

Non-IFRS and changes in accounting institutions – lessons from Nokia

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Abstract

We analyse the lessons learned from Nokia to illustrate the changing focus in accounting and organisational practices that affect the perceptions of relevant accounting work and the key measures of success. In the course of an analysis covering 25 years, the introduction of management accounting innovations was first emphasised regarding managerial relevance but were later replaced by financial accounting emphasis and innovations (e.g. non-IFRS reporting). Our data includes public reports, newspaper articles and 21 interviews made between 1996 and 2019. We present a framework for analysing shifts in the focus of accounting. Our case analysis on changing accounting practices, on shifting perceptions of relevance and reliability, and on primary measures of success, contributes to understanding the *focus of key accounting measures* in historical developments regarding perceived success or failure, and in changing institutional practices in terms of ‘institutional work’, especially through valourizing either the actions or valourizing reports.

Keywords

accounting, primary measures, change, institutions, work

Introduction

This article aims to clarify the context-specific implications of changes in accounting institutions, especially regarding the perceptions of organisational success and of the relevant and acceptable

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work of accountants. We do this by illustrating the accounting developments in parallel with developments in the Nokia corporation. In 1984, Kaplan argued that management accounting (MA) had become subordinate to the demands of financial accounting (FA), partly contributing to the weakening competitiveness of (American) corporations. In 1987, Johnson and Kaplan called for more relevant accounting. Since then, in FA, there have been changing accounting standards, changes in accepted practices and even crises; and in MA the emphasis of management accountant work has varied (Goretzki et al., 2013; Järvenpää, 2007). Moreover, advances in information technology have contributed to the convergence of many MA and FA practices (Taipaleenmäki and Ikäheimo, 2013). The focus of accounting, like other organisational practices, changes over time (Greenwood et al., 2011; Hiebl et al., 2015; Oliver, 1992; Sian et al., 2020). Covalleski and Dirsmith (1988) point out the role of institutional research in the analysis of accounting during the different periods of organisational ascent and decline. However, the implications of these periods deserve further study as they influence the course of corporate practices and developments.

Recent research has explored the role of accounting in institutional changes historically (e.g., Gervais and Quinn, 2016; Hiebl et al., 2015; Moreno and Quinn, 2020; Quinn and Jackson, 2014). This study, however, focuses on the changing accounting emphasis between FA and MA and the changing perceptions of accounting relevance and reliability during periods of perceived organisational success and failure, taking as our case organisation the Nokia corporation. We analyse the role of accounting work and key performance measures in the changing institutionalised focus of operations (see Agostino and Arnaboldi, 2020; Becker, 2014; Lounsbury, 2008). Our data consists of multiple forms of empirical data, such as 21 interviews, archival materials, books and earlier studies and financial statements. In this article we use historical Nokia events as an example to better understand the changes in institutional practices and in what is considered relevant work in maintaining and changing institutions, called ‘institutional work’, including for example ‘valourizing’ aspects of organisational behaviour (Canning and O’Dwyer, 2016; see also the typology of forms of institutional work in Lawrence and Suddaby, 2006). In this way we engage in historical institutionalist research (see Rowlinson and Hassard, 2013), illuminating the implications and organisational developments related to – and implications of – the changing focus of accounting institutions over time.

We illustrate these developments by analysing the rise and fall of the Nokia corporation from 1992 to 2019. This time period involves a roller-coaster ride of major changes in the organisation and in accounting (such as both growth and decline, adoption of balanced scorecard (BSC), option programmes, rolling forecasts, changes in the roles of accountants, increased global and investor focus and International Financial Reporting Standards (IFRS)). We suggest that the role of accounting during perceived success or failure¹ lies in its ability to shift the institutionalised view on the business focus, and the relevance of topics, such as what is considered the key, primary, measures of success (see Agostino and Arnaboldi, 2020; Lämsiluoto et al., 2013).

In complex global companies, the concepts of accounting or accounting entity are not necessarily clear or uniform among interest groups or countries. Such complexity affects perceptions of success, successful changes, and the role of accounting – and accountants – in accomplishing them, making them visible (see Burns and Vaivio, 2001; Busco et al., 2006; Järvenpää, 2007; Liguori, 2012; Quattrone and Hopper, 2001; Suddaby and Foster, 2017) and creating organisational focus (Agostino and Arnaboldi, 2020).

In our longitudinal Nokia group case (including both mobile phones and networks), we use two extreme periods of time as parts or sub-cases – the rise and the fall. We analyse the accounting changes made during these times. The fast-developing mobile technology industry (instead of a stable field, see e.g., Moreno and Quinn, 2020), is a ‘most likely’ field for studying the actions required to maintain and change institutions together with innovation in operational and accounting

practices from an accounting history perspective. Further, Quinn (2014) indicates that new rules (basically as rule-related innovations) may be most important in completing organisational changes. Moreover, Agostino and Arnaboldi (2020) recently highlight the primary mission of an organisation and the perceived key or *primary measures* of performance in giving focus to work and organisational change. Under special circumstances, such as ups and downs, a lot of 'institutional work' is made by accounting professionals to create and destroy institutions at the field, organisational and individual levels (Lawrence and Suddaby, 2006; Lawrence et al., 2011; Suddaby et al., 2015).

Our objective is to analyse and understand the changing focus and relevance of *new primary accounting measures in creating perceptions of success and expectations for accounting work* with regard to organisational up- and downturn contexts. Our research question is:

What implications do shifts in accounting focus have on the institutionalised perceptions of relevant accounting work and of organisational success?

Our institutionally informed historical analysis suggests that attention needs to be paid to how accounting developments and key performance measures affect the creation and destruction of institutions and organisational practices (Oliver, 1992). Our case allows the shifts in the practices of accounting and operations to be analysed historically. We note that accounting relevance and reliability are not always aligned but that a slight change in accounting primary measures (such as an IFRS vs. non-IFRS based profit) may affect the focus of organisational goal setting, perceived success and legitimate behaviour in the organisation and in the networks surrounding it. We take a critical stand on using alternative accounting numbers, such as non-IFRS figures, that is, presenting, and even valourizing (Canning and O'Dwyer, 2016) 'parallel realities' of performance either in actions (context-specific behaviour) or in reporting, where we even see traces of what might be called an alternative truth reporting for beating investor demands, and for affecting relevant practices (Chu et al., 2019). We contribute to earlier accounting research (Agostino and Arnaboldi, 2020; Lämsiluoto et al., 2013) by showing the influences of both the primary accounting measures and the management/financial accounting emphasis in creating the context-specific perceptions of success and expectations for accounting work over time.

This article is outlined as follows: next, we discuss theoretical starting points of this research including contingency theory, institutional theory and especially the concept of institutional work. After that, we provide the methodological reasoning for our analysis and further describe our data. In the empirical part we examine accounting developments in light of our case - Nokia. Finally, the discussion and conclusions follow.

Institutions, change and institutional work

Institutions provide stability and meaning to social life with taken-for-granted values and norms that affect the behaviour and the shared beliefs of individuals and collective actors, and provide templates for action, cognition and emotion (Lawrence et al., 2011; Scott, 2013: 56–57). Institutionalised ideas, ideologies, myths and practices can become taken for granted and remain as the accepted, definitive ways of behaving (Greenwood et al., 2002; Modell, 2004; Sian et al., 2020). However, some ideas and practices appear only briefly, as fashions or as historical remnants of earlier developments (Becker, 2014). The reasons for not reaching institutionalisation include the lack of perceived necessity or professional, functional (e.g. economic) or social support, that is legitimacy (Greenwood et al., 2002; Meyer and Scott, 1983; Oliver, 1992). Several constituents, such as business schools and control organisations, e.g. the Securities and Exchange

Commission (SEC), International Accounting Standards Board (IASB) and Financial Accounting Standards Board (FASB), also contribute to defining the ways in which organisations should behave (Gioia et al., 2000).

When changes to institutions occur in a turbulent business context, change can happen either through gradual processes or via a sudden revolutionary change (e.g. Burns and Vaivio, 2001; Liguori, 2012; Quattrone and Hopper, 2001). Covaleski et al. (1996) note that while contextual variables like strategies, technological changes, competition, company size, compensation systems, information systems and psychological variables, such as tolerance for ambiguity (e.g. Otley, 2016) have been noted, a historical perspective allows for an understanding of institutions through the historical processes in which they were produced. In this article we focus on the perceived success (during rise and fall periods) to highlight the institutional developments, while also acknowledging the different contextual elements.

According to Greenwood et al. (2002), the stages of institutional change include sudden jolts (such as competitive discontinuities), de-institutionalisation (initiated by new players, see Oliver, 1992), pre-institutionalisation (such as innovation), theorisation, diffusion (leading e.g. to increasing objectification), and, finally, re-institutionalisation (reaching cognitive legitimacy). The theorisation stage is important because here the perceptions and even myths of success and failure are created and become, initially, either trusted or distrusted in the organisation (see also Greenwood et al., 2002; Modell, 2004). Success may be partly visible in market share and different measures of profitability but also in meeting or exceeding analysts' expectations. However, exceeding analyst expectations has been noted as a problematic target, especially in the long term (Chu et al., 2019; Laamanen et al., 2016).

Combinations of differing performance measurement tools can be used in organisations, including quality and control indicators (see Cooper et al., 2019). Further, Quinn (2014) indicates that new rules are considered important in changing organisational practices, indicating that not all changes are equally important. Some measures of performance may be perceived as primary or key performance indicators, giving focus to organisational change efforts (e.g. Agostino and Arnaboldi, 2020; Lämsiluoto et al., 2013). The responses to multiple performance measures and change pressures may be fragmented (e.g. different in sub-units or in different organisational forms), or mixed responses (e.g. partly manipulative), and include managerial effort in order to cope with the conflicting pressures and legitimacy demands (Greenwood et al., 2011; Rautiainen and Järvenpää, 2012).

Institutions are often changed through key individuals' actions (see e.g. Hiebl et al., 2015; Moreno and Quinn, 2020). Recently, however, the role and efforts of individual actors at the grass-root level of operations in changing institutionalised practices has been focused on in accounting research by using the concept of *institutional work* (Canning and O'Dwyer, 2016; Lawrence and Suddaby, 2006; Lawrence et al., 2011; Suddaby et al., 2015). Institutional work highlights the intentional (goal oriented) activities by which institutions are *created, maintained and disrupted* (Canning and O'Dwyer, 2016; Lawrence and Suddaby, 2006; Suddaby et al., 2015).

In this article we use the historical Nokia case as an example of organisational developments reflecting the changes in the focus of accounting and in the relevant institutional work of accountants to advance our understanding of the implications of changing accounting institutions over time. Rowlinson and Hassard (2013) use the concept of 'historical neo-institutionalism' if institutional theory is being developed through historical research, whereas they use the concept of 'neo-institutionalist history' if a theory is used to illuminate historiographical debate. The emphases in combining theory and historiography may vary but, in a similar vein, in our theoretical framework, a concept of 'historical institutional work' describes our attempt to understand changes in institutional work, whereas the concept of 'institutional work history'² would be helpful for

illuminating how the institutional work by managers and accountants affected or echoed historical developments. We focus on the historical institutional work to understand how the socially constructed perceptions of relevant work and business success change over time. We note how an organisational shift in focus between MA and FA innovations (e.g. Activity-based costing (ABC) or IFRS) along with other contextual elements of the time, like market changes, competition and investor focus, contribute to organisational historical developments. At first, during the rise of Nokia, the changing context such as market changes, globalisation and the pressure of capital markets (i.e. stock market listings) drove the positive development in the organisation and highlighted the focus on management accounting. Also, management accounting needed to be more timely and support the business excellence and various reporting needs. But later with the fall of Nokia and increasing capital market expectations, the IFRS was also seen as a suitable and necessary method to address business concerns. However, consequently accounting developments focused more on financial accounting, its regulation, reconciliations, and finally also on non-IFRS reporting.

Several categories pertaining to institutional work have been presented, with forms of institutional work intended to create institutions including for example advocacy, constructing identities, changing definitions and normative associations, mimicry, theorising and educating (Canning and O'Dwyer, 2016). Similarly, institutional work that maintains institutions has been noted to take the forms of 'enabling', 'policing', 'detering', 'valourizing and demonizing', 'mythologizing', 'embedding and routinizing' (Canning and O'Dwyer, 2016: 4; Lawrence and Suddaby, 2006). Finally, disrupting institutions may involve disconnecting sanctions/rewards, disassociating moral foundations, or undermining beliefs associated with the given institution (Canning and O'Dwyer, 2016), involving both defining and redefining the approved practices (Lawrence and Suddaby, 2006). Next in our empirical section, we illustrate the changes in Nokia and in accounting focus over time.

Data and methods

Covaleski et al. (1996) distinguishes between three managerial accounting research approaches for studying how organisations and society function. These are contingency theory, the interpretive perspective and the critical perspective. We feel that these approaches need not be fully separated in an accounting history case study because Covaleski et al. (1996) note a critique towards contingency theory in that contingency theory tends to present a 'deterministic, ahistorical view of organisation' (Covaleski et al. 1996: 8). Acknowledging the works of Meyer and Rowan (1977) and ; DiMaggio and Powell (1983), they discuss the merits of institutional theory in informing managerial accounting research on organisations and situate it under the interpretive perspective. In early institutional research, Berger and Luckmann (1967) indicate that institutional research should employ a historical approach as institutions are only understood through the historical processes in which they were produced. Echoing this view, Covaleski and Dirsmith (1988) use an institutional perspective to analyse how the budgetary approaches change during organisational ascent and decline in a (public and political) university context. In this article, a global business case context is analysed.

Historically oriented or longitudinal case studies with qualitative features are common in interpretive and critical accounting research (see e.g., Cooper et al., 2019; Moreno et al., 2019; Vaivio, 2008), but also in sociologically oriented accounting history research, for example, in order to learn from case developments (see Carnegie, 2014; Parker, 1999; Rowlinson and Hassard, 2013). Our longitudinal case research on Nokia (1996 to 2021, see Appendices 1 and 2), focuses on two time periods, the rise and fall, during which there were developments in accounting innovations,

focus (MA vs. FA), and also in perceived shifts in accounting relevance and reliability (IFRS, 2018; Johnson and Kaplan, 1987; Kaplan, 1984).

In the first period dealing with the rise of Nokia and the institutionalisation of the new, perceivably more relevant management accounting function, our main empirical data include 17 semi-structured interviews conducted between 1996 and 2001. The interviews lasted between one and two hours and 14 of them were recorded and transcribed (see Appendix 1). The interviewees included the CFO, controllers, unit directors and other managers. However, interview data analysis is supported by archival and documentary materials. These included company manuals and presentations, annual reports, books and newspaper articles.

In the latter period (fall, 2008 onwards), we studied public documents, financial statements and other Nokia reports and announcements, participated in Nokia's Annual General Meetings, and studied newspaper articles, books and earlier research (most notably Aspara et al., 2011; Laamanen et al., 2016; Vuori and Huy, 2016), related to the company with a perspective on group performance in financial accounting terms. Four interviews were conducted with Nokia controllers and managers in 2018–2019 (see Appendix 1), and we also used public archival materials and newspaper articles up to 2021.

The longitudinal case approach facilitates illustrating developments and the key measures of success as well as the relevant institutional work categories both during the rise (basically 1992–2007) and fall (after 2008) of Nokia. The data, such as newspaper articles, are largely public and available to all. Our analysis follows the lines of institutionally informed historical case research, allowing the use of mixed methods, that is, both qualitative and quantitative data (see Modell, 2009; Yin, 1984). The use of qualitative and quantitative data in order to allow a wide view of case events has also been advocated by Kakkuri-Knuuttila et al. (2008: 270), who note that concepts from different methodological camps 'can co-operate within a single study' in explaining and theorising aspects of organisational life.

In analysing and combining our data, we first built a storyline of the main events of the case company and the accounting changes that had taken place during the period. We later focused on understanding the case events by considering the linkages between the contextual and accounting changes and the work conducted in the company during the years. As the institutional work concept had not been revealed in the organisational literature at the time, no explicit questions about institutional work were asked during the early stages of the fieldwork in the mid-nineties, but there was plenty of evidence on contextual elements, developments, and particularly on the actions of organisational actors in the interviews and in archival data, books and other sources.

In our data analysis, we consider that meanings are carried not only by the words themselves but are related to the context, the situation (see Toubiana and Zietsma, 2017), and to the actors' behaviour and motivation regarding the institutions at place (Canning and O'Dwyer, 2016; Lawrence and Suddaby, 2006). When analysing our empirical material, we noticed that many interview excerpts contained references to contextual elements of the time and provided evidence concerning the actions of organisational actors (e.g. valourizing customer-orientation and hard work) that could be labelled as institutional work in contemporary research (see Lawrence and Suddaby, 2006). Thus, in our analysis, we acknowledge the contextual elements that provide the frame in which the institutions operate and where the various actions are taken. We categorised the interview themes according to institutional work categories and noted that the interviewees referred to either figures (accounting reports, profit measures and so on) or action (behaviour, e.g. heroic work and speeches valourizing customer-orientation), and we distinguish between valourizing reports and valourizing action, thereby refining the categorisation by Canning and O'Dwyer (2016). We further consider the institutional work, not only as purposeful (as in Lawrence and Suddaby, 2006), but also consider its relevance in relation to

organisational success in the longer term. We also consider the reliability of the accounting figures and the accounting profession when changes occur over time in what is considered relevant institutional work. That is, we interpret our longitudinal empirical data both in its context and through the contemporary theoretical lens of institutional work.

Illustrations of accounting and operational changes in Nokia

Part I: The rise of Nokia

We start our case illustration by focusing on the rise of Nokia from 1992 to 2007. The net sales of Nokia in 1992 were €2.6 billion, resulting in an operating loss of €0.16 billion. In 1995 net sales were €6.18 billion and the operating margin was €0.84 billion (profit margin was 14 per cent). In 2000 net sales reached €30.4 billion, and the operating profit was €5.8 billion (an operating margin of 19 per cent). In 2007, the net sales reached an all-time high, peaking at €51.1 billion, while the operating profit was €8.0 billion (an operating margin of 16 per cent). Over several years the return on the capital employed (ROCE) was over 50 per cent. By comparison, the 2014 net sales were only €11.8 billion. We first look at the events before the rise.

In the late 1980s and early 1990s, Nokia, a highly diversified multi-business company with over 100 years of operating history at the time, was on the edge of collapse. This was due to the economic depression in Finland, the downturn in exports to the Soviet Union and Nokia's heavy international investment and acquisition program in consumer electronics. Already in the 1980s Nokia had invested into telecommunications and mobile phones, and in 1984, it launched Mobira Talkman, advertised as one of the first transportable phones, weighing around 5 kilograms. In 1987, Nokia introduced its first compact phone Mobira Cityman 900, the world's first hand-held mobile telephone, weighing around 800 grams. This iconic phone was nicknamed 'The Gorba' after the President of the Soviet Union Mikhail Gorbachev made a call from Helsinki to Moscow with the Cityman 900 during a press conference in 1989.

The CEO Kari Kairamo, the key architect of Nokia's strategy in the 1980s, committed suicide in December 1988. The new leaders, Chairman of the Board Simo Vuorilehto and CEO Kalle Isokallio brought in many changes. They divided the company into six units and divested the company of several units like flooring, paper, rubber and ventilation. Due to the problems of the dual leadership, Jorma Ollila was appointed as the new CEO in 1992. Later on, in the early 1990s Nokia focused solely on telecommunications: the data, power, television, tyre and cables units were sold in line with the focus on the core competence strategy, aiming for a global strategic architecture around a single global core competence (see Prahalad and Hamel, 1990) in telecommunications. In July 1991, the Finnish Prime Minister Harri Holkeri made the world's first official GSM (Global System for Mobile Communications) call using a Nokia phone. In 1992 the first hand-held GSM phone, the Nokia 1011, was launched, and the rise of Nokia had started.

Discarding the old. During the rise of the company, the controller function (management accountants were typically called controllers in Nokia) was expected to align with the general business development processes. In institutional work terms the old ways of working were demonized and discarded because in 1994, in addition to its traditional back-office support process, the controller function was to take part in the customer and product processes.

Customer satisfaction thinking has surely had an effect ... It is more important that business controllers really understand what is happening in the business and are able to support customer measurement and to control the customer interface. This leads to the emphasis on the controller's role in addition to the

traditional accounting and numerical analysis reporting. The business understanding is to be increased and so is the contribution to business control. (Accountant)

It is this growth and globalization. It is necessary, that we have enough strong financial competences in the world to support the line managers in different units. (Accountant)

The general target of growth and globalisation was a contextual element contributing to the new practices, including accounting work. Another important aspect contributing to the overall change of the Nokia group was the top management's strong support for it. Top executives spent their time with customers and monitored carefully two important non-financial measures, customer and personnel satisfaction. The new CEO, Jorma Ollila, emphasised the shared company values as essential for success, and a strong change in the company values was seen as one of the most important success factors for the whole group. Top management in this way created strong behavioural expectations for personnel regarding the highly valourized cross-functional, active, customer-oriented and 'heroic hands on' behaviour. This included portraying clear goals, and an ethos of hard work in changing the identity of the organisation. Top managers also required, valourized and demonstrated commitment to continuous improvement, involvement and achievement, that is, a high level of effort. Subsequently, the official financial accounting measures of profit and cash flow soon showed improvement, indicating that the company was on the right track. Thus, from the multiple available indicators of performance (see Cooper et al., 2019), traditional financial accounting key measures were used to define the primary target performance. It can be considered that institutional work conducted to valourize the ethos of hard work (in speeches and in action), the importance of financial value and customer-oriented behaviour contributed to the observed high performance and strong work ethic.

During this era of fast growth and excellent profitability, the most important measures according to both top executives and business units were *net sales*, *order inflow*, *sales margin*, *fixed costs* and *operating profit*. Steadily growing net sales and order books demonstrated the expansion and world conquering ethos of Nokia, and the sales margin and operating profit highlighted the outstanding financial performance in times of Nokia glory. Rapid growth, while creating some challenges in managing the operations, was seen as a crucial element of the strategy, as it also enabled the increases in sales and operating profit. A growth strategy also meant following the growth of orders in reporting. The order inflow, which was reflected in the 'latest estimates' plan and then in rolling forecasts, was considered the most important key measure of success.

Net sales are important, but even more important is the order inflow, because it predicts our future performance. (Business Controller, 1996)

When we look at the order inflow ...we see, what we have to produce in our product lines. ...If we don't get the future information ...our estimation is problematic. (Business Controller, 1996)

At this growth and expansion stage, net sales and order inflow have been the most essential. ...At this stage, we must have new customers. (Area Controller, 1996)

Regarding the official annual profitability calculation, it is noteworthy, that two sets of figures – FAS (Finnish Accounting Standards) and IAS (International Accounting Standards) – were presented already in the 1990s. In 1994 FAS and IAS net profits were respectively 3.658 millions of Finnish marks (Mmk) in FAS, and 3.939 Mmk according to IAS. In 1995 the net profit was 1.971 Mmk FAS, and 2.232 Mmk IAS. Thus, net profit according to IFRS was better than

according to FAS, suggesting that the traditional Finnish standard was more prudent than IAS (later IFRS). FAS and IAS had differences related to depreciation, taxes and provisions but FAS should not be mixed with the non-IFRS practice used 20 years later, which related to items considered extraordinary and discontinuous. Moreover, after New York Stock Exchange (NYSE) listing, conformity with US GAAP (Generally Accepted Accounting Principles in the USA) was required until 2007 when this requirement was relaxed by the SEC. However, even if the IAS/IFRS and US GAAP as such were highly relevant and involved laborious reconciliations for compliance reasons, they were actually not so relevant from the point of judging success or choosing the primary accounting measure, since Nokia's profitability was very high regardless the selected measure (FAS/IAS/US GAAP). For example, in the financial year 2006, the profit attributable to equity holders of the parent (IFRS) was €4.306 billion (profit margin 10.45 per cent) and with US GAAP method €4.275 billion (10.37 per cent).

A major goal was also to change the management accountant's role in line with the organisational culture into being an essential part of the business, so that 'controllers' became 'business controllers' or business partners (see Järvenpää, 2007). This valorized new controller identity was sought via training, through the increasingly decentralised positioning of the controller function, and by using job rotation. Moreover, more business-oriented accounting systems and innovations were implemented in order to meet this goal. Some highly regarded business controllers became trusted, legitimate colleagues in the (cognitive) frameworks of the personnel. The new work of controller and the associated competences were valorized. Real life examples were used in narratives to highlight the ideal type of controller. In the same spirit, the traditional bean-counter accountant behaviour and action became, if not demonised, at least devalued and even belittled, that is, de-institutionalised, as the following quotes illuminate.

They have had too little business involvement. They have not intervened ... or if, then in a very invisible way. ... But now the attitudes have changed. I presume and hope that this thing is changing, but yes we have these bean-counters and ... history has led to situation that the boundary is not only psychological one but also real one in a way that ... they have not such competences that are required in these duties and these new challenges. (Strategic Planning Director 1996)

Amongst other people than controllers, there is precisely this caricature [of the bean-counter] in mind. Partly there are justifiable reasons for it. It's to a great extent true that we are such professional accountant type of people. (Controller 1996)

The primary aspects in controller work and the identity of the controller changed towards the business partner role (see Järvenpää, 2007). Finance and control, the accounting function, was still one group but a change towards separate 'global finance' and 'locally relevant and legitimate business controllers' had begun.

It has decreased, the time we hide ourselves in our chamber, it is not common anymore. [...] Few years ago [...] I recognized that in the work it became more and more important to try to explain to others, what the numbers mean. (Controller 1996)

[It] is maybe the type of personality of this traditional typical calculative specialist or controller. They are often a little [...] introvert, not necessarily with the best communicative abilities. That is one problem and another one is that, finance and control has a long way to go in order to gain the trust of line managers. I mean in the way that the line managers will see them as something more than just number producers. (Director 1996)

Also, the financial reporting style changed from Finnish practices and tertiary interims to the US GAAP and quarterly reporting requirements (i.e. to new rules, see Quinn, 2014) when Nokia was listed on the NYSE in 1994. The financial reporting schedule was faster, and both publicity pressures and the compliance requirements of reporting became challenging. Nokia moved from three annual interims to quarterly disclosed interims.

Environment is tougher ... a great pressure on the timeliness ... quarters are extremely important nowadays ... share prices are jumping ... every quarter has an absolute value as such ... press is discussing ... (Business Controller, 1996).

Due to the increasing convergence of management accounting and financial accounting, driven especially by rapidly developing information technology (see Taipaleenmäki and Ikäheimo, 2013), including shared databases, IT-solutions and reporting tools, the change to US GAAP also had a heavy impact on management accounting. Complying with requirements by the NYSE challenged accounting in Nokia, but also meant faster management accounting by streamlining the reporting processes.

The operative control got intense, because [...] we changed to quarterly reporting. [...] It is completely different than two years ago, when we disclosed three interims, with no hurry. (Controller, 1996)

The external regulative, competitive, investor and media pressures enforced the institutionalisation of new accounting practices but gradually the accounting focus shifted from the internal development to external, quarterly (short-term) global FA reporting.

The institutional work in Nokia included defining new roles and valorizing certain primary behaviour (see also Agostino and Arnaboldi, 2020), even building myths about the way employees, including business controllers, should behave. This new identity was an image of dynamic, even heroic accounting workers supporting the excellence and profit-maximisation idea of the owners and the hard-working management dream team, and it was soon accepted by the accounting personnel. That is, they alone could influence the way the accounting role was developed. This kind of change may require attention and institutional work at several levels, including personal adaptation in the organisation (see Gioia et al., 2000; Hopper and Major, 2007).

There is a legion of heroes [many hard-working managers etc.] ... who are making miracles in the R&D programs. (Director 1998)

The problem is [...] how other people see the management accountant's role, how the management accountant can contribute, and there are a lot of problems due to the traditional bean-counter image, it is not particularly easy. Nobody else, but we ourselves, can help it. (Accountant 1996)

One significant way to de-institutionalise the ways of the 'old accounting' happened through the decentralisation of the MA function, which took place in three steps. First, MA functions were decentralised into strategic business units in the early 1990s and, second, they were given the role of participating in the customer and product process management during 1994–1995. The goal was that all business functions should understand how profitability will be achieved. As a third stage in 1998, the basic financial accounting was moved into a shared service centre, and business controllership became a separate process. So controllers were giving support for the business and developing the focus on mobile business excellence. Basic accounting became simpler, saving the controllers' time for in-depth analyses and business support. In 1995, software for group level

consolidation was also implemented. In order to support the fast growth and coordinate actions, the system of monthly revised latest estimates (LE) planning was implemented in the early 1990s. Then a rolling forecast (RF) system was implemented in 1998, which became an even more useful tool for managing the Nokia business, which was growing fast at the time. Moreover, the strategic planning became more flexible, and now even strategies could be revised during the year in order to ensure agile reactions to rapid changes.

If you look at the competition, there is a need for the management throughout the organization to act faster, to time it right and to get more exact information, to know where you are now and [...] especially where are you going. (Business controller 1996)

In every month we update our sales and order estimates, getting it more exact [...] annually we make four annual estimate revisions [...] one big deal may change the result greatly [...] when we are talking about projects worth of hundreds of millions. (Account manager 1996)

The rolling forecast ... brings the controller closer to the decision making. (CFO)

Routinizing and valourizing the standard practices. In 1999 Nokia implemented SAP/R3. In institutional work terms this standardised and routinised processes and made the basic accounting processes and reports timelier, and again gave extra time for analysis and business support for the controller organisation.

Decision-making requires fast information flows from different units. SAP/R3 is a suitable tool for this. (CFO)

Strong development efforts were also conducted in the form of several other accounting projects, like the development of customer profitability analysis, activity-based costing, open book costing, product lifecycle profitability analysis and the implementation of a new logistics system. Moreover, implementation of non-financial measures, most notably customer satisfaction, personnel satisfaction, and quality metrics started in 1994 and 1996. They were used together with the traditional financial figures in the recently developed performance management program. Around 2000 the balanced scorecard was implemented as a strategic planning tool and, along with the rolling forecast approach, as a reporting system.

This strong effort is also demonstrated by very active human resource management (HRM) aligned with the accounting change. It was visible in the recruitment policy, training and job rotation programs. For example, training included issues related to the company's business, customers, and competitors. Nokia devoted a lot of effort to the development of the accounting function during the era of rapid growth.

We have tried to hire more communicative and stronger controllers ... We have clearly tried to facilitate a change here. (Manager 1996)

During the growth, the (de-institutional) innovations in Nokia accounting easily became accepted: there was a strong shared goal to develop accounting and control functions. The legitimacy of the company, its products, its development efforts and the accounting function were strong. Accounting in the business units had two functions: basic accounting and facilitating business decisions by the controller function. Also, the legitimacy of accounting work had two separate but intertwined dimensions: reliability (especially in basic book-keeping) and relevance of accounting (especially in controlling function).

It's not enough that you are a good controller and it's not enough that you are traditional book-keeper, you have to be both and be good. ... Sometimes business managers ... know the figures better and point out mistakes ... in that case the controller has not understood that his duty is to check ... and seek explanations. It is demanding ... you have two hats. (Controller)

[The most important duty is] to produce reliable and relevant information to support business management decision making. (Controller)

To manage the reporting process correctly and in time, is the first job, and the second, of course, is the participation, being in the business. (Controller)

The controller work echoed the business excellence focus and the strong work ethic of the Finnish management dream team suggesting a need for 'heroic accountants'. In institutional work terms, the heroic ways of working were valorized. Along with business success, the institutional change became reality – both at the level of accounting and at the level of the organisation, transforming the mobile phone business: during the first years of this millennium Nokia overtook its competitors, such as Ericsson, and became the largest mobile phone manufacturer in the world. For example, the Nokia 1100/1110 models (launched 2003 and 2005) sold about 250 million units each.

A good controller could perform well as a business unit manager [...] and knows the business needs, and can link the business and the numbers immediately. (Business unit manager 1996)

The financial director is [...] a colleague on equal terms with the business director, and participates in decision making with professional skills. [...] The controller should take part in decision making and be a member of the group of executives. (Controller, 1996)

During the rise of Nokia, there were four major change processes: (1) accounting systems were strongly developed in several ways (addition of latest estimates, rolling forecasts, profitability analysis, activity based costing and non-financial measures); (2) financial accounting was separated from core operations (first it was de-institutionalised and then re-institutionalised as a support function); (3) management accounting was included in core operations (instead of being just one non-core support function); and (4) the group's financial accounting and finance function was taken as a separate development line, becoming increasingly integrated into the headquarters and international finance centres.

An associated aim was to develop accounting into a tool for communicating the perceived company success and so to satisfy investor demands. Order inflow, net sales and operating profit were considered primary measures, focusing on fast growth and excellent profitability, together with capital market expectations. However, placing emphasis on group accounting may have decreased the focus on the long-term success, organisational excellence and customers. This, in turn might have increased excessively the weight given to a new primary measure, the short-term investor expectations.

Part 2: The fall of Nokia

Backgrounds and the Nokia/iPhone field level succession. By the mid-2000s, being the largest in the field, reproducing routine practices within Nokia might have been enough to maintain its position, but 'the stock market' (investors, analysts and so on) craved for even more growth and profitability. Cost-leadership was a clear part of the business strategy at the time, and Nokia's production and logistics processes were highly efficient – for example component inventories were held by sub-

contractors. However, new competition soon entered the market: the Blackberry mobile device was used by many business professionals in the US, and the Apple iPhone entered the market in 2007 and de-institutionalised the high-end product segment, causing an external shock (which often changes operating practices, see e.g. Gervais and Quinn, 2016) to Nokia as well. However, a big company like Nokia did not have the flexibility to respond to that shock (Laamanen et al., 2016). Although Nokia phone design was improved and new products launched, the customer demands in the high-end product segment were no longer met.

During 2008, both the Nokia-Siemens-Networks (NSN, later Nokia Solutions and Networks) and the new Nokia subsidiary, the Navteq Maps, made losses. The Navteq Maps (later also Ovi Maps and Here Maps), originally a US company, was purchased in October 2007 for €5.4 billion (almost 8 billion dollars at the time) resulting in both interest-paying debt and a large goodwill value appearing in the Nokia group balance sheet. Although the Navteq Maps was a small unit producing mobile navigation and map services, and was expected to grow, its operating losses were about 42 per cent of its net sales. Nokia's market share in mobile phones was slightly declining with more competition, especially in the US and high-end markets. In 2008, the net sales of Nokia were still about €51 billion as in the previous year, but the operating profit decreased from 8 to 5 billion Euros. The 2009 IFRS result was €260 million (with net sales of about €41 billion).

Shifting accounting and organisational focus. Years of routinizing and valourizing certain practices (also in reporting and recruitment) had a downside when the market situation started to change, the de-institutionalization of old practices was not easy. Further, Vuori and Huy (2016) suggest that there was fear in the Nokia organisation: top managers feared investors and middle managers feared top managers, which contributed to myopic short-term decisions instead of focusing on long-term excellence. In such conditions, an interpretation is that accounting tools like rolling forecasts, balanced scorecards and Enterprise Resource Planning (ERP) systems were bureaucratic support systems, unable to help renewal but merely producing and reproducing the managerial myopia and reflecting the perceived fear.

Potential developments related to myopia and fear may also include changes in accounting and other practices. As an example of an accounting change in our case setting, we note that in the group accounting in the Nokia headquarters the pro forma or non-IFRS reporting style was introduced in 2008 and it gradually became an accepted measure for reporting. The possible non-IFRS differences were, understandably, due to NSN goodwill write-offs and reorganising expenses, for example. However, accounting presentation may have partly contributed to maintaining the myth of success for too long, especially in 2008–2009: Instead of focusing on the actual reasons behind the decline in performance (such as the low profitability of the NSN or Navteq, and the competition posed by iPhone), blame could be placed on changes in the global business context or circumstances, such as the financial crisis and the poor world economy in 2008, new specialties of IFRS reporting, and changes in the organisational structure. On the other hand, the company provided more accounting information: the 'optimistic' pro forma, or non-IFRS, results were often communicated in earnings announcements together with the official IFRS-profits. However, this practice may have reduced the clarity of reporting, at least for a non-professional investor.

Attempts to redefine the organisation. Routines related to earlier success went on, that is, institutions were maintained, and Nokia CEOs seemed to underestimate the threat posed by iPhone (from 2007 on) and Android (earliest versions since 2008, more widely since 2009). Jorma Ollila was the CEO 1992–2006 (and both CEO and the President of the Board during 1999–2006, and the Chairman of the Board until 2012). Olli-Pekka Kallasvuo became CEO in June 2006 with a focus on cost-effectiveness. Kallasvuo was followed by Stephen Elop in September 2010, who soon noted, in

his infamous ‘burning platform memo’ that changes were needed. The platform image was a reference both to the Symbian mobile phone operating system (perceived as difficult to develop and use in the high-end products) and to an oil rig fire where a worker may need to dive into the sea, even though normally that would not be a very rational choice. *The Wall Street Journal* (9 Feb 2011) quotes:

... We too, are standing on a ‘burning platform,’ and we must decide how we are going to change our behavior ... The first iPhone shipped in 2007, and we still don’t have a product that is close to their experience. Android came on the scene just over 2 years ago, and this week they took our leadership position in smartphone volumes. Unbelievable ...

The stock markets did not appreciate the CEO admitting failure, that is, that the company was on the brink of a dive. In institutional work terms this is clearly discarding old practices and a call for redefining the company practices. However, during the 1020-day period of Elop’s office, every day the company value declined by about €18 million (on average, see Salminen and Nykänen, 2014). However, by 2010–2011 it was clear that the Nokia’s Symbian operating system could not match the Apple’s OS or the Android operating systems in key market areas. In response came the announcement in February 2011 of the collaboration of Nokia and Microsoft. Yet the new smart phones suffered delays and the Lumia 900 model launch came in January 2012, just missing the important Christmas and end-of-year period. The new models were not very popular and the Navteq goodwill needed write-offs. In 2011 the net result was a loss of over €1.5 billion (with €38.7 billion net sales), and in 2012 losses were about €3.8 billion with about €30 billion in sales. At the beginning of September 2013, Nokia announced it would sell the mobile phone business to Microsoft International Holdings (a Dutch company, although the contract was signed in New York) for €5.4 billion. The Nokia Microsoft sale was completed by March 2014. The ambition to remain a leading company did not allow Nokia to be just another small Android manufacturer and later the Microsoft phones just did not become very popular.

Yes, we recognized the risks and probably we also thought about the Android path many times but perhaps the level of ambition was just so high ... we did not see that it could be ok to be a mediocre Android player when we could have been, if Windows Phone had become a new ecosystem, a dominant player. For a long time we believed that it could happen but it didn’t ... (Controller 3, 2018)

Risto Siilasmaa, a well-known Finnish internet security expert, followed Jorma Ollila as the President of the Board in 2012. CEO Stephen Elop was followed by the CFO Timo Ihamuotila as a temporary CEO in the fall of 2012, and then Risto Siilasmaa also became CEO in September 2013. During Siilasmaa’s reign Nokia continued its network business and organisational restructurings, which signalled in institutional work terms discarding the old ways of working but also increased uncertainty and required redefinition of the company. First, saving the rest of the company by the sale of the mobile business was a dramatic sign of redefining. A further attempt to redefine the company and to win back at least parts of the earlier glory was the acquisition of Alcatel-Lucent in spring 2015. From 1 May 2014 the CEO of Nokia had been Rajeiv Suri (a former NSN leader). However, in 2020, Siilasmaa was replaced by Sari Baldauf as Chair of the Board, and on 2 March 2020 it was announced that Pekka Lundmark would start as the new CEO in September 2020.

In the difficult market situation Nokia’s first half of 2016 resulted in losses of €1.3 billion (with net sales of €11 billion) compared to a profit of €500 million in the first half of 2015. 2016 ended

with losses of about €900 million in total from continuing operations (compared to a profit of little over €1 billion in 2015).

For a long time the financial situation, if you think about the end of the device manufacturing era, was biased. Financially we were doing so well for so long because the basic phones. ... We made a profit for a long time, even if the direction was really bad for a long time ... We had a big turnover and market share of over 30% so it perhaps restrained the managers, and took away the courage to make the bigger changes much earlier. (Controller 3, 2018)

While Nokia made reasonable profits in the low-price products, Apple understood the trends in the most profitable customer segments and managed better the organisational changes needed to adjust for this (see Gallo, 2010). There was a differing institutional logic or organisation of institutional work (central one big company only vs. field-level entrepreneurial networks) in making the mobile applications: Android and Apple also encouraged an approach involving a network of independent developers while Nokia did most R&D in-house, ironically utilising their 'connecting people' slogan at the time (For details of Nokia developments, see e.g. Aspara et al., 2011; Gallo, 2010; Remneland-Wikham et al., 2011). This suggests that the boundaries of successful institutional work need not be confined to the company walls but may extend to a network of allies with relatively aligned intentions, achieved by control systems or market mechanisms, thereby creating several innovative solutions (concerning control in innovation, see Chenhall and Moers, 2015).

The hoped-for comeback with Alcatel-Lucent deal. The Alcatel-Lucent deal was announced in April 2015. This deal was an attempt to turn the company round and to acquire scale benefits by combining two low profit organisations into one big organisation with over 100,000 employees. However, this also burdened the new organisation with high expenses on sales, general and administrative costs and R&D costs. Despite this, there was a strong effort and high hopes for the deal were expressed by Nokia Chairman of the Board Risto Siilasmaa who, according to newspaper sources and Annual General Meeting (AGM) speech on 23 May 2017, noted:

... Normally the purchasing company waits until it acquires 100% of the target company before starting the integration ... decides the continuing and discontinued products, starts the organizational change and so on. We acted in another way. We started all the above operations the very day we owned more than 50% ...

Nokia also announced on the day of the AGM (23 May 2017), a licensing agreement that was made with Apple, which according to Rajeev Suri's CEO statement (in Q2/2017 report) was a highlight for Nokia in Q2 of 2017. The licensing agreement involved an up-front payment, and additional revenues during the term of the agreement.

The blurring perceptions of relevant work and organisational success. The preferred and valourized controller role during Nokia's decline was still basically the active business partner role so that operative managers would understand the figures. Although data analytics and business intelligence skills were becoming more important, communicating the numbers was still the key:

Before I was more a number hacker but now controllers stay in touch with the managers ... of course it depends on the firm and the service center ... and sometimes you need to tell unpleasant things, cost-cuts etc., communicate these. (Controller 2, 2018)

Regardless of the changing reporting practices described earlier in the accounting department, trust in the accuracy and reliability of the accounting report did not falter. Reliability of accounting information seems always the first requirement. A controller notes:

I have always felt that what we say, in financial sense, is [true]. ... People may think that how did we get into this but probably the facts were never challenged. (Controller 3, 2018)

Already in 2008, Nokia adopted some non-IFRS reporting, especially in earning releases and announcements. In 2011 AGM, CFO Timo Ihamuotila considered its role in giving additional information for investors. The Nokia Complaint Board also emphasised in an e-mail in May 2011 that the IFRS and Non-IFRS numbers are disclosed together and should be analysed together. The current management has continued communicating the IFRS result first and only then disclosing the official IFRS numbers. Controller 3 explains:

In Nokia Technologies we had a lot of new businesses, it was part of our business to try new things and close them and start again, so there can be a big difference between non-IFRS and reported results ... it could stay in the background for a basic business director [go unnoticed]. Of course, our financial directors look at both figures and know that the cost does not go away even if we record it as non-IFRS reconciliations ... Perhaps we could also in the internal reporting ... show things from the reported profit perspective. (Controller 3, 2018)

IFRS standards are changing so comparability in presentation may require some adjustments. However, an ex-manager of Nokia emphasised that often items considered as extraordinary or non-IFRS are not really so extraordinary, but the business involves some cost-cutting and downsizing more as a rule than an exemption. Downsizing and laying off people had an effect on the spirit of working, and occasionally the many changes in development projects and in the organisation also distracted some resources from the core business development. Further, the use of non-IFRS in earnings announcements, may have been perceived by some stakeholders as a new primary framework (Agostino and Arnaboldi, 2020) for measuring success, thus shifting the focus of operations.

Non-IFRS, where you exclude one-off events, is related to reorganizations, downsizing and personnel cuts and so on, but ... the whole business is based on consolidations and reorganizations so that the best reorganizer gets profit on the bottom line. So you should look at the IFRS numbers because they show the one-off items that are not one-off but continuous. (Ex manager in 2019)

Table 1 shows the differences between non-IFRS profit and reported IFRS profit (unaudited profit or loss for the period).

The differences between IFRS and non-IFRS are mostly due to reorganisations and restructuring but there are also slight differences regarding how sales, expenses or taxes are calculated. In 2012,

Table 1. Differences between Non-IFRS and IFRS results in 2012–2020.

Profit (€ millions)	2012	2013	2014	2015	2016	2017	2018	2019	2020
-IFRS/reported	−3786	−739	3476	2468	−927	−1458	−335	11	−2424
-Non-IFRS	−472	211	670	1518	1248	1875	1272	1230	1464
Difference (m€)	3314	950	−2806	−950	2175	3333	1607	1219	3888

2013 and from 2016 to 2020 the differences are positive, that is, the non-IFRS result is considerably better. In the financial statements of 2020 Nokia announced an IFRS loss of €2.4 billion while non-IFRS profit was announced to be almost €1.5 billion, producing a record difference of almost €3.9 billion. The difference was partly due to de-recognition (or write-off) of Finnish deferred tax assets. Indeed, the difference is negative only in 2014 and 2015. The differences suggest some effort being spent on representing two differing views on company performance, perhaps even parallel realities. The 2014 difference is due to the gains from the sale of Devices & Services unit to Microsoft that increased the result of Q2/2014 by about €3.2 billion. The 2015 difference is mainly about the sale of HERE Maps to car manufacturers such as Audi, BMW and Daimler with a gain of about €1 billion. Although there are one-time events where non-IFRS adjustments convey an improved view to investors, they may also make the analysis of financial statements difficult to non-professional investors. There is, however, consistency in Nokia's practices, and even if the non-IFRSs are not audited, auditor opinions can be listened to when preparing the reports:

There are financial accounting people together with business representatives and auditors; it is co-operation. When we have taken some path, we need to stick to that. (Controller 1, 2018)

In our view, the adoption of a particular accounting practice, here non-IFRS reporting, may involve the risk of blurring the investor or managerial views of the company performance. In reporting, some losses or profits can be evened out. A company using alternative reporting practices basically takes a position, perhaps even unconsciously, that generally accepted accounting principles are not enough, making the true and fair view different. If such behaviour becomes institutionalised in the field, accounting control bodies may have to deal with the question of how such investor information is distributed, and what 'generally accepted' means. In terms of accounting, an innovation can be the creation of the non-IFRS accounts but such development also poses questions regarding reporting quality and impression management (see e.g. Moreno et al., 2019) and accounting professional roles or identities, especially under multiple performance requirements or measures (see Cooper et al., 2019).

In 2019, an ex-manager saw some worrying aspects in the financial communication in the earnings announcements.

About a year ago, the leader of Mobile networks, their key area, their crown jewel, had to go [was fired immediately]. ... It did not show much on any press release or earnings announcement ... like it was normal but I don't think it was. ... and then there was the drop in share price after the [Q3/2019] earnings announcement. I think these are not individual things but need to be seen as a whole, it's crisis communication.

Discarding the (non-IFRS) myths of financial success. In 2019, after several years of IFRS losses, the equity of Nokia had diminished so that a dividend could no longer be distributed. According to the Q3/2019 announcement (on page 3) 'On October 24, 2019, the Board resolved to not distribute the third and fourth quarterly instalments of the dividend for the financial year 2018'. This announcement came as a surprise to the markets and the Nokia share price dropped about 23 per cent on 24 October 2019, from about €4.7 to €3.6. There were some delays in the 5G products and product deliveries. However, on 6 February 2020, Nokia disclosed the 2019 figures and finally there was a 3 per cent increase in sales and the IFRS result was again positive, about €11 million. Year 2020 would have been profitable without the large, €2.9 billion, deferred tax asset write-offs.

We suggest that our longitudinal, institutional theory informed Nokia case casts light on how organisational perceptions of success can be affected by accounting-related institutional work

and accounting developments, such as what are seen as key measures of performance (Agostino and Arnaboldi, 2020; Quinn, 2014; see Appendix 2 for a timeline of events from 1980s to present). As an interesting epilogue to our findings, the leading Finnish business newspaper Kauppalehti (2021) claimed on 18 March 2021 that Nokia had bungled its 5G development and had tried to polish its financial situation with non-IFRS figures. Further, the newspaper claimed that Nokia management was rewarded based on non-IFRS figures, which is an indication that non-IFRS might have been perceived as a primary measure of success. However, according to the newspaper, this ‘time of non-IFRS illusions’ is coming to an end, again suggesting a shift in perceived primary measures and in institutional work terms, both redefining and discarding some of the old foundations of organisational success.

Discussion

With our Nokia case we illustrate even how slight changes in key accounting measures can contribute, together with other developments, to shifts in organisational institutional work practices and perceptions of success and failure. When analysing our interview data, we found that interviewees referred to two major organisational focus areas: on the one hand the reliability of accounting figures and changes in reporting (US GAAP, quartile reporting, IFRS, latest estimates) and on the other the relevance and requirements of accounting work (e.g. expectations of changing from bean-counters to business partners, illustrated through valourizing the heroic examples). Therefore, we analyse the Nokia accounting practices in terms of reliability and relevance (see Figure 1) and present the relevant or prominent forms of institutional work found from our empirical evidence. These forms relate to situations where either accounting relevance or reliability is differently perceived between time periods. Institutional work may take a different form when *valourizing reliability or relevance*, and when *valourizing reports or action*. In Nokia institutional work contributed to highlighting focus on reliable figures in reporting, and to behaviour that could be characterised as heroic business actions. However, transition between periods of success and failure created parallel ways of reporting and ambiguity concerning the actions required in order to promote success (especially in the long term).

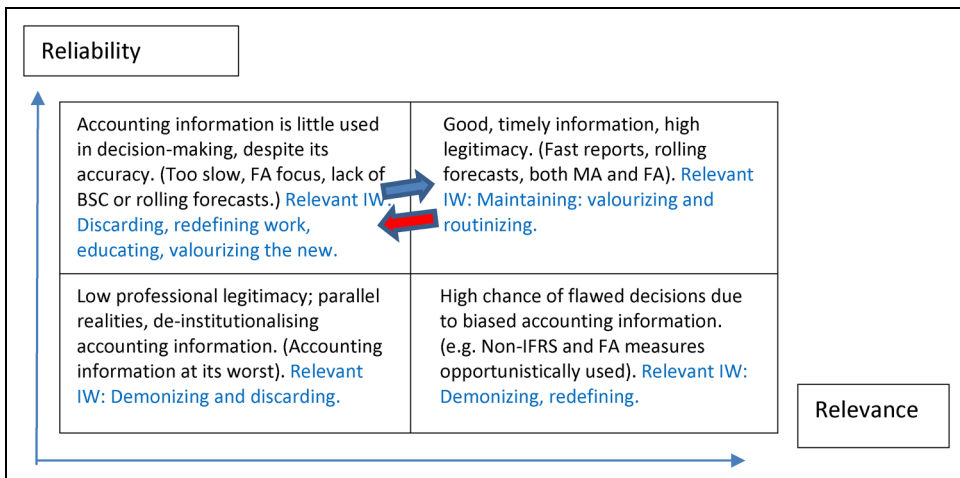


Figure 1. Focus shifts in accounting work, reliability and relevance.

Further, we noted in our Nokia case that there were focus shifts between financial accounting (FA) and management accounting (MA) and between perceptions of reliability and relevance, that together with new key performance measures influenced perceptions of success. In Nokia, financial accounting was required to be reliable and timely, whereas the legitimacy of management accounting stemmed more from relevant, even heroic actions, intended to be beneficial in improving business processes.

In Figure 1, the arrows are simplified examples of accounting focus changes, intended for analytical purposes but basically the blue (lighter) arrow depicts more the 1996–2001 phase, that is, acquiring the business excellence focus with a valorized view of heroic business partner accountants (instead of traditional bean-counting). The red (darker) arrow depicts a shift in focus towards dual figures and short-termism more suitable to the latter period. However, there are many, for example contextual, reasons for organisational developments and reliability and relevance focus dimensions might evolve differently among organisational levels (see Busco et al., 2006; Laamanen et al., 2016). Yet after 2008 at the group accounting level, the additional reporting styles, such as pro forma statements, and the non-IFRSs, even if offering additional information, created a risk of losing some of the reliability of basic accounting for the sake of investor relevance.

Effort spent on preparing several reports (IFRS and non-IFRS) uses resources, and it may allow for several interpretations of the performance. For example, the interpretations based on IFRS or non-IFRS might be very different. Any room for manipulating a view given in reports also represents a moral hazard and a possible threat to accounting legitimacy (see Chu et al., 2019; Currall and Epstein, 2003). At their worst, the pro forma or non-IFRS results suggest that multiple perceptions of performance co-exist (Greenwood et al., 2011; Pratt and Foreman, 2000). This may create conflicting goals, lower motivation and damage legitimacy among stakeholders (see Gioia et al., 2000; Lukka and Järvenpää, 2018; Modell, 2004). When the new primary focus (or primary mission, Agostino and Arnaboldi, 2020; Quinn, 2014) of operations shifts, for example, from business excellence to short-term profit, there may be disruptions in institutions, possibly amplified by innovations such as the iPhone.

Conclusion

In this article, we analysed the changes in accounting focus with an illustration of the Nokia case from 1992 to 2021. We also depict legitimacy of accounting (with reliability and relevance dimensions, see Figure 1), and the changes between periods of perceived success and failure through the lenses of contingency theory (Covaleski et al., 1996; Otley, 2016) and historical institutional research (Gervais and Quinn, 2016; Moreno and Quinn, 2020), particularly through the concept of institutional work (Canning and O'Dwyer, 2016; Lawrence and Suddaby, 2006).

The analysed changes in accounting, were contingent on a combination of elements changing over time, including market situation, technological change, strategic renewal, firm performance and organisational restructuring, which facilitated changes. We have accordingly described these contextual elements carefully in order to ground our analysis in institutional work in this global business surrounding. So, in this study we focused on the institutional developments in their context. We found that there can be differences in valorizing the reliability of figures or the relevant and context-specific actions. Further, we found that the key accounting measure of success affects what figures and actions are valorized and demonised, and that even slight changes in the primary accounting measure can be influential in the long term.

We contribute, first, to earlier literature on institutionalised developments in accounting relevance and reliability (see Currall and Epstein, 2003; Greenwood et al., 2011; Liguori, 2012; Pratt and

Foreman, 2000; Suddaby et al., 2015), and second, to longitudinal historical institutional work (Gervais and Quinn, 2016; Moreno and Quinn, 2020) on accounting change: We argue that *valourizing some new primary accounting measure* (Agostino and Arnaboldi, 2020; Lämsiluoto et al., 2013; Quinn, 2014) and the *actions, the context-specific institutional work* related to this (e.g. the heroic work and leading through example in each situation), is an effective way to create accounting and identity changes. We contribute to Agostino and Arnaboldi (2020) by finding that an accounting primary measure shift, for example, IFRS versus non-IFRS profit, and the institutional work related to this, changes not just the organisational focus but also institutionalised perceptions of success, accounting legitimacy, relevance considerations, and the accountant's identity.

In the Nokia Corporation, during the historical roller-coaster ride of ups and downs from the 1980s to the present, accounting changes occurred but the core assumptions from the rise period were not easily abandoned. Yet, Nokia is also a story of historically changing accounting focus since 1984: the forecasting, control and relevance needs and strategy concerns were first highlighted both in accounting literature (ABC, BSC and rolling forecasts) and in Nokia, whereas later the accounting focus turned more to financial accounting and IFRS reporting. Accounting focus and the key measures selected through institutional work considered relevant at each point in time then contributed to the perceptions of success; for example, a possible failure to meet the investor and organisational expectations (see Chu et al., 2019) can first be camouflaged, for example, through the use of non-IFRS in the press releases of a company.

De-institutional work at several levels, first in Nokia, then in Apple and Samsung, led to innovations that changed the field-level structures. Evolutionary changes also occurred through defining new relevant controller roles by valourizing certain behaviour and organisational structures (see also Canning and O'Dwyer, 2016; Lawrence and Suddaby, 2006; Lawrence et al., 2011; Suddaby et al., 2015). We suggest there can be a distinction between either *valourizing reports* (and figures) – or *valourizing action*. Thus, we contribute to institutional work categorisations in accounting work (Canning and O'Dwyer, 2016; Lawrence and Suddaby, 2006). During the period of rise, the relevant institutional work involved valourizing the emerging new accountant's behaviour (heroic business partner action). In the downturn, demonising and discarding the old was necessary, and new accounting figures helped in analysing the context, although they eventually also led to some loss of relevance in accounting work. So valourizing new figures and replacing the old reported measures of success with new ones did not necessarily improve the long-term success. However, the many beliefs and associated success myths lingering from the old organisation were difficult to discard while in many market areas the company was doing well for so long. The work and identities of traditional (financial) accountants and new business controllers were redefined during the two phases which involved shifts in the personal perception of accounting focus. The creation of non-IFRS accounts can be seen as an attempt at maintaining relevance and investor focus, but also possibly creating alternative, parallel realities of performance.

The organisational accounting practices of a market leader company may affect what is considered legitimate, or generally accepted, in field-level financial reporting. This extends the organisation level analyses to analyses of multiple levels yet involves also individual actors performing de-institutional work (cf. Greenwood et al., 2011; Hopper and Major, 2007). Regarding the managerial implications of this study, we highlight the multiple levels and the importance of the *key accounting measure and the related accounting professional work* in changing organisational identity and legitimacy of accounting (Agostino and Arnaboldi, 2020; Gioia et al., 2000; Greenwood et al., 2011; Lämsiluoto et al., 2013).

In our historical account of Nokia accounting, we found shifts in accounting focus and alternative ways of seeing relevant accounting work as well as of perceiving organisational success, even the true and fair view. We call for additional research on understanding these 'true and fair views' or

impressions in reporting (see also Moreno et al., 2019). We also suggest more institutionally oriented research on accounting (see also Gervais and Quinn, 2016; Moreno and Quinn, 2020), specifically on the responses to institutional demands in contexts of failure. Future research might view the developments of separate accounting professions (e.g. FA or MA, see also Carnegie, 2014), the changes in the focus of accounting work, and whether, why and how accountants have properly communicated the need for change to stakeholders.

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Notes

1. We relate perceived organisational success to traditional accounting measures, such as profit, growth and market share. We acknowledge that organisational success and failure are institutionalised perceptions (or contextually framed views), instead of being purely objective or strictly measurable (Laamanen et al., 2016). Such perceptions relate for example to meeting expectations (see Laamanen et al., 2016). Doing this we study accounting regarding perceived success. That is, we do not try to demonstrate the role of accounting as a key factor of success or failure, but as a factor creating the perceptions about these.
2. We thank the anonymous reviewer for pointing out this conceptual discussion.

References

- Agostino D and Arnaboldi M (2020) From preservation to entertainment: Accounting for the transformation of participation in Italian state museums. *Accounting History* 26(1): 101–122.
- Aspara J, Lamberg J-A, Laukia A, et al. (2011) Strategic management of business model transformation: Lessons from Nokia. *Management Decision* 49(4): 622–647.
- Becker S (2014) When organisations deinstitutionalise control practices: A multiple-case study of budget abandonment. *European Accounting Review* 23(4): 593–623.
- Berger P and Luckmann T (1967) Aspects sociologiques du pluralisme. *Archives de Sociologie des Religions* 12(2–3): 117–127.
- Burns J and Vaivio J (2001) Management accounting change. *Management Accounting Research* 12(4): 389–402.
- Busco C, Riccaboni A and Scapens R (2006) Trust for accounting and accounting for trust *Management Accounting Research* 17(1): 11–41.

- Canning M and O'Dwyer B (2016) Institutional work and regulatory change in the accounting profession. *Accounting, Organizations and Society* 54: 1–21.
- Carnegie G (2014) The present and future of accounting history. *Accounting, Auditing & Accountability Journal* 27(8): 1241–1249.
- Chenhall R and Moers F (2015) The role of innovation in the evolution of management accounting and its integration into management control. *Accounting, Organizations and Society* 47(1): 1–13.
- Chu J, Dechow P, Hui K, et al. (2019) Maintaining a reputation for consistently beating earnings expectations and the slippery slope to earnings manipulation. *Contemporary Accounting Research* 36(4): 1966–1998.
- Cooper D, Ezzamel M and Robson K (2019) The multiplicity of performance management systems: Heterogeneity in multinational corporations and management sense-making. *Contemporary Accounting Research* 36(1): 451–485.
- Covaleski M and Dirsmith M (1988) An institutional perspective on the rise, social transformation, and fall of a university budget category. *Administrative Science Quarterly* 33(4): 562–587.
- Covaleski M, Dirsmith M and Samuel S (1996) Managerial accounting research: The contributions of organizational and sociological theories. *Journal of Management Accounting Research* 8: 1–36.
- Currall S and Epstein M (2003) The fragility of organizational trust: Lessons from the rise and fall of Enron. *Organizational Dynamics* 32(2): 193–206.
- Gallo C (2010) *The Innovation Secrets of Steve Jobs: Insanely Different Principles for Breakthrough Success*. New York: McGraw-Hill.
- Gervais P and Quinn M (2016) Costing in the early industrial revolution: Gradual change to cost calculations at US cloth mills in the 1820s. *Accounting History Review* 26(3): 191–217.
- Gioia D, Schultz M and Corley K (2000) Organizational identity, image and adaptive instability. *The Academy of Management Review* 25(1): 63–81.
- Goretzki L, Strauss E and Weber J (2013) An institutional perspective on the changes in management accountants' professional role. *Management Accounting Research* 24(1): 41–63.
- Greenwood R, Raynard M, Kodeih F, et al. (2011) Institutional complexity and organizational responses. *The Academy of Management Annals* 5(1): 317–371.
- Greenwood R, Suddaby R and Hinings C (2002) Theorizing change: The role of professional associations in the transformation of institutionalized fields. *Academy of Management Journal* 45(1): 58–80.
- Hiebl M, Quinn M and Martínez Franco C (2015) An analysis of the role of a chief accountant at Guinness c. 1920–1940. *Accounting History Review* 25(2): 145–165.
- Hopper T and Major M (2007) Extending institutional analysis through theoretical triangulation: Regulation and activity-based costing in Portuguese telecommunications. *European Accounting Review* 16(1): 59–97.
- IFRS Conceptual Framework (2018) International Accounting Standards Board.
- Järvenpää M (2007) Making business partners: A case study on how management accounting culture was changed. *European Accounting Review* 16(1): 99–142.
- Johnson H and Kaplan R (1987) *Relevance Lost*. Boston: Harvard Business School Press.
- Kakkuri-Knuuttila M-L, Lukka K and Kuorikoski J (2008) Straddling between paradigms: A naturalistic philosophical case study on interpretive research in management accounting. *Accounting, Organizations and Society* 33(2–3): 267–291.
- Kaplan R (1984) The evolution of management accounting. *The Accounting Review* 59(3): 390–408.
- Kauppalehti (2021) <https://www.kauppalehti.fi/uutiset/nokia-mokasi-5gssa-ja-yritti-kaunistella-tilannettaan/236701c0-bc2f-475e-9e86-c1f6c0880435>, accessed on 18 March 2021.
- Laamanen T, Lamberg J-A and Vaara E (2016) Explanations of success and failure in management learning: What can we learn from Nokia's rise and fall? *Academy of Management Learning & Education* 15(1): 2–25.
- Lämsiluoto A, Järvenpää M and Krumwiede K (2013) Conflicting interests but filtered key targets: Stakeholder and resource-dependency analyses at the university of applied sciences (UAS). *Management Accounting Research* 24(3): 225–245.
- Lawrence T and Suddaby R (2006) Institutions and institutional work. In: Clegg S, Hardy C, Lawrence T and Nord W (eds) *The Sage Handbook of Organization Studies*: 215–254 2nd ed., London: Sage.

- Lawrence T, Suddaby R and Leca B (2011) Institutional work: Refocusing institutional studies of organization. *Journal of Management Inquiry* 20(1): 52–58.
- Liguori M (2012) Radical change, accounting and public sector reforms: A comparison of Italian and Canadian municipalities. *Financial Accountability & Management* 28(4): 437–463.
- Lounsbury M (2008) Institutional rationality and practice variation: New directions in the institutional analysis of practice. *Accounting, Organizations and Society* 33(4–5): 349–361.
- Lukka K and Järvenpää M (2018) The dynamics of the academic discourse on the role change of management accountants – a Finnish perspective. In: Goretzki L and Strauss E (eds) *The Role of the Management Accounting – Local Variations and Global Influences*. London: Routledge, pp.305–319.
- Meyer J and Scott W (1983) Centralization and the legitimacy problems of local government. In: Meyer and Scott (eds) *Organizational Environments: Ritual and Rationality*. Beverly Hills, CA, USA: Sage, pp.199–215.
- Meyer JW and Rowan B (1977) Institutionalized organizations: Formal structure as myth and ceremony. *American Journal of Sociology* 83(2): 340–363.
- Modell S (2004) Performance measurement myths in the public sector: A research note. *Financial Accountability & Management* 20(1): 39–55.
- Modell S (2009) Institutional research on performance measurement and management in the public sector accounting literature: A review and assessment. *Financial Accountability & Management* 25(3): 277–303.
- Moreno A, Jones M and Quinn M (2019) A longitudinal study of the textual characteristics in the chairman's statements of Guinness. *Accounting, Auditing & Accountability Journal* 32(6): 1714–1741.
- Moreno A and Quinn M (2020) The influence of institutional factors on corporate narratives: A thematic content analysis of Guinness. *Accounting History* 25(3): 425–447.
- Oliver C (1992) The antecedents of deinstitutionalization. *Organization Studies* 13(4): 563–588.
- Otley D (2016) The contingency theory of management accounting and control: 1980–2014. *Management Accounting Research* 31: 45–62.
- Parker L (1999) Historiography for the new millennium: Adventures in accounting and management. *Accounting History* 4(2): 11–42.
- Prahalad C and Hamel G (1990) The core competence of the corporation. *Harvard Business Review* 68(3): 79–91.
- Pratt M and Foreman P (2000) Classifying managerial responses to multiple organizational identities. *The Academy of Management Review* 25(1): 18–42.
- Quattrone P and Hopper T (2001) What does organizational change mean? Speculations on a taken-for-granted category. *Management Accounting Research* 12(4): 403–435.
- Quinn M (2014) Stability and change in management accounting over time—A century or so of evidence from Guinness. *Management Accounting Research* 25(1): 76–92.
- Quinn M and Jackson WJ (2014) Accounting for war risk costs: Management accounting change at Guinness during the first world war. *Accounting History Review* 24(2/3): 191–209.
- Rautiainen A and Järvenpää M (2012) Institutional logics and responses to performance measurement systems. *Financial Accountability & Management* 28(2): 164–188.
- Remneland-Wikham B, Ljungberg J, Bergquist M, et al. (2011) Open innovation, generativity and the supplier as peer: The case of iPhone and android. *International Journal of Innovation Management* 15(1): 205–230.
- Rowlinson M and Hassard J (2013) Historical neo-institutionalism or neo-institutionalist history? Historical research in management and organization studies. *Management & Organizational History* 8(2): 111–126.
- Salminen M and Nykänen P (2014) *Operaatio Elop – Nokian Matkapuhelinten Viimeiset Vuodet. [Operation Elop – the Final Years of Nokia Mobile Phones]*. Helsinki: Teos.
- Scott WR (2013) *Institutions and Organizations: Ideas, Interests, and Identities*, 4th ed. California: Sage Publications.
- Sian S, Magli F, Nobolo A, et al. (2020) Enacting accountability: The case of the Asili di Carità, 1913–1926. *Accounting History* 25(2): 237–260.
- Suddaby R and Foster W (2017) History and organizational change. *Journal of Management* 43(1): 19–38.

- Suddaby R, Saxton G and Guntz S (2015) Twittering change: The institutional work of domain change in accounting expertise. *Accounting, Organizations and Society* 45(1): 52–68.
- Taipaleenmäki J and Ikäheimo S (2013) On the convergence of management accounting and financial accounting – the role of information technology in accounting change. *International Journal of Accounting Information Systems* 14(4): 321–348.
- Toubiana M and Zietsma C (2017) The message is on the wall? Emotions, social media and the dynamics of institutional complexity. *Academy of Management Journal* 60(3): 922–953.
- Vaivio J (2008) Qualitative management accounting research: Rationale, pitfalls and potential. *Qualitative Research in Accounting & Management* 5(1): 64–86.
- Vuori T and Huy Q (2016) Distributed attention and shared emotions in the innovation process: How Nokia lost the smartphone battle. *Administrative Science Quarterly* 61(1): 9–51.
- Yin R (1984) *Case Study Research. Design and Methods*. Newbury: Sage.

APPENDIX I.

Interview list for part 1: 1996–2001.

Time	Title	Duration (h)	Recording
2/1996	Strategic planning director	1.50	Notes
4/1996	CFO	1.00	Notes
4/1996	Accounting director	1.00	Notes
5/1996	CFO	1.50	Tape recorder
5/1996	Accounting director	1.50	Tape recorder
5/1996	Divisional controller	2.50	Tape recorder
5/1996	Strategic planning director	1.50	Tape recorder
6/1996	Area controller	1.50	Tape recorder
7/1996	Divisional controller	1.50	Tape recorder
8/1996	Strategic business unit director	1.00	Tape recorder
8/1996	Country controller	1.50	Tape recorder
8/1996	Director, Customer Finance	1.50	Tape recorder
8/1996	Director, Customer Service Division	1.00	Tape recorder
8/1996	Business controller	1.50	Tape recorder
9/1996	Business controller	2.00	Tape recorder
1/2001	CFO	1.50	Tape recorder
1/2001	Controller	1.50	Tape recorder
5/2018	Controller 1	1.00	Digital recorder
12/2018	Controller 2	0.75	Digital recorder
12/2018	Controller 3	1.00	Digital recorder
11/2019	Ex-manager	0.50	Digital recorder

Controller interviews: 2018–2019.

APPENDIX 2. Timeline

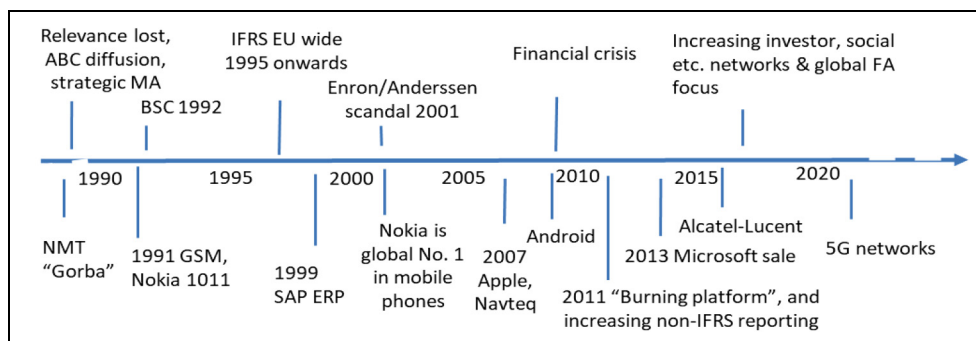


Figure A2. Timeline mirroring accounting and organisational developments.