

Digitalization in accounting– Warmly embraced or coldly ignored?

Digitalization
in accounting

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Abstract

Purpose – The Accounting Information Systems (AIS) research field emerged around 30 years ago as a subfield of accounting but is at risk to develop further as an isolated discipline. However, given the importance of digitalization and its relevance for accounting, an amalgamation of the parent research field of accounting and the subfield of accounting information systems is pivotal for continuing relevant research that is of high quality. This study empirically investigates the distance between AIS research that is included in accounting literature and AIS research that prevails in dedicated AIS research outlets.

Design/methodology/approach – To understand which topics define AIS research, all articles published in the two leading AIS journals since 2000 were analyzed. Based on this topical inventory, all AIS studies that were published in the top 16 accounting journals, also since 2000, are identified and categorized in terms of topic, subtopic and research methodology. Next, AIS studies published in the general accounting field and AIS studies published in the AIS field were compared in terms of topics and research methodology to gain insights into the distance between the two fields.

Findings – The coverage of AIS topics in accounting journals is, to no small extent, concentrated around the topics “information disclosure”, “network technologies” and “audit and control”. Other AIS topics remain underrepresented. A possible explanation might be the focus on archival studies in accounting outlets, but other elements might play a role. The findings suggest that there is only a partial overlap between the parent accounting research field and the AIS subfield, in terms of both topic and research methodology diversity. These findings suggest a considerable distance between both fields, which might hold detrimental consequences in the long run, if no corrective actions are taken.

Originality/value – This is the first in-depth investigation of the distance between the AIS research field and its parent field of accounting. This study helped develop an AIS classification scheme, which can be used in other research endeavors. This study creates awareness of the divergence between the general accounting



research field and the AIS subfield. Given the latter's relevance to the accounting profession, isolation or deterioration of the AIS research must be avoided. Some actionable suggestions are provided in the paper.

Keywords Accounting information systems, Accounting research field, Literature review, Digitalization, Technology

Paper type Literature review

Introduction

Accounting is a well-established research discipline that is key to businesses from various industries as well as education programs. An undeniable factor in accounting, both in practice and in research, is the impact of digitalization on accounting (Murthy, 2016). The goal of this paper is to analyze the field of accounting, and more specifically, its inclusion of accounting information systems research, in order to better apprehend the interrelationship among the accounting and the AIS research field, as these fields should be aligned to create synergetic effects (Sutton, 2010).

The accounting research field has several subfields, not only AIS, that specialize in topical areas, each having dedicated journals to nurture research in that area. Apart from dedicated topical journals, a rather stable list of top-6 general accounting journals exists when ranking high-quality publications in accounting [1] (Barrick *et al.*, 2019). Zooming in on the AIS topical area reveals a telling, somehow deviating, observation. For AIS publications, the top journal (JIS) is a “dedicated journal” and has almost three times the number of highly ranked articles relative to the next-best general accounting journal (AOS) in three consecutive 6-year periods (Barrick *et al.*, 2019). There is no other subfield of accounting where this discrepancy is so remarkable as with AIS. We consider this observation as a first signal of a potentially too large distance between the accounting research field and the AIS subfield.

Accounting and AIS cannot be studied separately as they both form an integrated whole. Yet, the difficulties that AIS researchers experience in publishing in top accounting journals were already mentioned in the past by the acting editors-in-chief of both JIS (Journal of Information Systems) and IJAIS (International Journal of Accounting Information Systems) (Sutton, 2010; Murthy, 2016) and acknowledged by several other accounting researchers (Poston and Grabski, 2000; Stone, 2002; Dechow and Mouritsen, 2005; Granlund, 2011; Kogan *et al.*, 2019; Quattrone, 2016). This challenge is particularly emergent since experienced AIS researchers seem to leave the discipline on one hand, and it is difficult to attract and educate new PhD students on the other hand (Sutton, 2010; Murthy, 2016). Without a critical mass of dedicated researchers, a discipline is vulnerable to deterioration in research quality and relevance. These expressed concerns provide further support for the idea of a potentially excessive distance between the parent and the subfield.

Tensions between a parent research field and its subfield(s) are not uncommon. For example, the interplay between a parent research field and subfields was also the subject of investigation in the research field of computing. At a moment of impetus for amalgamation between the three academic subfields in computing [2], Glass *et al.* (2004) investigated how well the people in the different disciplines understood each other and were prepared to accept each other. The three sub-fields showcased a certain level of isolation, similar to what is signaled in the Accounting–AIS relationship. The conclusion of Glass *et al.* (2004) nicely describes the potential danger of research disciplines that are assumed to strengthen each other but are too far away from each other: “*Especially important is the fact that each of the fields has singled out a set of topics on which to focus its research, topic areas that have little overlap. The most significant problem area appears to be that each of the fields has its own set of preferred research approaches and research methods, which do not necessarily command the respect of the other disciplines*” (Glass *et al.*, 2004, p. 94). As already stressed by Sutton (2010) and Murthy (2016), a full-fledged integration of AIS in the accounting field can therefore only

occur when there is mutual understanding and mutual acceptance. The AIS field should recognize that it is “a viable part of accounting and integrate with the larger discipline” (Sutton, 2010, p. 294). In this study, we empirically investigate, from the AIS perspective, the distance between the parent accounting field and the AIS field.

Given the position of AIS research as a rather young subfield of accounting, confronted with challenges of recognition such as publishing in top journals of the larger accounting field and maintaining a steady stream of researchers to safeguard quality AIS research, we aim to answer the following research question:

RQ. To what extent does accounting research reflect the advancements in AIS research in terms of topics and applied methodologies?

To answer this research question, a two-phase approach was taken. In phase one, we surveyed the AIS literature over the past two decades to identify the topics that constitute the AIS research field. We extracted a topics classification scheme from these studies. In phase two, we used this classification scheme to identify and analyze the AIS studies that were published in the 16 most influential accounting journals. To measure the diversity of AIS research in both the AIS field and in the accounting field, the approach of Vessey *et al.* (2002) was followed. Relative shares of both topics and methodologies are compared against the mean to gain more insights into the representation of topics and methodologies in both research fields.

Based on our analyses, several important findings emerged. Firstly, whereas the AIS literature has a broad and balanced level of diversity in research topics, AIS research in general accounting journals is more fragmented and focused on specific areas. This might be worrisome. If each field has its preferences in terms of topics and research methods, recognition and respect for the other field may diminish, and the link between parent and subfield might turn artificial. We underscore the importance of the AIS field given the contemporary transformation to an information-based society and the limited number of accounting publications covering AIS topics (Murthy, 2016; Stone, 2002).

Secondly, by identifying topical trends over time, we observe that accounting journals have been increasing their coverage of AIS topics in recent years, thereby increasing topic diversity. However, large differences exist among accounting journals. Some are front-runners in publishing AIS topics, whereas others do not extensively publish on AIS topics. Ideally, such differences fade out over the years, indicating that all accounting journals equally embrace AIS studies (in terms of topics and methodologies, not necessarily in mere numbers).

Thirdly, the methodologies between both fields differ. Whereas accounting research is dominated by archival studies, the AIS field is characterized by a broader set of methodologies. This finding is another important indicator that there is indeed a certain distance between AIS and accounting since the set of accepted research methods tells something about the “view on research” a research field applies (Vessey *et al.*, 2002). It is important to follow-up on this distance, as diverting research views may distort a valuable interaction between both research fields. It is important to take into account, however, that this relationship goes both ways. We only investigated the uptake of AIS research in the larger accounting field. A follow-up investigation would require a compatible study on the integration of the larger accounting research topics and methods into the subfield of AIS.

Fourthly, by analyzing the topical focus across years, we find a great deal of similarity between accounting and AIS, suggesting that accounting and AIS are subject to similar research dynamics. For example, both AIS and accounting research have recognized the importance of enterprise information systems in the generation of accounting information, with spikes around 2003–2004 and 2014–2015. This finding again illustrates the clear link between both fields, despite each field having its own focus. We elaborate on these findings and their implications in our discussion section.

Our study contributes to the literature in multiple ways. First, we shed light on the extent to which accounting research has embraced AIS research as one of its subfields and investigated the distance between both fields, starting from the AIS perspective. Although there is a partial overlap in topics and methodology, our findings report on potentially diverging coverage of both aspects which may be detrimental to both the accounting and the AIS discipline. To avoid this scenario, recommendations have been formulated. Second, we complement recent literature reviews in the AIS field such as the ones of [Chiu et al. \(2019\)](#) and [Murthy \(2016\)](#), by investigating AIS research in both AIS outlets and in accounting outlets. However, our focus on examining the distance between both fields in an empirical way is unique in the accounting field. By transposing our classification to the accounting field, we were able to bring more depth to our understanding of how the AIS and accounting fields relate to each other. In that regard, we also complement the work of [Coyne et al. \(2010\)](#) and [Barrick et al. \(2019\)](#) that touched upon the integration of AIS research in accounting in terms of number of publications but did not investigate this further at the level of topics. Additionally, the manual classification by an expert panel (as opposed to a text mining approach) permits thorough insights into the research field. Third, we provide an up-to-date topical classification of the AIS literature particularly suited to the accounting literature. This classification may help to position accounting research studies vis-à-vis the AIS field.

The remainder of this paper is organized as follows. The next section presents the context of this paper and provides an overview of prior AIS literature reviews. Section three discusses the development of a topical classification scheme based on the AIS literature in AIS journals. Section four presents the results of analyzing AIS research in general accounting. Next, a discussion of the findings and the limitations of our paper as well as further research ideas are presented. In the final section, a summary of the main results is provided.

Background

The field of accounting has a long history and has since its inception focused on the generation and use of information by various stakeholders ([Staubus, 1999](#)). Over the past decades, ample research has provided support for the important role of accounting information for various actors, such as investors, managers and customers. As such, this focus closely matches the focus of the AIS field, which targets the systems and users of systems that collect, use or disseminate accounting information ([Coyne et al., 2010](#)). Based on the study of [Baldwin et al. \(2000\)](#) on whether AIS researchers position themselves more in the accounting, more in the Information Systems (IS), or on the bridge between both research fields, AIS can be seen as a subfield of accounting. The difference between both fields is that whereas the accounting field deals with all topics in which accounting may play a role, the AIS subfield explicitly builds on an IS component ([Murthy, 2016](#)). Although both fields share a similar topical focus, several accounting researchers have issued criticisms on their field and have highlighted the difficulties the field faces in integrating modern IS developments and digitalization into accounting (e.g. [Dechow and Mouritsen, 2005](#); [Granlund, 2011](#); [Kogan et al., 2019](#); [Moser, 2012](#); [Quattrone, 2016](#)).

An example article that addresses the difficulties of AIS research finding its way into the larger accounting field is the study by [Coyne et al. \(2010\)](#). It showed that the coverage of AIS topics in the top 10 accounting journals is on average 1% or less. According to this study, accounting researchers may not be fully grasping the potential that modern technologies offer for accounting practice and research. Similar thoughts have been echoed by authors in the AIS literature ([Murthy, 2016](#); [Stone, 2002](#)). A recent study by [Barrick et al. \(2019\)](#) further supported the idea that the top accounting journals continue to underexpose AIS research. Specifically, when ranking all journals with the most cited AIS articles, one-half of the journals based on this ranking is different from the traditional top 6 accounting journals.

Different dynamics could be at play, explaining these observations. For instance, general accounting journals and AIS journals have different foci. Consequently, the number of AIS research studies in general accounting journals is limited to a subset of the published articles; albeit probably a larger share than 1%. However, this dynamic would not explain the large gap between the general and the dedicated journals when it comes to highly ranked AIS articles that are typically published in the dedicated journals, not in the general ones. If the parent accounting field truly embraces the AIS subfield, highly ranked AIS articles could be expected to find their way to the top accounting journals. Other dynamics that could play a role are related to the investigated topic or the applied research methodology. If a (different) preference for certain topics and/or methodologies exist in the two research fields, a discrepancy between the general and dedicated journal articles would arise. Given the distinguishing characteristics of a subfield, this would not be surprising. However, caution is warranted when these preferences lead to a lack of common understanding and appreciation of both fields. Previously reported evidence suggests that such a split between the field of accounting and the field of AIS research is possibly developing.

Existing AIS literature exhibits a strong tradition of publishing review work that examines the state of the AIS field and its possible future directions, as summarized in online [Appendix1](#) [3]. Although not specifically targeted toward accounting, these studies allow for a meaningful benchmark to determine the status of the field. One of the earliest studies, by [Poston and Grabski \(2000\)](#), conducted a trend analysis of a mixed bag of AIS, IS and accounting journals to identify the underlying theories, research methods and IS topics presented in AIS articles between 1982 and 1998. Concurrently, [Samuels and Steinbart \(2002\)](#) analyzed the first 15 years of JIS publications to extract a broad set of topic categories within the AIS field. The scope of the study was, however, limited to one AIS journal for a stipulated timeframe of 15 years. Jointly, both studies shed light on the emergence and development of the AIS field in the prior millennium.

After [Poston and Grabski \(2000\)](#) and [Samuels and Steinbart \(2002\)](#), the interest in AIS literature reviews, specifically those that cover the entire domain of AIS, has declined. The leading AIS journals still publish literature reviews, but given the large body of AIS research, coverage is limited to specific AIS topics (e.g. ERP implementation, XBRL, etc.). Recently, the emergence of content analysis and text mining has led to renewed research interest. A recent study by [Chiu et al. \(2019\)](#) examined a more recent period (2004–2016) to identify key topics and research methods in six AIS journals. The authors further examined changes over time regarding research methods, the coverage of accounting areas in AIS journals and the importance of emerging technologies. Complementing this evidence, studies by [Guan et al. \(2018\)](#) and [Hutchison et al. \(2018\)](#) applied latent semantic analysis to analyze journal publications and to discover AIS research topics in an automated way. By using text mining techniques, these studies were able to analyze an extensive body of research in an automated fashion, thereby allowing for broad coverage.

Drawing on this review of prior work, we identified three important limitations of the existing AIS review literature that restrict the applicability of existing classification schemes to the accounting field. First, although [Samuels and Steinbart \(2002\)](#) analyzed a 15-year period of publications, and [Guan et al. \(2018\)](#) examined a 30-year period, both studies focused on a single academic outlet which might have led to potential biases. Second, the AIS discipline is dynamic in nature and, therefore, the range of topics that define AIS is constantly evolving. Prior proposed classification schemes to identify AIS topics might be outdated. Third, the topics that were identified in, for example, [Samuels and Steinbart \(2002\)](#) were formulated on a coarse level, which makes them difficult to transpose to the accounting field (e.g. “Organization and Management of an Information System”). Fourth, although we recognize the benefits of applying text mining in the context of literature reviews, an automated classification approach as used by [Guan et al. \(2018\)](#) and [Hutchison et al. \(2018\)](#)

cannot fully substitute for manual coding, as the latter allows for a better understanding of terminology and content and hence allows for a more accurate analysis of research articles. Specifically, text mining approaches may fail to capture domain-specific aspects of language and are unable to resolve alternative meanings of the same word (e.g. “agent” in the context of “agency theory” or in “REA”) (Loughran and McDonald, 2016).

Although some AIS studies have already made an initial limited headway in examining the representation of AIS topics in the accounting literature (e.g. Murthy, 2016; Poston and Grabski, 2000; Stone, 2002), most of these studies focus on specific topics; for example, the effects of emerging technologies on accounting are well documented in the AIS literature (e.g. Dai and Vasarhelyi, 2017; Kokina et al., 2017; Zhang et al., 2017). Therefore, an overall oversight is missing, since the different fragmented studies do not shed light on which AIS topics are acknowledged in the current accounting literature. Even apart from the scope of existing literature overviews, an empirical investigation of the distance between the accounting field and the AIS field is lacking.

In order to obtain a comprehensive oversight to answer our research question, two consecutive steps are taken. The first step is to identify the dominant topics in AIS research, which is executed in phase 1. Next, the identification and investigation of AIS research in accounting journals are made in phase 2.

Phase 1 – Identifying AIS topics

In the first phase of the study, we explore which topics constitute AIS research following the process depicted in Figure 1. We investigate this through a systematic literature review of the two top AIS research journals, *Journal of Information Systems* (JIS) and *International Journal of Accounting Information Systems* (IJAIS) and develop a new topical classification scheme.

Research methodology

We conducted a systematic literature review for the 2000–2018 period of the two leading AIS journals, as identified by Barrick et al. (2019): *Journal of Information Systems* (JIS) and *International Journal of Accounting Information Systems* (IJAIS). This “revealed preference ranking” is based on citations, as opposed to “stated preference rankings” that rely on surveying faculty. Both JIS and IJAIS are ranked higher than the traditional top-tier accounting journals for the AIS topical area (Barrick et al., 2019). Therefore, the articles published in these journals can be considered as representatives of high-quality AIS research.

To conduct the systematic literature review, we followed the established guidelines as published by Vessey et al. (2002), Webster and Watson (2002), Rowe (2014) and Massaro et al. (2016). The citation information for JIS and IJAIS from 2000 to 2018 was extracted from Ebscohost and ScienceDirect, respectively. This resulted in a list of 720 publications. This list was screened to examine whether the article qualifies as a peer-reviewed publication.

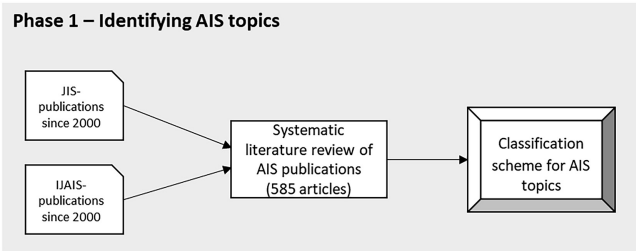


Figure 1.
The process followed
in Phase 1

Non-peer-reviewed editorial notes and discussions were removed from the list, as these did not qualify as research articles. Excluding editorial notes, commentaries, discussions and withdrawn articles resulted in 585 articles.

The list of 585 articles formed the basis of the literature review. The identified articles were coded by two interdisciplinary teams formed by the authors, comprising both accounting and AIS scholars. Two members constituted one team, and three members the other team, all at the level of assistant professor or higher. Both teams coded all academic articles independently by reading the title, abstract, keywords, and, in case of ambiguities, the article itself. The following criteria were coded: subject, topic and research method. To safeguard internal validity in coding, there were team meetings to examine intercoder reliability after coding the first 300 (of the 585) articles. During this meeting, clarification or adaptation of certain research schemes were discussed. Afterward, both teams independently coded the remainder of the articles. This approach avoided biased classification by an individual team or through an individual research field lens. After both teams coded all articles, disagreements in coding were identified and discussed.

Both teams assigned subjects to each article. The assigned subject was what was found to be the most representative subject for the study according to the coders. This was done in an open-ended way, without consulting a predefined list. Since two teams provided subjects for all articles, two different sets of subjects were created in this way. These subjects were used in a later phase to perform a content analysis to uncover an up-to-date and fine-grained scheme of AIS topics.

The research methods of the publications were also coded. For each article, the primary research method was selected from a list of eight research methods identified by [Ferguson and Seow \(2011\)](#) in the context of AIS research: analytical, empirical/survey, empirical/archival, experimental, field study, case study, literature review and synthesis and model building.

Evaluation of coding process

Upon completion of the coding, we evaluated the interrater reliability of the two teams for each coding criterion. For the research method, a Cohen's Kappa value of 0.8 was reached, which points to a substantial level of agreement ([Landis and Koch, 1977](#)). The two teams discussed the mismatches together and came to full agreement on the coded research methods.

Since the subjects for each study were assigned in an open-ended way, we checked for the ratio of agreement instead of the Cohen's Kappa. For this purpose, we went through the pairs of subjects and marked whether they were referring to the *same* concepts, but potentially with different words (e.g. "ERP" and "Enterprise Resource Planning"), whether they referred to the same general concept but at *different levels* (e.g. "ERP" and "SAP," or "Auditing" and "Continuous Auditing"), or whether they were *different*. Overall, the two teams classified 76% of the 585 articles in a similar way (*same* or *different level*), which can be considered very high given that the teams worked independently and without any predefined categories. We investigated and discussed the mismatches (*different* subjects) to ensure a consistent coding of the literature, such that it reflected the variety of subjects in contemporary AIS research. Two conclusions were drawn from this discussion. First, the focal point was found to be different for some studies, although it was agreed upon to code the primary subject of the study. This was because a large number of studies borders on both accounting and information systems. Second, we observed that the variance in our coding was larger for IS topics than for accounting. Additionally, topics that were most similar between teams were those that most closely bordered the accounting field (e.g. continuous auditing, IT governance, internal control over IT). We concluded that for those articles that were assigned different subjects by the two teams, there was a valid reason to do so. Multiple subjects, and consequently multiple topics

(which we see on a more aggregate level), were needed to capture the multi-dimensional content of those studies. This finding is in line with previous AIS literature, which highlighted the multi-disciplinary nature of AIS research at the intersection of multiple themes (Murthy, 2016). As a result, we decided to keep two subjects assigned for the 167 articles in which multiple topics were integrated into a single research question.

New classification scheme for AIS topics

In total, 240 distinct subjects were identified for articles in phase one. The high number of subjects reflects the diversity of the topics that are studied in the AIS field but cannot give a solid picture of the AIS field. To develop a structured and versatile view of the field for AIS scholars, we developed a broader topical classification scheme. We arranged subjects into subtopics, which were then grouped as topics and then perspectives, as shown in Table 1. The complete overview of subjects assigned to each subtopic can be found in online Appendix 2. A detailed description of the subtopics is provided in online Appendix 3.

Subtopic	Topic	Perspective
IT assurance	IT assurance	Assurance perspective
Auditing	Audit and control	
Fraud		
Internal control		
Risk management		
IT business value	IT valuation	Business perspective
IT industry		
IT sustainability	IT strategy	
Enterprise architecture	Enterprise information systems	
Outsourcing		
Information disclosure		
System reliability		Information disclosure
System security		System reliability and security
System implementation		
System development		
System types and technologies		
Decision support systems		
Blockchain		Network technologies
Cloud computing		
Virtual collaboration		
E-commerce		
Social media		
Internet		
Electronic data interchange		
Data analytics	Data	Data perspective
Data management		
Data presentation		
Data security		
Information retrieval	Knowledge dissemination	
Group decision making		
Knowledge management		
Learning		
IT user (characteristics)	IT usage	
IT and IS adoption	Research and education	
Research in AIS		
AIS education		
Singular topics		

Table 1.
Classification scheme
for AIS topics

Analysis of AIS articles

Based on the new classification scheme, all subjects identified in the reviewed articles were assigned to the related topic. [Figure 2](#) shows how the topics in 585 AIS articles are distributed [\[4\]](#). The topics of audit and control and data seem to be most represented in the AIS field, followed by enterprise information systems, IT usage and information disclosure. Adding up the three subsequent topics (research and education, network technologies and IT valuation) shows that eight topics out of 13 cover about 86% of articles in the field. An untabulated comparison between journals shows that there does not seem to be too much difference in the number of articles published by the two AIS journals investigated.

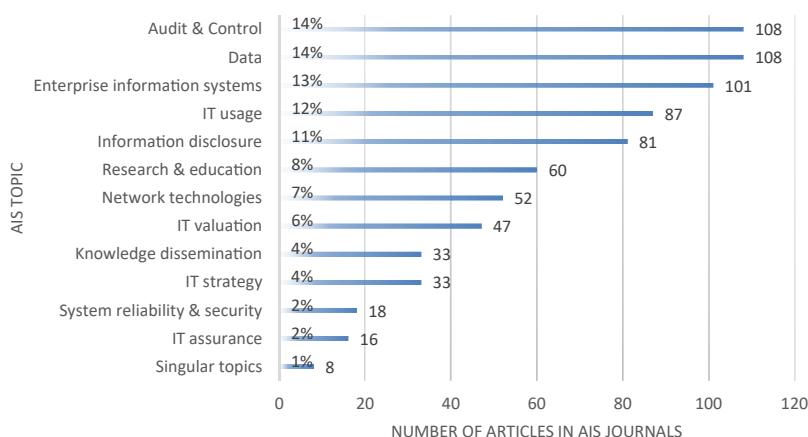
The fact that 28.5% (167 out of 585) of the coded articles were linked to two topics reflect the multifaceted nature of this field. Online [Appendix 4](#) presents a heat-mapped matrix that highlights the (pairs of) topics that have been assigned to the AIS articles. This matrix indicates that AIS articles exhibit a clear tendency to capture more than one topic in an article, which revealed itself even when the coding did not specifically aim to reveal multiple topics.

An analysis of the number of articles per topic in six time periods is shown in the chart in [Figure 3](#), which shows considerable heterogeneity in research topics across time. For improved readability and reaching a meaningful number of articles in each group, the articles were combined into six groups based on the year and the last three topics with few items (system reliability and security, IT assurance, singular topics) were removed from chart. A particular increase can be observed for one of the top topics, data, in the last three years, after a modest decline in the middle. Audit and control and information disclosure seem to be on the decline despite the constant increase in previous periods.

Lastly, the variety of research methods used in the AIS articles is reported in online [Appendix 5](#). Among the examined AIS research articles, literature review and synthesis, archival and experimental methods are the most frequently used research methods.

Phase 2 - Analyzing AIS research topics and methods in accounting journals

In the second phase, we investigated to what extent the AIS topics, as identified in the first phase, are covered in the leading accounting journals along with the applied research methods following the process depicted in [Figure 4](#).



Note(s): Published in JIS and IJAIS between 2000 and 2018: 585 articles and 752 topics

Figure 2.
The representation of
different topics in AIS
articles

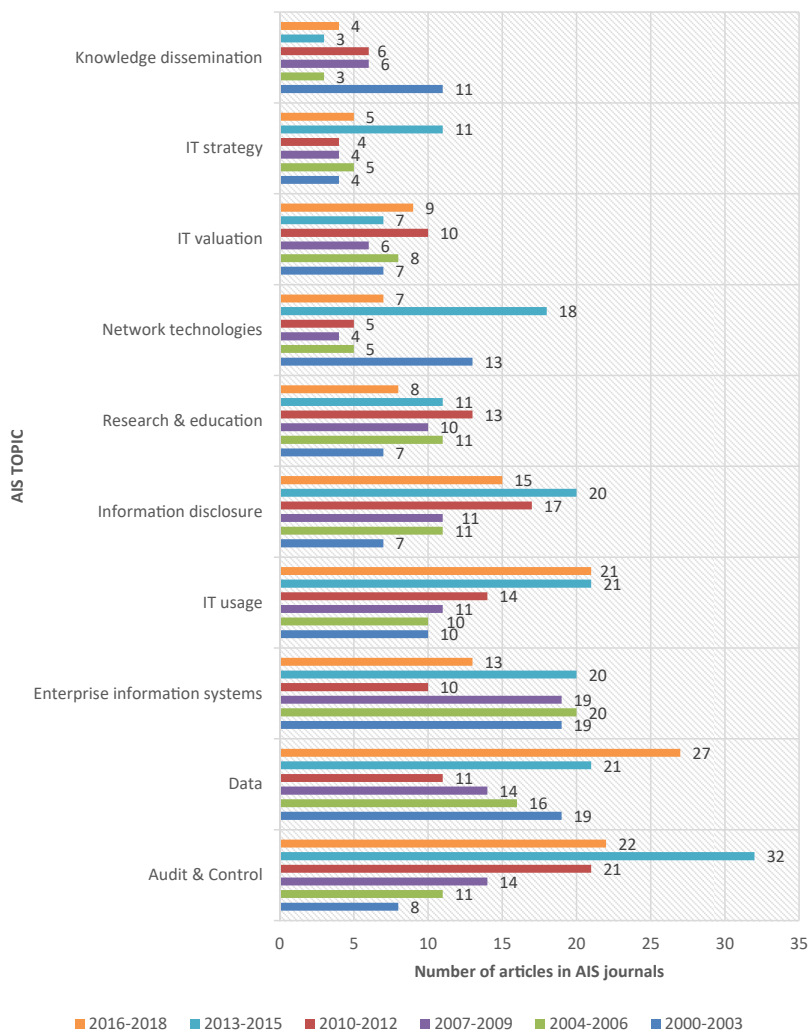
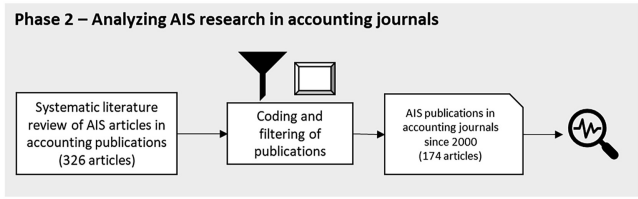


Figure 3.
Number of articles
published per AIS topic
in AIS journals in six
periods in the years
2000–2018

Figure 4.
The process followed
in Phase 2



Research methodology

We conducted a structured literature review of the dominant accounting research journals using the classification scheme developed in phase one. Using previous peer-reviewed articles that have extensively studied the accounting journal rankings, we constructed a list of

accounting journals based on several criteria, such as the H-index, the G-index and the global impact factor (e.g. [Barrick et al., 2019](#); [Chan et al., 2009](#); [Locke and Lowe, 2008](#); [Merigó and Yang, 2017](#); [Rosenstreich and Wooliscroft, 2009](#)). Based on these studies, a list of 16 accounting journals emerged as being representative of the accounting research field [5].

In these 16 journals, we selected the AIS papers. While literature reviews generally identify papers using keywords related to the topic under examination (e.g. [Solomon and Trotman, 2003](#)), this approach was not suitable for our research goals. That way, we might have missed papers due to the different taxonomy applied in the accounting literature as compared to the AIS literature. Therefore, we relied on our own research expertise to identify the selection of papers, which is in line with the approach of [Coyne et al. \(2010\)](#), [Pickerd et al. \(2011\)](#) and [Barrick et al. \(2019\)](#). Additionally, we followed the suggestion by [Murthy \(2016\)](#) to consider information *technology* to be a distinguishing factor to be considered AIS research. The 16 journals were distributed among the authors and a research assistant, who manually went through the assigned journals and selected all AIS papers based on the definition of AIS studies developed by [Coyne et al. \(2010\)](#):

Studies that address issues related to the systems and the users of systems that collect, store, and generate accounting information. Users are defined broadly to include those involved in collection, storage, or use of accounting information or even the implementation of the system[. . .]. ([Coyne et al., 2010](#), p. 634)

To further reduce the risk of missing a relevant article, a conservative approach was applied. In case of doubt, the article was included in our initial overview of accounting studies examining AIS research topics. Commentaries, calls for papers, discussions and retracted studies were excluded. We cross-checked samples of each other's work and regularly held feedback meetings to enhance selection consistency and discuss common difficulties across journals. This resulted in an initial selection of 326 articles.

Following the selection of the 326 research articles, each article was coded in parallel by the two research teams. Both teams coded the topic and subtopic based on our classification scheme presented in [Table 1](#) and the research method. Given our findings in phase one and the inherent multifaceted nature of AIS research, we allowed for the coding of two topics per paper, if deemed relevant. This further reduced the subjectivity of selecting the primary research topic when multiple topics were investigated in one study.

After parallel coding by the two research teams, a collective discussion was held with all authors. There were two main sources of disagreements. The first were studies that focused on systems (e.g. management control systems, management accounting systems, performance measurement systems). For these articles, it was often difficult to determine whether they met our AIS requirement of relating to a digital system. When we did not find evidence that a study focused on a digital information system, the article was excluded from the set of papers. The second source of disagreement was about studies examining accounting questions in an IS setting, such as the software industry. The studies in which the IS setting was purely incidental and not the primary target of the study were also excluded. These exclusions significantly reduced our set of papers (from 326 to 174), but they also ensured a fair representation of AIS research in the accounting literature. Our study is therefore not directly comparable to the studies of [Coyne et al. \(2010\)](#), [Pickerd et al. \(2011\)](#) and [Barrick et al. \(2019\)](#), each of which used both a broader definition and a less conservative approach in identifying AIS studies. While their approaches might have led to an overestimation of AIS research within the accounting literature, we acknowledge that our approach involved the risk of *underestimation*. However, since our research goal was to examine to what extent AIS topics are integrated into the accounting literature, we minimized the risk of including studies that did not have a clear AIS link, as they might have distorted our findings.

Evaluation of coding process

Regarding the research method, a Cohen's Kappa value of 0.76 was obtained, demonstrating high interrater validity. The lack of full agreement highlights the fact that identifying the primary research method is not always straightforward. Regarding the topic, it was more difficult to calculate the interrater validity due to the assignment of two topics to some articles. However, the instances in which one research team assigned topic(s) that were different from the topic(s) assigned by the other team were low. For 78% of the articles, both coding groups identified a similar topic. For 39 articles (22%), there was no initial match in terms of topic. The corresponding investigation revealed that these mismatches were mostly due to one team being systematically more specific in topic selection than the other and to a differential focus on the explanatory or dependent variable. After several joint discussion rounds, the teams came to an agreement on all criteria for the coded papers in this phase.

Analysis of AIS articles in the accounting literature

Figure 5 shows how the topics in the 174 AIS articles in accounting literature are distributed across the different topical categories. In total, 278 topics are listed, since 104 articles were assigned two topics. This finding alone suggests that AIS research in accounting typically addresses multiple facets. The topics of network technologies and information disclosure seem to be best represented in the accounting journals, followed by audit and control, IT usage, and data. The top seven topics out of 13 cover 91% of AIS research articles in the accounting journals. The singular topics category was removed since it included no articles.

Online Appendix 6 presents a heat-mapped matrix that highlights the (pairs of) topics that have been assigned to the articles as done in phase one. Many articles combine two topics, even more so than dealing with a single topic. For example, regarding the information disclosure topic, more multidimensional studies were found compared to studies targeting only information disclosure. This finding confirms the multifaceted nature of AIS research.

An analysis of the number of articles per topic across time is shown in Figure 6. We again split our sample into six periods based on the year and remove the last three topics as they had too few items. For most of the AIS research topics, a low point seems to take place in or around the 2007–2009 period, which is followed by a constant increase thereafter. The sole exception is the data topic, which declines in the last period after a continuous increase in

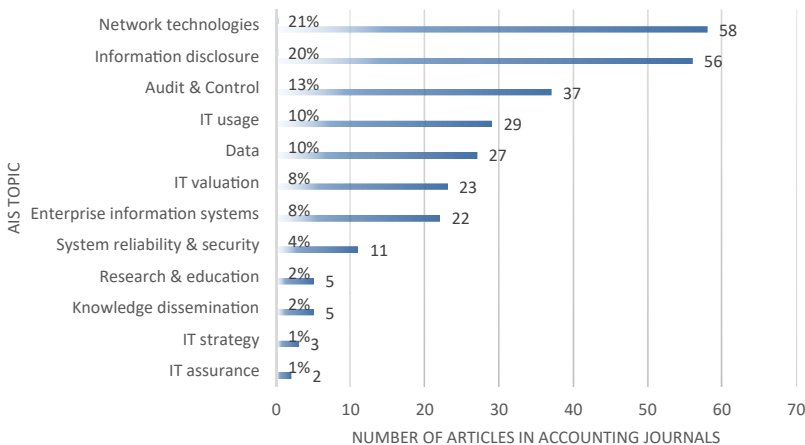


Figure 5.
Representation of
different topics in
accounting articles

Note(s): Published between 2000 and 2018: 174 articles and 278 topics

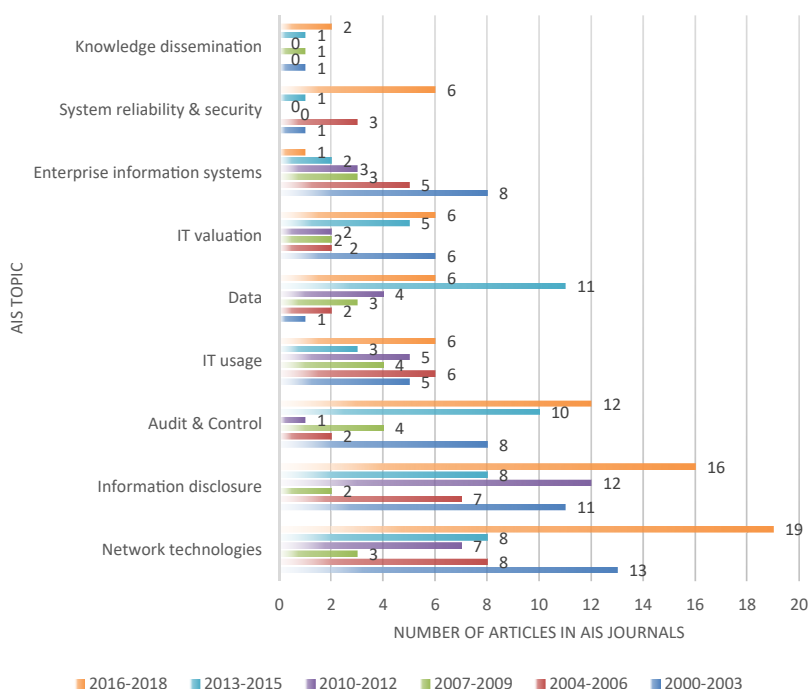


Figure 6.
Number of articles
published per AIS topic
in accounting journals
in six periods in the
years 2000–2018

previous periods. Similarly, the enterprise information systems topic has received diminishing research interest over time. Overall, Figure 6 suggests that accounting journals have been paying more attention to AIS research topics in recent years.

Although an increase in the number of AIS articles was observed in the last years in the overall accounting domain, different journals may have responded differently, as each journal has its own focus. Figure 7 provides further insight into this and contains the total number of AIS research articles published in each accounting journal under investigation. The figure shows that the first six journals, each of which has published 15 or more AIS articles in the last 19 years, provide 66% of the total number of articles among the selected 16 journals. Conversely, the last six journals have altogether published 21 studies over the past 19 years, which equals about 12% of all AIS articles in accounting. Our findings clearly show large differences across accounting journals in terms of their integration of AIS research topics.

The variety of research methods used in the accounting articles is shown in online Appendix 7. Archival is by far the most frequently used research method in AIS papers of the examined accounting journals, which matches the findings and criticisms of prior literature that AIS research might not find its way into accounting journals because of its preferred research method. However, as mentioned before, this cannot be the full explanation. We investigate this further in the next section.

Integration of AIS research in accounting journals

Research method. To examine how the different research methods are represented in AIS and in accounting journals, we compared their relative presence, expressed in percentages. Figure 8 visualizes a pairwise comparison of the studies that were published in AIS and

Figure 7.
Number of AIS articles
per accounting journal
between 2000 and 2018

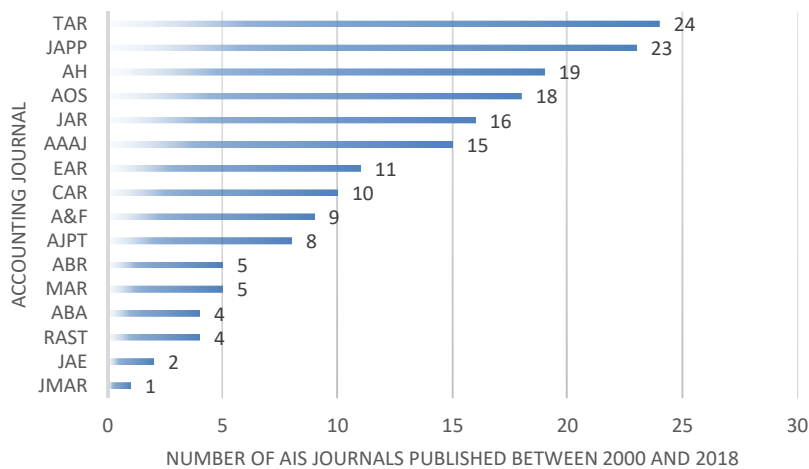
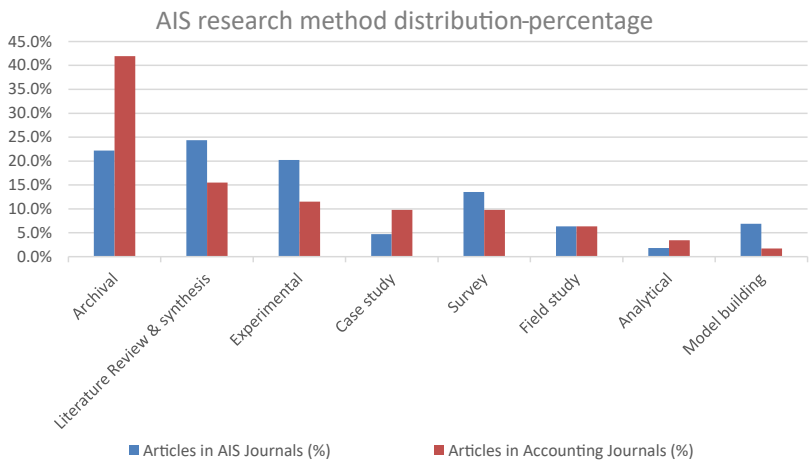


Figure 8.
Distribution of
research methods in
AIS articles published
in AIS journals and in
accounting journals



accounting journals. Although all research methods used in AIS studies in AIS journals are also represented in the accounting journals, it seems that there is a notable imbalance, with archival studies having a much higher uptake than other research methods.

AIS perspective. To gain more insights into the uptake of AIS topics in accounting journals, we provide a comparative view of AIS articles published in AIS and accounting journals. On a higher level, Figure 9 shows the distribution of articles regarding the perspectives that we identified in our classification scheme. At first glance, there does not seem to be a big difference, since all perspectives are represented, and their order does not reveal a substantial difference. However, to investigate how diversified the set of AIS perspectives are in both outlets, we followed the approach used by Vessey *et al.* (2002). In their study of topic diversity in the IS research field, relative shares of topics and other aspects were compared against the mean to gain more insights into the representativeness and diversity of papers over different categories. By means of example, in the case of four categories, an equal representation would

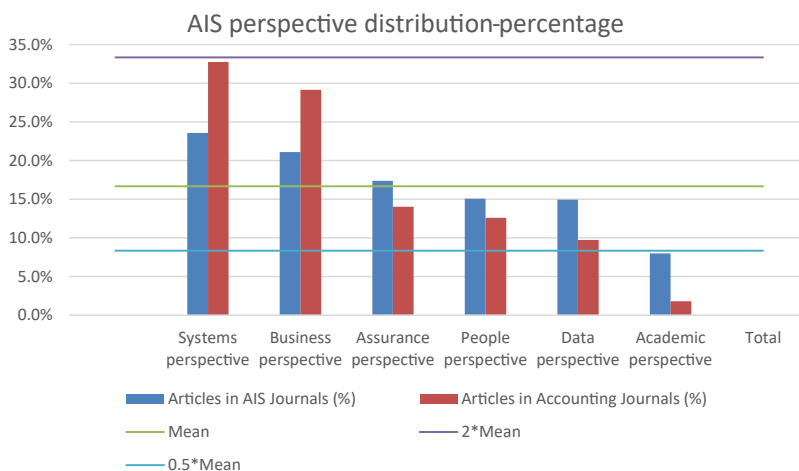


Figure 9. Distribution of AIS perspectives in AIS articles published in AIS journals and in accounting journals

relate to a mean share of 25%, whereas any category representing not even one-half of the mean's share can be identified as an underrepresented category. Likewise, any categories exceeding the average share would indicate an overrepresentation of this category. To facilitate this interpretation, three lines were added to our graph in Figure 9: the mean, 0.5*mean, and 2*mean (Table 2 in online Appendix 8 contains the numbers behind the graph in Figure 9). Taking these lines as reference points, we can see that there is more balance in how AIS perspectives are represented in AIS journals (there are more bars that are in the neighborhood of the “mean” line) than in accounting journals. Accounting journals seem to devote relatively more attention to the systems and business perspectives, whereas AIS journals demonstrate a more equal spread. Both outlets have only a small share in the academic perspective, which is not surprising given the supportive scientific nature of this perspective.

Using the diversity measure of Vessey *et al.* (2002), the standard deviation of relative shares is 5.5% for AIS and 11.9% for accounting journals [6]. Given that a lower standard deviation indicates a higher level of diversity, this metric also suggests a higher level of diversity of AIS perspectives in AIS journals than in accounting journals.

AIS topics. We further investigated the similarities and differences among AIS research in AIS and accounting at the level of investigated topics. Before looking at the diversity and representation of topics in both sets of journals, we examined publication trends per topic over the years. We did so to check whether there were trends that were only picked up by one of the journal classes – a concern that is often raised (e.g. Barrick *et al.*, 2019).

Figure 10 shows the number of AIS studies published in the two leading AIS journals and the number published in accounting journals, broken down per topic. For the eight largest topics, accounting journals follow a similar pattern compared to AIS journals, however demonstrating a more smoothed line sometimes or a time lag of a year. This comparison suggests that AIS research in accounting journals is on par with the developments in the AIS field as a whole and that both follow similar trends across time. However, the coverage is much more limited given that we were comparing 16 accounting journals to two AIS journals.

We examine the distribution of the various topics in Figure 11. This figure sheds light on how well all AIS topics are represented in both journal sets. The underlying data are again provided in online Appendix 8. As with the AIS perspectives, all topics are represented in both journal sets. However, accounting journals again show a picture that is less balanced

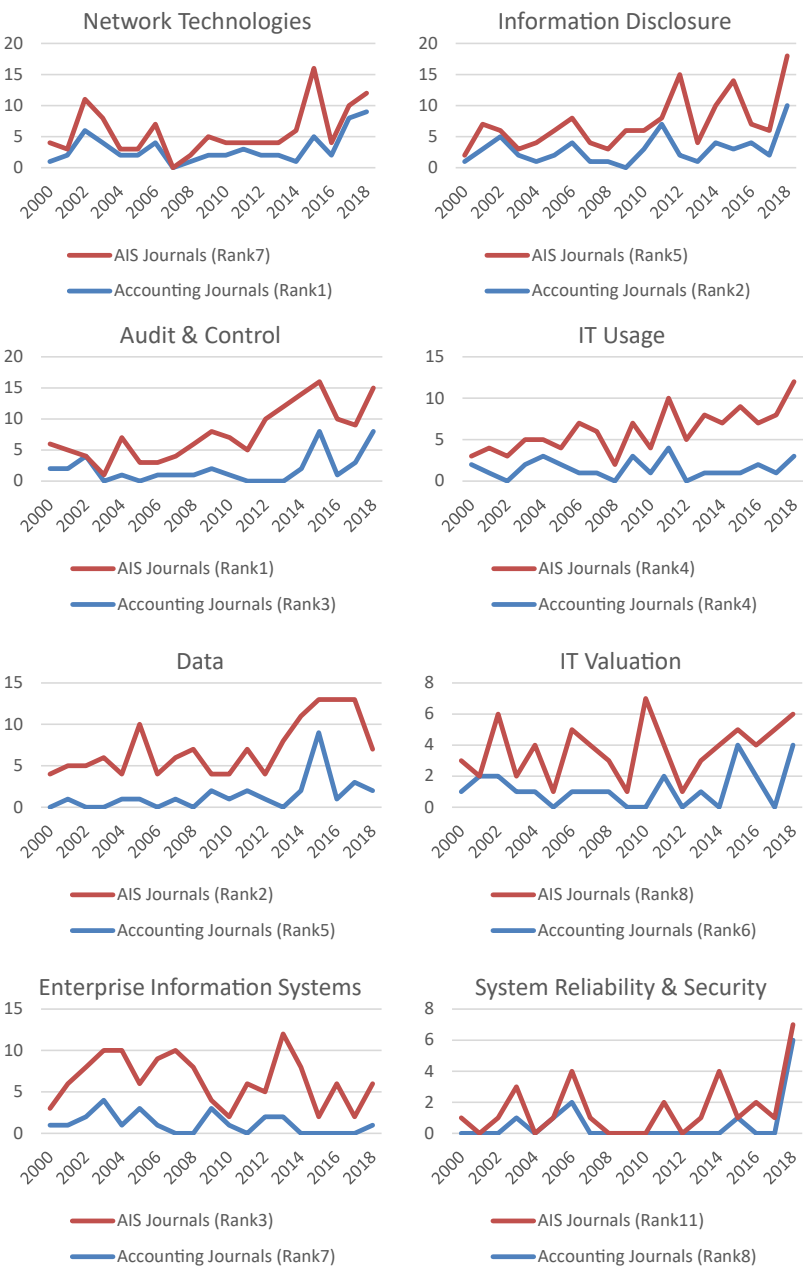


Figure 10. Number of AIS articles, published over the years (X-axis) in accounting journals and in AIS journals, for the different AIS topics

than that in AIS journals [7]. Two topics, information disclosure and network technologies, are overrepresented in accounting journals, with a share that exceeds two times the mean share (56 and 55 out of 278 coded topics). These are the drivers behind the overrepresented business and systems perspectives. These same topics do not receive a similar share of

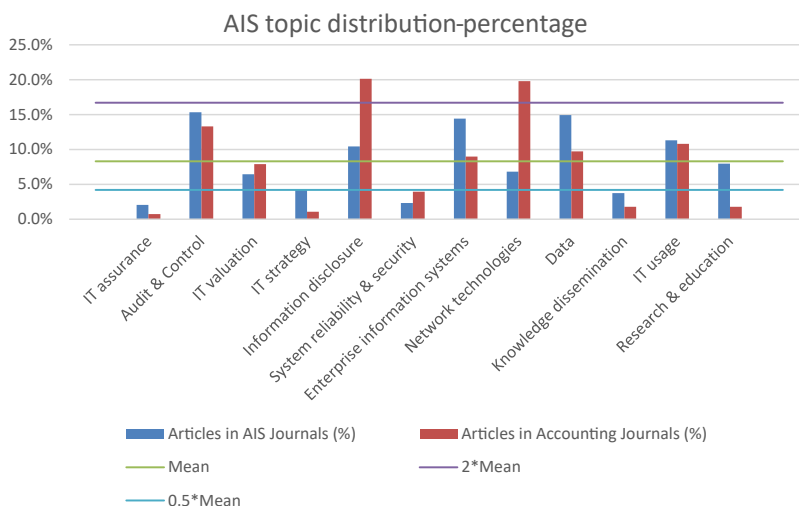


Figure 11.
Distribution of AIS
topics published in AIS
journals and in
accounting journals

attention within the AIS journals. On the contrary, the topic of network technologies does not even represent a mean share in AIS journals.

AIS subtopics. Lastly, we looked at the representation of AIS studies in accounting journals at the level of subtopic. In Figure 12, a visual overview is provided of all subtopics, making abstractions of the topic to which they belong. The exact numbers of relative shares are provided in online Appendix 8. In general, there are more peaks for certain subtopics within the accounting journals than within the AIS journals, also at this low level. As expected, the large presence of the information disclosure subtopic is again visible here. We further see that social media and virtual collaboration are the subtopics that drive the earlier mentioned overrepresentation of the network technologies topic. The larger presence of data

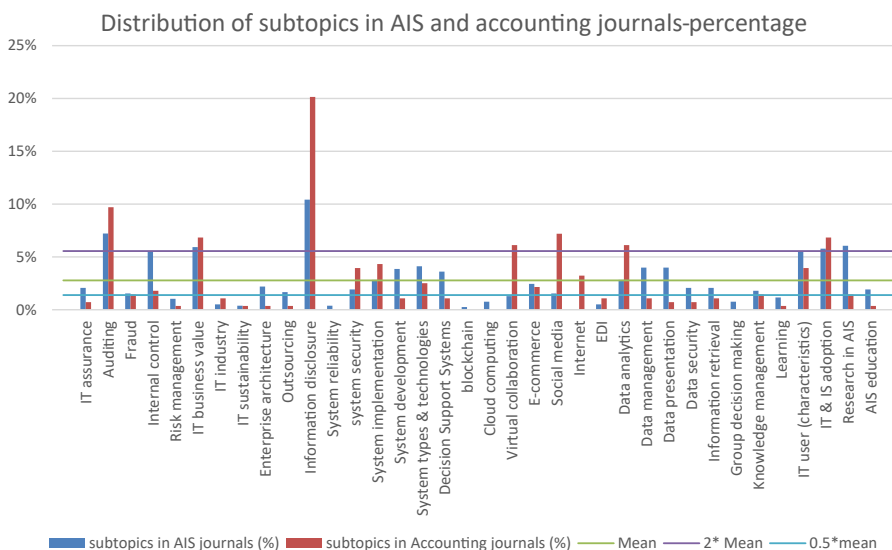


Figure 12.
Distribution of AIS
subtopics published in
AIS and accounting
journals

analytics, on the other hand, is somewhat surprising. “Data” as a topic was less represented in accounting journals than in AIS journals, whereas the subtopic of data analytics seems to be much more integrated.

To further understand the relation between the two fields, we explored the specific subtopics in greater depth. We discuss two of the dominant topics in-text and refer to [Appendix 8](#) for a detailed overview of the subtopics per broader topic. First, we focus on the network technologies topic, which was a top-ranked topic within accounting journals in our analysis (55 articles). [Figure 13](#) clearly shows that even though both fields have published a relatively high number of studies on the topic of network technologies, a different focus exists. For example, the network technologies category in AIS journals is dominated by social media and e-commerce research. In the accounting journals, the latter is only of marginal importance. Similarly, cloud computing and blockchain did not receive any attention in the accounting field, whereas it accounts for 11 and 4%, respectively, of network technology studies in the AIS literature. Conversely, the subtopic, Internet, is only addressed in accounting journals, being non-existent in the AIS field. A different focus seems to exist between both sets of journals.

Data is another interesting topic for further exploration. This topic was not overrepresented in accounting journals. However, it contains the subtopic data analytics, which covers 17 out of the 27 data studies in accounting journals and, hence, forms a subtopic that carries substantial interest within the accounting field. [Figure 14](#) shows the diversity of subtopics within the data topic in AIS and in accounting journals, confirming that one data subsection succeeds in finding its way into accounting outlets, whereas the other subtopics do not succeed in this as easily.

Figure 13.
Distribution of AIS
subtopics in “network
technologies” studies
published in AIS and
accounting journals

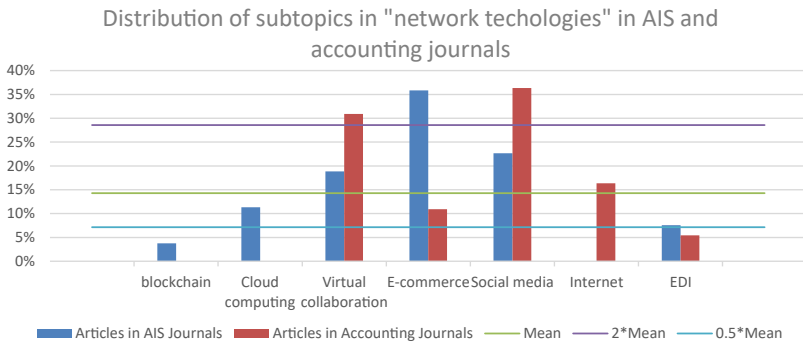
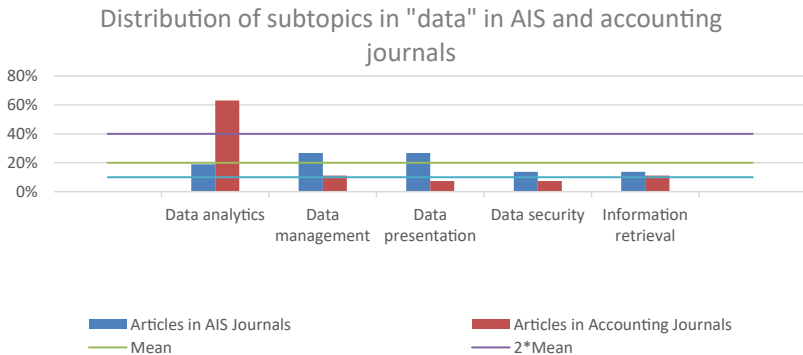


Figure 14.
Distribution of AIS
subtopics in “data”
studies published in
AIS and accounting
journals



Discussion

When analyzing AIS studies that were published in accounting journals between 2000 and 2018, several patterns emerged. In this discussion, we aim to answer the following question: to what extent does accounting research reflect the advancements in AIS research? To do so, we look at AIS perspectives, topics and subtopics, as well as research methodologies. We then discuss the implications of our work for research and practice.

Integration of AIS perspectives and topics in accounting journals

Zooming out to the level of *perspectives*, accounting journals significantly favor studies that contribute to the systems and business perspectives, with the dominant underlying topics being information disclosure (21%) and network technologies (20%). Along with studies on the topic of audit and control (13%), these three topics jointly account for more than 50% of the AIS studies published in accounting journals. Only one of the top three topics in AIS journals coincides with the top topics in accounting journals. Overall, all topics identified in AIS journals were present in the accounting journals, but the coverage spread is more balanced in AIS journals than in accounting journals. There seems to be an invisible filter between AIS research and accounting outlets.

Looking at the time trends, both fields display a similar trend in the coverage of topics. This finding matches the findings of [Murthy \(2016\)](#), who argued that technological developments relevant to AIS are also relevant to the field of accounting. However, this relevance thus only seems to be recognized for a limited subset of topics by accounting journals. On the one hand, it is logical that accounting journals especially embrace AIS topics linked to “information disclosure”, “network and technologies” and “audit and control” because of the obvious overlap between accounting and information systems concerning these topics. On the other hand, it is worth questioning whether AIS research optimally advances accounting literature, theoretically and practically, if there is only focus on those topics of which the added value is already known. Important to note is that we did not have data about the submitted (but rejected) papers of the accounting journals. Therefore, we cannot conclude that the filter that seems to exist between AIS and accounting journals can be attributed entirely to the editors and reviewers of the accounting journals. Based on past (mis) conceptions, researchers focusing on less “mainstream” AIS topics might not target accounting journals frequently enough anymore. Therefore, we hope this study will motivate scholars on both spectrums of the publication process to consider more AIS topics as relevant to the accounting domain.

Integration of AIS subtopics in accounting journals

Differences between both fields become more pronounced when descending one level further to the subtopics. Ten subtopics have no or only one study published in accounting and are actively represented in AIS [\[8\]](#). Conversely, one subtopic, the Internet, shows the opposite trend, driven by a series of studies on online reporting. When considering other topics, such as network technologies or data, apparent differences in preference at the subtopic level emerge. For example, within the topic of network technology, virtual collaboration and social media are highly present in accounting journals, whereas accounting scholars have barely researched e-commerce. The opposite pattern occurs in AIS. An alternative example is the topic of data, as studies on data analytics have found their way into accounting journals to a much greater extent compared to the other subtopics within this category (data management, data preparation, data security and information retrieval). These examples highlight the variation across subtopics and warrant further investigation into why some topics find their way into accounting research while others do not. Thus, our initial interpretation that some research topics may be perceived as too far away from the accounting field also seems to be

confirmed on subtopic-level. We call for future research to identify the obstacles that prohibit accounting researchers from integrating such IS topics. Alternatively, it would be valuable to investigate whether AIS research covers the topics of interest of the larger accounting field. A question of investigation can be if a mismatch is evolving in both directions. Identifying the common ground between the topics might be an answer to increase the interchangeability of research contributions between the two research fields.

A time analysis of the subtopics suggests, as for the topics, that the research attention given to the different subtopics follows similar trends across time in both research fields. For example, social media has emerged as a leading topic for both fields in the past six years, the importance of e-commerce has declined over time and research attention toward virtual collaboration has been relatively stable over time. This finding again highlights the important parallels between both fields, despite the more limited and fragmented coverage of AIS subtopics in accounting journals.

Our findings further corroborate the multi-faceted nature of AIS, as the majority of AIS studies in accounting journals research the intersection of different topical categories, such as information disclosure and audit and control. Our matrix analysis visualizes the presence of single or dual topics within a single study and clearly shows that a large number of studies fall outside of the diagonal, effectively combining two topics. However, ample gaps exist, for example regarding IT assurance and audit and control, which suggests important avenues for further research – not necessarily because of the gap *per se*, but because these topics are likely intertwined in the profession but not (yet) in academic research (e.g. in internal auditing as expressed by [Kotb et al. \(2020\)](#)). Given the steady increase in the number of accounting studies researching AIS topics, accounting may be on the way toward a warm embrace of the AIS subfield. However, this trend strongly differs between journals, corroborating the findings by [Barrick et al. \(2019\)](#).

Applied research methods in AIS studies in accounting journals

Also, the methodological variety between both fields is an important factor to consider, as different research methods allow for examining different research questions. When benchmarking the methods, it stands out that the AIS field is open to a wide range of methods. Literature reviews, experiments and archival studies each account for about 20% of the AIS research articles. Surveys account for about 15%, and other methodologies, such as case studies, jointly account for about 20% of the studies in the AIS outlets included in our investigation. This is in line with prior research reviewing the accounting ([Dumay et al., 2018](#)) and the AIS field ([Barrick et al., 2019](#); [Samuels and Steinbart, 2002](#)). However, the results are different for the AIS studies published in accounting journals. Archival studies by themselves accounted for 42% of all studies in our population. Literature reviews (15%) and experiments (11%) complemented the top three methodologies, similar to the AIS field. Surveys and case studies each accounted for 10% of the studies focusing on AIS topics, and all other methodologies in total accounted for 12%. Jointly considered, our results suggest that the AIS literature relies on a larger variety of research methodologies compared to the accounting literature, which could be a potential explanation for why accounting only partially exhibits a true representation of AIS topics.

The high percentage of archival studies (42%) in accounting journals could further suggest that in the accounting field, sufficient data must be accumulated until a new technology is studied – which inevitably delays the adoption of AIS topics in accounting research. Being open to alternative research methods may thereby open up opportunities to conduct research about new AIS topics early on in accounting.

Scientific progress of accounting and AIS

As a broader theoretical background against which to position these findings, Kuhn's (1970) notion of scientific progress might be at play here. Scientific progress is made over periods of time, with each period subject to a "ruling" paradigm that represents the current thinking within the discipline at that moment. During periods of revolution, one paradigm is replaced by another, becoming the new frame of that discipline. The change in paradigms is driven by the field itself – which falls under the so-called "internalist" view (Vessey *et al.*, 2002). The accounting field fits this internalist view, which could be a possible explanation for why certain AIS research topics experience difficulty being accepted as part of accounting research: these topics may not fit the current paradigm of (accounting) research. In contrast, the AIS research field perhaps better fits the "externalist" view of scientific progress, where there is no fixed ruling paradigm, but the discipline is instead nourished by external influences from different disciplines (Whitley, 2000). This would explain the wide diversity in research topics and methodologies. The IS research field is indeed seen as having an external stance on scientific progress (Vessey *et al.*, 2002), so most probably AIS also fits this view. A different view on scientific progress within the accounting and the AIS research field may be the explanation for current tensions between these two related, but not similar, research fields. It is important to realize these potentially different views on scientific research, as only awareness of these differences can open the door for rapprochement.

Based on our findings, we see a number of concrete actions that might mitigate the risk of AIS and accounting research drifting away from each other. In random order, we identify the following list of recommendations.

- (1) Accounting journals can ensure that their editorial board includes at least one member with an AIS background.
- (2) Special issues can be published on topics that are currently underreported in accounting journals. These issues could be (guest) edited by AIS researchers that are experts on those topics. Our study can be used as a source to identify which topics could be the subject of these special issues.
- (3) AIS researchers can advocate for broadening the basket of journals that are taken into consideration in terms of career opportunities. Citation-based studies like the one of Barrick *et al.* (2019) can be used to support this case, along with the findings of this study. This will be important to maintain a sustainable inflow of young AIS researchers, which is needed to safeguard the quality of AIS research.
- (4) Workshops on different methodologies than archival studies can be organized by AIS researchers and hosted at more generic accounting events.
- (5) Joint projects can be written to obtain research funding, bringing accounting and AIS closer to each other at the most granular level: the individual collaboration.

Surely, there are plenty more initiatives that could be installed to facilitate a rapprochement between the accounting and AIS research fields. Responsibility for implementing these initiatives lies with both the accounting and the AIS researchers, who are not strictly separated as two different camps as we sketch in these sentences. Researchers with AIS expertise should come forward with these initiatives and approach accounting journals, conference organizations and funding organizations, which, in turn, should be susceptible to the ideas. Common ground must be sought, but at the same time, the need for an open mind-set prevails. Journals may need to be open to different research methods than the ones they are familiar with, while AIS researchers may need to motivate their methodology choices more heavily than they are used to. We believe the provided list and the findings of this study can guide both accounting and AIS researchers in nurturing and progressing both fields.

Conclusion

This study examined the distance between the accounting research field and the AIS sub-field in terms of topic and methodology coverage by a profound two-phase literature review and analysis. First, we surveyed the AIS literature over the past two decades to identify the topics that constitute the AIS research field. Our analysis indicates the following topical categories central to the AIS literature: IT assurance, audit and control, IT valuation, IT strategy, information disclosure, system reliability and security, enterprise information systems, network technologies, data, knowledge dissemination, IT usage and research and education in AIS. Next, we analyzed the 16 most influential accounting journals using this topic classification to evaluate the extent to which accounting research has embraced AIS research topics. Our analyses show that accounting research has examined some AIS topics heavily and some scarcely. The research methods employed by accounting also differ from those used in AIS, which could (at least partially) explain why some areas have received scant research attention. Coverage of AIS topics by accounting research has, however, increased over time, and important parallels exist between both fields – although large differences exist between journals. In sum, our analyses show that the coverage of AIS topics in accounting is fragmented and that the full diversity of research topics and methodologies, as demonstrated in AIS journals, is only partially reflected in the larger accounting research field. These findings suggest a certain distance between the accounting and the AIS research field, looking at it from an AIS perspective. Follow-up research in the opposite direction could complement our insights as to whether AIS outlets include all topics of interest to the broader accounting discipline or not. It is important to be aware of this distance and the risks this entails, such as a potential disconnection between the two fields, and a lack of understanding and respect for each other's work. In the worst-case scenario, this could result in the deterioration of the entire AIS research stream, if career opportunities in AIS would remain tightly linked to publications in accounting outlets. Through this study, by making the discrepancies explicit, we hope AIS and accounting scholars, reviewers and editors find common ground to further nurture the advancements in accounting literature. We propose a number of specific recommendations that can facilitate the rapprochement between the accounting and AIS research fields.

As with every research study, our analysis is subject to a number of limitations. First, we explicitly set our scope of analyses to the topics included in the AIS literature. We purposely took on a broader view by identifying the predominant topical areas in AIS research. This approach obscures meaningful variations in the underlying micro topics. Hence, we encourage further research to examine more specific categories, such as blockchain, process mining or XBRL. Second, our study did not investigate the root causes of the inclusion or exclusion of certain topics in accounting research. We, therefore, cannot conclusively put forward the drivers of (the lack of) integration of AIS research topics in accounting journals, which remains a highly valuable path for future research. Third, we identified the top-tier accounting journals based on various journal rankings and indicators. Nonetheless, one can always include more journals. Fourth, we relied on manual coding and analysis for the identification and classification of AIS topics as well as the application of this classification to the accounting literature. This was a deliberate choice, as the synthesis of two research streams is a difficult accomplishment for automatic coding methods. However, despite our blind coding in two separate teams, the cross-reviewer meetings, and high intercoder reliability, we cannot fully rule out bias originating from the coders. We, therefore, encourage further research to validate our findings through reproduction or using alternative methods. Also, the potentially different views on scientific progress (the internalist versus the externalist view) between accounting and AIS research is a potential subject for future research. Most of all, we encourage accounting researchers to bridge the gap between the AIS and accounting literature and to actively integrate AIS topics in established accounting research.

Notes

1. JAR, TAR, JAE, CAR, AOS and RAST.
2. Computer science (CS), software engineering (SE) and information systems (IS).
3. Link to the online open repository will be placed here, not provided due to blind review.
4. In total, 752 topics are listed, as 167 articles were assigned two topics.
5. This yields the following 16 journals in alphabetical order: *Abacus*; *Accounting Horizons*; *Accounting, Organizations and Society*; *Accounting, Auditing and Accountability Journal*; *Accounting and Business Research*; *Auditing: A Journal of Practice and Theory*; *Contemporary Accounting Research*; *European Accounting Review*; *International Journal of Accounting*; *Journal of Accounting and Economics*; *Journal of Accounting and Public Policy*; *Journal of Accounting Research*; *Journal of Management Accounting Research*; *Management Accounting Research*; *Review of Accounting Studies*; *The Accounting Review*.
6. A theoretical maximal diversity is reached when the standard deviation is zero. This occurs when all shares have exactly the same size. As a consequence, the higher the standard deviation, the lower the diversity.
7. This is also reflected in the standard deviation of 4.9% for AIS journals and 6.9% for accounting journals (see [Appendix 8](#)).
8. These are risk management (8), IT sustainability (3), enterprise architecture (17), outsourcing (13), system reliability (3), blockchain (2), cloud computing (6), group decision making (6), learning (9) and AIS education (15) (between brackets are the number of studies published in AIS).

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Appendix

The supplementary material for this article can be found online: <https://doi.org/10.6084/m9.figshare.20789227.v1>.

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