be regarded as a noteworthy finding.

Ownership structure

61 companies from the sample (33 % of 183) are public limited, 47 firms (26 %) are private limited, and 32 organizations (17 %) are divisions of other firms or have been acquired recently. These types of organizations comprise about 77 % of the total sample (183 organizations). The data show also a significant interest of various governmental, intergovernmental, and non-for-profit organizations to the Beyond Budgeting ideas. There are 32 such organizations in the sample (17 % out of 183). The author was not able to identify the ownership structure of 11 organizations from the sample.

Among 32 ‘divisions’, there are 21 firms that have been acquired lately, and 11 firms are stated to be ‘business units’. *International Business Machines Corp. (IBM)* has acquired four of the companies from the list. One of the BBRT firms has been acquired by *Kraft Foods*, and one of the firms is now a subsidiary of *Microsoft*. However, *IBM*, *Microsoft*, and *Kraft Foods* are not listed as BBRT members. Moreover, some of the BBRT members have been acquired by other BBRT members; nevertheless, all such companies remain in the BBRT “current membership” lists.

All these facts make the author believe that the BBRT so-called “current” membership lists might be to some extent inaccurate. Many of evidently former members of the BBRT have not been deleted from its official lists. If one excludes all acquired and liquidated companies from the BBRT lists, the current membership will decrease substantially, which, in the author’s opinion, might not be in the best interests of the BBRT.

Organizational structure

The BBRT members are very different in their organizational structures. These structures might be dependent on the companies' size, corporate sector, scope of international operations, and other factors. The corresponding analysis may be regarded as an interesting topic for further research.

Some of the firms may be considered as *local* (such organizations have their offices in one or several locations over one country), while others may be regarded as *multinational* (such organizations have their offices all over the world). Some organizations consist of a few *similar* divisions, whereas other organizations include a large number of *different* divisions and subsidiaries with various tasks, products and services. Many of the firms are themselves divisions of other companies, as discussed above.

Small consulting, software, financial, and health organizations from the BBRT lists are mostly local firms, while many *large* industrial, financial, and consulting firms are multinational. There are also several international organizations (for instance, *The World Bank* etc.) that are presented in many locations all over the globe.

CEO and CFO data

The data about the CEOs and CFOs appointment year and age have been rather difficult to obtain. The complete data have been found for a relatively small number of the analyzed organizations. For 84 companies no CEO/CFO data have been found at all (including the unidentified firms, divisions, liquidated or acquired companies, and a number of small private firms, governmental, intergovernmental, and non-for-profit organizations).

The top management of the companies has been found to be rather 'young' (in the sense that the CEO's or CFO's experience in this position at each particular company from the sample is mostly short). However, many of the CEOs and CFOs have a large experience from similar positions in other companies and/or have been working for their companies during a long period in different positions. The CEOs of the analyzed companies are mostly experienced people in their 50 – 60 years, while the CFOs are mostly experienced people in their 40 – 50 years, that is, a little younger than the CEOs.

Return on equity and leverage

In order to compare the financial position of the BBRT members that use 11 different currencies in their annual reports, the author decided to calculate the following financial indices: *return on equity* (net profit divided by book equity) and *leverage* (book equity divided by total assets). These indices have been calculated for 73 organizations from the sample. Accordingly, the indices have not been calculated for 110 organizations (private limited companies, non-for-profit organizations, and divisions) because of the lack of the necessary financial data.

The analysis has shown that the BBRT members have rather low returns on their equity. 11 organizations have even negative returns. 21 companies have positive returns no higher than 10 %. The highest returns have been found for firms in financial sector, natural resources, machinery and technology, communications, and healthcare products.

On the contrary, the BBRT members have rather high leverage. Higher leverage levels are more typical for public-owned organizations, low leverage levels are more typical for financial companies. These facts, in the author's opinion, are easily understandable. Public-owned companies are financed by governmental budgets and do not have much liabilities and long-term debt in their balance sheets. Financial companies (banks), on the other hand, concentrate large amounts of money as their liabilities.

5.1.4 Beyond Budgeting diffusion: some concluding remarks

As explained above, the Beyond Budgeting concept may be regarded as a *reduction* type of management accounting change (removal of a management accounting technique with no replacement) and, for that reason, it may be considered as a kind of *radical* management accounting innovations. This fact might be one of the explanations of its relatively low diffusion rate. Other possible explanations that have been discussed in this thesis are the following: the unsatisfactory comparison between the *costs* and the *benefits* of the Beyond Budgeting; '*accounting lag*' between the emergence of theoretical ideas in management accounting and their practical implementation ('stability' of management accounting systems); and unclear *effectiveness* of Beyond Budgeting methods for decision-making.

Moreover, researchers have argued the Beyond Budgeting idea has *low compatibility* with existing model of management, *high complexity* of the concept, *low trialability*, *low perceived relative advantage* in comparison with traditional budgeting, and *low observability* of its potential results.

Nevertheless, a number of companies – the Beyond Budgeting Roundtable organizations discussed in this thesis – have shown their interest in these ideas, and many of them have indeed abandoned budgets. The author of this thesis believes that so far the Beyond Budgeting ideas have been disseminated, mostly, due to the *competitive* factors (the *efficient choice* reasoning), and the relatively small number of the BBRT organizations may at least to some extent support this view. The author believes that the ‘early’ adopters of Beyond Budgeting (those who have already decided to abandon budgets or, at least, have shown some interest in this issue) may have done so in order to increase their efficiency and competitiveness. However, consulting companies, in the author’s opinion, might also be interested in the Beyond Budgeting ideas (like in other management accounting innovations) in order to keep themselves informed and to be potentially able to put on the market the corresponding solutions for their clients.

As discussed above, studies of management accounting innovations use either a *demand-side* (adopter) perspective or a *supply-side* perspective. In this thesis, the author has decided to use primarily the results of *demand-side* organizational innovativeness research in order to look at the explanatory variables that are associated with the adoption of innovations (so-called *contingency approach*). It should be mentioned, however, that there is no developed theory to associate the specific organizational and cultural factors with the extent of adoption. At the same time, in the author’s opinion, the *supply-side* research findings discussed in this thesis are also highly relevant to the actual and potential Beyond Budgeting diffusion and adoption.

5.1.5 Could at least some of the main variables associated with organizations' interest in and receptiveness to new management accounting and control ideas, according to prior research, also be associated with the BBRT organizations?

In this thesis, the author has collected and analyzed the data about the BBRT companies according to the following variables: company size, its age, industry, nationality, ownership, organizational structure, and certain data about CEO and/or CFO of the company.

The results of the data analysis have shown the following patterns in the sample:

- the BBRT members are more broadly presented in highly developed countries, especially the USA, the UK, Scandinavian countries, Germanic countries, and France;
- the BBRT members belong to various industries and corporate sectors, but about 25 % of all the companies from the sample belong to software, information technologies (IT), and consulting services;
- the dissemination of the Beyond Budgeting ideas is somewhat higher in the 'non-productive' sector. However, the 'productive' industries also show a big interest in the Beyond Budgeting ideas;
- the Beyond Budgeting ideas in Europe and other countries (except the USA) are spread mostly among 'productive' industries, whereas in the USA the scope of the Beyond Budgeting dissemination can be described as mainly 'non-productive';
- among the BBRT members there is a significant amount of non-for-profit international organizations, financial organizations, charities, and public service and regional development organizations;
- among the BBRT members there are several US health organizations (hospitals);
- many of the BBRT organizations are of relatively 'young' age. The younger BBRT participants tend to be 'non-productive' (for instance, consulting and software companies), whereas the older ones belong primarily to the 'productive' sector;

- the BBRT companies are very different in their size (measured as the number of their employees);
- the BBRT members are mostly public limited or private limited companies, although there are many various governmental, intergovernmental, and non-for-profit organizations in the sample;
- most of the BBRT members are independent companies, although there are many business units, acquired or liquidated companies in the BBRT membership lists. Some of the BBRT members been even acquired by other BBRT members;
- the organizational structures of the BBRT members are different and might be dependent on the companies' size, corporate sector, scope of international operations, and other factors. There are both local and multinational (global, multi-domestic, and matrix) organizations in the sample;
- the CEO's or CFO's experience in this position at each particular company from the sample is mostly short. However, many of the CEOs and CFOs have a large previous working experience. The CEOs of the analyzed companies are mostly experienced people in their 50 – 60 years, while the CFOs are mostly experienced people in their 40 – 50 years;
- the BBRT members tend to have rather low returns on their equity. The highest returns have been found for firms in financial sector, natural resources, machinery and technology, communications, and healthcare products;
- the BBRT members tend to have rather high leverage (especially public-owned organizations). Low leverage levels are more typical only for financial companies.

In short, the author of this thesis believes that at least some of the main variables associated with overall organizations' receptiveness to new management accounting and control ideas could also be associated with the BBRT organizations. In the author's opinion, among the most interesting variables, according to this thesis' findings, there may be nationality, corporate sector, age of the company, age of the CEO/CFO of the company, and return on equity.

5.2 Suggestions for further research

In the author's opinion, the further research of the Beyond Budgeting initiative and the Beyond Budgeting Roundtable members may be both an interesting and challenging task.

First of all, researchers can try to obtain more broad and precise lists of the companies that are interested in 'beyond budgeting' practices, but have never been members of the BBRT.

Second, it may be worth to extend the list of the variables under consideration and include into this list other variables that have been found by prior research as associated with organizations' and receptiveness to new management accounting and control ideas, and, maybe, even discuss some new variables.

Third, researchers should use not only open sources of information, but also, if possible, some internal sources (for instance, interviews with the CEOs and CFOs of the 'beyond budgeting' companies).

Fourth, the data should be collected preferably for several years, which can show the dynamics of the companies' indices and, hopefully, allows determining if the 'beyond budgeting' approach has had significant benefits for the firms.

Fifth, it may be interesting to analyze industrial data over years and compare them with the data of the individual 'beyond budgeting' companies in order to find out whether these companies have some specific characteristics and whether the 'beyond budgeting' implementation has been advantageous for the firms.

Sixth, it might be an interesting task to analyze the motivation of the BBRT members to participate in the Beyond Budgeting movement, especially for various non-for-profit organizations, health companies, international organizations, charities, and public service and regional development organizations.

Seventh, the organizational structures of the BBRT members should be analyzed more thoroughly, according to the companies' size, corporate sector, scope of international operations, and other factors.

And, last but not least: the explanations for the observed variables (characteristics) of the analyzed organizations given in this thesis may be challenged and extended by further research.

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Appendix 1: The compiled list of the analyzed organizations

- ABB
- Accenture
- ACCO Europe
- ACNielsen
- Acorn Systems
- Adaptive Planning
- Agility Consulting
- Ahlsell
- Akademiska Hus
- Akili
- Alcan Packaging
- ALG Software/Business Objects
- Alight Financial Planning
- Alstom
- American Century Investments
- American Express
- Andersen
- Anheuser Busch
- Applied-Analytix
- Applix
- Archstone Consulting
- Ascom
- Barclays Bank
- Basico Consulting
- Baycare
- BDO Visura
- BearingPoint OOO
- BG Transco
- Bintech
- Boots The Chemists
- Borealis
- British Council
- BT Group
- Burmah Castrol
- Cadbury Schweppes
- Carnaud Metal box
- Centrotherm Photovoltaics
- Charles Schwab
- Chesapeake Corporation
- CIBC
- CIMA
- CITB Construction Skills
- Clariant International
- Clarity Systems
- Cognos
- Coloplast
- Cook Children's Health Care System
- Coors Brewers (UK)
- CorVu plc
- CSIRO Livestock Industries
- Cytec Industries
- Danfoss
- De Beers
- Deutsche Bank
- DFW International Airport
- DHL
- Diageo
- Discover Financial Services
- DNV Business Assurance
- Dr Michael Sonntag
- EBRD
- eCapital Advisors
- Ekan
- Embarq
- eNiklas
- Ernst & Young
- Exelon Corp
- Forestry Commission
- gruppoSTI
- Guardian Industries
- Halifax
- Hammond Suddards
- HEB
- HNI Group
- HNI Industries
- Housing Associations
- HP Bulmer
- Hunterdon Healthcare
- Hyperion
- IBM Business Consulting Services
- IES
- IFAD
- IFC
- INEUM consulting
- Ingersoll Rand
- Interbrew UK
- itartis
- Japan Tobacco
- Jernia
- Johnsonville Sausage LLC
- Kaiser Permanente
- Kansas City Southern
- Kingfisher

- KPMG Consulting
- Libbey
- Lucille Packard Children's Hospital
- M D Anderson Cancer Center
- MarketSphere Consulting
- Mars Confectionery
- MasterCard International
- Maxager
- Mencap
- Millipore Corp
- Mutual First Federal Credit Union
- National Power
- Navigant Consulting
- Navigator Systems
- Novartis
- OJSC Siberian Coal Energy Company (SUEK)
- Omgeo LLC
- Orkla
- Össur
- Oxleas NHS Foundation Trust
- Palladium Group
- Park Nicollet Health Services
- Parker Hannifin
- Pentland Group
- Port of Tyne Authority
- PPL Electric Utilities
- PRGX
- PriBa
- Priority Health
- proDacapo
- Promega Corp
- Puget Sound Energy
- Resorts World Bhd
- Revelwood
- Rhodia
- River Logic
- Royal Mail
- Rugby Group
- Sainsbury's Supermarkets
- SAS Performance Management
- Schneider Electric
- Schwan Food Co
- Scottish Enterprise
- Seattle Children's Hospital
- Semco
- Siemens
- Sightsavers International
- SKF
- SlimFast
- SNF (NHH)
- Softlab GmbH
- Solver
- South East England Development Agency
- Southco
- SpareBank 1 Gruppen
- SpecChem
- Standard Life
- Statoil
- Stratature
- Stryker Instruments
- Sun Healthcare Group
- Svenska Handelsbanken
- Target Corporation
- Telecom New Zealand
- Telekom Malaysia
- Telenor
- Texas Instruments
- Thames Water
- The Carle Foundation
- The Player Group
- The World Bank
- ThinkFast Consulting
- Thomson
- Time Warner Telecom
- T-Online International
- TPG
- UBS AG
- Unilever
- United Engineering Forgings
- University of Plymouth
- US Analytics
- Vaisala Oy
- Valcon
- Valmet Corporation
- Verisign
- VHA Inc.
- Wachovia
- Welsh Assembly Government
- West Bromwich Building Society
- Wright Williams & Kelly

Appendix 2: The database

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	Money unit	Headquarters address	Revenues	Operating profit	Net profit	Total assets	Book equity	Book equity/Total assets	Return on equity	Number of employees	Year of foundation	Main types of products and services	Corporate sector (industry)	CEO data (appointment)	CEO data (age)	CFO data (appointment)	CFO data (age)	Ownership data	Ownership form	Organizational structure
ABB	USD million	Switzerland/ Sweden	31 589	3 818	2 732	36 295	14 885	41 %	18 %	124 000	1883 (ASEA founded); 1891 (BBC founded); 1988 (ASEA and BBC merged)	power and automation technologies	machinery and technology	since 2008	age 54	since 2005	age 55	public limited	public limited	matrix
Accenture	USD million	Ireland/Bermuda/ USA	21 551	2 915	2 060	12 835	2 836	22 %	73 %	204 000	1989	consulting	consulting	since 2011	age 51	since 2006	age 53	plc	public limited	multinational
ACCO Europe	...	UK	...	...	...	...	...	...	...	...	1893 (Wilson Jones founded)	branded office products	office products	...	...	...	...	parent company - ACCO Brands Inc.	division	...
ACNielsen	...	USA	...	...	...	...	...	...	...	...	1923	marketing research	marketing research	...	...	...	...	part of The Nielsen Company	division	...
Acorn Systems	...	USA	...	...	...	...	...	...	...	...	...	consulting	consulting	...	...	...	...	private	private limited	multinational
Adaptive Planning	USD million	USA	6	...	...	...	...	...	...	65	2003	software for budgeting, forecasting and reporting beyond spreadsheets	software and IT	...	...	since 2003	...	a growth-stage, venture-backed company	private limited	local
Agility Consulting	...	Australia	...	...	...	...	...	...	...	...	1995	Business Intelligence firm	consulting	since 1995	...	...	...	private	private limited	local
Ahlsell	SEK million	Sweden	19 256	...	...	...	...	...	...	4 300	1877	heating, plumbing, electrical, tools and machinery, refrigeration	machinery and technology	since 1999	age 56	...	...	Cinven Ltd. and Goldman Sachs Capital Partners - 96 % of the shares. Senior executives in Ahlsell - 4 %	private limited	multinational
Akademiska Hus	SEK million	Sweden	5 176	3 134	2 124	53 526	25 406	47 %	8 %	421	1992	planning, construction, ownership and management of property (the rentable floor space is 3.2 million square metres)	property company	since 2009	age 50	since 2001	age 55	state company; was established following a parliamentary decision	public-owned and governmental	local; the regional organisations are supported by a group office
Akili	USD million	USA	3	...	...	...	...	...	...	36	1992	boutique IT services firm specializing in SAP BusinessObjects, Enterprise Performance Management and Business Intelligence implementations	software and IT	since 1992	...	since 1994	...	private	private limited	local
Alcan Packaging	...	USA	...	...	...	...	...	...	...	...	...	packaging	packaging	...	...	...	...	sold to Amcor and to Bemis Company in 2010	division	...
ALG Software/Business Objects	...	Australia	...	...	...	...	...	...	...	...	2004	software for costing, budgeting and forecasting	software and IT	...	...	...	...	wholly owned	private limited	local
Alight Financial Planning	...	USA	...	...	...	...	...	...	...	...	2005	software for budgeting, planning, reporting and analysis	software and IT	since 2005	...	...	...	LLC	private limited	local
Alstom	EURO million	France	20 923	1 570	490	29 633	4 152	14 %	12 %	93 500	...	transport infrastructure and signalling, maintenance equipment, trains, power generation and transmission	machinery and energy	public limited	public limited	multinational

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American Century Investments	...	USA	1 300	1958	investments, money management	financial services	since 2007	privately-controlled	private limited	local
American Express	USD million	USA	27 819	5 964	4 057	147 042	16 230	11 %	25 %	60 500	1850 (express mail company started)	financial services (payment processing, credit cards, cheques)	financial services	since 2001	age 59	since 2007	age 61	public limited	public limited	multinational
Andersen	...	USA	...	...	...	...	...	...	...	...	...	consulting	consulting	...	...	...	...	LLP	private limited	...
Anheuser Busch	USD million	Belgium	36 297	10 897	5 762	114 342	38 799	34 %	15 %	114 000	1366	brewery	food, beverages, tobacco	since 2004	age 51	since 1999	age 46	publicly traded company	public limited	multinational
Applied-Analytix	...	USA	...	...	...	...	...	...	...	...	1996	software in budgeting, planning, forecasting, reporting and analytics	software and IT	since 1996	...	...	...	firm	private limited	local
Applix	USD million	USA	...	...	...	...	...	...	...	...	1983	software	software and IT	...	...	...	...	In 2007, Applix was acquired by Cognos. In 2008, Cognos was itself acquired by IBM	division	local
Archstone Consulting	...	USA	...	...	...	...	...	...	...	...	2003	strategy consulting and operations consulting in the consumer packaged goods, life sciences and manufacturing industries	consulting	...	...	...	...	a division of The Hackett Group, Inc.	division	local
Ascom	CHF million	Switzerland	571	48	33	580	189	33 %	17 %	2 093	1987	Mission-Critical Communication solutions (Wireless Solutions, Network Testing and Security Communication)	communications	since 2011	age 53	since 2008	age 46	public limited	public limited	multinational
Barclays Bank	pounds million	UK	32 204	6 065	4 549	1 489 645	62 262	4 %	7 %	147 500	1896	financial services	financial services	since 2011	age 59	...	...	plc	public limited	multinational
Basico Consulting	...	Denmark	...	...	...	...	...	...	...	...	2003	finance consulting (controlling and accounting)	consulting	since 2003	...	since 2003	...	Basico Consulting International ApS (BCI) is owned by Altius Invest A/S and Dansk Merchant Capital. Basico Consulting A/S and Økonomiforum A/S are fully owned subsidiaries of BCI	private limited	multinational
Baycare	...	USA	...	...	...	...	...	...	...	18 500	1997	community-based health system	health	since 2004	...	...	...	a network of not-for-profit hospitals, facilities and services	non-for-profit	local: a network of 10 not-for-profit hospitals, outpatient facilities and services
BDO Visura	CHF million	Switzerland	157	807	1932	auditing, tax, legal, outsourcing and management consultancy	consulting	since 2011	Ltd	private limited	local: each BDO member firm is an independent legal entity in its own country

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BearingPoint OOO	...	Russia	business consulting	consulting	private	private limited	local: office of BearingPoint GmbH, Austria
BG Transco	USD million	UK	16 772	5 562	3 500	50 299	26 684	53 %	13 %	6 172	1997 (British Gas plc demerged)	discovery, extraction, transmission, distribution and supply of natural gas	natural resources	since 2000	age 57	since 2011	age 50	plc	public limited	multinational
Bintech	...	USA	...	...	...	...	...	...	...	...	...	consulting	consulting	...	...	...	...	private	private limited	multinational
Boots The Chemists	...	UK	...	...	...	...	...	...	...	...	1849	pharmacy-led health and beauty group	healthcare products	...	...	...	...	a member of Alliance Boots	division	...
Borealis	EURO million	Denmark	6 269	349	333	5 630	2 898	51 %	11 %	5 075	1994 (Neste and Statoil merge their petrochemical and polyolefins businesses)	plastic materials and chemicals	chemical industry	...	age 49	...	age 44	International Petroleum Investment Company of Abu Dhabi (64%), OMV Aktiengesellschaft, the energy group along the European growth belt (36%)	public limited	multinational
British Council	pounds million	UK	705	-4	-5	308	227	74 %	-2 %	7 377	1934	The United Kingdom's international organisation for cultural relations and educational opportunities	international organization	since 2007	age 56	...	...	charity	public-owned and governmental	multinational
BT Group	pounds million	UK	20 859	2 123	1 029	28 680	-2 626	...	...	96 100	1846	fixed-line services, broadband, mobile, TV, networked IT services	communications	since 2008	age 45	since 2008	age 55	public limited	public limited	multinational
Burmah Castrol	...	UK	...	...	...	...	...	...	...	...	1899	lubricants	chemical industry	...	...	...	...	In 2000, Burmah-Castrol was acquired by BP plc	division	...
Cadbury Schweppes	...	UK	...	...	...	...	...	...	...	...	1824	confectionary	food, beverages, tobacco	...	...	...	...	acquired by Kraft Foods in 2010	division	...
Carnaud Metal box	...	n/a	...	...	...	...	...	...	...	...	...	...	n/a	...	...	...	...	n/a	n/a	...
Centrotherm Photovoltaics	EURO million	Germany	624	75	52	806	396	49 %	13 %	1 448	1976 (foundation of Centrotherm Elektrische Anlagen GmbH)	technology and equipment provider for the photovoltaics sector	machinery and technology	...	age 43	since 2010	...	public limited	public limited	multinational
Charles Schwab	USD million	USA	4 248	779	454	92 568	6 226	7 %	7 %	12 800	1963 (investment advisory newsletter is launched), 1973 (the company was launched)	financial services (advisory, banking, retirement, investments, brokerage)	financial services	since 2008	age 50	since 2007	age 48	public limited	public limited	local
Chesapeake Corporation	...	UK	...	...	...	...	...	...	...	...	...	cartons, labels and leaflets, specialist plastic packaging	packaging	...	...	...	...	limited	private limited	multinational
CIBC	USD million	Canada	12 085	4 012	2 452	352 040	15 790	4 %	16 %	42 354	1867 (Canadian Bank of Commerce was founded)	financial products and services	financial services	since 2005	age 55	since 2008	age 49	public limited	public limited	multinational
CIMA	pounds million	UK	39	1	1	33	12	37 %	9 %	369	1919	Chartered Institute of Management Accountants	professional body	chartered body	public-owned and governmental	multinational

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CITB Construction Skills	...	UK	2003	Sector Skills Council and Industry Training Board for the construction industry, to deliver a professional construction workforce	research and education	since 2008	public sector	public-owned and governmental	local: governed by an industry-led, non-executive Board, Chairman is appointed by the Secretary of State for Business, Innovation and Skills
Clariant International	CHF million	Switzerland	7 120	366	191	5 921	1 806	31 %	11 %	16 200	1886 (chemical company Sandoz was established), 1995 (Clariant was formed as a spin-off)	colours, surface effects and performance chemicals	chemical industry	since 2008	age 54	since 2006	...	public limited	public limited	multinational
Clarity Systems	...	Canada	...	...	...	...	...	...	...	...	1995	software for budgeting, planning, consolidations, scorecarding, profitability modelling and reporting	software and IT	...	...	...	...	privately-held company: acquired by IBM in 2010	division	...
Cognos	...	Canada	...	...	...	...	...	...	...	...	1969 (founded)	software for business intelligence and financial performance	software and IT	...	...	...	...	acquired by IBM in 2008	division	...
Coloplast	DKK million	Denmark	9 537	1 995	1 243	7 771	3 452	44 %	36 %	7 207	1957 (founded)	intimate healthcare products (ostomy care, urology and continence care, and wound and skin care): catheters, bandages, and stoma bags	healthcare products	...	age 52	...	age 52	public limited	public limited	multinational
Cook Children's Health Care System	...	USA	...	...	...	...	...	...	...	4 000	1918	paediatric services	health	...	...	...	...	not-for-profit	non-for-profit	local: 8 health companies and 60 clinics
Coors Brewers (UK)	...	UK	...	...	...	...	...	...	...	...	1777	brewery	food, beverages, tobacco	...	...	...	...	part of Molson Coors Brewing Company (USA)	division	...
CorVu plc	...	UK	...	...	...	...	...	...	...	...	...	software and IT	software and IT	...	...	...	...	plc	public limited	...
CSIRO Livestock Industries	...	Australia	...	...	...	...	...	...	...	...	1926 (CSIRO founded)	research solutions to Australia's livestock and allied industries	research and education	since 2007	...	...	...	national government	public-owned and governmental	local: a division of The Commonwealth Scientific and Industrial Research Organisation (CSIRO), national government body for scientific research
Cytec Industries	USD million	USA	2 748	234	175	3 674	1 737	47 %	10 %	6 000	1907 (American Cyanamid was founded)	specialty chemicals and materials for aerospace, adhesives, automotive and industrial coatings, chemical intermediates and plastics	chemical industry	since 2009	age 52	since 2007	age 52	public limited	public limited	multinational
Danfoss	DKK million	Denmark	31 550	3 264	1 378	29 868	11 700	39 %	12 %	23 392	1933 (established)	refrigeration, heating, water controls, industrial automation, high-pressure systems	machinery and technology	since 2004	age 45	...	age 54	public limited	public limited	multinational

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De Beers	USD million	Luxembourg/South Africa	5 877	478	638	6 947	3 423	49 %	19 %	16 000	1888	diamond value chain	natural resources	Anglo American (45%), Central Holdings (40% - representing the Oppenheimer family) and the Government of the Republic of Botswana (15%)	private limited	multinational
Deutsche Bank	EURO million	Germany	27 293	3 975	2 330	1 905 630	50 392	3 %	5 %	100 000	1870	financial services	financial services	since 2002	age 63	since 2008	age 49	public limited	public limited	multinational; 74 countries
DFW International Airport	USD million	USA	501	-51	-84	5 317	1 353	25 %	-6 %	1 825	1968	international airport	transport and infrastructure	since 1994	...	since 2003	...	jointly owned by the Cities of Dallas and Fort Worth	public-owned and governmental	local
DHL	EURO million	Germany/USA	11 111	497	...	...	...	...	...	88 384	1969	express mail services	mail services	...	...	...	...	a part of Deutsche Post - since 2002	division	multinational
Diageo	pounds million	UK	9 780	2 574	1 743	19 454	4 786	25 %	36 %	20 000	1749 (Justerini & Brooks founded), 1997 (Diageo was created through the merger)	premium drinks (international brands across spirits, beer and wine)	food, beverages, tobacco	since 2000	...	since 2010	...	plc	public limited	multinational
Discover Financial Services	USD million	USA	6 658	1 269	765	60 785	6 457	11 %	12 %	10 300	1986	financial services (card issues, loans, savings, payments)	financial services	since 2004	age 50	since 2005	age 57	public limited	public limited	local
DNV Business Assurance	...	Norway	...	...	...	...	...	...	...	...	1864 (DNV was established)	management system certification, product certification	certification	...	...	...	...	an independent business unit of DNV	division	...
Dr Michael Sonntag	...	n/a	...	...	...	...	...	...	...	...	...	...	n/a	...	...	...	...	n/a	n/a	...
EBRD	EURO million	UK	1 754	617	1 377	39 327	12 977	33 %	11 %	1 492	1991	European Bank for Reconstruction and Development: support the development of market economies in the central and eastern Europe	financial services	...	...	...	...	owned by 61 countries, the European Union and the European Investment Bank	intergovernmental	multinational; 29 countries
eCapital Advisors	...	USA	...	...	...	...	...	...	...	...	...	performance management consulting	consulting	...	...	...	...	LLC	private limited	local
Ekan	...	Sweden	...	...	...	...	...	...	...	...	1985	management consulting	consulting	...	...	...	...	a spin-off from the SAM research foundation within the School of Business, Economics and Law at the University of Gothenburg	private limited	local
Embarq	USD million	USA	...	...	...	...	...	...	...	...	1899	communications	communications	...	...	...	...	purchased by CenturyTel in 2009	division	...
eNiklas	...	n/a	...	...	...	...	...	...	...	...	...	...	n/a	...	...	...	...	n/a	n/a	...
Ernst & Young	USD million	UK	21 255	140 964	1989	consulting	consulting	since 2001	private company limited by guarantee	private limited	multinational; 140 countries

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Exelon Corp	USD million	USA	18 644	4 726	2 563	52 240	13 560	26 %	19 %	19 000	2000	energy generation, power marketing, transmission and energy delivery	energy	since 2000	...	since 2008	age 46	public limited	public limited	local: Exelon Generation, Exelon Transmission Company, ComEd, PECO, and Exelon Business Services Company
Forestry Commission	pounds million	UK	30	-76	-76	45	15	33 %	-507 %	3 240	1919	forestry	natural resources	...	...	...	...	non-Ministerial Department	public-owned and governmental	local
gruppoSTI	...	Italy	...	...	...	...	...	...	...	...	...	management and investment company	consulting	...	...	...	...	private	private limited	local
Guardian Industries	...	USA	...	...	...	...	...	...	...	18 000	1932	glass, fibreglass	chemical industry	...	...	...	...	private	private limited	multinational: in more than 25 countries
Halifax	...	UK	...	...	...	...	...	...	...	...	1853	financial services	financial services	...	...	...	...	part of the Lloyds Banking Group since 2009	division	...
Hammond Suddards	...	UK	...	...	...	...	...	...	...	500	1887	legal counsel	consulting	...	...	...	...	combines with Squire Sanders in 2011	division	...
HEB	USD million	USA	12 000	...	...	...	...	...	...	76 000	1905	supermarket chain	retail trade	since 1971	...	...	...	privately held	private limited	multinational: 315 stores in the USA and Mexico
HNI Group	...	n/a	...	...	...	...	...	...	...	...	...	...	n/a	...	...	...	...	n/a	n/a	...
HNI Industries	USD million	USA	1 687	58	27	998	408	41 %	7 %	14 000	1944	office furniture manufacturer	furniture	since 2004	age 50	since 2008	...	public limited	public limited	multinational
Housing Associations	...	n/a	...	...	...	...	...	...	...	...	...	...	n/a	...	...	...	...	n/a	n/a	...
HP Bulmer	...	UK	...	...	...	...	...	...	...	...	1887	apple cider production	food, beverages, tobacco	...	...	...	...	private	private limited	local
Hunterdon Healthcare	...	USA	...	...	...	...	...	...	...	...	...	health services	health	...	...	...	...	not-for-profit	non-for-profit	local
Hyperion	...	n/a	...	...	...	...	...	...	...	...	...	...	n/a	...	...	...	...	n/a	n/a	...
IBM Business Consulting Services	...	Bermuda	...	...	...	...	...	...	...	...	...	business process solutions	software and IT	...	age 52	...	age 53	formerly known as PWC Consulting: changed its name following its acquisition by International Business Machines Corp. (IBM); a subsidiary of IBM	division	...
IES	USD million	USA	461	-29	-32	205	102	50 %	-32 %	4 000	1998	electrical and communication services	machinery and technology	since 2006	age 51	since 2010	age 60	public limited	public limited	local

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IFAD	USD million	Italy	409	-105	-105	7 801	6 750	87 %	-2 %	474	1977	International financial institution (International Fund for Agricultural Development)	international organization	specialized agency of the United Nations	intergovernmental	multinational	
IFC	USD million	USA	3 044	1 746	1 746	61 075	18 359	30 %	10 %	3 354	1956	international financial corporation	international organization	...	...	...	a member of the World Bank Group	intergovernmental	multinational
INEUM consulting	...	France	...	...	...	...	...	...	...	...	...	management consulting	consulting	...	...	...	merger of Kurt Salmon Associates and Ineum Consulting into Kurt Salmon in 2011	division	...
Ingersoll Rand	USD million	Ireland	14 079	1 248	665	19 991	7 964	40 %	8 %	58 000	1871	refrigeration, heating, ventilating, air conditioning, mechanical and electronic locks, advanced controls, security systems, attendance and personnel scheduling systems	machinery and technology	since 2010	...	since 2008	...	plc	public limited	multinational
Interbrew UK	...	UK	...	...	...	...	...	...	...	1 450	1742	brewery	food, beverages, tobacco	...	...	...	subsidiary of Anheuser-Busch InBev since 2008	division	...
itartis	...	Switzerland	...	...	...	...	...	...	...	...	...	development of e-work environment, electronic business-to-business marketplace, software solutions	software and IT	since 2011	...	...	private	private limited	local
Japan Tobacco	yen billion	Japan	6 135	297	138	3 873	1 723	44 %	8 %	49 665	1985	cigarette manufacturing. Also operates in foods, pharmaceuticals, agribusiness, engineering, and real estate	food, beverages, tobacco	since 2006	age 57	...	public limited	public limited	multinational	
Jernia	...	Norway	...	...	...	...	...	...	...	...	1951	distribution of ironware, tools, kitchen equipment, industrial equipment	distribution of equipment	...	...	...	wholly owned subsidiary of Canica AS from 2005	division	multinational: 160 shops in Norway, 78 shops in Sweden, Internet shop
Johnsonville Sausage LLC	...	USA	...	...	...	...	...	...	...	...	1945	sausages	food, beverages, tobacco	...	...	...	privately owned	private limited	local
Kaiser Permanente	...	USA	164 098	1945	non-profit health plan and hospital system	health	since 2005	not-for-profit	not-for-profit	local: Kaiser Foundation Health Plan, Inc.; Kaiser Foundation Hospitals and their subsidiaries: The Permanente Medical Groups: 35 hospitals	

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Kansas City Southern	USD million	USA	1 815	487	180	5 641	2 714	48 %	7 %	6 100	1887	transportation holding	transport and infrastructure	public limited	public limited	multinational; railroad investments in the USA, Mexico and Panama
Kingfisher	pounds million	UK	10 450	698	491	9 603	5 460	57 %	9 %	80 000	1982	home improvement retailer	retail trade	since 2008	age 50	since 2008	age 45	plc	public limited	multinational; 860 stores in 8 countries
KPMG Consulting	USD million	Switzerland	20 630	...	...	...	...	...	...	137 835	1987	audit, tax and advisory services	consulting	...	...	...	...	international cooperative, a Swiss entity	private limited	multinational; 150 countries
Libbey	USD million	USA	800	69	70	819	11	1 %	622 %	7 005	1818	manufacturing, distribution and service network of glass tableware, ceramic dinnerware, metal flatware, hollowware, and plastic items	tableware	since 1993	...	since 2010	...	public limited	public limited	multinational
Lucille Packard Children's Hospital	...	USA	...	...	...	...	...	...	...	2 725	1919	paediatric and obstetric care	health	...	...	...	...	not-for-profit	non-for-profit	local
M D Anderson Cancer Center	USD million	USA	3 300	...	...	...	...	...	...	18 000	1941	cancer centre	health	since 1996	age 75	...	...	not-for-profit	non-for-profit	local
MarketSphere Consulting	...	USA	...	...	...	...	...	...	...	...	2002	consulting to optimize business performance within the finance, human resources, supply chain, and sales and marketing functions	consulting	since 2002	...	...	...	private	private limited	local
Mars Confectionery	USD million	USA	30 000	...	...	...	...	...	...	65 000	1911	chocolate, pet care, gum and confections, food, drinks and symbioscience	food, beverages, tobacco	...	...	...	...	private, family-owned company	private limited	multinational
MasterCard International	USD million	USA	5 539	2 752	1 847	8 837	5 216	59 %	35 %	5 500	1966 (founded as the Interbank Card Association)	payment industry	financial services	since 2010	age 50	...	...	public limited	public limited	multinational
Maxager	...	USA	...	...	...	...	...	...	...	...	1996	enterprise profit optimization solutions	software and IT	...	...	...	...	private	private limited	multinational
Mencap	pounds million	UK	194	6	-10	134	41	31 %	-23 %	7 500	1946	supporting people with a learning disability and their families and carers	health	...	...	...	...	charity	non-for-profit	local; a federation of over 600 affiliated local groups
Millipore Corp	...	USA	technologies, tools, and services for bioscience research and biopharmaceutical manufacturing, for the life science industry	machinery and technology	division of Merck KGaA	division	...

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Mutual First Federal Credit Union	...	USA	1949	credit union (financial institution owned by its members and managed by a volunteer board of directors), not-for-profit financial cooperative	financial services	non-for-profit: owned by its members	non-for-profit	local
National Power	...	UK	...	...	...	...	...	...	...	...	1990 (privatisation of the UK electricity market)	energy	energy	...	...	...	...	plc	public limited	demerged into two separate companies in 2001
Navigant Consulting	USD million	USA	704	50	24	869	461	53 %	5 %	2 359	1999	advisory and consulting	consulting	since 2000	age 62	since 2008	...	public limited	public limited	multinational
Navigator Systems	...	UK	...	...	...	...	...	...	...	...	1995	software	software and IT	...	...	...	...	ltd	private limited	multinational
Novartis	USD million	Switzerland	50 624	11 526	9 969	123 300	56 000	45 %	18 %	119 000	1996 (the merger of Ciba-Geigy and Sandoz)	healthcare products	healthcare products	since 2010	age 51	since 2010	...	public limited	public limited	multinational: operations in more than 140 countries
OJSC Siberian Coal Energy Company (SUEK)	RUR million	Russia	100 427	10 215	6 908	130 532	26 843	21 %	26 %	50 189	1999 (Russian coal producers became part of SUEK)	coal and power	natural resources	since 2004	age 38	since 2004	age 50	DONALINK LIMITED (Cyprus) - 99,84 %, ZAO Krasnoyarskaya - 0,16 %	private limited	local
Omgeo LLC	...	USA	...	...	...	...	...	...	...	600	2001	post-trade and pre-settlement solutions to investment managers, broker/dealers, and banks	software and IT	since 2006	...	...	...	a wholly owned, global joint venture between the Depository Trust & Clearing Corporation (DTCC) and Thomson Reuters	private limited	multinational
Orkla	NOK million	Norway	57 338	4 222	-864	87 541	46 931	54 %	-2 %	30 233	1654 (a copper pyrite mine was started); 1904 (Orkla Grube-Aktiebolag was founded)	consumer goods, aluminium solutions, renewable energy, materials and financial investment sectors	consumer goods, machinery and technology, and financial services	since 2010	age 51	since 2000	age 53	public limited	public limited	multinational
Ossur	USD million	Iceland	359	60	35	607	344	57 %	10 %	1 627	1971	development, manufacture and sale of orthopaedic solutions	healthcare products	since 1996	age 55	since 2001	...	public limited	public limited	multinational
Oxleas NHS Foundation Trust	pounds million	UK	139	6	3	113	113	100 %	2 %	2 079	1994	mental health	health	since 2002	...	since 1996	...	not-for-profit	not-for-profit	local: 7 directorates
Palladium Group	...	USA	consulting, technology, and education in strategy management, performance management, and business intelligence; the Balanced Scorecard	consulting	since 2008	...	founders include Drs. Robert S. Kaplan and David P. Norton	private limited	multinational

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Park Nicollet Health Services	USD million	USA	1 000	8 100	...	health care	health	since 2010	non-profit	non-for-profit	local: Park Nicollet Methodist Hospital, Park Nicollet Clinic, Park Nicollet Foundation and Park Nicollet Institute
Parker Hannifin	USD million	USA	9 993	755	556	9 910	4 459	45 %	12 %	54 794	1918	manufacturer of motion and control technologies and systems, solutions for commercial, mobile, industrial and aerospace markets	machinery and technology	since 2001	age 60	since 2010	age 54	public limited	public limited	multinational
Pentland Group	USD million	UK	1 800	...	...	...	...	...	...	12 000	1932	brand management company in clothing and footwear (sports, outdoor and fashion)	clothing and footwear	...	...	...	...	plc	public limited	multinational
Port of Tyne Authority	pounds million	UK	41	3	2	129	89	69 %	2 %	460	second century (the port was established); 1968 (Port of Tyne Authority)	port operator	transport and infrastructure	since 2008	...	since 2009	...	no public limited or owners; is governed by an independent board of executive directors, and non-executive directors who are appointed by the Secretary of State for Transport	public-owned and governmental	local
PPL Electric Utilities	USD million	USA	...	...	...	...	...	...	...	...	1920	energy generating, energy sales, delivering electricity and natural gas	energy	since 2006	age 62	since 2007	age 43	part of PPL Corporation	division	power plants, wholesale and retail electricity sales, gas delivery, distribution business in UK
PRGX	USD million	USA	184	8	3	106	49	46 %	7 %	1 400	...	business analytics and information services	consulting	since 2009	age 41	since 2009	age 55	public limited	public limited	multinational
PriBa	...	Switzerland	...	...	...	...	...	...	...	...	...	bank	financial services	...	...	...	...	n/a	n/a	...
Priority Health	...	USA	...	...	...	...	...	...	...	...	1986	not-for-profit health insurance company	financial services	since 1997	...	since 2007	...	not-for-profit	non-for-profit	local
proDacapo	...	Sweden	...	...	...	...	...	...	...	...	1994	software solutions for corporate performance management	software and IT	...	...	...	...	the company is owned by institutional and private investors	private limited	local
Promega Corp	USD million	USA	250	...	...	...	...	...	...	1 100	1978	products for basic research, drug discovery, forensics and paternity testing, and hospital and clinic-based diagnostics, for life science industry	machinery and technology	since 1978	age 62	...	...	employees and investors; privately held	private limited	multinational
Puget Sound Energy	...	USA	1873	energy utility (electricity and natural gas)	energy	since 2010	...	since 2002	...	Puget Energy is the parent company of Puget Sound Energy	division	...

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Resorts World Bhd	RM million	Malaysia	5 333	1 745	1 276	14 784	11 609	79 %	11 %	10 600	1965	leisure and hospitality business (theme parks, gaming, hotels, seaside resorts and entertainment)	leisure and hospitality	since 2002	public company	public limited	multinational: 5 public companies listed in 3 jurisdictions
Revelwood	...	USA	...	...	...	...	...	...	...	...	1995	software and IT	software and IT	...	...	...	...	private	private limited	local
Rhodia	EURO million	France	5 226	602	262	5 131	-288	...	...	14 000	1998 (spin-off into a separate company)	chemical industry	chemical industry	since 2003	age 53	since 2005	age 51	public limited	public limited	multinational: 11 Global Business Units, 65 production sites worldwide
River Logic	...	USA	...	...	...	...	...	...	...	...	2000	enterprise planning, corporate performance management, predictive modelling solutions	software and IT	...	...	...	...	privately held technology firm	private limited	local
Royal Mail	pounds million	UK	9 349	113	-320	5 893	-6 281	...	...	168 000	1516	postal services	mail services	since 2010	age 56	since 2006	age 49	plc	public limited	local: Royal Mail Holdings plc owns Royal Mail Group Ltd that is the parent company of Royal Mail, Post Office, General Logistics, and Parcelforce Worldwide
Rugby Group	...	UK	...	...	...	...	...	...	...	...	1825	cement and related products, such as lime and fuel ash	chemical industry	...	...	...	...	plc	public limited	...
Sainsbury's Supermarkets	...	UK	...	...	...	...	...	...	...	...	1869	supermarkets, convenience stores and pharmacies	retail trade	...	...	...	...	J. Sainsbury plc is the parent company of Sainsbury's Supermarkets Ltd	division	...
SAS Performance Management	USD million	USA	2 430	...	...	...	...	...	...	11 801	1976	business analytics software	software and IT	since 1976	age 68	...	...	privately held	private limited	multinational: more than 400 offices globally
Schneider Electric	EURO million	France	19 580	2 703	1 796	31 051	14 989	48 %	12 %	118 819	1836	technology and solutions to optimise energy usage in markets like energy & infrastructure, industry, data centres, buildings and residential	machinery and technology	since 2006	age 48	since 2009	age 44	public limited	public limited	multinational: in more than 100 countries
Schwan Food Co	...	USA	...	...	...	...	...	...	...	17 000	1948	food	food, beverages, tobacco	since 2008	...	since 2009	...	private company	private limited	local
Scottish Enterprise	pounds million	UK	40	-272	-283	412	292	71 %	-97 %	1 274	1991	development of the conditions for economic growth in Scotland	public service and regional development	since 2009	...	since 2010	...	public body	public-owned and governmental	local: 12 offices
Seattle Children's Hospital	USD million	USA	1 150	...	...	...	...	...	...	4 763	1907	healthcare for children	health	since 2005	...	...	...	not-for-profit	non-for-profit	local: hospital, research institute, hospital foundation
Semco	...	Brazil	...	...	...	...	...	...	...	...	...	...	n/a	...	...	...	...	n/a	n/a	...
Siemens	EURO million	Germany	75 978	5 876	4 068	102 827	29 096	28 %	14 %	405 000	1847	electrical engineering and electronics	machinery and technology	since 2007	age 54	since 2006	age 54	public limited	public limited	multinational

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Sightsavers International	pounds million	UK	100	1	1	15	9	64 %	10 %	362	1950	international charity: works to eliminate avoidable blindness and promote equality of opportunity for disabled people in the developing world	international organization	since 2005	...	since 2009	...	international charity	non-for-profit	multinational
SKF	SEK million	Sweden	61 029	8 452	5 296	55 224	19 894	36 %	27 %	44 742	1907	products, solutions and services within rolling bearings, seals, mechatronics, services and lubrication systems	machinery and technology	...	age 56	...	age 60	public limited	public limited	multinational: three divisions: Industrial, Automotive and Service: seven Group staff units
SlimFast	...	USA	...	...	...	...	...	...	...	...	1977	food	food, beverages, tobacco	...	...	...	...	was acquired by Unilever in 2000	division	...
SNF (NHH)	...	Norway	...	...	...	...	...	...	...	...	1991	research and education	research and education	...	...	...	...	SNF Foundation 90 %, NHH 8 %, UIB 2 %	public-owned and governmental	local
Softlab GmbH	...	Germany	...	...	...	...	...	...	...	...	1971	IT	software and IT	...	...	...	...	since 2008 in Cirquent GmbH	division	...
Solver	...	USA	...	...	...	...	...	...	...	...	1996	provider of Microsoft-based financial reporting, consolidations, budgeting and business intelligence solutions	software and IT	since 1996	...	...	...	private	private limited	multinational
South East England Development Agency	pounds million	UK	37	-159	-164	164	135	82 %	-121 %	359	1999	support the economic development of the region	public service and regional development	since 2004	...	...	...	public body	public-owned and governmental	local
Southco	...	USA	...	...	...	...	...	...	...	...	1899	fasteners, latches, hinges, handles	machinery and technology	...	...	...	...	private	private limited	multinational
SpareBank 1 Gruppen	NOK million	Norway	10 838	1 194	900	61 467	5 293	9 %	17 %	1 411	1996	financial products and services (bank, insurance, fund management)	financial services	since 2002	age 48	...	age 49	SpareBank 1 Nord-Norge (19.5%), SpareBank 1 SMN (19.5%), SpareBank 1 SR-Bank (19.5%), Samarbeidende Sparebanker AS (19.5%), Sparebanken Hedmark (12%), Landsorganisasjone n/fagforbund LO (10%)	private limited	local: finance group (9 subsidiaries)
SpecChem	...	Austria	...	...	...	...	...	...	...	...	...	petrochemical industry	chemical industry	...	...	...	...	n/a	n/a	...
Standard Life	pounds million	UK	18 569	971	493	154 116	4 238	3 %	12 %	10 000	1825	long term savings and investments, corporate pensions and benefits	financial services	since 2010	age 50	since 2010	age 42	plc: 1.5 million individual public limited in over 50 countries	public limited	multinational: UK, Canada, Ireland, Germany, Austria, India, USA, Hong Kong and mainland China
Statoil	NOK million	Norway	529 648	137 228	37 647	643 008	226 395	35 %	17 %	30 344	1972 (Statoil was formed)	oil and gas industry	natural resources	since 2004	age 49	since 2005	age 42	public limited	public limited	multinational

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Stratature	...	USA	2001	provider of Master Data Management (MDM) solutions	software and IT	a wholly owned subsidiary of Microsoft since 2007	division	...
Stryker Instruments	USD million	USA	7 320	1 751	1 273	10 895	7 174	66 %	18 %	20 036	1941	instruments for surgery	healthcare products	since 2005	age 47	since 2009	age 47	public limited	public limited	multinational
Sun Healthcare Group	USD million	USA	1 907	248	-5	1 082	512	47 %	-1 %	35 000	1993	nursing, long-term care and assisted living and mental health facilities	health	since 2001	age 56	since 2005	age 65	public limited	public limited	local
Svenska Handelsbanken	SEK million	Sweden	31 296	14 770	11 025	2 153 530	88 391	4 %	12 %	10 850	1871	full-service bank	financial services	...	age 50	...	age 52	public limited	public limited	multinational
Target Corporation	USD million	USA	65 357	4 673	2 488	44 533	15 347	34 %	16 %	351 000	1902	retail trade	retail trade	since 2008	age 56	since 2000	age 55	public limited	public limited	local; 1740 stores
Telecom New Zealand	NZ dollars million	New Zealand	5 271	732	382	6 865	2 545	37 %	15 %	9 015	1987	telecommunications service	communications	since 2007	...	since 2008	...	public limited	public limited	multinational: made up of five businesses: Chorus; Telecom Wholesale & International; Telecom Retail; Gen-I and AAPT
Telekom Malaysia	RM million	Malaysia	8 791	1 360	1 245	20 780	5 532	27 %	23 %	26 629	1984	telecommunications and related services	communications	...	...	...	...	public limited	public limited	multinational
Telenor	NOK million	Norway	94 843	12 500	14 808	172 731	96 218	56 %	15 %	33 200	1855 (The Norwegian Telegraph Administration is founded)	mobile and fixed line services, television and satellite broadcasting services, data traffic, mobile broadband, 3G services	communications	since 2002	age 57	since 2010	age 45	public limited	public limited	multinational
Texas Instruments	USD million	USA	13 966	4 514	3 228	13 401	10 437	78 %	31 %	28 412	1947	semiconductor design and manufacturing	machinery and technology	since 2004	age 52	since 2003	age 53	public limited	public limited	multinational
Thames Water	pounds million	UK	...	...	...	...	...	...	...	4 600	1989	water and wastewater services	utilities	since 2010	...	since 2007	...	In 2006, Thames Water was acquired by Kemble Water Limited, a consortium of institutional investors managed by the Macquarie Capital Funds (Europe) Limited	division	local
The Carle Foundation	...	USA	1918	health care	health	not-for-profit	not-for-profit	local: not-for-profit parent company of an integrated network of healthcare services (Carle Foundation Hospital, Carle Physician Group and Health Alliance Medical Plans)

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The Player Group	...	USA	2001	consulting	consulting	since 2001	LLC	private limited	local
The World Bank	USD million	USA	6 856	800	-2 154	428 282	165 830	39 %	-1 %	10 000	1944	financial and technical assistance to developing countries	international organization	since 2007	age 58	...	...	the bank is made up of development institutions owned by 187 member countries	intergovernmental	multinational
ThinkFast Consulting	...	USA	...	...	...	...	...	...	...	...	1996	telecom development consulting	consulting	...	...	...	...	In 2005, ThinkFast Consulting, Inc. was acquired by Palladium Group, Inc.	division	...
Thomson	USD million	USA	13 070	1 419	933	35 531	19 675	55 %	5 %	55 000	1851	deliver critical information to decision makers in the financial, legal, tax and accounting, healthcare, science and media markets	information agency	since 2001	age 52	since 1998	age 61	public limited	public limited	multinational
Time Warner Telecom	USD million	USA	1 273	146	271	2 669	985	37 %	28 %	2 975	1993	data, Internet access, local and long distance voice services	communications	since 1998	age 51	since 2005	age 49	public limited	public limited	local
T-Online International	...	Germany	...	...	...	...	...	...	...	...	1995	communications	communications	...	...	...	...	business unit of Deutsche Telekom	division	...
TPG	...	n/a	...	...	...	...	...	...	...	...	...	...	n/a	...	...	...	...	n/a	n/a	...
UBS AG	CHF million	Switzerland	31 994	7 455	7 838	1 317 247	51 863	4 %	15 %	64 617	1854 (constitution of the "Bankverein" as a consortium of six Private Banking-houses): 1998 (the merger between Union Bank of Switzerland and Swiss Bank Corporation to form UBS AG)	wealth management, investment banking and asset management	financial services	since 2009	age 68	since 2008	age 51	public limited	public limited	multinational: offices in more than 50 countries
Unilever	EURO million	Netherlands and the UK	44 262	6 339	4 598	41 167	15 078	37 %	30 %	167 000	1930	food, personal care and home care	food, personal care and home care	since 2009	age 54	since 2010	age 41	public limited	public limited	multinational
United Engineering Forgings	...	UK	...	...	...	...	...	...	...	...	...	automotive component supplier, iron and steel forgings	machinery and technology	...	...	...	...	private	private limited	...
University of Plymouth	pounds million	UK	209	6	8	296	86	29 %	9 %	3 000	1862	higher education	research and education	since 2007	...	...	...	governmental	public-owned and governmental	local
US Analytics	...	USA	...	...	...	...	...	...	...	...	1999	business intelligence consulting firm and full-service solution provider	consulting	since 1999	...	...	...	LLC	private limited	local
Vaisala Oy	EURO million	Finland	253	12	10	249	182	73 %	6 %	1 350	1936	environmental and industrial measurement; observation and measurement products and services for meteorology, weather critical operations and controlled environments	machinery and technology	since 2006	age 53	since 2006	age 40	public limited	public limited	multinational: 30 locations in 12 countries
Valcon	...	n/a	n/a	n/a	n/a	...

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Valmet Corporation	...	Finland	1951	machinery and technology	machinery and technology	Valmet merged with Rauma company in 1999, and Metso Corporation was created	division	...
Verisign	USD million	USA	681	232	834	2 444	676	28 %	123 %	1 100	1995	provider of Internet infrastructure services	software and IT	since 2009	age 45	since 2009	age 41	public limited	public limited	multinational
VHA Inc.	USD million	USA	...	...	...	...	...	...	...	1 500	1977	member-based health alliance (supply chain management services)	supply chain management services	...	...	...	...	nationwide network of community-owned health care organizations and physicians (cooperative)	public-owned and governmental	local: 1400 not-for-profit hospitals and more than 24000 non-acute care health care organizations
Wachovia	...	USA	...	...	...	...	...	...	...	...	1879	financial services	financial services	...	...	...	...	acquired by Wells Fargo & Company in 2008	division	...
Welsh Assembly Government	...	UK	...	...	...	...	...	...	...	...	1999	the government for Wales	public service and regional development	...	...	...	...	government	public-owned and governmental	local
West Bromwich Building Society	...	UK	...	...	...	...	...	...	...	...	...	mutual building society (savings, mortgages)	financial services	...	...	...	...	building society	private limited	local
Wright Williams & Kelly	...	USA	...	...	...	...	...	...	...	...	1991	software products for business decisions	software and IT	...	...	...	...	private	private limited	multinational