



## Integration of accounting functions globally

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### Abstract

This paper examines how Danish Headquarters (HQ) use different global integration modes to integrate one business function, i.e., the accounting function, of their Estonian subsidiaries. The study analyses the use of four specific integration modes: people, information, formalization, and centralization. 14 HQs in Denmark with corresponding Estonian subsidiaries were addressed with questionnaires eliciting their integration mode strategies. Prior to the HQ survey, the accounting functions in the corresponding subsidiaries had been interviewed regarding integration modes with the Danish HQ. The structure of accounting activities calls for the use of the formalization-based mode and the information-based mode, and therefore these modes were expected to be prevailing. The findings were consistent with our expectations, but also the centralization-based mode was extensively used. The people-based integration mode was not used extensively, but more than expected. Finally, coordination of the accounting function is not an emphasis of the HQ's. Control but not coordination is in contrast to earlier theory and findings on the relationships between HQs and their subsidiaries.

**Keywords:** global integration, integrating modes, accounting function, multinational companies.

### Streszczenie

#### Integracja funkcji rachunkowości globalnie

W artykule przedstawiono, w jaki sposób duńskie główne centrale przedsiębiorstw wykorzystują różne globalne tryby integracji w celu zintegrowania jednej funkcji biznesowej, tj. funkcji rachunkowości, ich estońskich filii. W artykule przeanalizowano wykorzystanie czterech konkretnych trybów integracji: ludzi, informacji, formalizacji i centralizacji. 14 głównych centrali z siedzibą w Danii, wraz z odpowiednimi estońskimi filiami, uwzględniono w badaniu, wykorzystując kwestionariusz ankietowy, pokazując ich strategie dotyczące trybu integracji. Przed badaniem ankietowym w centrali przeprowadzono wywiady z działami księgowymi w odpowiednich spółkach zależnych, które dotyczyły trybów integracji z duńskim zarządem głównym. Struktura działań księgowych wymaga zastosowania trybu opartego na formalizacji i trybu opartego na informacji. Wyniki badania były zgodne z naszymi oczekiwaniami, ale także szeroko stosowano tryb centralizacji. Oparty na ludziach tryb integracji nie był intensywnie wykorzystywany, ale bardziej niż oczekiwano. Wreszcie, koordynacja funkcji rachunkowości nie jest punktem koncentracji centrali. Kontrola, ale nie koordynacja, pozostaje w przeciwieństwie do wcześniejszej teorii i ustaleń dotyczących relacji między centralami głównymi przedsiębiorstw a ich filiami.

**Słowa kluczowe:** integracja globalna, tryby integracyjne, funkcja rachunkowości, przedsiębiorstwa.

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## Introduction

The literature on headquarters-subsiary (HQS) relationships in multinational corporations (MNCs) is vast and has been evolving for decades from different perspectives. Kostova et al. (2016) conducted a literature review on 81 articles published in the *Journal of World Business* from the late 1960s to 2015. The focus was on the field of international management (IM). The HQS relationship is primarily seen from the headquarters' perspective (view). The review of the articles showed different themes: 1) organizational design and control systems; 2) host and home country context; 3) subsidiary roles and regional structures; 4) knowledge creation and transfer; and 5) expatriate management and global HRM (Kostova et al., 2016, p. 178). The analysis also showed 3 global trends during this period of 50 years: Global Trend #1: The Globalization of Western NMCs; Global Trend #2: The Emergence of a Multi-Polar World; and Global Trend #3: The Rise of Emerging Market MNCs (EM-MNCs) (Kostova et al., 2016, Fig. 1, p. 178). Two recent papers discuss multinational headquarters' control of wholly owned foreign subsidiaries through transaction cost economics theory (Giacobbe et al., 2016; Matolcsy & Wakefield, 2017). The evidence is based on, first, a series of explanatory interviews and second, on data from a cross-sectional survey completed by 159 Australian multinational corporation headquarters. The authors apply a control archetype approach to consider the controls exercised. The study has the headquarters (HQ) perspective; the subsidiaries are not surveyed.

The present study on integration of the accounting functions includes both headquarters and subsidiaries. Danish-owned Estonian subsidiaries and the headquarters in Denmark are researched. The aim of this paper is to examine how Danish Headquarters (HQ) use different global integration modes to integrate one business function, i.e., the accounting function, of their Estonian subsidiaries.

Since Soviet times, several emerging markets in Eastern Europe have experienced substantial foreign direct investments (Heliste et al., 2007). Some of these investments resulted in the establishment of foreign subsidiaries. Mintzberg (1980) categorized companies operating in diversified markets, such as multinational companies (MNCs) with subsidiaries in different countries, as the divisionalized form. The divisionalized form favors the middle line with a manager, who is responsible for performance control systems. The activities are coordinated by the mechanism standardization of outputs (Mintzberg, 1980). In order to enable the headquarters (HQ) in the parent country to control and coordinate activities, it is important to implement reporting systems with the subsidiary in the host country. These reporting systems may comprise various performance key figures and other information. Therefore, it is remarkable that within the area of global integration research, comprehensive studies of the integration of the accounting function in subsidiaries are almost non-existent. This function obviously includes accounting practice and techniques, but it is more than that. Accounting theory also developed from the prevailing economic and social forces within which accounting

operates. In the 1970's, the changing environment shifted the focus of interest away from income theory towards decision theory, according to Glautier and Underdown (1974). This resulted in a new perception of accounting, i.e., as a measurement-communication function of the decision process. The different approaches to decision-making – e.g., economic, psychological, quantitative and sociological – changed accounting to become an interdisciplinary science (Glautier and Underdown, 1974). Within this concept, reports, budgets, financial reports, and cash flow statements etc., are integral parts of the accounting function and therefore also subject to the integration of that function.

Empirical research comprising several subsidiaries and their corresponding HQs is, to the authors' best knowledge, very rare, almost non-existent. However, there is a study by Kirk and Mouritsen (1996) on one Danish HQ and its Canadian subsidiary and a study by Thomsen (2008) on local managers in economic functions in Danish-owned subsidiaries in Estonia, Latvia and Lithuania. There is also a case-study by Leksell (1981) on six big Swedish multinationals and a selection of their international subsidiaries. The research topic was HQ-Subsidiary relationships in MNCs, by which is meant HQ's coordination and control of the foreign subsidiaries. The basic purpose of the study is "to investigate how multinational companies coordinate and control the activities of their foreign subsidiaries" (Leksell, 1981, p. 1). The object of study is the MNC on which the author utilizes a systems perspective. The study investigates systems such as the organizational systems, social systems and administrative systems for management, but it does not investigate specific functions. Administrative systems, nevertheless, encompass the design of the international budget and planning system and the international financial reporting system. However, the investigation is not conducted from a global integration perspective.

Kim et al. (2003, p. 330) assume that "(I)n a function central to global strategic implementation, there would be an incentive to develop effective integrating modes worldwide and thus a significant impact on performance". Due to the emphasis on control and coordinating measures, like reporting from the subsidiary to the HQ, the assumption of the authors is that the accounting function of the subsidiary is important to the management in the HQ in Denmark. The importance of the accounting function in integration is defined in this article as the extent of control and coordination of activities via standardization of output in the form of reporting between HQs and their subsidiaries. Therefore, they have an incentive to develop the centralization-based, information-based, people-based and formalization-based integration modes (Kim et al., 2003; Smale et al., 2007, 2013).

The role of the accounting function and its relationship to the firm has been debated to some extent internationally. Simon et al. conducted a study in 1954 on the organizing and tasks of the accounting function in HQs and subsidiaries of groups. This study has become a classical contribution to accounting research. Since then, the subject has been touched by two principal schools of thoughts, i.e., contingency theory and role theory

(Mouritsen, 1993). Simon et al. (1954) found that in HQs the role of the accounting function was primarily to provide top management with information describing the financial situation. This information should give top management the possibility to see, e.g., if budgets had been met, and was therefore mainly ex-post accounting information and variance reports.

However, in subsidiaries, Simon et al. found that the tasks of the accounting staff are far more focused on creating proper information for decision-making. The accounting staff here is more directly involved in planning and participating in the business decisions of the firm.

Later studies by Firth found that subsidiaries are often required to adopt the parent company's accounting practices, performance evaluation policies and budgetary plans (Firth, 1996). From the perspective of global integration, global coordination and controlling of accountancy across borders will be important for the performance of a multinational business.

A selection of 20 Danish-owned subsidiaries in Estonia was interviewed. Fifty interviews were conducted on accounting, the skills of accountants and overall human resource management with chief executive officers (CEOs), chief financial officers (CFOs), chief accountants and ordinary employees in the subsidiary on accounting issues, relevant to Danish accountancy, e.g., budgeting and decision-making issues.

In order to have views from both sides, i.e., the Estonian subsidiaries and their Danish HQs, a questionnaire survey among the Danish parent companies was conducted eliciting what global integration modes are used to integrate the accounting procedures and which personnel policies exist for the accounting staff of their subsidiaries. Following Glautier and Underdown (1974) the survey also examined the nature and content of the reports received from the subsidiaries. This paper will concentrate on the findings from the HQs' survey.

The findings indicate that both information-based integration and formalization-based integration are widely used by HQs. The primary decision-making authority, however, lies with the HQs and thus do not seem to be in line with Simon et al. (1954) but more with the centralized view of Firth (1966).

In the global integration literature, many studies investigated business functions, such as the human resource function, the management function and the R&D function. Our study contributes to the body of global integration research in studying the accounting function, which has received very limited consideration so far. The sample is rather small because the survey study was conducted in Danish HQs of which there are rather few. Therefore, we suggest future research on the accounting function with headquarters from other countries, e.g., Sweden and Finland, and their Estonian subsidiaries.

The structure of the paper is organized as follows: Section 2 describes the theoretical framework, section 3 introduces the methodology of the study, section 4 deals with the results, followed by conclusions in section 5, and discussions in section 6.

## 1. Theoretical framework

Global integration may be referred to as the coordination and control of business operations across borders (Cray, 1984). Coordination is about developing linkages between geographically dispersed units of a function, and control deals with regulating business activities to align them with expected goals. According to Kim et al. (2003), previous research has examined global integration at two levels, i.e., with the focus on the firm level and with the focus on the function level. The study of Kim et al. (2003) investigated global integration at the function level. They point out that “global integration becomes possible only through the use of organizational mechanisms for coordination and control” (Kim et al. 2003, p. 329). Based on a review of the control and coordination literature, they identify four specific integrating modes: people-based, information-based, formalization-based, and centralization-based.

**Table 1.** Four integration modes

<b>Integration Modes</b>	<b>Characteristics</b>
Centralization-based integration	Decision-making authority resides at the HQ
Formalization-based integration	Standardisation of work procedures, rules, policies, and manuals
Information-based integration	Information flow via databases, intranets and electronic data exchanges
People-based integration	Person-to-person interaction

Source: Kim et al. (2003, p. 330).

The characteristics of the four integration modes in Table 1 are expanded below. Centralization-based integration means that decision-making authority resides at the HQ and can be used for exercising not only behaviour control (e.g. making decisions on procedures) but also to exercise output control and input control. A high degree of centralization is likely to be associated with some degree of transfer of HQ practices of MNCs to foreign subsidiaries, as decision-makers are likely to view their own practices and procedures as the most appropriate ones (Smale et al., 2007, 2013; Gomez and Sanchez, 2005). The role of the accounting function in the subsidiary as described above by Simon et al. seems to be opposed to centralization-based integration.

Formalization-based integration concerns the standardization of work procedures, rules, policies, and manuals such as standard operating procedures (SOPs). It is most effective if activities can be codified into identifiable rules and procedures (Kim et al., 2003). It is often referred to as bureaucratic control (Child, 1973).

Information-based integration is effective when large volumes of information need to be distributed quickly (Kim et al., 2003). The use of information systems works through information flow via databases, intranets and electronic data exchanges. Research has shown that information-based integration can be used either

to communicate knowledge impersonally or to disseminate complex knowledge throughout the firm (Hansen et al., 1999; Voelpel et al., 2005). A contributing factor has been the advances in information and communication technology (e.g. integrated IT-platforms).

People-based integration is about person-to-person interaction, which can take place in different ways: in meetings, committees, and teams, but also through the transfer of people from subsidiaries to HQs and vice versa (Smale et al., 2007, 2013). Firms use people to achieve coordination and control of business functions across borders (Kim et al., 2003). According to Baliga and Jaeger (1984), this form of integrating mode can serve both as personnel control (Child, 1973), by placing personnel from the HQ into the subsidiary for control, and as the development of trust and shared vision, values and norms. Joint committees, site visits and joint training programs which facilitate the socialization of foreign subsidiaries into the MNC also have a positive effect on the transfer of knowledge (Gupta, Govindarajan, 2000).

The accounting function involves a set of activities related to the process of identifying, measuring and communicating financial information about an entity to permit informed judgments and decisions by users of the information (Weetman, 2010).

Kim et al. (2003) focus on R&D, manufacturing, and marketing functions. These functions are the line activities in Mintzberg's configurations (Mintzberg, 1980). All three functions draw upon the accounting function. Kim et al. (2003) argue that for multinational business, these functions are regarded as the primary sources of global transfer and integration for achieving scale, scope, and learning economies (Yip, 1992), and also from the point of view of the impracticality of addressing all business functions. In this study, we argue that the accounting function in the technostructure (Mintzberg, 1980) is a very important part of establishing and processing a well-functioning reporting system between the HQ and the subsidiary. Smale et al. (2007, 2013) adopt Kim et al.'s (2003) classification of integrating modes to examine the global integration of four human resource management practices in China. A recent study conducted by Belizon et al. (2016) also draws extensively on Kim et al.'s (2003) classification of integrating modes to "examine variations in the use of international integration mechanisms across individual human resource management practices in MNCs. The object of the study was only the subsidiaries, but it was a comprehensive sample of over 450 MNC subsidiaries located in Ireland and Spain. Firth (1996) conducted a study examining the diffusion of managerial accounting procedures of Sino-foreign joint venture enterprises in China. The focus of this study is the global integration of the accounting function.

Kim et al. (2003) developed hypotheses for each business function, R&D, manufacturing, and marketing, and analyzed 161 usable questionnaire responses as to which integration mode(s) would be most effective for global integration (Kim et al., 2003, pp. 331–332). They found that each function had a different combination of effective integrating modes. People-based and information-based modes were most effective for

global R&D integration. For manufacturing, people, information, and formalization were more effective than centralization. As for marketing, information and centralization were most effective.

Accounting activities are relatively well structured and therefore can be codified, which calls for formalizing activities and the standardization of work procedures (Kim et al., 2003). At the same time, the activities also require extensive information sharing and communications across units. This involves the international flow of information via systems such as the internet, intranet and electronic data interchanges, and people. The structure of accounting activities calls for the use of the formalization-based mode and the information-based mode. Accordingly, we propose the following research question:

To what extent do Danish headquarters use the two other integration modes, i.e., centralization-based and people-based, compared to the use of the expected integration modes, i.e., formalization-based and information-based, to integrate the accounting function of their Estonian subsidiaries?

By “comparison of the extent of use” we mean a comparison between HQs, not a comparison of the use of the four modes within an individual HQ.

## 2. Methodology

This study consists of two parts: (1) interviews with the accounting staff in Danish-owned subsidiaries in Estonia, and (2) a questionnaire survey of the Danish parent companies.

The number of Danish subsidiaries in Estonia was 101 in 2008 (StatBank Denmark), which was the total population when the focus is the integration of accounting function. The research group contacted the Danish-owned companies in Estonia, based on a list from the Royal Danish Embassy (2009) in Tallinn. The number of Danish-owned companies from the Danish Embassy list was 119 in 2009 and encompassed subsidiaries, joint ventures and single Danish-owned entities in Estonia. The research group eliminated the single-owned entities from the list and entities with fewer than ten employees because most likely they do not have a separate unit for accounting and instead used services of an accounting firm. Besides the size criterion (no. of employees), the geographical criterion was used in the selection of the companies so that almost all regions of Estonia were represented in the final sample. Finally, an industry criterion was used so that both production and service companies were represented in the sample.

Based on these criteria, the researchers found a target group of 34 Danish-owned companies. From this target group, 20 subsidiaries were visited and interviewed, and 50 interviews were conducted in 2010 and 2011.

In order to document the global integration of the 20 interviewed Estonian subsidiaries, a questionnaire survey among the Danish parent companies or HQs was conducted in Danish and English from 2012 to 2015. They represent the total population for this survey. The results are based on a total of 14 completed questionnaires. Three subsidiaries did not respond to our request for a contact person in the HQ, and three subsidiaries were no longer Danish-owned.

The questionnaire was tested on three of the HQs before the remaining HQs were approached and did not result in any significant changes. In order to obtain reliable data the questionnaire was addressed to the head of the Accounting department in Denmark or responsible HQ person for the accountancy operations in the Estonian subsidiary.

Using a sequential exploratory method (Creswell, Plano, Clark, 2011), relevant knowledge from the interviews was used to formulate the questions in the survey. This method includes an initial phase of explorative qualitative data collection which we conducted in the accounting function of the Danish-owned subsidiary, followed by a second phase of quantitative data collection using a questionnaire survey in the corresponding Danish headquarters. The results from the interviews were used to design questions in the questionnaire.

The questionnaire was structured in four sections as follows. The first section included 4 questions about the respondent's background as position; the second section included 11 questions about the group, e.g., the total number of employees and the number of accounting staff and their education; the third section was the most comprehensive, with 30 questions regarding the Estonian subsidiary and relationships; and the last section included 2 questions dealing with the possibility to ask further questions, if necessary. The questions were both open-ended and closed questions. Most questions were closed in order to directly compare the answers from the HQs in Denmark with each other, and to compare the answers directly with the answers from the corresponding subsidiary in Estonia.

In the research of Kim et al., the HQ answers were not compared with the corresponding subsidiary. In the present research project, the possibility of comparing the answers gives a more complete picture of the integration of the accountancy function. The open questions were used when detailed information was needed. For example, a more explorative approach was necessary when information on the kinds of reporting from the subsidiaries to the HQ and control measures was asked for.

The operationalization of the theory by Kim et al. and the variables in the questionnaire in section three are described as follows: To investigate formalization-based integration, questions were asked about the types of reports from the subsidiary and how the information was used. To investigate information-based integration, questions about the reporting and information systems were asked.

People-based integration was also considered in questions about Estonian accounting staff visiting Denmark and Danish staff visiting the subsidiary. To investigate centralization-based integration, questions about who has the responsibility for strategic



organization policy decision-making in the subsidiary were asked. The limited number of HQs did not render possibilities for meaningful statistical tests or presentations in the analysis (Hill, 2008, pp. 68–69). The relevant Human Resource questions were used from the questionnaires in the well-established comparative and global Human Resource Management (HRM) survey, the Cranet survey (Rogaczewska et al., 2003). The sample is not a representative sample, but due to the relatively small size of the total population and the criteria used, which ensured a certain level of diversification in the selection, the findings can be said to support relatively strong tendencies for the total population.

### 3. Results

As mentioned above, this paper will concentrate on the findings from the HQ survey in order to elucidate their views on the importance of the accounting function of the subsidiary and the integration modes employed. In line with Simon et al. (1954), who found that the accounting staff in a subsidiary is more directly involved in planning and participating in the business decisions of the firm, it was assumed that this would also be the case in the Estonian subsidiaries. As a measure of the degree of integration of the accounting function and the direct involvement of the accounting staff in planning and participating in the business decisions of the firm, four questions were asked. The questions and answers are presented in Table 2.

Regarding participation in the business strategy, the responsible person in Estonia is not involved from the beginning. More than 50 percent of the HQs state that he or she is only involved in implementation. As regards the responsible person in Estonia, 43 percent of the HQs state that he or she is not consulted or involved. These findings may indicate low participation and that there is a high degree of centralization-based integration.

The primary decision-making authority regarding organizational issues in the Estonian accounting function, such as organizational structure, and financial and management accounting, seems to be evenly divided between the organization in Estonia and the parent company in Denmark. Planning and budgeting procedures, as well as investment policy, lie mostly with the parent company, whereas personnel policy is mostly decided by the subsidiary – in 11 HQs out of 14. The next question concerned changes in responsibility for decisions during the last three years. There seem to be two opposite tendencies: Three HQs report that responsibility is changing towards the parent company – “More active governance”; “Investments due to differences in culture and values management accounting has become more strict”; “The Group has developed its processes during the last year, and although the organization is still decentralized there are some centralized operations that have been developed”. Two HQs reported the opposite tendency:

**Table 2.** Results of integration of the accounting function

Question	Possible answers to choose	Number of HQs stating use of the item			% (N = 14)		
		1	2	3			
If your corporation has a business strategy, at what point in time does the responsible person in <b>Estonia</b> get involved?	From the beginning		8		57		
	As an advisor during the process						
	At implementation					6	43
	Not consulted/involved						
Which categories of employees in Estonia are systematically informed about the economic situation?	Managers/bosses	12			86		
	Technicians/specialists	2			14		
	Office staff	3			22		
	Skilled/unskilled	2			14		
This question especially focuses on the accounting function in Estonia. Which part has the primary responsibility for larger organizational political decisions in the Estonian organization within the following issues? 1 = Organization in Estonia, 2 = Parent company in DK, 3 = Third party	Organisational structure	7	6	1			
	Accounting	8	8	1			
	Management accounting	8	9	1			
	Planning and budgeting procedures	3	10	1			
	Personnel policy (HRM)	11	2	1			
	Investment policy	2	12	-			
	Culture and values	8	8	-			
Have any changes taken place during the last three years regarding which part has decided in the Estonian organization in the above issues? 1 = Organization in Estonia, 2 = Parent company in DK, 3 = Third party	Unchanged	7	9	-			
	Yes, decreased	-	1	-			
	Yes, increased	1	3	1			

Source: Author's own compilation.

“There is a more independent responsibility for managing the firm locally. This has been necessary along with the growing complexity that cannot be solved centrally” and “because of the regionalization, a greater part of the decisions have moved from the main office (the Parent company) to the region”. The majority, however, state that no changes have taken place.

These findings regarding the primary decision-making authority do not seem to be in line with Simon et al. (1954), who found that the accounting staff in a subsidiary is more directly involved in planning and participating in the business decisions of the company.

The authors expected that the most important integration modes for the accounting function would be formalization-based integration and information-based integration. Formalization-based integration is most effective if activities can be codified into identifiable rules and procedures (Kim et al., 2003), and information-based integration works through information flow via databases, intranets and electronic data exchanges, which are the prevalent working tools in accountancy now. However, the other mechanisms are also used in the international integration of the accounting function, i.e., people-based and centralization-based integration.

To give a general overview of the results of the HQ-study regarding integration modes, Table 3 was compiled to present a quantitative analysis of the data.

**Table 3.** Main results of the research of integration modes

Integration modes*	Item indicating use of mode	Number of HQs stating use of the item	%
			(N = 14)
Information-based integration	Monthly reports, budgets, financial reports, cash flow statements, sales numbers, and many other reports	14 – a variety of reports are requested	100
Formalization-based integration	Systems used for reporting between subsidiary and HQ e.g., SAP R3, excel, Navision, Concorde, Axapta and others	14 – all HQs have systems	100
Centralization-based integration	Info-systems adapted to the organization by HQ	12	85.7
	Subsidiary cannot change the systems	13	95.8
	Information used for:		
	Control purposes	12	85.7
	Analysis purposes	12	85.7
	Decision-making	12	85.7
	Co-ordination purposes	4	35.7
People-based integration	Exchange of staff		
	From HQ to subsidiary	6	50
	From subsidiary to HQ	6	50

\* For characteristics see Table 1.

Source: Author's own compilation.

As stated above, the authors expected that the information-based mode be used in the accounting function. This integration works through information flow via databases, intranets and electronic data exchanges. 2 HQs are able to extract all needed data themselves while others receive the needed information electronically. All 14 HQs state that they receive a huge number of reports, budgets and financial reports. All mention

monthly reporting, but annual reports, cash reports, activity reports and budgets based on HQ guidelines are also mentioned. Twelve parent companies use this information for control purposes, analysis purposes and decision-making purposes. For these three purposes, the majority of the HQs use the centralization-based mode. Only 4 HQs use the information for coordination purposes. Three of them are production companies. This finding was surprising as – in line with Kim et al. (2003) – an emphasis on control and coordinating measures had been expected. In most groups, standardized accounting systems like SAP are used. The systems are adapted to the organization by the parent company. Only one subsidiary is free to make changes in the system; all the others are not. This confirms the centralization-based mode. In order to find out to what extent people-based integration was used, 4 questions about exchange of staff were asked. Firstly, HQs were asked if they had sent Danish employees to Estonian companies and if so, whom, when and for how long. Six HQs answered ‘yes’. The employees were the financial controller, quality manager and IT manager. One HQ had sent a SAP teaching team while another HQ had rotated accountants for six months. Estonian employees had also been in Denmark, 6 HQs reported. They were, for instance, the local responsible people, bookkeeper, sales and accounting staff. Four of the six HQs answered ‘yes’ to both questions.

The interviews with the subsidiaries also suggest some people-based integration, for example, one subsidiary CEO said that the chief accountant had frequent face-to-face interaction with other people in the organization.

#### **4. Conclusions**

The aim of the present paper was to examine how Danish Headquarters use different global integration modes to integrate the accounting function of their Estonian subsidiaries. Based on interviews in their subsidiaries in Estonia, 14 corresponding Danish HQs filled in a questionnaire about the relationship with their Estonian subsidiaries regarding the accounting function. We proposed a research question: To what extent do the Danish headquarters use the two other integration modes, i.e., centralization-based and people-based, compared to the use of the expected integration modes, i.e., formalization-based and information-based, for the integration of the accounting function of their Estonian subsidiaries?

The findings show that information-based integration and the formalization-based integration are used by all 14 HQs, thus, supporting our expectations. From the research question, it could be inferred that the usage of the centralization-based and people-based integration modes would be less than that of the expected integration modes. However, the majority of HQs (85.7%) state that the systems are adapted to the subsidiary by the HQ and that the subsidiary cannot change the systems. This is more than expected, but indicates centralization of the decision-making authority, to which Child refers as the centralizing strategy of control (Child, 1973).

The usage of the information-based integration mode is in line with the expectation of the authors, based on the nature of the accounting function and Firth (1996). As was expected, the formalization-based mode is much in use. All HQs report that communication systems like SAP, Excel or Axapta are used.

The extensive use of the centralization-based mode in general was a new finding and not in line with Simon et al. (1956) or with our expectations. However, the HQs use the centralized information for three purposes, i.e., control purposes, analysis purposes and decision-making. A new finding was also that only four HQs report using the information for coordination purposes. One reason might be that the head of the accounting function does not consider co-ordination to be a task for the accounting function.

The people-based integration mode is used only by six HQs, reporting that they have sent employees from Denmark to Estonia, and six HQs reporting that Estonian employees have been in Denmark. Four of the six HQs report both – having sent and received employees. The authors have only considered the exchange of accounting staff. Some HQs state that they have also exchanged staff from other functions. The exchange of accounting staff comprised managers, controllers and other specialists as well as credit staff and bookkeepers.

About 42 percent of HQs used people-based integration, which meets our expectations. The percentage, though, seems to indicate that HQs give priority to the people-to-people mode, although it takes time, money and effort to travel (the friction of space (Kirk, Mouritsen, 1996)).

The findings regarding integration modes seem largely to be in line with Firth's findings that subsidiaries are often required to adopt the parent company accounting practices, performance evaluation policies and budgetary plans (Firth, 1996, p. 631). Simon et al.'s (1954) finding that the accounting staff in the subsidiary is more directly involved in planning and participating in the business decisions of the firm was not found in this study except for a few instances: Personnel policy (HRM) seems to be planned and decided locally, and to a great extent also by culture and values.

The sample is rather small because the survey study was conducted in Danish HQs of which there are rather few. Still, our study contributes to the body of global integration research in studying the accounting function, which has received very limited consideration so far, whereas a large number of studies investigating business functions such as the human resource function, the management function, and the R&D function, have been conducted. To get a larger research sample, we suggest future research on the accounting function with headquarters from other countries, e.g., Sweden and Finland, and their Estonian subsidiaries.

## 5. Discussions and limitations

From the survey, it appears that centralization of the accounting function in Estonian subsidiaries of Danish HQs prevails in many aspects of the function. If accounting systems are formalized and centralized it will serve the needs of the HQs and disregard the uniqueness of the subsidiaries (Kirk, Mouritsen, 1996, p. 8). HQs may fail to obtain insight into local matters affecting the subsidiary.

If involvement in planning and participating in the business decisions of the firm, as mentioned by Simon et al. (1954), is to be effective, it would require analytical skills and thus a more academic background of the accounting staff. The present survey showed that the staff working with analysis and budgeting tasks in the HQs are high-level employees, such as group CFO, group controllers, chief accountants, finance controllers with experience and/or higher education, like PhD, MSc or MA (econ), and accountants with an auditing background.

Half of the HQs confirm that they specify requirements for accounting skills in the subsidiaries, which is inconsistent with their statement that personnel policy (HRM) is decided locally – and that they would appreciate it if the accounting staff in Estonia participated in training courses. They were also sure that the Estonian executives would appreciate such an initiative. This is not in line with the views of the local staff, who declared that their local executive was indifferent. It could be argued that there is not much need for academic accounting education in a setting with formalized systems and centralized decision-making. This may be the reason for the attitude of the local manager.

It would be interesting to conduct further research into this education issue. It could be done in different ways. One possibility could be to expand the sample of Danish-owned subsidiaries, or Estonian-owned companies could be surveyed for comparison, or the investigation could be extended to other Nordic subsidiaries in Estonia, e.g., Sweden and Finland. The number of subsidiaries from these countries is much larger than the number of Danish subsidiaries.

Also, the issue of centralization-based integration for different information purposes in particular has perspectives for further development. Different countries have different ideologies, e.g., on the use of the accounting function (Nørreklit, 2003). A comparative research design could reveal these differences. Including cultural aspects could finally reveal if the transfer of a Danish system to an Estonian context could explain the different levels of success.

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