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Accounting Policies Setting of Internally Developed Software and its Subsequent Expenditures in The Traditional Production Organisations

Master's Degree Project in Accounting and Financial Management

School of Business, Economics and Law at the University of Gothenburg

Authors: Alaa Al Mawed, Khaled Mohamed

Supervisor: Berit Hartmann

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Abstract

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Background: In recent decades, technologies have overlapped with many traditional products. The competition is no longer limited to the quality of the products but also to the level of technology used in the products. That resulted in traditional production organisations finding their way into the field of software development. These organisations encounter many challenges due to the lack of expertise. In addition, a clear understanding of different software development methods was needed. This study focuses on the accounting challenges regarding distinguishing between subsequent expenditure and maintenance expenses. The purpose of this study is to provide an overview of how organisations set their accounting policies related to internally developed software. In addition to how the operational departments interact with these policies.

Methodology: To answer the research questions, a qualitative research method was adopted. It was mainly based on accumulated research work, where information was collected through interviews and documentations. Afterwards, the data were analysed, and finally, the results were discussed.

Concluding Discussion: Despite the fact that the sample was relatively small, the thesis showed several results. The results were represented by the organisations' work on setting primary accounting policies, within the framework of IFRS. The study shows that cooperation among organisations strengthens the implementation of proper policies. Moreover, it encourages finding the optimal accounting treatment for software development methods. Finally, it enhances operations departments' role in developing and improving procedures.

Keywords: Accounting Policies, Internally Developed Software, Subsequent Expenditures, Maintenance Expenses, IFRS, Agile Method, Waterfall Method, Intangible Assets.

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Alaa Al Mawed Khaled Mohamed

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Glossary

Big Four = KPMG, Deloitte, EY, and PWC

EU = European Union

IAS = International Accounting Standards

IASB = International Accounting Standards Board

IFRS = International Financial Reporting Standards

para = Paragraph

R&D = Research and Development

1. Introduction

This section provides general background on the field of study. It also reviews the importance of the study and its contribution to the field of accounting. This section examines the problem area and purpose of the study, in addition to the central research questions.

1.1. Background

In recent years, organisations have increasingly relied on intangible assets (Aboody & Lev, 1998; Sullivan & Sullivan, 2000). One of the reasons for this transformation is the significant technological development that has taken place. Mainly, the software has become an essential part of organisations' assets (Allender, 2019). Traditional products have become increasingly associated with technology (Porter & Heppelmann, 2014). The market is increasingly moving towards smart software-backed products (Porter & Heppelmann, 2014). Traditional production organisations need to produce smart products with technical specifications to preserve their chances of competition (Porter & Heppelmann, 2014).

Organisations usually acquire software either through external procurement or through internal development. However, many organisations develop their own software to save costs, especially large, sophisticated organisations with high resources (Linton, 2011). These organisations strive for the best and cheapest ways to increase their efficiency and effectiveness (Bessen & Frick, 2018). However, incorporating software development into the businesses of traditional production organisations opens the door to entirely new areas for them. Traditional production organisations do not have the expertise in software development, as integrating software into products is relatively recent. The lack of expertise in this field creates many technical and accounting problems (Alexander, 2016).

Researchers have discussed the accounting problems created by internally developed software related to the capitalisation of expenditure. Researchers agree that the expenditures should be part of the balance sheet if they meet capitalisation conditions. Lev (2001, 2008) believes that a low level of capitalisation causes an undervaluation of the assets. However, significant uncertainty remains, which increases the need for clear accounting rules governing software expenditures (Walker & Oliver, 2005). IAS 38 lacks details regarding internally developed software. With the increasing complexity resulting from the software development process, the uncertainty increases for organisations to find the optimal accounting treatment methods for software development expenditure.

Accounting differentiates between the terms expenditure and expense. According to Holliday (2020), the term expense refers to the amounts an organisation spends on its business to ensure its continuation, i.e., utilities and maintenance. On the other hand, the term expenditure refers to the amounts that the organisation spends on purchasing assets or increasing the value of assets, which leads to an increase in the organisation's long-term value. Another difference between expense and expenditure is that expenses appear on the income statement while expenditures appear on the balance sheet (Elizabeth, 2022).

Programmers develop software using several programming methods that create the basis for the programmers' technical point of view. The two most common methods are the traditional waterfall and agile (McCormick, 2012). These two methods differently affect the accounting treatment of software development expenditures. The development method used to work with software may complicate the accounting treatment of the development. The distinction between the two methods is that the traditional waterfall method is more straightforward from the accounting point of view in determining the type of expenditure. However, it does not meet the modern technical standards of software development represented by continuous product improvement. In the waterfall method, the project's development occurs separately at each stage (McCormick, 2012).

Conversely, the agile method develops the software in a periodic iterative manner, adding subsequent frequent enhancements (Moniruzzaman & Hossain, 2013). Many organisations are trending to abandon the traditional software development waterfall method and adopt the agile method (Keita, 2020). The agile method gives organisations greater flexibility in the development process (Yurieva, 2016). It also enables programmers to make continuous enhancements (Moniruzzaman & Hossain, 2013). However, the agile method promotes the accounting complexity and creates problems related to subsequent expenditures (Balaziuk et al., 2020). Subsequent expenditures arise due to maintenance and enhancements added to the software after its release. The agile method makes the distinction between enhancements expenditures and maintenance expenses harder. It represents a big accounting challenge for the capitalisation of expenditures (Balaziuk et al., 2020).

The significance of the study is demonstrated by the software's major role in modern business models. Accountants need effective ways to deal with the software development process's accounting complexity. This study contributes to the accounting field by studying the

capitalisation problematic of internally developed software expenditures in traditional production organisations.

1.2. Problem area

In the absence of clear standards, the question arises of how organisations set their accounting policies to distinguish between subsequent expenditures and maintenance expenses. The accounting policies should lead to obtain acceptable capitalisation of internally developed software assets.

Recently there has been a shift in the business models of traditional production organisations. Traditional products are gradually being abandoned, and the markets demand smarter products by integrating software with the product (Porter & Heppelmann, 2014). This shifting made traditional production organisations enter the field of software development in which they had no experience (Alexander, 2016).

From an accounting perspective, the main problem the traditional production organisations encounter is the subsequent expenditures. They need to decide which expenditures should be capitalised and separate them from the expenses that should be expensed (Walker & Oliver, 2005). Due to the complexities of the process of software development, the expenditures overlap. The overlap hinders organisations from distinguishing between enhancements expenditures, which generate future economic benefits to the asset, and maintenance expenses.

The problem appears clearly when programmers develop internally developed software according to the agile software development method. In the agile method, programmers improve and maintain software simultaneously, even after software release. It causes the enhancements expenditures and the maintenance expenses to be overlapped.

According to Barker et al (2021), it is difficult to distinguish between operating expenses and investment expenditures. Therefore, the recognition of intangible assets is limited (Wyatt, 2008). Comparably, treating all expenditures as expenses within the income statement is considered as a failure, or a kind of misidentification (Eberhart et al., 2004). In contrast, distinguishing between current and other expenditures that intend to generate future revenues is considered to be successful (Barker et al., 2021).

IAS 38 lacks details about the accounting treatment of subsequent expenditures for internally developed software. However, organisations are obligated to follow the IFRS. The serious challenge for organisations is to set their accounting policies regarding internally developed software. Accounting policies should follow the requirements of IAS 38. They should also provide solutions to the problematic of subsequent expenditures for internally developed software.

1.3. Purpose & research question

The current study aims to examine the capitalisation of internally developed software expenditures through three levels. The first level is the translation of international standards into accounting policies in the organisation. In addition to the cooperation between organisations in this field. Organisations are obligated to operate in accordance with IFRS. They are working on proposals for the accounting policy for capitalising subsequent improvement expenditures within the IFRS framework to be able to integrate them into their business models.

The second level is the organisations' implementation of their defined accounting policies. At this level, the study examines the driving factors in how organisations implement their accounting policies through an understanding of IFRS requirements. The study explains the uncertainty about software expenditures as intangible assets (Barker et al., 2021) related to software development methods. It also describes the strategies these organisations follow to differentiate between subsequent expenditures and maintenance expenses.

The third level is how operations departments interact with accounting policies. How they participate in accounting policies implementation and how they deal with the practical difficulties they encounter.

The central research questions are:

- How are international standards translated into accounting policies regarding internally developed software?
- How do organisations' software development methods affect the capitalisation of expenditures?

1.4. Disposition

The remainder of the study is structured as follows. The second section covers the previous literature examining internally developed software development expenditures and the revision of IAS 38. It also reviews previous literature on software development methods and their impact on the accounting treatment of expenditures. Subsequently, the third section describes the methods used to prepare the study and analyse them. The findings and analysis section presents themes based on the research questions. Then the discussion section of the key findings and contributions. The study concludes with the discussion conclusion sections. In addition to suggestions for further research.

2. Theoretical Framework

In this section, the study reviews the requirements of IAS 38 that organisations must follow. This section also reviews institutional isomorphism and its relationship to the cooperation between organisations. It reviews previous literature that examines internally developed software. In addition to highlighting the software development methods from the technical and accounting perspectives. This section discusses how the previous literature addressed the problematic of subsequent expenditures capitalisation.

2.1. International accounting standard requirements

Starting in 2005, International Financial Reporting Standards (IFRS) implemented IAS 38, which aimed to address all intangible and non-monetary assets (Marton et al., 2013). The International Accounting Standards Board (IASB) revised IAS 38 and made inserted new amendments to it in 2008 and 2014. However, the amendments did not solve all the issues that the intangible assets encountered (Barker et al., 2021).

The International Accounting Standards Board has clarified capitalising and recognising internally produced assets as intangible assets (IAS 38, para 57). The conceptual framework of IASB requires that the entity has technical feasibility, intention, and ability to complete an asset for sale or use. The asset has to generate potential economic benefits. The availability of financial and technical resources is also needed to complete developing the asset. Finally, the entity should be able to accurately and reliably calculate the expenditures on this asset during its development.

Expenditures include all costs of materials, salaries, services, benefits provided to employees, registration fees of all kinds, whether legal or administrative, loan interests, and any other expenditures related to the development and production of the asset (IAS 38, para 66).

The decision of expensing or capitalising the internally developed software expenditure passes through two phases registered in the accounting records (IAS 38, para 52). According to IAS 38, the first phase covers the research (IAS 38, para 54), and the second phase covers the development (IAS 38, para 57).

The first phase includes those software items that do not meet the requirements for capitalisation. According to their respective nature, these items are recorded as expenses in the income statement (e.g., research and development, software tools, etc.) (IAS 38, para 54).

The second phase is the capitalisation. For this type of internal software, the decision to expense or capitalise the expenditure must be made after the internal software has been established (IAS 38, para 57). When the requirements are met, the intangible asset can be accepted. However, if the requirements are not fulfilled, the asset is registered as an expense in the income statement (IAS 38, para 34). Standard 38 directs that research expenses should be immediately recorded in the income statement. It also allows development expenditures to be capitalised and shown in the balance sheet (IAS 38, para 54).

International Accounting Standards have not expanded on the subsequent expenditures of intangible assets. IAS 38 considered that subsequent expenditures are more likely to preserve future economic benefits. It also states that they rarely meet the criteria for recognition of assets (IAS 38, para 20). Subsequent expenditures on intangible assets are only recognised as expenses when they do not increase the asset's economic benefits (Chalmers et al., 2008). It is possible to deal with software development expenditures through alternative methods (Walker & Oliver, 2005). Some financial managers and accountants are trying to develop their policies to cover the missing parts of the financial standards (Barth, 2018).

2.2. Institutional isomorphism

Institutional isomorphism is one of the main determinants when organisations implement accounting policies. It is represented by the tendency of organisations in the same field to be more similar over time due to pressures (DiMaggio & Powell, 1983). One of the classifications of institutional isomorphism is mimetic. In this classification, organisations seek to emulate the policies and practices of other successful organisations (DiMaggio & Powell, 1983). Mimetics arise due to uncertainty in accounting treatment (DiMaggio & Powell, 1983). Institutional isomorphism explains the compatibility of rules and practices between organisations in a given organisational area (Johnston, 2013).

Mimetic isomorphism is considered as one of the solutions to hard-to-solve problems (Lee & Pennings, 2002). However, organisations may mimic the application of accounting policies

that they believe are more efficient (Flynn et al., 2016). Organisations encounter difficulties determining the optimal accounting policies that deal with the capitalisation problematic of internally developed software expenditures. Therefore, through collaborative professional networks, organisations exchange information and experiences (DiMaggio & Powell, 1983). The information and experiences exchange between organisations increases the chances of finding solutions to problems (Collier, 2016). Organisational cooperation is also a form of mimetic isomorphism, as the organisation seeks to copy successful accounting policies (DiMaggio & Powell, 1983).

2.3. Internally developed software

Intangible assets have become significant for the organisation's financial statements, one of the highest quality assets (Maria Ienciu & Matis, 2014, P:6). Additionally, the internally developed software becomes a significant part of the intangible assets produced within many organisations.

The accounting treatment of internally developed software often differs significantly from the other assets. Based on the requirements and restrictions decreed by accounting standards, intangible investments should be included as assets in the financial statements (Prediscan & Sacui, 2011). The main problem is assessing internal software and determining its cost. Some of the internal software development methods -waterfall and agile- were discussed in this study from the accounting perspective. However, some capitalisation cases still need a special treatment to be applied.

The differences are evident in the accounting treatment of intangible assets between the internally developed software and those bought from other organisations (Prediscan & Sacui, 2011). Some managers are reluctant to mitigate intangible assets and thus tend to overinvest (Hatfield, 2002). Some methods imply that the intangible asset's useful life will increase by the software development process. It creates a problem of recognition for subsequent expenditures, modifications, and software changes. Even though IFRS allows some choices of whether to expense or capitalise certain intangible expenditures, it is hard to make the right decision. (Lu & Sivaramakrishnan, 2018).

2.4. Software development methods

The waterfall method of software development is no longer dominant. Organisations have gradually started leaning on agile methods. The Waterfall method is usually considered a more conservative approach and does not meet the modern technical requirements for programming (Stober & Hansmann, 2010). Waterfall development is a process in which software is developed through a long and rigorous plan. It is not easy to make significant revisions during the process. The waterfall method requires that one phase must be completed before the next one begins (Othman et al., 2017). Some organisations and individuals still use the waterfall method due to its focus on the plan before the work starts. The waterfall software development methods are best suited for projects with more stable or unchanging requirements (Vallabhaneni, 2018).

The methods used in software development affect the accounting treatment of software differently. Although the agile method leads to high-quality technical results, the work with agile methodology increases the accounting complexity (Balaziuk et al., 2020). The agile development approach influences how organisations determine software development expenditures. It requires organisations to apply accounting policies to identify and classify capitalisable expenditures (Celi & Dorn, 2020). Naturally, there are ongoing discussions about updating standards to an agile environment, but such discussions usually take years of planning (Balaziuk et al., 2020). Organisations need to keep track of all costs in developing agile software to ensure the accuracy of accounting records, and these costs should be categorised according to accounting policies (Celi & Dorn, 2020).

From the technical perspective, agile methods have gained wide acceptance due to the faster and more reliable solutions than traditional methods. They create their reputation by focusing on adaptability and flexibility. It's a single project design that allows for quick changes and multiple iterations (McCormick, 2012). These methods aim to provide a nimbler process for building software designing in small, iterative phases that allow developers to adjust their work based on feedback quickly. Incremental changes and frequent customer feedback and increased cooperation between department levels help create more competitive sphered cooperation between department levels. It also helps get more competitive products (Puri, 2009; Canty, 2015; Cobb, 2015; Kihlström, 2016).

Agile systems development methods have emerged as alternatives to traditional plan-driven approaches that fail to keep pace with rapidly changing environments (Highsmith, 2002). Every iteration passes through all design process stages, coding, and testing (McCormick, 2012). The general features of the agile software development method are incremental, collaborative, straightforward, and adaptable (Abrahamsson, Warsta, Siponen & Ronkainen, 2003). Agile development is about feedback and change. Thus, its methodologies are developed to "embrace, rather than reject, higher rates of change." (Williams & Cockburn, 2003). Agility is feeling for and responding to business prospects in order to stay creative in an unstable and fast-changing business (Highsmith, 2002). The agile approach includes the agility of the development stages as well as the development teams and their environment (Boehm & Turner, 2004).

The team-based agile approach achieves regularity (Coram & Bohner, 2005). This approach includes providing clients with software features in regular short time frames in line with the ideals of all parties (Southwell, 2002). Agile methodologies promote communication between project team members. They also increase the efficiency of collaboration and feedback. Finally, they cycle the improvement and verify the requirements (McCormick, 2012). Agile teams are created by people with multiple skills (Boehm, 2002). The development teams have on-site customers with much experience to ensure that the requirements are understood (Abrahamsson et al., 2002). Teams can handle change and discover new requirements more easily with short development cycles (Highsmith, 2002). Boehm and Phillip (1988) found that requirements often change by 25% or more. These methods are mentioned in scientific literature, and the need for agile management method features is emphasised (Puri, 2009; Canty, 2015; Cobb, 2015; Kihlström, 2016). Agile software development promotes incremental changes. It can also be flexible enough to adapt to changing needs (Stober & Hansmann, 2010).

2.5. The capitalisation of subsequent expenditures

The significance of subsequent expenditures has increased in the software development process. Through agile development methods, developers seek continuous periodic enhancements and software maintenance (McCormick, 2012). After using the agile software development methods, the proportion of subsequent expenditures that must be capitalised

increases. Software development expenditures were considered as seriously problematic from an accounting perspective. In addition, deciding what should be capitalised and what should be expensed was the most challenging difficulty (Walker & Oliver, 2005).

Some organisations need to develop effective ways to separate maintenance expenses from enhancements to avoid capitalising maintenance expenses (Triplett & Heuer, 2020). The asset recognition criteria also apply to subsequent expenditures, as these expenditures may lead to upgrades and enhancements that meet the criteria. The standards require that the expenditure introduces new functionality and increases the asset's economic benefits. The standards also suggest that the expenditure be measured and traced back to the asset reliably (IAS 38, para 20).

Maintenance expenses are intended to correct errors and keep the software up to date (Triplett & Heuer, 2020). Many researchers have considered maintenance as an umbrella term that includes enhancements and maintenance, although it is preferable to distinguish between enhancements and maintenance (Boddie, 1987; Marciniak and Reifer, 1990; Youll, 1990). Software changes are constantly made after the product has been released (Sommerville, 2000). In that case, the development was not limited to pre-release anymore.

2.6. Summary of the theoretical framework

In the theoretical framework section, the study refers to the theoretical requirements of IAS 38 for internally developed software. Organisations are obligated to follow IFRS, so they need to study all the aspects of IAS 38. Although IAS 38 does not provide sufficient detail (Barker et al., 2021), it forms the basis for how organisations build their accounting policies. The ability of organisations to translate international standards helps them set accounting policies that are able to solve the problematic of subsequent expenditures. Previous literature indicates a relationship between organisational cooperation and institutional isomorphism. Institutional isomorphism provides an explanation of the idea of organisations cooperation and their reasons for cooperation. Organisations seek to emulate successful policies and practices (DiMaggio & Powell, 1983). They may cooperate by sharing information and experience to obtain the best accounting policies.

Previous literature examines internally developed software from an accounting perspective. The importance of internally developed software for traditional production organisations is highlighted. Previous literature addresses the complexities of the internally developed software. The complexities are shown when programmers work with different software development methods. The theoretical section studies the software development methods from a technical perspective to understand the technical requirements of each method. The two most common software development methods are the waterfall and agile methods. The researchers argue that the waterfall method does not meet the modern technical requirements for programming and is more conservative (Stober & Hansmann, 2010). While the agile method gains wide acceptance, it gives faster and more reliable solutions (McCormick, 2012).

On the other hand, accounting research finds that the agile method increases the accounting complexity (Balaziuk et al., 2020). When working in the agile method, organisations encounter difficulties with subsequent expenditures. Separating the expenditures that should be capitalised from the expenses that should be expensed is the biggest challenge for organisations (Walker & Oliver, 2005). Together, these studies provide important insights into how organisations translate international standards to set accounting policies that are able to solve the problems regarding internally developed software.

3. Methodology

This section provides an overview of the methodology used in the research in terms of research design and quality. In addition, the method used to analyse the data is going to be presented.

3.1. Research design

Methodologies differ and have different strategies to reach the best investigation (Easterby et al., 2008). Each method has its strengths and weaknesses (Babbie, 2004). The research focuses on the problem, where the term “problem” is used to describe a knowledge gap equivalent to a research weakness (Coker and Macaulay, 2019). The chosen research method takes the form of a qualitative approach. It is mainly based on the accumulation of research (Aitken et al., 1994). According to Easterby et al. (2008), qualitative research helps identify and explore the issue of quality, which is to be implemented in this research. The qualitative research method makes the study more scrutinised which generates more details and questions. Moreover, it is the most proper approach employed to answer the research questions.

3.2. Data collection

The data has been collected through interviews (Cypress, 2018), and documents, i.e, internal memos during spring 2022. The research method followed strategies based on searching for information in two ways.

3.2.1. Interviews

To get more relevant information, interviews have been adopted as representing the art of asking and listening to obtain the relevant information (Denzin & Lincoln, 1994). It is considered as the best methodological tool (Lincoln & Guba, 1991) in this study. The interview is a type of research tool, where an interviewer gathers information about the procedures and processes followed in these organisations to set the accounting policies. The

authors do not know what the expert respondents know about the topics raised in the interviews (Cypress, 2018). All those respondents are professional accountants with high experience. They were nominated at the preparatory meetings. They occupy positions in the departments of the organisations in which they work and directly or indirectly contribute to the setting of accounting policies.

3.2.1.1. Define the industry

The focus has been on traditional production organisations. They are not organisations specialising in producing and selling software. In software production organisations, the software is considered products and goods. While in traditional production organisations it is considered an intangible asset. Focusing on one industry helps us avoid confusion because some factors and determinants differ between various industries (Aitken et al., 1994).

These organisations develop their independent software internally and then integrate it into their products. To narrow down the scope of the research, the focus was placed on the expenditures for enhancing and improving the software and its capitalisation. In addition, the method of setting policies.

This is the reason for choosing two of the largest traditional production organisations that have internally developed software departments. They represent optimal study models for the subject of our research. The software produced by those two organisations is constantly developed to still be able to compete and lead in the market. Therefore, they have a large amount of spending in this field, which provides a large sample with a relatively large qualitative weight compared to small organisations whose spending on software promotion is immaterial.

The respondents who were interviewed from these two organisations have great experience in dealing with this type of problems, through the development of policies compatible with IFRS and the fact that these policies are applicable in the operations departments. This means providing us with empirical materials that are relevant to the research topic.

3.2.1.2. Respondents

Several organisations were invited to participate in the study. However, only two relevant organisations showed the intention to cooperate. The respondents are IFRS specialists who manage the setting and approval of accounting policies consistent with IFRS. In addition to respondents in the other departments, they are who implement these policies. They are in daily contact with the rest of the operational departments, such as programmers and developers. They contribute indirectly to the setting of accounting policies through discussions, notes, and various financial and operational reports. The interesting and vital topic of the research was the capitalisation of the subsequent expenditures of the internally developed software. This topic motivated the respondents due to their awareness of the knowledge gap and the problem in the financial and accounting work that needs to be addressed. It may also help stimulate more research and find solutions to these issues that have not yet been fully resolved by IFRS. The names of the respondents or their job titles were not mentioned for privacy considerations. The label was "Respondent + (number)" and they have briefly described as Table 1 shows:

Table 1. The list of respondents, their roles, and tasks.

Respondent	**Role**	**Tasks**
Respondent 1	Head of Department in Group A	● Member of Senior Management, ● IFRS Expert, ● Contributes to Accounting Policies Setting and Approval, ● Monitors Financial and Accounting Performance and Financial Reporting, ● Manager and Team Leader
Respondent 2	Head of Department in Group B	● Member of Senior Management, ● IFRS expert, ● Contributes to Accounting Policies Setting and Approval, ● Issuing Quarterly and Annual

		External Reports, ● Manager and Team Leader
Respondent 3	Expert Accountant in Group A	● Expert and Specialist in Capitalising Intangible Assets in Financial and Accounting Management, ● In Constant Contact with Programmers and Developers
Respondent 4	Expert Accountant in Group A	● Expert and Specialist in the Interpretation of Policies and in the Accounting Guidance in Financial and Accounting Management ● Coordinator with the Financial Departments in Co-organisation and Subsidiary Organisations.

3.2.1.3. Structure of interviews

Semi-structured interviews were conducted via the Microsoft Teams platform based on respondents' requests, which comforted. The main topic for the interviews was accounting policies of internally developed software and its subsequent expenditures in the traditional production organisations. More specifically, the focus was on subsequent expenditures issues related to software enhancements. Each interview lasted about 60 minutes on average. The interviews aimed to discuss the research questions from several aspects at a specific time. The respondents have been informed about the purpose, results, and how and where to use the information (Cypress, 2018). They were aware and permitted that the meetings were recorded. They all affirmed that the information they share is shareable and does not cause their employers any damage.

The interview questions were typical agreeable questions. There was also a possibility to pass on them due to secrecy. They were descriptive (Giorgi, 2009) and focused on phenomena

(Englander, 2012). There was always an open last question about what the respondents thought about the research topic outside the scope of the questions prepared in advance. The roles were distributed among the researchers to interviewer and observer. Questions were asked by the interviewer and notes were taken by the observer. The results from the interviews were then typed, and texts were thoroughly reviewed. The information provided by the respondents is assumably correct and relevant. A deficiency or error means that the respondent did not have enough information about the issue.

3.2.2. Document relevance check

To check the document relevance, initially, introductory meetings have been scheduled with the coordinator in Group A. During the first meeting, the history of the organisation has been viewed, and a brief explanation about the structure of the financial department (IFRS experts) has been given. Then internal memos used for perusal were taken and explained in detail. The memos represented guidelines for operations departments, within special channels. Then, a special permission to access these channels was granted to check more memos that meticulously describe work details, e.g., how, and when should subsequent expenditures be recognised as an asset in relation to already developed and capitalised software. Another example is what are the criteria and bases to be followed when registering for accounting? What is the useful life of the different software assets? How is the residual value of the asset determined when enhancements are made to it. Would this mean that the asset does not need to be depreciated to a value of zero?

Another example is the position paper, which will be discussed later in the finding section. Which is considered a preliminary paper that raises the accounting issue to be resolved, e.g, as regards the paper, what procedures should be taken to be able to capitalise on the development cost? This is in addition to reviewing historical data and digraphs related to some information, e.g, several of previous years' fault reports, which helps separate maintenance expenses from enhancement expenditures.

3.2.3. Data analysis

According to Maxwell (2005), data analysis is considered to be one of the most critical and ambiguous kinds of qualitative analyses. The current data has been collected from a transcript of the documented interviews. Transcription also helps to obtain specific and clear citations to support findings and analysis. These scripts formed the theoretical basis that created the key themes (Hartmann, 2021). In addition the leading actors roles and organisational procedures in setting policies (Hartmann, 2021). It helps in tracking the implementation of these policies by other departments later (Hartmann, 2021). The data is prepared and organised into digital folders and sorted by codes. The data analysis was based on the general analysis procedures such as taking notes, reflective thinking, and writing summaries (Creswell & Poth, 2017).

The highlighted specific data is related to the policies' setting approaches and the cooperation between the policies' setters and other departments. Through interactive discussions, acceptable methods of policies practice are followed. Moreover, the categories will be linked to the literature review. Finally, the ultimate point of view will be created, and the final report will be presented.

In the interviews, there have been many direct questions about setting and structuring accounting policies. The organisations' paperwork that has been documented took the form of internal memos, annual reports, and various documents related to internal accounting policies and their clarifications to operational divisions. All data and materials collected were critically examined and analysed. Moreover, Analysed information received in interviews with respondents who work in the organisations covered by the research. The inductive and discourse analysis were used to reasonably complete the research and answer the research questions. In addition, many methods and research tools that highlight relevance and faithful representation were used.

The research method assumes that knowledge of the accounting treatment of subsequent expenditures is incomplete. It creates an opportunity for research to enrich that knowledge. Therefore, this study tries to highlight some professional accountants' experience in setting accounting policies. It will conduct that through information and comments collected and analysed from the interviews. The research approach began with analysing the information collected from interviews and documents about subsequent expenditures. It also touched

upon the problem of the lack of clear criteria that would properly help address subsequent expenditures.

3.2.4. Limitation of the study

The qualitative approach helps describe and contain many details (Ochieng, 2009), on the other hand, there are many limitations in this study.

The present study has been subjected to some limitations, such as the differences in the semantic functions of some words and terminologies. Some words are polysemous such as Capitalisation, which is used in both lingual and financial contexts. Some other words have special meanings from the user's perspective, which does not always provide the same degree of certainty (Ochieng 2009). To avoid ambiguity, words with many interpretations have not been used on a large scale in the present study, and if the case is to use such words, elaborations will be provided.

The main limitation of the qualitative approach is that the sample is relatively small, which limits the diversity of the conclusions drawn from the research. In addition, the samples represent the respondents' points of view, which cannot be generalised to cover other organisations that have not been examined. One other limitation is the scarecy of information available from different organisations. In today's business, the dominant majority of all work organisations resort to secure their data in various business frameworks. It is taken into consideration that despite the cooperation of multinational groups, the study was limited for ethical considerations not to violate the organisations' data or privacy.

3.2.6. Ethical considerations and reliability

The agreements of information protection have been signed-in with the organisations' representatives. That goes under the plan to protect the confidentiality of information. The reason is that some organisations may have confidentiality concerns due to various factors, such as competition with other organisations. Collecting information was by reaching the private webs according to special permissions and channels. All these procedures secure the data, privacy, and confidentiality of the respondents' information (Cypress, 2018).

To avoid any harm to the respondents, whether physical or moral. Respondents have been informed in advance of the research topic, “Accounting policies of internally developed software and its subsequent expenditures, in the traditional production organisations”. They read the questions and prepared the main points for the appropriate answers. Some candidates refused to take part in the study, which was one of their rights. Withdrawal was also an available option. Some other candidates withdrew even after they had given an initial approval to participate.

4. Findings and Analysis

This section shows the results found in the investigation. The findings and analysis section is divided by topic based on the following levels: The first level is the translation of international standards into accounting policies inside the organisation, in addition to the cooperation between organisations in this field. The second level is the organisations' implementation of their defined accounting policies. The third level is how operations departments interact with accounting policies.

4.1. Interpretations of international standards into organisations' accounting policies

4.1.1. Preparation accounting policies inside the organisation.

The case organisations have enhancement expenditures for internally developed software. Those expenditures are different from regular, periodic, and non-periodic maintenance expenses. The lack of precise and clear instructions for dealing with these subsequent expenditures in IFRS has created an accounting problem for departments. organisations usually solve such problems by developing their accounting policies based on IFRS. Internally set accounting policies are more relevant to the organisation itself. It constitutes the accounting instructions, guidelines, and directions the accounting departments follow to solve accounting problems.

According to respondents 1 and 2, their organisations have special departments that deal with IFRS, and policy development. These departments deal with IASB's pre-existing standards. They also follow up on updates from IASB that issue IFRS. Departments work to ensure that all accounting practices and financial reports issued and adopted by their organisations are consistent with IFRS.

> *Our department with IFRS experts, is the department within our group that interprets IFRS standards into group policies.* ***Respondent 1***

> *The group is following the IFRS as the EU adopts them, and the process for implementing accounting standards in the group is constantly following the development of any amendments or new accounting standards.* ***Respondent 2***

IAS 38 was created to describe the accounting treatment of intangible assets. Despite the particular importance of software in modern business models, the two case organisations consider that IAS 38 did not provide adequate interpretations regarding capitalising software development expenditure. Adherence to the standards is a legal obligation as the European Union (EU) has adopted IFRS. IAS 38 also requires organisations to include intangible assets in their financial statements. It is their duty to follow the concept of relative reliability (Huikku et al., 2017).

Concerning the implementation of IAS 38 in the two case organisations, they are drawing on the expertise of the Big Four, KPMG, Deloitte, EY, and PWC, in addition to reviewing the research published in this field. Organisations also collaborate to ensure optimal performance. The most challenging issue is that Standard 38 does not provide sufficient details and requires further interpretation. There is also an increasing need for clear definitions of maintenance expenses and the expenditures that must be capitalised.

> *It's really hard when it's a brand new area with the software, said* ***Respondent 1***
> *In terms of internally developed software, we follow the three criteria of asset recognition, identifiability, controllability and future economic benefits, said* ***Respondent 3***

The interviewed respondents 1,2,3, and 4 demonstrated how the two organisations strictly follow the IFRS. In this framework, organisations develop their accounting policies regarding software. That occurs after many discussions that lead to decent explanations. All departments involved in the software development process need to understand the accounting policies. The following sections discuss the accounting policy development process in more detail.

Regarding policy selection, the findings are generally consistent with the previous research (Stadler & Nobes, 2018). The subsequent costs of the developed software are economically significant for organisations to a certain degree. They significantly affect the organisation financial statements (Stadler & Nobes, 2018). Therefore, the accounting policies that solve the subsequent expenditure issues are urgent necessities when clear standards are missing (Stadler & Nobes, 2018).

Respondents emphasised that the policies-setting department's view presents through a preliminary accounting position paper. This paper is general and, simultaneously, specific to

the requirements of the IFRS standards. It is done by reviewing these case standards and previous comments collected on relevant cases as well as recommendations and guidance of external auditors, especially the Big Four.

> *When we start to develop the new accounting policies, we always start to look at what the IFRS standard says and what it requires. We also read a lot of material […] which is collected in the book, also we read a lot of guidelines from the Big Four.* ***Respondent 1***

This position paper is subject to further examination to access more details through cooperation with operative departments who have daily work instructions. Meetings with departments are held including the department of development, engineering, and equipment testing. Understanding how the software departments work and how they develop software helps establish the proper policies. In addition, it shows the cooperation among organisations within the group through mixed governance structures (Ménard, 2004).

4.1.2. Cooperation among organisations

The results of the present study show, unexpectedly, that organisations cooperate despite secrecy and competition. Organisations in similar industries consult and exchange experiences in software capitalisation. Caglio and Ditillo (2010) claim that the exchange of accounting information is a common method among organisations. Additionally, Thrane and Hald (2006) claim that the information exchange among organisations promotes cooperation and serves more significant purposes. The verity of the exchanged accounting information is vital for cooperation among organisations (Tomkins, 2001).

The collaboration between organisations is consistent with the assumptions of institutional isomorphism. According to DiMaggio & Powell (1983), when organisations cooperate in setting policies, they aim to mimic the organisation's best policies. Organisations tend to be similar in a particular organisational area (Johnston, 2013). Collier (2016) also supposes that the exchange of experiences and information facilitates obtaining solutions to the problems of organisations.

That interdependence and cooperation among organisations affect the flow of accounting information (Tomkins, 2001). When there is a high specificity of assets, the exchange of accounting information helps in the success of cooperative relations (Dekker, 2004). Thus, the exchange of common methods and settings between organisations creates a new and stimulating environment (Håkansson and Lind, 2006). On the contrary, some cautions have been given against the exchange of methods and information due to privacy, quality tests, and financial performance (Baiman and Rajan, 2002). Respondents 1 and 2 emphasised that cooperation in knowledge exchange must not cause any harm to any part of the operation.

> *We try to connect with other organisations in certain questions and to see how they have worked with these kinds of areas within their organisation.* ***Respondent 1***

> *We talk to other organisations [...] or other large Swedish organisations. [...] It's a mutual discussion that we learn from each other. [...] It's more like we need to solve this together.* ***Respondent 2***

Accounting research usually focuses on the development of accounting policies and the information technology infrastructure related to them. However, this study focuses on cooperation and exchange of accounting experiences among departments in different organisations. That constitutes a great deal of support for the accounting work regarding substantial human and material potentials and resources.

To conclude, cooperation is an essential and significant factor for accounting policies development. It might seem complex and problematic due to secrecy and quality test, but it is a robustly useful means to solve existing and potential problems.

4.2. Organisations' implementation of accounting policies

The analysis shows that some organisations face an accounting dilemma when following the agile approach to software development. The agile method presents a challenge from an accounting perspective. It is challenging to separate expenditures that need to be capitalised from maintenance expenses (Balaziuk et al., 2020). Overhead costs associated with internally developed software projects are more complex to measure than production overheads (Reed

& Wyckoff, 2016). In contrast to the waterfall method, in which software development is done in stages, the costs are more visible from the accounting perspective.

According to Balaziuk et al. (2020), research on accounting aspects of the agile method in software development requires topical significance. Previous research indicates that the main principles of the agile model are rapidness and consciousness. Those two principles guarantee that small software is satisfactorily delivered to customers constantly on time. This model engages with multiple iterations. Every iteration attempts to promote the product (McCormick, 2012). The agile approach is a more accurate way of scheduling and delivering on time (Smits, 2006).

Despite the technical benefits of the agile method, the main problem arises with the disappearance of clear boundaries between the stages of development. Organisations have difficulties applying effective accounting methods. The reason is that traditional accounting principles fail to deal with new challenges of the agile method (Balaziuk et al., 2020).

Respondent 2 claims that some organisations have not yet made the transition from the waterfall to the agile method. These organisations need to have more discussions about the possibility of implementing accounting policies. Those policies allow them to deal with the complexity created by the agile method. Through the discussions, the ability to determine and measure the asset's cost is gained.

> *We haven't done a full transition from waterfall to agile for a major part of the internally developed software. We have several discussions in regards to how intangible asset standard IAS 38 can be applied to agile projects, […] since the IAS 38 is based on the waterfall method.* ***Respondent 2***

Organisations that have adopted the agile method are trying to find accounting solutions to determine the internally developed software costs. Before moving to the agile method, each project had its own number, and it was easy to allocate the costs of each project based on its number. However, the type of capitalisation differs among different departments when applying the agile method, said Respondent 1.

> *When it comes to the r&d (Research and Development) department, […] they are still using cost carriers, which is like some sort of project number, […] these cost carriers are easy to follow and track between different gates.* ***Respondent 1***

Software development projects in the research and development department pass through multiple gates. There are research gate, development gate, and maintenance gate. The costs are clear and easy to follow in this section due to the use of cost carriers. However, the development process in other departments is more ambiguous. There are no project numbers and no cost carriers. The development team also works on a range of products simultaneously through different sprints, as explained by Respondent 1.

> *The engineers do only time-reports at the product level, so we needed to find a good way to allocate all the costs that come into the product.[…] We need to calculate what can be capitalised, and what should be considered as maintenance.* ***Respondent 1***

Organisations need to find the appropriate unit of accounting in order to be able to evaluate their accounting achievement. In agile environments, the stages of development are not clearly defined (Celi & Dorn, 2020). Some organisations use maintenance keys as solutions to separate subsequent expenditures that must be capitalised from maintenance expenses. The percentage of maintenance expenses is estimated through the maintenance keys, based on several specific factors. Fault reports are one of the primary factors in determining the percentage of maintenance expenses. There is a system that collects the various faults, in which the number of fault reports the organisation receives is considered. However, newly developed software lacks sufficient data, which leads to estimating the reasonable level of maintenance percentage based on professional judgement, said Respondent 1.

> *They need to make some kind of judgement to structure it in the best way as possible, when it comes to establish and decide the maintenance key. [...] There is the controlling organisation that just the assessment and provides a proposal for how the maintenance key should look, and what kind of percentage should be used. […] The controlling organisation is the party that needs to make the decisions, said* ***Respondent 1***

This quotation indicates that the controlling organisation plays a major role in the process of separating subsequent expenditures that should be capitalised from maintenance expenses. In the controlling organisation, the managing team discusses proposals for maintenance keys. The team is authorised and qualified to make decisions due to its work with expenditures.

4.3. Operation departments interaction with accounting policies.

The memos show that these organisations set their accounting policies according to IFRS. These memos contain accurate and clear instructions, clarifications, and steps for points related to the implementation of accounting policies. The memos help analyse the relationship between high management that sets accounting policies and operative departments that implement them. There is an interaction among different operational departments with these policies. The departments indirectly participate through discussions and notes made to set policies. The departments of programming and development also communicate to fill in data reports. That makes it easier for the accounting operative departments to register correctly, where all submit to supervision and control. The controllers follow up the operations of all kinds to reach decent results.

The actual implementation of the standards requires the activation of rules and routine procedures through accounting policies (Hartmann, 2021). On the one hand, accounting policies were created as solutions for the lack of criteria for capitalising subsequent expenditures to enhance internally developed software in IFRS. On the other hand, they were bridging the knowledge gap caused by these problems. Therefore, the actual implementation of policies shows to what extent these policies achieve this goal.

The policies were set to facilitate the work of departments. They aim to harmoniously ensure consistent applications. That includes all operational departments and high management at all administrative levels. However, departments can not make decisions separately. The data rearrangement and coordination may waste time instead of developing. It is considered as a flaw in all of the performance, validity, and accuracy of the financial reports. Therefore, the high management undertakes the planning process and develops accounting policies (Hartmann, 2021). In addition to the ultimate interpretation of these policies, as explained by Respondent 2.

> *The purpose of the accounting policy is to make life easier for our accounting departments and to ensure the consistent application throughout the group […] if we just say this is the guidelines book, please use it, then we will have different interpretations all over the group, and we wouldn't be able to answer how we do it, said* ***Respondent 2***

IFRS experts in the management and policy-setting department are keen to hold discussions with the operative departments. In terms of implementation possibilities, they discuss their doubts about whether policies are applicable. The general management cooperates with the controllers to implement policies. The main protocols and frameworks must be established to ensure the development of financial reports based on IFRS. Operational departments take the responsibility to operate this due to their experience in project leadership and costs, said Respondent 1.

> *The IFRS experts management is the one that should interpret and set the policy, and then hand it over to other departments, but to set the policy, we need to take input from a lot of different departments, said* ***Respondent 1***

The operative departments show that constant communication with senior policy-making departments solves any problem of uncertainty. They cooperate to discuss the solutions and set the policies from the group's perspective, as defined by the IFRS. They also ask for more explanations for some doubtful or ambiguous policies, as respondents 3 and 4 claim:

> *If there is an inter interpretation, where we are a bit unsure, we can involve the person who has been a part of writing or making that interpretation, to make sure how to interpret that actual situation, said* ***Respondent 3***

> *We also have a close connection with the control area too. I would say that all of them are interlinked, […] If we need their help to make a judgement, we contact them. We also contact controllers to get a better understanding of the actual business if we are unsure. All in all, yes, communication is so significant in such cases, said* ***Respondent 4.***

It is noted that the communication increases the significance of the operative departments' role in the development of accounting policies. It defines the operations and helps develop various steps in order to implement clear and accurate accounting policies. Regarding accounting policies setting, these departments are active action-takers, not just recipients of instructions. It is due to the strong interdependence, integration, and continuous communication between the operation and control departments. In addition to the connection with IFRS experts and accounting policies development management, as respondent 4 emphasised:

We need to do our judgement, since we need to apply the standards on the reality [...] We can make that judgement ourselves for sure, but we need to have their permission, since it could affect the financial statements significantly, said ***Respondent 4.***

5. Discussion

Initially, regarding the development over the last two decades, traditional production organisations have found themselves compelled to enter the field of software development (Sommerville, 2000). Many products are no longer traditional and increasingly intertwined with technologies. The development of IAS 38 also has not been at the same level as the software development. These issues motivate the traditional production organisations to work on developing accounting policies that separate maintenance expenses from enhancement expenditures of the internally developed software. This separation helps organisations avoid capitalising maintenance expenses (Triplett and Heuer, 2020).

There is a knowledge gap for organisations, which is finding the best way to separate expenditures of the internally developed software. It has prompted relevant organisations to strive to fill the gap. IAS 38 requires an organisation to recognise an intangible asset if it meets specific conditions and criteria (IAS 38, para Objective). Developing accounting policies helps find practical solutions to these cases in line with IFRS Standards. The knowledge gap and lack of solutions prompted the authors to ask the first research question: How are international standards translated into accounting policies regarding internally developed software?

According to Boddie et al. (1990), for decades, there has been a need to distinguish between expense maintenance and enhancement expenditures. When organisations comply with IFRS, they are obliged to interpret IFRS in order to adopt them. In the present study, two organisations' accounting policies have been checked. It has been explained why some policies are namely implemented by management (Bunea, 2006). IFRS specialists read articles and follow up on periodic reports, such as the Big Four, to issue acceptable accounting and financial reports. IFRS specialists also manage the process of implementing accounting policies and issue notes that instruct that. Organisations benefit from the advice and guidance provided by external audit firms, especially the Big Four. These guidelines help maintain accounting policies within the framework of IFRS and exclude what may not be consistent.

Hartmann (2021) states that the accounting policy setting needs effective communication. The information perspective is crucial and creates one of the essential points of view used by researchers. Organisations may demand more consistency in their reports when applying

policies consistent with IFRS (Marioara et al., 2010). It is crucial to know that financial and management accounting have two different contexts. The standards bind the financial accounting context with legal requirements for listed organisations (Hartmann, 2021).

One unanticipated finding was that there is a cooperation between the two organisations that have been questioned during the study. The collaboration occurs at the level of policy-setting departments. The heads of departments cooperate through formal and informal networks. This finding is considered as unexpected based on the restrictions imposed by these organisations, i.e., maintaining the competition and secrecy of information. It is consistent with Thrane and Hald (2006) finding, who emphasises the cooperation and experience exchange between organisations, which benefits all parties. This finding is also consistent with that of DiMaggio & Powell (1983), who found that organisations move towards institutional isomorphism, as they seek to emulate the policies and practices of other successful organisations. In institutional isomorphism, the rules and practices between organisations are compatible in a given organisational area (Johnston, 2013). Collier (2016) believes that cooperation between organisations increases the chances of finding solutions to problems. Thus, the collaboration between organisations opens the way for the transfer and development of valuable ways and ideas. At the same time, it supports the idea of institutional isomorphism and mimetics between organisations, as previously argued (DiMaggio & Powell, 1983).

The second question in this study was, how do organisations' software development methods affect the capitalisation of expenditures? Controversy still exists regarding the different approaches to develop and update internally developed software. Some specialised programmers claim that the waterfall method is less complicated, as it is done in clear stages. Others argue that the agile method is best suited for this type of project. The Agile method is creative and modern. It does not submit to the frameworks and preconceived plans that restrict programmers and developers' implementation. Others see a mixture of the two methods and subject each partial software development project to one of these methods as appropriate to the state of that project. Organisations need to understand the technical complexities associated with software development methods. Therefore, the choice of method imposes a different accounting treatment. The management must sort out periodic and non-periodic maintenance expenses and enhancement expenditures to be capitalised.

In other words, following the agile method completely by one of the two organisations made its focus on developing completely new accounting policies. It makes capitalisation of subsequent expenditures in terms of continuous follow-up and sorting of these expenditures almost complete. The organisations set the operational foundations to facilitate the sorting process with the help of the operating departments (Balaziuk et al., 2020).

The second organisation adopted both traditional waterfall and agile methods. It motivated the IFRS experts to maintain the accounting policies of the waterfall method and work to develop accounting policies that fit the internally developed software projects which use the agile method.

There is also cooperation between IFRS specialists in these organisations and the other departments that are involved directly or indirectly in policy implementation. The role of the operational departments is critical, especially the controllers who actively participate in the discussions. They provide essential information to upper management about expenditures. This information greatly and effectively helps in determining the nature of these expenditures. Expenditures are allocated between the enhancements that add value to the asset and maintenance that maintains the asset's complete operating condition.

Controllers are in direct contact with programmers and engineers who provide time reports that show time and effort spent on projects under development. They are also in direct contact with accountants who record daily operations and issue monthly and annual reports. Communication takes place through official correspondence, meetings, and discussions. Communication aims to simultaneously achieve a smooth and acceptable workflow and avoid contradictions with IFRS. The feedback that operational departments provide to IFRS specialists and policy development is essential for clarifying ambiguities that may be encountered. It indicates the necessity of cooperation between the higher management that makes the decisions as IFRS experts and the operational departments.

It is taken into account that the methodology of the present study had been subjected to some limitations. The first limitation is the lack of literature regarding the subsequent expenditure capitalisation of the internally developed software. Previous literature focused on intangible assets, including internally developed software only, without expanding on the capitalisation of subsequent expenditure. The second limitation is the lack of information provided by case organisations about the subsequent capitalisation of internally developed software

expenditures. The reason is that the institutions are keen on maintaining the confidentiality of information. To explain, the information is limited by commercial reasons related to competition. The third limitation is secrecy. A respectful deal of information was gathered from several organisations, but some of it is unpublishable due to intellectual property.

In conclusion, the IFRS experts strive for appropriate accounting policies for capitalising subsequent expenditures for internally developed software. They cooperate with operative departments, the Big Four, and accounting policy setters in other organisations. They design the accounting policies to suit the waterfall or agile methods. The policy-setting departments in the two case organisations understood IFRS and developed decent accounting policies. Policy-setting departments reached the accounting policies by providing relevant reports and financial statements. Policy-setting departments constantly strive for solution finding and knowledge-gap bridging regarding the capitalising of subsequent expenditures of internally developed software.

6. Conclusion

To conclude, the present study attempted to provide diverse and decent insights from different levels of management. I.e., high management members in the IFRS department, and mid-level management, i.e., members of the operational department. The present study was conducted to answer questions about setting accounting policies to capitalise the subsequent expenditures of internally developed software in traditional production organisations. The study examined two international organisations, and the results showed that organisations develop their accounting policies based on their interpretation of IAS 38. Three main levels have been identified in the organisations to conduct the study.

The first level is the translation of IFRS into accounting policies in the organisations and the cooperation among organisations. The study explained how the IFRS department strives to develop accounting policies compatible with IFRS. The development goes through many stages, such as understanding the requirements of IFRS, reviewing the updates issued by IFRS, and benefiting from the experience of the Big Four. The results also stressed the significance of cooperation and the exchange of experience among organisations, which greatly supports the accounting work. It is consistent with the previous research on institutional isomorphism, which supports cooperation and the exchange of information.

The second level is the organisations' implementation of their defined accounting policies. Based on the requirements of IFRS, the department began to develop a preliminary accounting position paper. The position paper is subject to further examination to set the final details. It is done according to each organisation and the method they used to develop software, whether the agile or the traditional waterfall method.

The third level is how operations departments interact with the accounting policies. Operations departments do not operate independently. They constantly receive instructions from the IFRS department. However, they do not only deal with accounting policies as recipients, but they also interact with them. The study showed the significant role of these departments in providing essential information and assistance in the process of setting accounting policies. These departments meet with the IFRS department, programmers, and developers.

To conclude, developing accounting policies for subsequent expenditures is an integrated process. The experts of IFRS in these organisations work to find solutions that formulate the

basis of primary accounting policies within the framework of IFRS requirements. Policies can be properly and efficiently implemented by providing technical support, discussion, consultation, and development of working methods.

7. Suggestions for further research

New cases of software and subsequent expenditures are still valuable for research and follow-up. Therefore, it is suggested that more studies should be carried out and focus on the diligent work carried out by IFRS experts. It should motivate the IASB to make revisions and updates to IFRS, especially standard IAS 38. It may expand to cover most of the latest instances generated by the tremendous development of internally developed software and its subsequent continuous enhancements.

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