ACCOUNTING THEORY:

A NEGLECTED TOPIC IN ACADEMIC ACCOUNTING RESEARCH

by

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Dedication

To my son,
Naasir.

While I was researching the neglect of accounting theory in academic accounting research, I may have neglected you. I will devote whatever time that is needed to make it up to you; even if it requires whatever is left of my life. As long as I breathe, you are my top priority and will have my ultimate attention. I live to see the day when you live independently in all aspects of life and without help.

I wish you well.

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Khalid Rasheed Al-Adeem

Accounting Theory:

A Neglected Topic in Academic Accounting Research

Abstract

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A careful examination of accounting literature reveals the prospect for developing normative accounting theory that is capable of meeting society's needs at any given time. Despite the importance and the possibility of developing such a type of theory, research concerning normative theorization ceased in favor of the new empirical accounting research, which investigates the usefulness of accounting information to decision-making. Launching this line of research was a consequence of changing the objectives of financial accounting.

This study empirically analyzes the shift in academic accounting research as proxied by *The Accounting Review* (*TAR*). *TAR* is the American Accounting Association's premier journal and the American oldest accounting journal devoted to the development of accounting theory. Coding of the articles published in *TAR* is the research method.

Depending on whether or not an article possesses the characteristics of the four variables identified in this study, each article was coded as 0 or 1 under each variable. For each issue, the articles receiving a 1 were counted and summed up. Each issue became a unit of analysis. Samples came from issues published between 1926 and 2007. The years sampled were as follows: 1926-1930, 1952-1956, 1977-1981 and 2003-2007 respectively.

This study found accounting theory declined while the use of the empirical archival method, the influence of economics and finance in academic accounting research, and the financial accounting topics appealing increased. This study also found that the use of the empirical archival method is positively associated with the influence of economics and finance. Further, this study found that the influence of economics and finance is positively associated with financial accounting topics.

These three trends increased in academic accounting research at the expense of discussing accounting theory as a topic in academic accounting research. The emergence of the new "financial empirical paradigm" mandated the elimination of the "conventional paradigm." The theoretical foundations underlying the new financial empirical paradigm are accepted due to their "usefulness," and they have also been enforced. Judged by its relevance to accounting practice, however contemporary academic accounting research seems to be moving away from accounting practice, broadening the schism between theory and practice.

Accounting Theory:

A Neglected Topic in Academic Accounting Research

CHAPTER ONE

Introduction

Accounting is not merely practiced processes and techniques. Chatfield (1977, p.217) documents that "accounting has always been based on a structure of ideas" that can be explained as "patterns of thought underlying accounting processes which afford rational explanations for particular methods which finally evolve." Moreover, the emergence of accounting from practice (e.g. Hopwood, 1987; Sterling, 1977) does not mean that accounting should not possess its own philosophy (Ijiri, 1967) and general theory (e.g. Maskell, 1955; McCredie, 1957; Oehler, 1942; Wright, 1914). Such theory would not only base the already practiced procedures and methods *on reasoning*, but also assist accounting practitioners in deciding upon accounting procedures and methods that *ought to be* practiced.

Theory is "the soul of practice" to the extent that without theory to "animate" it, practice is "mere mechanism" (Wright, 1914, p.432). In addition, without a philosophical foundation, accounting becomes "a patch collection of practice" (Ijiri, 1967, p.ix). Hopwood (1987, p.210) emphasizes that "accounting, even in the conventional view, is not a mere technique. Knowledge does not stand outside of accounting…" Thus, a theory of accounting is necessary (McCredie, 1957). Such a theory is "a guide for practitioners in their individual decision-making capacity" (Archer, 1993, p.62). McCredie (1957,

p.222) stresses that "the whole structure of accounting as a theory can be set up to precede the structure of accounting as [practiced]."

The relationship between accounting theory and accounting practice is well recognized by accounting writers, especially during the early age of the development of accounting thought (e.g. Maskell, 1955; McCredie, 1957; Oehler, 1942; Wright, 1914). The case has always been such that complexities create a demand for a sound theory upon which sound practice depends (Jastrow as cited in Wright, 1914, p.431). In a politically democratic society where "extensive financial control requires legitimation" (Montagna 1986 p.104) and given the increasing complexities of "our civilization and commercial machinery", "sound theory" becomes for accountants a necessity to function fruitfully in society (Wright, 1914, p.432). "Accountants provide that legitimation," Montagna (1986, p.104) continues to argue, "through theory and practice."

The necessity of a theory for accounting extends to accounting research. Wheeler (1970, p.1) claims, "research without a theory leads to aimless wandering in the morass of data…with little hope of meaningful results in terms of the better understanding of accounting." At the same time, in its development, accounting theory relies on academic accounting research. Wolk et al. (2004, p.29) assert that "an important segment of accounting theory is derived from the research process." Thus, interdependence exits between accounting theory and academic accounting research.

Accounting theory has been associated with the separation between management and ownership in modern corporations. Writing in 1993, Mumford argued that "the term accounting theory has come over the past fifty years to refer to just a single aspect of corporate reporting" (p.8). Accounting theory has been used in conjunction with "the

problem of financial reporting by corporate entities to external parities" (Mumford, 1993, p.8) created by the separation between ownership and control in corporations (Berle and Means, 1932). Gaffikin (1988a, p.10) observes that "almost all efforts (in English) were concerned with building a theoretical structure for external financial reporting."

Searching for a theoretical basis for financial accounting is to discover accounting principles (Archer, 1993). In 1926, DR Scott observed a tendency of accounting theory to become a body of principles. Because accounting rules cannot be justified in theory and practice (Jones, 1857), accounting rules cannot be integrated to a theory and thus do not yield a theory of accounting. Accounting principles, on the other hand, can be integrated in a form of theory (see for example, Carlson 1964; Cohen, 1960). Accounting practice has developed from "fundamental premises" (McCredie, 1957, p.222) that can be established in the form of a theory of accounting. Accounting theory, which is based on principles (Chatfield, 1975; Flesher, 1991), can guide accounting practice.

The separation between ownership and management which characterizes the American corporate economy represents a challenge to accounting. The emergence of the corporate economy represents "a formidable task" that accounting theorists need to address (Previts and Merino, 1998, p.210; see also Merino, 1993). Such a formidable task did not deter accounting academicians, accounting professional bodies, and academic accounting organizations from addressing this challenge. Once accounting theorists and academicians (e. g. Alexander; Canning; Chambers; Devine; Hatfield; Gilman; Littleton; Ijiri; May; MacNeal; Moore; Paton; Sprague; Stamp; Sterling; Sweeney), accounting professional bodies (e.g. American Institute for Certified Public Accountants (AICPA)) and accounting academic organizations (e.g. the American Accounting Association

(AAA)) recognized the need for general accounting theory, they were diligent in theorizing and searching for general financial accounting theory. Such efforts dictated the agenda for academic accounting research.

As a result, many theories have been proposed as candidates for general theory for financial accounting[1]. For example, accounting academics and theorists have proposed deductive theories to depict how the enterprise interfaces with owners in the owners' equity accounts (Wolk et al. 2004, pp.142-143). Mattessich (1993, p.179), describes the state of accounting theory as "the fragmentation." Chambers (1956) finds difficulty in knowing what can be labeled as theory in accounting. Chambers (1956) also distinguishes between a theory of accounting and accounting theory. Since accounting theory, as defined by Chambers (1956), is general in the way it encompasses several alternative explanations, each theory of the proposed theories for accounting thus far is a theory of accounting. None of the proposed theories has gained wide acceptance (Chatfield, 1977, p. 228; the *Statement on Accounting Theory and Theory Acceptance*, 1977), nor has one of them "won out over others" (Lee, 2009, p.159). The lack of wide acceptance of a single accounting theory is concerning in that it makes accounting today a discipline without general theory. Several accounting writers have explicitly acknowledged the lack of having comprehensive or unified accounting theory (e.g., Belkaoui, 2004; King, 2006). In Gaffikin's (1987, p. 17) perspective, accounting "seems to have developed no theory of its own, no philosophy."

In addition, the necessity of accounting theory extends to include academic accounting research to assure its independence from other disciplines. Accounting theory

[1] Table 4 and table 5 in chapter 4 list some of their efforts.

that assists accounting researchers in designing their studies is missing (Fogarty, 2006; Smith, 2003). This does not mean that accounting researchers do not utilize theoretical foundations in their studies. Rather, what Fogarty (2006) and Smith (2003) are concerned about is that accounting researchers have turned their attention to other disciplines looking for theoretical foundations for their studies. Furthermore, the lack of having general accounting theory offers other disciplines a critical and notable role to play in academic accounting research. Carpenter and Strawser (1971 as cited in Belkaoui and Chan, 1988, p.7) found that, "accounting is increasingly relying on inputs from mature social-science disciplines for theoretical foundations."

The continuous borrowing of theories from other disciplines weakens accounting researchers' claim of independence from such disciplines. The lack of having general accounting theory threatens the existence of accounting as an autonomous discipline. In his argument for the necessity of developing general accounting theory, Mattessich (1972, p.482) warns that "accounting as a discipline might dissolve and be absorbed by neighboring fields." Recently, contemporary accounting writers (e.g., Demski, 2007; Fellingham, 2007) have raised concerns about whether accounting is an academic discipline. To Demski (2007, p.153) accounting is not an academic discipline.

Exploring the neglect of accounting theory in current academic accounting research is valuable. Such an exploration contributes to our knowledge by addressing questions such as: What are the theoretical foundations that contemporary accounting researchers rely on in guiding their studies? Has a line of thinking recently been dominant in accounting research? This study is not, however, a survey of the proposed financial accounting theories nor does this study evaluate or judge such proposed theories in

attempting to prefer one over others. This study is silent on what might be the proper general accounting theory.

Addressing such questions is possible by empirically analyzing academic accounting research, specifically, by studying the contents of *The Accounting Review* (*TAR*). Two reasons make *TAR* a suitable source for collecting data for this study. First, *TAR* is the main journal of the American Accounting Association (AAA) (Sunder, 2007), and developing accounting theory has been a role undertaken by the AAA (American Association of University Instructors in Accounting[2] (AAUIA), 1925; *A Statement Of Basic Accounting Theory*, 1966; Langenderfer, 1987; Zeff, 1966). Second, *TAR* is the oldest US journal that began as a theoretical journal (Flesher, 1991) "devoted predominantly to accounting theory" (Zeff, 1966, p.57) and traditionally known for developing accounting theory (Chatfield, 1975).

Three objectives motivate this study. The first objective of this work is to identify and consider accounting theory as discussed in *TAR.* Another purpose of this study is to relate accounting theory's trend with the rise of three trends that have been observed in academic accounting research. The first trend is the increase of the use of the empirical archival method (Buckmaster and Theang, 1991; Dopuch, 1979; Dyckman and Zeff, 1984; Gaffikin, 1988b, 2005a; Granof and Zeff, 2008; Oler et al. 2008; Previts and Robinson, 1997; Zeff, 1989). The second trend is the increase of the influence of economics and finance (Bricker and Previts, 1990; Bricker et al. 2003; Gaffikin, 2005b; Lee 1995; Lee and Williams, 1999; Oler et al. 2008; Reiter, 1998; Reiter and Williams,

[2] In 1935, the name of the Association was changed from the American Association of University Instructors in Accounting (AAUIA) to what is known now as the American Accounting Association (AAA).

2002; Smith, 2003; Tinker, 2001; Williams and Rodgers, 1995). The third trend is the increase of financial accounting topics over time (Bonner et al. 2006; Fogarty, 2007b; Kinney, 1990; Oler et al. 2008; Sundem, 1987; Tuttle and Dillard, 2007). A third objective of this study is to assess the association of the three trends with each other.

Accounting theory, along with these trends, is represented by four variables that are indentified in this study. To name them, the variables are accounting theory, the use of the empirical archival method, the influence of economics and finance, and finally financial accounting topics.

Coding of articles published in *TAR* is the method employed in this study. Depending on whether or not an article possesses the characteristics of the four variables identified in this study, each article will be coded as 0 or 1 under each variable. Then for each issue, the articles receiving a 1 will be counted and summed up. Each issue will become a unit of analysis. Samples will come from issues published between 1926 and 2007. Over twenty years were sampled out of issues published in the years between 1926 and 2007. The years sampled are as follows: 1926-1930, 1952-1956, 1977-1981 and 2003-2007 respectively. 82 issues were published during the sampled twenty years.

The issue scores of the first variable (accounting theory) will be used to explore the trend over time. That is, the number of articles about accounting theory per issue will be used to investigate whether accounting theory as a topic is discussed in contemporary academic accounting research proxied by *TAR*. The issue scores for other variables also permit examining the relations among the latter three variables (the use of empirical archival method, the influence of economics and finance, and financial accounting topics). The issue scores obtained for all variables will be utilized to investigate the

associations between the accounting theory on one side and the use of the empirical archival method, the influence of economics and finance, and financial accounting topics on the other side. Negative associations between the two groups indicate that the shift in the focus of academic accounting research has been at the expense of continuing the efforts to develop accounting theory.

Philosophers of the history of science, like Kuhn (1996), have attempted to explain stages in the development of sciences, particularly, the shift in the focus of a scientific community. Kuhn (1996) employs the term "a paradigm shift" to refer to a shifting of focus by a scientific community. A transition to a new paradigm is a transition toward maturity in a scientific field in Kuhn's view.

There has been similar observations about a shift in academic accounting research (e.g., Beaver, 1998; Buckmaster and Theang, 1991; Dopuch, 1979; Dyckman and Zeff, 1984; Gaffikin, 1988b, 2005a; Granof and Zeff, 2008; Hopwood, 2007; Lee, 2009; Oler et al. 2008; Previts and Robinson, 1997; The Association to Advance Collegiate Schools of Business (AACSB-International), 2008; Tuttle and Dillard, 2007; Wolk et al. 2004; Zeff, 1989).

Hopwood (2007) classifies accounting research into two camps. The first camp, which can be labeled as "conventional accounting research" (Wolk et al. 2004, p.34), includes accounting researchers who have "a thorough understanding of accounting itself and can reflect on its internal logic and the possibilities of these to change" (Hopwood, 2007, p.1368).

The second camp contains those who research the consequences of accounting. The latter represents the mainstream of contemporary accounting research. This camp is

what Dopuch (1979, p.67-68) calls a "new empirical paradigm" which started emerging after the publication of Ball and Brown (1968). Reiter (1998) asserts that the study of Ball and Brown (1968) was later supplemented by the study of Watts and Zimmerman (1978).

Hopwood (2007) acknowledges that the two camps, or in Kuhn' terminology the two paradigms, have been viewed as either/or. The rise of one camp (paradigm) must be at the expense of the other. While there may be an argument for a paradigm replacement or shift in academic accounting research, this study does not attempt to make the case that the paradigm shift is a development toward maturity as Kuhn suggests. The observed schism between academic accounting and accounting practice, which has been broadening as academic accounting continues its tendency toward empirical research, will be used as a criterion to judge and evaluate the prevalent paradigm.

The remainder of this study is organized as follows. The second chapter reviews the relevant literature. The third chapter models the phenomenon of interest in a narrative style and a graphical format. The model ties the developed hypotheses that collectively provide a picture of what has taken place in academic accounting research in the past. The fourth chapter discusses the source chosen to collect data in order to test the hypotheses. The sampling procedure and measuring each variable along with the research method are discussed in chapter four. The results and the findings of the study are presented in chapter five. Chapter six provides a discussion and conclusions, and acknowledges the limitations of this study. Chapter six also suggests directions for future research.

CHAPTER TWO

Literature Review

This chapter contains three major parts. The first part discusses the discourse about accounting theory. This discussion is covered in seven sub-sections. The second part presents the shift in the focus of academic accounting research. The third part is devoted to contemporary academic accounting research. This part is divided into four sub-sections.

2.1. Accounting Theory

While accounting is a pragmatic discipline, building accounting theory involves a conception of ideals. Examinations of the nature of accounting coupled with the consideration of its flexible role demonstrate the possibility of a philosophy of accounting and general theory of accounting through normative theorization. Early accounting professionals recognized the need for having such general theory to meet the challenges brought to accounting by the emergence of corporations. In addition to their own efforts, accounting professionals partnered with accounting academicians to develop general theory for accounting. Academic accounting research reflected the assignment from accounting practitioners that accounting academics had undertaken. However, as argued in the following pages, no single accounting theory gained wide acceptance over long periods of time.

Dismay over normative theorization contributed to shifting the focus of academic accounting research away from developing normative accounting theory. The following sub-sections detail this discourse.

2.1.1. The Emergence of Accounting from Practice Does Not Prevent Accounting from Having General Theory

Hopwood (1987) asserts the development of accounting emerged from practice. Writing in 1978, Hopwood (p.7) argues, "Until recently the development of accounting…was a very pragmatic affair." McCredie (1957) states that "accounting procedures may be developed without a 'theory'" (p.223). However, the pragmatic origins of accounting do not prevent this discipline from possessing general theory to guide its practice. McCredie (1957, p.222) asserts that "a theory of accounting" does not necessarily suggest "no development before practice." While practice "is the desire to direct our actions to achieve predetermined ends," theories are "the desire to understand" (Whitehead 1950 p.154 as cited in Glautier, 1973, p.438). McCredie (1957) believes that one must go behind the practice to find reasoning. Hopwood (1987, p.210) acknowledges the importance of theories and ideas in enlightening and offering guidance to "the pragmatic accounting task." Practice not only "is derived from beliefs and ideas," but also "determines them" (Maskell, 1955, p.112). Accounting theory and accounting practice go hand in hand, and no conflict exists between the two (McCredie, 1957).

The relationship between accounting theory and accounting practice exists because of the difficulty and perhaps the impossibility of performing accounting as a scientific practice "without a sound body of principles upon which the practice can be based" (Oehler, 1942, p.277). Practicing accountants are usually obligated to use "their own judgments in theoretical issues" (Hendriksen and Breda, 2001, p.3). In Chambers' (1969 as quoted in Barton, 1982, p.119) perspective, "to become more practical it is necessary to become more theoretical." The accountant who strives to master the theory

of his or her profession will assure the soundness of this practice more than one that does not strive to do so (Wright, 1914, p.434). No wonder Oehler (1942, p.281) is harsh in stating that "the accountant who does not possess a sufficiently comprehensive knowledge of general accounting theory before beginning his practice, is not a practical accountant because of that fact." Contrasting accounting theory against the practice of accounting is not a useful argument to be established or a beneficial way of defining either theory or practice (see Oehler, 1942, pp.277-278).

2.1.2. The Need for Philosophy of Accounting and for General Accounting Theory

The lack of general accounting theory with wide acceptance at the present time does not indicate that previous accounting theorists had not exerted serious efforts to build general accounting theory. Accounting theorists who attempted to build a theory for financial reporting were diverse in their perceptions toward "both the users of accounting data and the environments in which the users and preparers of accounting data are supposed to behave" (Belkaoui, 2004, p.108). The *Statement on Accounting Theory and Theory Acceptance* (1977) recognizes three approaches that had been proposed to build accounting theory: the normative deductive school, the inductive school and the decision-usefulness approach (for more see the *Statement on Accounting Theory and Theory Acceptance*, 1977, pp.5-21).

From these approaches, a variety of accounting theories have been proposed. Belkaoui (2004, p.84) describes such theories as "middle-range theories to the field of accounting." If a theory is " a set of interrelated constructs (concepts), definitions, and propositions that present a systematic view of the phenomenon by specifying

relationships among variables with the purpose of explaining and predicting the phenomena" (Kerlinger and Lee, 2000, p.11), then theories of the middle range "lie between the minor but necessarily working hypotheses that evolve in abundance during day-to-day research and the all-inclusive systematic efforts to develop a unified theory" (Merton, 1967, p.39).

Accounting theories of the middle-range perceive the users of accounting data and the environment differently (Belkaoui, 2004). No single one of the proposed theories has been generally accepted (the *Statement on Accounting Theory and Theory Acceptance*, 1977). Those middle range theories cannot be viewed as substitutes for general accounting theory. A need still exists today for general accounting theory. Understanding the nature of accounting and the role of accounting has the potential of revealing the possibility of building general accounting theory and an approach to theorize in accounting.

2.1.3. On the Nature and the Flexible Role of Accounting

Littleton (1966, p.363) asserts that, "accounting originated in known circumstances in response to known needs." Chatfield (1974 p. 256 as cited in Wolk et al. 1984 p.114) claims that "accounting concepts mostly developed in a pragmatic fashion from practical operating necessities…" Cowan (1968, p.97) argues that, "accounting may be thought of as a set of particular responses to a set of particular needs." Accounting procedures and techniques can thus be viewed as responses to business needs.

Changes in business needs necessitate reaction from accounting in response to these needs. As Chatfield (1977, p.3, emphasis added) puts it, "…accounting processes are

reactive…they develop mainly in response to business needs at given times, and…its growth is relative to economic progress generally…" Similarly, accounting by nature is reactive to the advancement in the economic system that governs commercial activities in a culture (Chatfield, 1977). Needs of businesses existing in a culture define the role of accounting within the culture (Chatfield, 1977; Cowan, 1968; Littleton, 1966; Merino, 1993; Vatter, 1963).

Changes in business needs entail changes in the role of accounting. DR Scott (1926, p.20) observed that, "…as business administration has changed in character[,] an accompanying change has taken place in technique used by it." Accounting techniques are among those techniques used by business administrations (see DR Scott, 1926). Changes in accounting can be explained in terms of forces current at the time (Littleton, 1966, p.362). The ability of accounting to respond by changing its processes and techniques in accordance to external situations and forces (Hopwood, 1987, p.211) enables accounting to evolve and grow "in harmony with its surroundings" (Littleton, 1966, p.362). Accounting has an adaptive nature (Montgomery in the Foreword to Edward Peragallo's *Origin and Evolution of Double Entry Bookkeeping* as cited in Nelson 1949 p.357). Thus, the flexibility of adapting to new roles might be a unique and determining attribute of accounting. The lack of awareness of such a quality permits some accountants to assert the impossibility of building general accounting theory.

2.1.4. On the Possibility of a Theory of Accounting through Normative Theorizing

A theory of accounting is possible (McCredie, 1957). A possible way to theorize in accounting is the normative type of theorizing. This was the form chosen by early

accounting theorists, particularly prior to 1968. It was their way of attempting to build general accounting theory. Normative theories received considerable attention in accounting (Wolk et al. 2004). These theories were normative in nature because they all were intended to show how corporate reporting 'should be.'

By stating "attempts can be made to improve accounting in the name of what it should be rather than what it is" (p.210), Hopwood (1987) represents a defense for such a position. Normative judgment is critical to the progress of research (Sterling, 1990). It was predicted in 1966 in *A Statement of Basic Accounting Theory* that, "a possible structure of future accounting theory would be more normative and less descriptive than in the past" (p.63). Also, in the mid-1960s, the Accounting Principles Board (APB) revealed its tendency not to synthesize "accepted practice[,]" but instead to "adopt a normative stance toward the development of basic concepts" (Zeff, 1999, p.95). Yu (1976, p. 104) argues that the normative approach is promising because "the kind of accounting that we practice is largely founded on a normative basis."

The normative type of theory fits the nature of accounting. Accounting by nature reacts responsively to business needs. This responsive nature of accounting ought to be considered and taken seriously in the debate of whether accounting has a theory. It is worthy of considering and pondering over Cowan's (1968, p.97) statement that the responses of accounting to business needs can be formed in "a unified system of accounting."

This unified system of accounting can be built in a way that assures business needs in a given culture at a given time are met. Once business needs are identified, the objectives that accounting serves are stated. In other words, the objectives of accounting

are an extension of business needs (Cowan, 1968, p.100). Vatter (1963, p.186) asserts that, "the selection of objectives and purposes is not pure assumptions, but conditions to be met." After the objectives are identified, "a unified system of accounting" (Cowan, 1968, p.97) can be structured in a form of a normative theory of accounting in which accounting procedures and processes are derived from principles which are deduced from objectives that are intended to respond to business needs.

Accounting objectives define the role of accounting at any given time for any given culture. The accuracy of the role of accounting at any given time and culture is subject to the correctness of the objectives fulfilled by accounting. This is because the objectives that accounting has to fulfill change from time to time and vary across cultures and environments. That is why needs and objectives require a constant and critical re-examination (Cowan, 1968). Stating the proper objectives that accounting has to serve and meet is a condition for proposing the most suitable normative accounting theory for a given culture at a given time. Similarly, a disagreement upon such objectives guarantees proposing variety and divergent normative accounting theories.

At any given time, there is no reason to think that accounting cannot have a theory. The pragmatic perspective lends itself to develop a theory of accounting that is capable of addressing business needs. Chatfield (1977, p.228) argues that all the proposed theories "failed to adjust to changes in the business condition which first gave them validity." Stated differently, each theory for accounting has been proposed to respond to a change in business conditions and the environment. However, when a new change had taken place, the already proposed theory failed to adjust in accordance with the new change. A normative theory of accounting that takes the surrounding dynamic

environment into consideration has the potential of enabling accountants to function fruitfully in their society.

Assuming that no theory of accounting is good for all times nor fits all business needs, then it might not be correct to think of accounting as having a single theory that is capable of serving different cultures which have different business needs. The nature of accounting along with its flexible role requires accounting theory to change over time. In 1957, McCredie stated some aspects of this idea. Defining a theory as a series of propositions relating to entities and results, McCredie (1957, p.218) states, "The entities, results and propositions will change from time to time…"

Adopting a pragmatic perspective in analyzing the role of accounting is promising (Merino, 1993). Such a perspective tends to address accounting theory formulation in an evolutionary fashion. As such, accounting continues evolving as the environment surrounding accounting changes. Based on this evolutionary view, adapting and modifying the theoretical structure will continue as changes in the surrounding environment occur (the *Statement on Accounting Theory and Theory Acceptance*, 1977).

The evolutionary view of accounting theory formulation is appealing in that it "allows for existence of important, unresolved issues" (the *Statement on Accounting Theory and Theory Acceptance*, 1977, p.41). The flexibility of modifying its theoretical structure may be the unique aspect of accounting theory while may not be fully appreciated nor well perceived by those who argued against the possibility of having a normative theory of accounting.

2.1.5. Early Accounting Professionals Proposing Theories of Accounting

Previts (1980, p.4, emphasis added) states, "Significant influence upon the development of financial accounting thought can be traced to the writing of a group of *professional accounting* pioneers of the period 1900 to 1920." Previts labels this period as pre-classicalism in the development of the American financial accounting thought. He considers William Morse Cole, Arthur Dickinson, Paul-Joseph Esquerre, Henry Rand Hatfiled, Roy Bernard Kester, Rober Heister Montgomery, Charles Ezra Sprague and John Raymond Wildman as preclassical writers, who "transformed early accounting notions into those which served as a foundation for subsequent advances in accounting theory" (p.5).

Furthermore, Previts and Merino (1998, p.211) argue, "the first integrative [accounting] theory to evolve was labeled 'proprietary'." The emergence of such a theory was a response from accounting theorists to the "formidable task" that was to "reconcile traditional accounting profit measurement based on individualistic economic theories with an emerging corporate economy" (Previts and Merino, 1998, p.212). Chatfield (1977) credits Sprague (1907) and Hatfield (1909) with presenting the proprietary theory of accounting in a complete form. Sprague and Hatfield articulated a doctrine whose underlying assumptions dominated American accounting textbooks (Chatfield, 1977). "[T]he meaning of accounts from the owners' viewpoint" (Chatfield 1977, p.220) is a dominant perspective that has been taught using accounting textbooks. Depicting how the enterprise interfaces with owners in the owners' equity accounts (Wolk et al. 2004, pp.142-143) is still taught in accounting textbooks.

According to proprietary theory, as applied to corporations, business is assumed and obligated "to maximize the wealth of its owners." Based on this view, accounting records are kept and statements are prepared from the proprietor's perspective and are aimed at measurement and analysis of the proprietor's net worth (Chatfield, 1977, p.223).

The entity theory challenges proprietary theory. Paton, (1922, p.89 as cited in Previts and Merino, 1998, p.213) an advocate of entity theory, argues that management's goal is "to increase the return to all equities" and not just the return to common stock holders. Previts and Merino (1998, p.213) explain that Paton used the term "equities" to include all sources of financing for the firm. If the corporation is functionally separate from its owners and creditors, then the corporation and not the owners and creditors would be the center of accounting interest (Chatfield, 1977, p.224).

Chatfield (1977, p.220) argues that "…the proprietary and entity doctrines…still serve as rationalizations for bookkeeping methodology and an integrating framework for accounting theory." Therefore, one may argue that the initial efforts toward academic development of accounting theory began around 1920. One may also argue that accounting theorists who took the initiative to advance accounting theory depended on the work and contributions of accounting writers prior to 1920. For example, Sprague wrote on the elementary aspects of the proprietary equation as early as 1880. Hatfield (1977, p.2)[3] credited the works of Thomas Jones and B. F. Foster for explaining the natural theory of accounts or what is usually known as the theory of two series of accounts, which was written in the mid 19th century.

[3] H. R. Hatfield lived between 1866 and 1945. Previts (1977) states that Hatfield's article originally appeared in the Zeitschrift fur Buchhaltung (Linz, Austia) in 1909. It was first translated in 1977 (for more about Hatfield's article see Previts, 1977).

2.1.6. The Role of Academic Accounting Research in Building General Accounting Theory

Accounting practitioners recognized the necessity of involving accounting academicians in building general accounting theory. McCredie (1957) realizes the gains that may be achieved from involving accounting academia. A main part of accounting theory results from the research process (Wolk et al. 2004). Since research is indispensable for the effectiveness of theory development (Schroeder et al. 2001), early accounting practitioners suggested "the development of a coherent accounting theory" as a direction for academic accounting research (the *Statement on Accounting Theory and Theory Acceptance*, 1977, p. 6). Accounting academicians played a critical role in advancing accounting practice by developing general accounting theory capable of guiding accounting practice.

Prior to the 1960s, academic accounting research was an accumulation of the efforts of accounting theorists and accounting academicians to build accounting theory and to describe accounting practice. Academic accounting research was descriptive and mostly prescriptive. That is, academic accounting research was normative deduction and descriptive of practice (Zeff, 1989). Besides describing existing standards, practices and suggesting ways in which they could be improved (Granof and Zeff, 2008), accounting researchers prescribed how corporate reporting ought to be. Furthermore, the descriptive accounting research during this period was much different from what some contemporary accounting researchers propose as an alternative to prescriptive research (see Watts and Zimmerman, 1986, ch.1). Descriptive research which existed prior to the 1960s benefited

standard-setting boards, accounting practitioners, and corporate officers (Granof and Zeff, 2008).

2.1.7. Dismay over Efforts in Building Normative Accounting Theory

A group of accounting writers argue that the emergence of normative theories were a consequence of political events. After passing the Securities Acts of 1933 and 1934, accounting theorists started prescribing how corporations should report (Watts and Zimmerman, 1986). In more poignant terms, "government regulation creates a demand for normative accounting theories employing public interest arguments" (Watts and Zimmerman, 1979, p.282). This argument is in contrast with Hopwood's understanding that "accounting has been seen to be in the process of becoming what it should be" (1987, p.210), Yu's (1976) view of the normative foundation of accounting practice, Sterling's (1990) argument, and the prediction of *A Statement Of Basic Accounting Theory* (1966),

No consensus exists among normative accounting theorists in accepting one accounting theory. This fact brings more attack and criticism upon normative theories by contemporary accounting academicians. Beaver (1998, p.35) criticizes normative theories asserting that, accounting theory had a "predominantly normative flavor" in deciding upon the best practice. Furthermore, Beaver argues that an agreement on a single theory is impossible "because various constituencies may be affected by the consequences of information in different ways" (1998, p.35). Demski (1973) concludes that normative accounting theory in general cannot be provided.[4] Demski (1973, p.721-722) identifies

[4] Chambers (1976), however, disagrees with Demski's conclusion arguing that Demski's argument is flawed.

"accounting theory as providing a complete and tentative ranking of accounting alternatives at the individual level."

Dismay over normative theorizing has involved editors of some top-tier journals, motivating them to explicitly stop publishing this line of research thus affecting the development of general normative accounting theory. Dopuch seemed proud to write that, "Personally, I do believe that the traditional form of normative income theorizing is [dead], and I have done my best as editor of *JAR* [*Journal of Accounting Research*] to encourage this end" (1979, p.80). Normative accounting theorists found that leading research journals would not include their works but instead were in favor of the "'science' of accounting empiricism" (Lee, 2009, p.153). As time passed, publication of papers in traditional normative theory approached nearly zero (Heck and Jensen, 2007), and such theory became "a dirty word" (Fogarty, 2007a, p.7). With some handful of exceptions, normative theorization has generally "*disappeared* from the literature" (Lee, 2009, p.152 emphasis added).

2.2. Shifting Academic Accounting Research As the Objectives of Financial Accounting Changed

In the early 1960s, Davidson and Trueblood (1961, p.577) documented that, "many managers believe the accounting function has failed to adjust its objectives and activities to the decision making requirements of a changing business world." In order for accounting to respond to the changes in the business world, Davidson and Trueblood (1961, p.582) argue that "accounting must divert itself from its preoccupation of the past with fiduciary and stewardship responsibilities." The decision-making approach was

suggested as an approach for financial accounting reporting because an accounting response required an alternative approach for financial accounting reporting. In the late 1960s, the perspective in financial accounting shifted "from income measurement to an 'informational' approach" (Beaver, 1998, p.4). The Trueblood Report refocused "discussions in the accounting policy arena from stewardship reporting to providing information useful for decision makers" (Zeff, 1999, p.101).

The investment process was recognized as a central aspect of the financial reporting environment (Beaver, 1998). In this environment, investors demand information that assists them in evaluating the future cash flows associated with the securities and the firm which issued these securities (Beaver, 1998). The accounting function thus has assumed an expanded responsibility for information flows (Davidson and Trueblood, 1961). Management plays the role of supplying information to investors and creditors (Beaver, 1998).

The dissatisfaction with the old objectives of financial accounting has been paralleled with concerns regarding the state of academic accounting research. In the late 1950s, two reports on the state of business schools' scholarships were published. The first report was authored by Gordon and Howell (1959) and sponsored by The Ford Foundation. The second report was authored by Pierson (1959) and sponsored by the Carnegie Corporation.

The impact of these two reports upon academic accounting research was remarkable (e.g., Dyckman and Zeff, 1984; Heck and Jensen, 2007; The Association to Advance Collegiate Schools of Business (AACSB-International), 2008; Wyhe, 1994). Both reports expressed concerns with regard to the scholarship and research in business

schools. An intellectual comparison between business schools, and other schools and colleges was unfavorable to business schools (Gordon and Howell, 1959 p.356 as cited in The Association to Advance Collegiate Schools of Business (AACSB-International), 2008 p.8). A major criticism was the lack of scientific inquiry. Business faculties were short of research skills (Gordon and Howell 1959 as cited in Heck and Jensen 2007). Neither accounting nor accounting researchers were exceptions to such criticism.

Academic accounting research made the investment process the center of the new financial reporting. In the late 1960s, relevant and useful issues of financial information and the optimal choice of accounting procedures were at the top of the research agenda (Lev, 1998). From the 1960s the agenda for academic accounting research shifted to scientific style research that investigates the decision usefulness of accounting information.

Ball and Brown (1968) along with Beaver (1968) "launched the tradition of "returns/earnings studies" (Lev, 1968, p.153). These two studies initiated a type of academic accounting research grounded in financial economics (Tuttle and Dillard, 2007, p.402).

Similar to any other "new methodological approaches [that] tend to attract a large number of followers" (Hopwood, 2007, p.1371), empirical accounting research initiated by Ball and Brown (1968) and Beaver (1968) attracted many new and young accounting scholars. Subsequent researchers examined "the extent to which the information conveyed by earnings was consistent with reflected security returns (no causal inferences drawn)" (Lev, 1998, p.154). That is, financial information's usefulness was inferred from capital market evidence (Lev, 1998). The relationships expressed in such empirical

research in accounting while "mechanistic" (Wolk et al. 2004, p. 31) created a demand for theoretical foundations to guide empirical research in accounting.

The study of Watts and Zimmerman (1978) introduced positive accounting research as an element of the emerging empirical research culture in accounting (Reiter, 1998). Watts and Zimmerman are known for popularizing agency theory in an accounting environment (Smith, 2003). Wolk et al. (2004, p.43) considered "the Watts and Zimmerman (1978) study…[as] the first major agency theory work done in accounting." Watts and Zimmerman imported agency theory from the economic literature and utilized it in describing behavioral relationships. Basing their work on economic empirical literature, Watts and Zimmerman (1986, p.8) labeled their work as "positive" in that it was "concerned with how the world works." Positive accounting research was an attempt "to answer the question of why particular standards were selected by policy makers or why management selects the particular accounting alternative it chooses….Positive accounting research attempts to explain behavioral relationships in accounting" (Wolk et. al. 2004, p.31). Positive accounting research is concerned "with the behavior of those who prepare and use accounting data-accountants, management, and users" (Christenson 1983 as cited in Wolk et al. 2004, p.34)[5].

Oler et al. (2008) deemed the publications of Ball and Brown (1968) and of Watts and Zimmerman (1978) as a turning point in the history of academic accounting research. Accordingly, two lines of academic accounting research have existed. The first

[5] Some early studies, for example Grady (1965); Sanders, Hatfield and Moore (1938), are positive in nature (see table 4 in chapter 4). The early positivists were rather different from contemporary positivists in that the former were concerned with studying accounting as practiced in order to discover accounting principles.

one was established before such a turning point took place when the focus of accounting academics and theorists were aimed at developing accounting theory. The second one was established at the time of these two studies.

Beaver (1998, p.ix) argues that the shift towards "an informational perspective" was conceptual and academic. The shift was accompanied by a considerable "explosion of empirical research that adopted this informational perspective" (Beaver, 1998, p.ix). Some accounting writers expressed concerns about the shift in the objective of financial accounting to decision usefulness. Lee (2009, p.156) argues "the theory of satisfying user needs remains a relativity empty one when little or nothing is known about these needs in practice." Solomons (1986 p.118 as cited in Zeff 1999 p.108) asserts that "the purposes that the…[FASB] had defined for financial accounting reporting are excessively narrow" (for more see Zeff, 1999; Lee, 2009).

2.3. Academic Accounting Research and the Experience of Two Distinct Paradigms

Hopwood (2007) classifies accounting research into two camps. The first camp includes accounting researchers who have "a thorough understanding of accounting itself and can reflect on its internal logic and the possibilities of these to change" (p.1368). Such a line of research is labeled as "conventional accounting research" (Wolk et al. 2004, p.34).

The second camp contains those researching the consequences of accounting. The studies within the second camp "hold the promise for findings of relevance to current

financial reporting and accounting problems" (Previts and Bricker, 1994, p.626). This camp represents the mainstream of contemporary accounting research. It is based on the assumptions due to "the existence of an agency relationship in which ownership is dispersed and in which owners cannot directly observe the corporation," leading investors to rely on management disclosure (Previts and Bricker, 1994, p.629). Such a perspective adds value to financial reporting and the "notion of market [in]efficiency takes meaning" (Previts and Bricker, 1994, p.629).

While it can be asserted that this is not ideal, the two lines of research have been viewed as either/or (Hopwood, 2007). That is, the rise of one line would be at the expense of the other stream of research.

2.3.1 A Closer Look at Contemporary Academic Accounting Research

In recent years, several accounting writers and researchers have evaluated and examined contemporary accounting research (e.g. Granof and Zeff, 2008; Rayburn, 2005, 2006; Hopwood, 2007; Oler et al. 2008). These writers and researchers expressed their concerns about their observations in contemporary accounting research. Three trends were noticed in academic accounting research. First, the use of the empirical archival method increased over time (Buckmaster and Theang, 1991; Dopuch, 1979; Dyckman and Zeff, 1984; Gaffikin, 1988b, 2005a; Granof and Zeff, 2008; Oler et al. 2008; Previts and Robinson, 1997; Zeff, 1989). Dopuch (1979, p.67-68) considers the study of Ball and Brown (1968) as the opening of a "new empirical paradigm," which was absent from the early efforts to develop accounting theory at least to the early 1900s. Hopwood (2007)

limits the influence of this study to that of a methodological impact upon academic accounting research.

The second trend is the increased influence of economics and finance (Bricker and Previts, 1990; Bricker et al. 2003; Gaffikin, 2005b; Lee 1995; Lee and Williams, 1999; Oler et al. 2008; Reiter, 1998; Reiter and Williams, 2002; Smith, 2003; Tinker, 2001; Williams and Rodgers, 1995). The third trend is the increase in financial accounting topics over time (Bonner et al.2006; Fogarty, 2007b; Kinney, 1990; Oler et al. 2008; Sundem, 1987; Tuttle and Dillard, 2007).

This study asserts that the increases in these three trends have been at the expense of continuing efforts towards developing general accounting theory. These three trends are proposed to have negative associations with accounting theory. Chapter three discusses these hypothesized relationships in detail. The remainder of this chapter discusses each trend in detail.

2.3.2. The Use of the Empirical Archival Method

The decline in normative theories was in conjunction with a movement toward so-called scientific research, namely logical positivist empiricism. A critique of accounting emerged in the 1970s resisting to this shift toward *more* positivist empiricism, as well as efficient market and agency studies (Neimark, 1990, p.105, emphasis added).

Two major forces pushed academic accounting research to move toward empiricism. First during the 1950s and 1960s, criticisms emerged as to the lack of scientifically-based accounting research (Zeff, 1989). The second force was the concern

that very little was done by academia to enhance the understanding of accounting as a field of knowledge (Mautz, 1963).

In addition to these two forces, the surroundings which existed prior to the shift toward empirical research which was represented by the view that accounting is an information system coupled with increase growth in the mathematical, behavioral, and economic theory of information "provided an ideal environment for the growth of empirical research" (Dyckman and Zeff, 1984, p.268). Since 1970, the accessibility of large financial databases and refined statistical techniques helped empirical accounting research achieve dominance to the extent that it became the mainstream (e.g. Buckmaster and Theang, 1991; Dopuch, 1979; Gaffikin, 1988b, 2005a; Previts and Robinson, 1997). Thus, the developments of computerization and technology, which has made handling a huge volume of data possible and manageable, is a variable in an explanatory model of accounting literature (Buckmaster and Theang, 1991, p.75). Furthermore, with "the availability of computer supported market price databases, ideas based in logical positivist empiricism, gained influence over the market for financial accounting theory" (Previts and Robinson, 1997, p.313). Rodgers and Williams (1996, p.74) noticed that while "lab experiments and data tapes rose in importance, accounting theory diminished in importance."

In sum, as Davidson (1984, p.282) exclaimed, the development of statistical techniques and quantitative analyses, the progress in computerization and the advancement in theories on motivation and other related aspects of behavioral science has pushed accounting research to a new phase of capitalizing "on these advances in related fields." As a result of these many developments and advances imported to accounting

academia, Davidson hoped that accounting research had situated itself towards a more scientific approach.

2.3.3. The Influence of Economics and Finance

"Since theory guides the research design of empirical studies" (Dopuch, 1979, p.67) and "since interpretation of empirical analysis is impossible without theoretical guidance" (Kothari, 2001, p.106), the need for theories exist. Contemporary empirical accounting researchers must find a source for theories to utilize in empirical archival research. Trained in a positivist economic orthodoxy (Williams and Rodgers, 1995) and because economics provides the greatest respectability (Williams and Rodgers, 1995; Reiter and Williams, 2002), accounting researchers who identify themselves as empiricists have chosen an economic paradigm. Specifically, accounting researchers in this category have chosen a financial-economic paradigm as a source theory for accounting knowledge. The influence of economic theory in accounting exists (Gaffikin, 2005b), and likely has been present since the writings of Paton whose theories and views were deeply rooted in classical economics.

In addition to economics, finance is another discipline that has offered theories to accounting researchers (Smith, 2003). Watts and Zimmerman (1986, p.6) argue that, "the developments in finance aimed at explaining practice provided a ready basis for…a theory [of accounting]." Although finance might be viewed as a sub-discipline of economics, Smith (2003, pp.43-44) articulates, "the developments in this field [finance] have had such a radical influence on accounting research that they deserve separate consideration." Accounting researchers who were trained to use research tools containing

statistical research hypotheses testing directed their attention to the capital market finance literature searching for data to test (Gaffikin, 1988b). These same accounting researchers borrowed theories from finance to assist them in explaining the phenomena observed in the capital market and predicting the unobserved ones. The influence of finance on accounting research exists (Bricker et al. 2003, p.417)

Borrowing from finance and economics has been slowly and gradually increasing (Oler et al. 2008, p.4). While citations from economics and finance in accounting research have increased (Oler et al. 2008, p.6; Rayburn, 2005), the citations to other disciplines like law, political science, sociology, psychology, philosophy, any natural science, history, anthology...etc disappeared in accounting research (Williams, 2001). Citations to economics and finance are an indication of the tendency of accounting research to relate to these two disciplines (Oler et al., 2008).

While accounting tends to sustain closer ties with finance and economics, these two disciplines do not reciprocate such ties to accounting in their literature. Accounting cites finance and/or economics much more than either of them cites accounting (Reiter and Williams, 2002). Using citation analysis, Bricker et al. (2003, p.417) found that in contrast to the influence of finance upon accounting research, little impact of accounting research on finance exists. In addition to behavioral and sociology literature, economics and finance have been sources of most theories employed in accounting research (Smith, 2003, p.40).

Moreover, contemporary accounting researchers do not cite economics and finance in search of findings. Instead, these researchers borrow theories, methodologies and models from these disciplines. Dyckman and Zeff (1984, p.227-229) observed that,

"…the transmigration of the 1960s and 1970s…draws a multiplicity of disciplines…and has concentrated more heavily on the importation of methods of rigorous research rather than primarily on substantive research findings." Specifically, US academic accounting researchers appear to have become functionally dependent on scientific methodologies imported from other areas, two of which are economics and finance (Bricker and Previts, 1990, p.12). Lee (1995) argues that the dominant school of accounting research depended on economics and finance-based theories and methodologies. The influential papers published in American accounting journals are dominated by an economic paradigm (Brown 1996; Lee and Williams 1999). The "neoclassical economic paradigm", comprises "capital markets", "positive theory", "forecasting" and "agency" (Lee and Williams, 1999, p.881).

Borrowing theories from one field to another threatens the existence of the field that continuously borrows theories (Dyckman and Zeff, 1984). In the case of accounting, theories imported from other disciplines "carry with them a type of thinking and some of the concepts of their origin which are not always appropriate to their application in an accounting context" (Dyckman et al. 1978, p.81).

Another risk of the continued borrowing of other theories is the concern of dissolving the discipline that constantly borrows theories and methodologies. Yu (1976, p.104) warns that "accounting does not have a positive framework" and that introducing a positive approach represents a serious threat. After decades of utilizing empirical archival method, economics apparently has become "a meta-framework for accounting" (Tinker, 2001, p.80). Economic imperialism exists in academic accounting research (Reiter, 1998)

to the extent that "it is not unusual now to observe accounting academics making no distinction between accounting and economics" (Williams, 2000, p.112).

2.3.4. Financial Accounting Topics

Zeff (1983), when his five-year editorial term at *TAR* was complete, informed and warned about the consequences of the tendency toward narrowing the scope of *TAR*. However, his warnings were ignored. As documented by Rayburn (2006), the accounting discipline had limited the scope of accounting's top academic journals. Such a narrowness began in the 1960s and 1970s (Tuttle and Dillard, 2007).

Tuttle and Dillard (2007) observed a large increase in the number of financial accounting papers. Sundem (1987), a *TAR* editor, stated financial accounting had become the main topic of accounting research with 41% of submissions. Oler et al. (2008, p.4) found that "financial accounting research has remained the consistently dominant topic of research, and is becoming increasingly so."

During the period of 1984-2005, the proportion of financial accounting articles in the top-tier accounting journals are 72.2%, 60.2%, 50.6% and 51% of the articles in *Journal of Accounting Research* (*JAR), Journal of Accounting and Economics (JAE), TAR,* and *Contemporary Accounting Research (CAR)*, respectively (Bonner et al. 2006). In 2006, the percentage of financial accounting topics published in *TAR* was about 66% (Tuttle and Dillard, 2007).

The imported theories from economics and finance fit financial accounting topics. Agency theory which is a component of the "neoclassical economic paradigm" (Lee and Williams, 1999, p.881) is suitable for explaining phenomena produced by the principal-

agent problem. The separation between management and ownership makes agency theory a good theoretical framework for studies examining the relationships between managers and shareholders and for research questions related to the agent's reporting to the principal. Similarly, other economic theories, such as rational choice theory and asymmetric information theory, are suitable and applicable to financial accounting. In general, economic theories of information and behavior assist in providing links between accounting information and market phenomena (Reiter, 1998).

In summary, while normative theorization represents a possible way to build general accounting theory, dismay over normative theorization contributed to shifting the focus of academic accounting research away from developing normative accounting theory. As the objectives of financial accounting changed to decision usefulness, the investment process has become an essential aspect of the financial reporting environment. The change in the objectives of financial accounting was paralleled by a shift in academic accounting research to scientific style research that investigates the decision usefulness of accounting information. A closer look at contemporary academic accounting research reveals the existence of three increasing trends: the use of the empirical archival method, the influence of economics and finance, and the increased financial accounting topic content of research articles.

The following chapter will discuss the development of research hypotheses to explore and expand our knowledge of the content of accounting literature over time. The hypotheses will be about accounting theory as a topic discussed in academic accounting

research. They will also be about the three increased trends that exist in academic accounting research.

CHAPTER THREE

Hypotheses Development and Modeling the Phenomenon of the Decline of Accounting Theory

3.1. Hypotheses Development

Several studies have explored and investigated the decline in accounting theory. Analyzing the first fifty years of *TAR*'s publications, Chatfield (1975) concludes that the era of the middle 1950s can be characterized as an epoch of candidates for accounting theory. Chatfield (1975) also concludes that since the beginning of the 1960s, the emphasis of *TAR* on accounting theory, as it has been traditionally understood, declined in favor of empirical studies. Chatfield's (1975) study does not present data supporting such conclusions, nor does it reveal explicitly what materials constitute an article focusing on accounting theory. In defining accounting theory based on accounting principles, Chatfield did not list the accounting principles that allowed him consider an article to be about accounting theory.

Other studies utilize data to show that such a decline has occurred. Some of these studies do not describe how accounting theory is defined while others lack definitions for normative accounting research. Analyzing 80 years of *TAR*'s publications, Heck and Jensen (2007) argue that normative accounting theory is approaching zero, but they do not reveal how normative accounting theory is defined in their study nor do they report data supporting their arguments. Instead, they cite previous studies like Chatfield (1975). Oler et al. (2008), who report a similar finding, loosely define normative accounting research. Oler et al (2008) define traditional normative research as "catch-all." They list

categories for classifying articles. At the bottom of their classification, they have a category called normative accounting research. Articles that do not fit under other categories are classified as normative accounting research. Such a definition is not well defined operationally. Some accounting researchers may face difficulties using and employing such a definition in their studies.

Since these views do not test this implicit hypothesis about the decline of accounting theory, there is still a need for testing the hypothesis of accounting theory's decline relying on a well-defined definition and on an objective measure. It is thus hypothesized that:

H_1: Accounting theory in academic accounting research has decreased over time.

The accounting practice community considers empirical research in accounting to be promising for the advancement of accounting practice (Reiter and Williams, 2002). The hope that empirical research provides academic accounting research a scientific status (e.g. Devine, 1985a; Devine, 1985b; Mautz, 1963; Reiter, 1998) may have popularized and accelerated the use of the empirical archival method.

While empirical research can be conducted using several methods, i.e., case study, experiment, field study, survey, laboratory, and archival (see Fulbier and Sellhorn, 2006), the empirical archival method has dominated contemporary academic accounting research. Oler et al. (2008) found that archival methodologies have dominated accounting research since 1960.

Studies have argued that the dominance of the empirical archival method has been at the expense of accounting theory. Previts and Robinson (1997) argue that the rise of

empirical research has been in conjunction with a decline in research for accounting theory, but no data was supplied to support such an assertion. A study by Rodgers and Williams (1996) reached a similar conclusion supported by data. Analyzing a sample of articles published in *TAR* during the period 1967-1993, Rodgers and Williams (1996) find that while data tapes and lab experiments rose in importance, accounting theory has declined. They based their conclusion on descriptive statistics. Rodgers and Williams restricted the articles, which they analyzed, to the ones written by the "elite" authors, as they defined them. There might be, however, non-elite authors who published articles about accounting theory in *TAR* during that period.

With all these studies being published, Lee (2009) still speculates that the emergence of empirical finance-based accounting research may be related to the decline of accounting theory. There is still a need to test the association between the rise of the empirical archival method and the decline in accounting theory. The increase in the number of manuscripts using the empirical archival method in academic accounting research may be related to the decrease in manuscripts concerned with accounting theory. It is accordingly hypothesized that:

H_2: The use of the empirical archival method in academic accounting research is negatively associated with accounting theory in academic accounting research.

Like studies utilizing other empirical methods, studies where the empirical archival method is employed need theories for designing such studies and interpreting their findings. Empiricism, which currently dominates American accounting research, emerged from economic and finance traditions. The two studies which launched contemporary

accounting research (Ball and Brown 1968; Beaver 1968) have been grounded in financial economics (Tuttle and Dillard, 2007). The study by Watts and Zimmerman (1978), which has supplemented the Ball and Brown 1968 and Beaver 1968 studies, emerged from economic literature. Accounting researchers who are influenced by such studies peruse empirical studies that utilize the empirical archival method. Economics and finance may be chosen as theoretical foundations for these empirical accounting studies. It is hypothesized that:

H_3: The use of the empirical archival method in academic accounting research is positively associated with the influence of economics and finance upon academic accounting research.

Utilizing theories from the economic and finance disciplines may decrease the importance of accounting theory. For example, agency theory has been used in guiding the design of empirical accounting studies and in interpreting their findings. It is hypothesized that:

H_4: The influence of economics and finance on academic accounting research has a negative association with accounting theory in academic accounting research.

Wolk et al. (2004) point out that "…the roots of agency theory lie in finance and economics." Agency theory and some other theories imported from the economic literature provide behavioral relationships. Imported theories from the finance literature assist contemporary accounting researchers in their investigations of relationships between the usefulness of accounting information and corporation performance. Contemporary accounting researchers use theories from finance to explain the observed

phenomena in the capital market and to predict unobserved ones (Gaffikin, 1988b). Theories imported from economics and finance may promote sub-areas in financial accounting. Such sub-areas were not previously studied or explored by accounting academics.

Capital market research is an example of these sub-areas in financial accounting. Capital market research emerged in the accounting literature as importing theories from economics and finance continued. Beaver (1998, p.4) asserts that "financial accounting research in information economics, security prices, and behavioral science" reflects the shift in academic accounting research which took place in the late 1960s. It is hypothesized that:

H_5: The influence of economics and finance on academic accounting research is positively associated with the financial accounting topics in academic accounting research.

This hypothesis does not suggest that financial accounting in general did not appear in academic accounting research prior to the importation of theories from economics and finance. Financial accounting topics have been appearing in academic journals since the time they were established. Fleming et al. (1990) found the ratio of financial accounting topics published in *TAR* during the period of 1926-1945 is 66.9%.

What this study is concerned with is the proportion of financial accounting articles that can be associated with the rise of imported theories from the economic and finance disciplines. Excluding market studies from financial accounting, Kinney (1990) reports a small increase in the ratio of financial accounting (43.7%) as compared to the ratio of financial accounting published during Sundem's (1987) term as *TAR*'s editor which was 41%. Using definitions of financial accounting different from the one used in

this current study, Fleming et al. (2000) reported a small change (2%) between the ratios of financial accounting during the periods between 1946-1965 and 1966-1985. While the ratio of financial accounting during the period of 1946-1965 was 46% (Fleming et al, 1991), the ratio of financial accounting during the period of 1966-1985 was 48% (Fleming et al. 2000). Recent studies report that the ratio of financial accounting to the total number of articles published in *TAR* is higher than 60% (Bonner et al. 2006; Tuttle and Dillard, 2007).

Leaders of the accounting discipline (e.g. Rayburn, 2006) as well as editors of some top accounting journals (e.g. Zeff, 1983) observed narrowness in the scope of top accounting journals. Despite such observed narrowness, financial accounting topics have not only appeared and increased in number, but also increased in popularity. The popularity of financial accounting as an area of research has been at the expense of other areas of inquiry (Fogarty, 2007b). Some (Oler et al. 2008; Zeff, 2008) have expressed their concerns about the decline in normative accounting research. As financial accounting topics increased in academic accounting research, research addressing accounting theory may be among the declining topics. It is thus hypothesized that:

H_6: Financial accounting topics in academic accounting research have a negative association with accounting theory.

3.2. Modeling the Phenomenon of the Decline of Accounting Theory

This section portrays the relations among these variables in a narrative fashion and in a graphical format. These relations can be briefly classified in two categories. The first category contains three negative associations between accounting theory on one

hand and the use of the empirical archival method, the influence of economics and finance, and financial accounting topics on the other hand. The second category includes two positive relationships. The first one is between the use of the empirical archival method and the influence of economics and finance. The second positive association is between the influence of economics and finance and financial accounting topics.

In this section, the model is presented in the two forms that Klem suggests. Klem (1995, p.67) advises that "the model is…presented both in words and by a path diagram..."

3.2.1. Narrative

The empirical archival method may have taken over the market of accounting theory. Academic accounting research may have shifted from building general accounting theory in favor of focusing on research studies utilizing the empirical archival method. The latter may further be associated with importing ready-built theories from mature disciplines, namely economics and finance, since theories are needed for empirical studies to guide their design and to help interpret their findings (Dopuch, 1979; Kothari, 2001). Archival data, which are related to corporations and are used in the empirical archival method, are disclosed and reported by the agent (management) to the principal (shareholders). Observed phenomena produced as a result of external financial reporting can be explained and may be predicted by theories borrowed from economics and finance.

Asymmetric information theory, rational choice theory, and signaling theory may offer explanations for the phenomena observed in the archival data that the agent reports to the principal. The increase in attempts to import ready-built theories from neighboring

disciplines, in particular economics and finance, may be negatively associated with efforts to develop general accounting theory to guide accounting practice. Instead of working on building general accounting theory that would lead accounting practice, many contemporary accounting researchers employ borrowed theories in their empirical studies. The belief in agency theory leads researchers to deduce hypotheses related to external financial reporting.

The appropriateness of imported theories from economics and finance in explaining phenomena produced by the problem of a principal-agent relationship may lead one to correlate the influence of economics and finance with the increased trends observed in financial accounting topics in academic accounting research. This increased trend in financial accounting topics in academic accounting has been at the expense of other accounting topics (Fogarty, 2007b). Accounting theory may fall into this category. The increase in financial accounting topics in academic accounting research may be negatively correlated with accounting theory.

3.2.2. Graphically

Diagram 1 ties together hypotheses: $\mathbf{H_2}$, $\mathbf{H_3}$, $\mathbf{H_4}$, $\mathbf{H_5}$ and $\mathbf{H_6}$. Tying them together along with the first hypothesis ($\mathbf{H_1}$) provides a coherent and comprehensive picture of what may have taken place in academic accounting research.

[Insert Diagram 1 here]

CHAPTER FOUR

Study Design

This chapter discusses the design of the study in four parts. The source of the data and the sample selection are discussed in the first part. The second part details how to measure each variable. In the third part, the research method deals with the procedure for coding the articles and the demonstration of the process of obtaining scores for issues (unit of analysis). The last part discusses how to analyze the obtained scores.

4.1. Data

One of the goals of the emergence of academic accounting research has been to build general accounting theory. The American Association of University Instructors in Accounting (AAUIA)[6] recognized the incapability of practitioners to deliver a body of knowledge that would contribute to the advancements of accounting theory. Later, the AAUIA reorganized to include research, particularly on accounting theory as a topic that AAUIA would pursue. Article II of the *Report of the Committee on Revision of the Constitution and By-Law* states "…improvement in accounting which will make its use more satisfactory and serviceable must come from attention to the theory of the subject" (AAUIA, 1925, p.153).

The years following the constitutional revision experienced many efforts by the AAA to develop general accounting theory, specifically the years between 1936 and 1977 (for a detailed list of these efforts see the second part of Table 4 in this study; see Zeff 1999, p.90 for an introduction of these statements). Such efforts led accounting writers, like Langenderfer (1987), to view AAA's main role as that of developing accounting

[6] In 1935 AAUIA became AAA.

theory underlying sound financial reports, which at that time accounting scholars were very enthusiastic to establish. An official document sponsored and published by the AAA stresses such a role. *A Statement Of Basic Accounting Theory* states that "the American Accounting Association has a consistent record of activity in the development of accounting principles, standards, and accounting theory generally" (1966, p.vii).

The AAA is capable of not only controlling the "legitimate scholarly agenda" (Rieter and Williams, 2002, p.602), but also influencing and shaping the American accounting academy through several means such as editorial boards, research, awards and others (see Lee, 1995; Fogarty and Liao 2006). *TAR* is the greatest and the most effective means that the AAA employs in organizing the contents of accounting knowledge (Heck and Bremser 1986; Williams 1985; Williams and Rodgers 1995). *TAR* has gained the recognition within the accounting community as a US-leading journal and a valuable source for accounting scholars to establish a reputation. It possesses the power of deciding the "contents of accounting knowledge" (Williams and Rodgers, 1995, p.263).

US accounting faculties identify *TAR* as one of the most prestigious journals (Lee, 1997). Even though the AAA has expanded the number and the diversity of journals, none of them is as important as *TAR* in university performance evaluation decisions (Heck and Jensen, 2007). Clearly, *TAR* enjoys a significant value as compared to other accounting journals. Sunder, a former president of the AAA, describes *TAR* as "the granddaddy of the AAA's publications" (2007, p.4).

TAR is the manifestation, the phrase used by Rodgers and Williams (1996), of the latent desire of the AAA to promote certain directions and avenues in accounting research, to encourage specific research methodologies, and to motivate particular ideas.

Therefore, changes in the AAA's mission have affected almost all the types and the contents of articles that have been published in *TAR*. Lee (1995, p.256) has observed changes in the AAA's missions over time from "practice teaching to practice research and finally to academic research."

The second and third stages have been reflected in *TAR*'s contents. Flesher (1991) divided *TAR*'s age into three stages. The first stage began after the establishment of the journal. At that stage *TAR* was "predominantly a theoretical journal" (Flesher, 1991, p.167) with no emphasis on practice. A decade after its establishment, *TAR* became a tool for advancing accounting practice and theory. The third stage took place in the late 1950s when the journal was "an outlet" for empirical studies where "theory based on accounting principles" declined in importance (Flesher, 1991, p.167; see also Chatfield 1975, p.1). Such phases mostly mirror the mission changes of the AAA observed by Lee (1995). Thus, it can be said, the contents of *TAR* have paralleled the changes and the modifications that have occurred to the AAA's mission throughout time. *TAR* functions as the surface that displays the intention of the AAA toward academic accounting research.

In addition, the purpose of this study is to associate the decline of accounting theory on one side with the rise of empirical archival method, the increase of the influence of economics and finance, and the increase of financial accounting topics on the other side. Recalling such a purpose, *TAR* is the best source of collecting data. *TAR* is the oldest American academic journal founded as an association journal to serve the interests of its members. The purpose of establishing a journal sponsored by the AAA was to enhance public respect toward the profession by including topics dealing with education

and theory (Chatfield, 1975). *TAR* was once dedicated to accounting theory (see Flesher, 1991). Zeff declares that, "*The Accounting Review*…was the first English-language periodical devoted predominantly to accounting theory" (1966, p.57). Thus, unlike other top-tier journals (*JAR* and *JAE)*, *TAR* was not dedicated to serve the wave of empiricism in the first place, which makes it a reasonable means to study the impact of the movement towards the empirical archival method on the decline of accounting theory.

TAR has attracted several accounting researchers to study it for a variety of reasons and use it as a source for their data (e. g. Abdel-Khalik, 1976; Chatfield 1975; Fleming et al. 1990, 1991, 2000; Fogarty and Liao 2006; Heck and Bremser 1986; Rodgers and Williams 1996; and Williams and Rodger 1995; Williams 1985; and recently Heck and Jenson 2007). Therefore, *TAR* is a valid and reliable source for collecting data needed to test the hypotheses previously stated.

4.2. Sample Selection

A sample of articles published in *TAR* in four different periods is included in this study. Each period contains five years, starting with the first five years (1926-1930) and ending with the last five years (2003-2007). The remaining two periods will be chosen from the years between the last year of the first period (1930) and the first year of the last period (2003) in a way that assures as much as possible equal distances among the sufficiently random four periods. That is, the gap between the first two periods must be equal or close to the gap between the second and the third periods and so on.

The first period covers the first five years between 1926 and 1930. This period will offer a sense of what type of articles were published in *TAR* at the time of its

establishment. The twenty-one years which follow the first period are skipped. The second period is then selected. The second period covers the years between 1952 and 1956. The twenty years following the second period are skipped. The third period is then selected. The third period covers the years between 1977 and 1981. The twenty-one years following the third period are skipped, leaving us with the last five years. Accordingly, the fourth period covers the years between 2003 and 2007.

[Insert Diagram 2 here]

Including these four periods in the sample is valuable for a variety of reasons. As stated above, the first period will offer us a sense of how the articles published in *TAR* appeared when it was established. The second period, as the literature reveals covers part of the time when the market for accounting theory reached its peak. Examining such a period is important to understand the relationship between accounting theory and the other variables. The third period starts in 1977 which is a decade after the publications of the studies of Beaver (1968) and Ball and Brown (1968). Dopuch (1976) considers the study of Ball and Brown (1968) as the opening of the new empirical paradigm in academic accounting research. Examining *TAR* as a proxy of academic accounting research a decade later after this type of study is published gives it relatively enough time to have an influence in accounting academia. During the third period, two studies of Watts and Zimmerman (1978, 1979) were published in *TAR*. Examining the fourth period is important for our understanding in that it allows more than two decades for the Watts and Zimmerman (1978, 1979), Ball and Brown (1968), and Beaver (1968) studies to have influences in academic accounting research. The fourth period also shows us the current

relations among the four variables (accounting theory, the use of empirical archival method, the influence of economics and finance, and financial accounting topics).

4. 3. Measurement

This section discusses in detail how each variable is measured. For some variables (the use of the empirical archival method and financial accounting topics), detailed discussions about the lack of precise definitions for these variables are presented before a decision is made on how to measure these two variables in this study. For the variable concerned with the influence of economics and finance, extensive literature suggests a way of measuring this variable. For the last variable accounting theory, this study establishes its own criterion in measuring this variable. This criterion has two dimensions as discussed below.

4.3.1. Accounting Theory

Accounting theory has been defined broadly in this study. By doing so, this study avoids possible criticism that a narrow definition of accounting theory may bring. Relying on a narrow definition may raise concerns that articles published in recent *TAR* issues will not be considered accounting theory. The reason for broadening the definition is to give articles published in recent years, particularly during the fourth period (2003-2007), a chance to be treated as articles discussing accounting theory. This study considers the many possibilities available for a main article to be treated and classified as an article about accounting theory.

For an article to be classified as one dealing with accounting theory, three alternatives are available. Each alternative is represented by a dimension. If an article has a reference to only a dimension, then an article will be deemed to be about accounting theory. References to one dimension or a sub-dimension is considered enough for an article to be listed as being about accounting theory.

Accounting theory is measured using two different dimensions. The first dimension is concerned with references to accounting theory. This dimension is divided into two different sub-dimensions. The first sub-dimension is concerned with references to any of the elements of the structure of accounting theory as defined by Belkaoui (2004). The second sub-dimension is concerned with references to any of the statements published by the AICPA and the AAA that are concerned with accounting theory or by the Financial Accounting Standards Board (FASB) that are concerned with the conceptual framework. These statements might be referred to while the article has nothing to do with accounting theory because a constraint is imposed upon articles that refer to such statements. This constraint is represented by factors such as citing an accounting theorist, examining the title of the article, and examining the contents of the article. For example, if the article concerns one of these statements and at the same time refers to an accounting theorist, it will be clear that this type of article is concerned with accounting theory. The second dimension is to refer to an accounting theorist. These dimensions are discussed in detail below. Diagram 3 summarizes these dimensions.

Each of the following sub-sections discusses a dimension. Each sub-section provides examples of what will be classified as accounting theory and what will not be classified as accounting theory.

[Insert Diagram 3 here]

4.3.1.1. Reference to Accounting Theory

Two sub-dimensions make up for this dimension. The first one is to refer to an element or more of the structure of accounting. The second one is to refer to a statement concerning accounting theory. It has to meet at least one of the three suggested criteria listed below in Section **4.4.2.1.2.** The second sub-dimension includes references to one of the statements creating the conceptual framework of the FASB.

The reason for having the second sub-dimension is to cover the possibility that an author would discuss an aspect(s) of a statement suggested as part of a theory of accounting, while such an aspect is not included in Belkaoui's "structure of accounting theory." Some of these statements, in particular by AICPA and by the AAA, were not popular and not generally accepted. For example, *The Basic Postulates of Accounting* (ARS No. 1) (1961) and *A Tentative Set of Broad Accounting Principles for Business Enterprise* (ARS No. 3) (1962) are of this type (see Wolk et al. 2004, p.123). Thus, there is a concern that Belkaoui's "structure of accounting theory" may not include them. Belkaoui's "structure of accounting theory" also may not take into account similar efforts that have been suggested as part of the structure of accounting theory. Such efforts may not have been considered by the accounting community as such. Since the current study is not aimed at judging the efforts put in place in the establishment of general accounting theory, all writings and articles that have been undertaken toward that end are considered in this study for the purpose of measuring the accounting theory variable.

4.3.1.1.1 Reference to the Elements of the Structure of Accounting Theory

"The structure of accounting theory" as offered by Belkaoui is more wide-ranging of a topic in accounting theory. He illustrates it in Chapter 7 of his book entitled *Accounting Theory* (2004). The structure of accounting theory, according to him, comprises four levels (pp.210-211):

1- A statement of the objectives of financial statements.
2- A statement of the postulates and the theoretical concepts of accounting concerned with the environment[al] assumptions and the nature of the accounting unit.
3- A statement of the basic accounting principles based on both the postulates and the theoretical concepts.
4- A body of accounting techniques derived from the accounting principles.

Belkaoui does not discuss the fourth level in his book. He (2004, p.211) states this level is the subject of technique-oriented courses. Belkaoui discusses the second and the third in single chapters within his book. He devotes chapter six to discuss the first level. The following discussion summarizes his discussion of the first, second, and third levels.

4.3.1.1.1.1. The first level of the structure of accounting theory

The first level is very important in accounting theory formulation because a statement of the reasons and objectives motivate the establishment of the concepts and principles (Belkaoui, 2004). The AICPA formed two study groups in April 1971. The first group dealt with the establishment of accounting principles. This group is known as "Wheat Committee." The second group known as "Trueblood Committee" was to develop the objectives of financial statements (for more see Belkaoui, 2004, ch.6). The Trueblood Committee proposed twelve objectives (see Table 1) and seven qualitative characteristics of reporting (see Table 2). For a discussion about these objectives see

Belkaoui (2004, pp.167-173). Some accounting academics have suggested different objectives. Such suggested objectives, in addition to Trueblood Committee's proposed objectives, will be considered in this current study for the purpose of measuring the accounting theory variable. This study considers published attempts toward developing and constructing accounting theory.

[Insert Tables 1 and 2 here]

4.3.1.1.1.2. The second and the third levels of the structure of accounting theory

Table 3 contains a detailed list of what would be included under levels 2 and 3 of Belkaoui's "structure of accounting theory."

[Insert Table 3 here]

4.3.1.1.2 References to Major Statements Related to Accounting Theory

Three organizations have sponsored and published these major statements. Based on the organizations the statements can be classified in three categories.

In the first category, the statements were sponsored and issued by the AICPA (see the first part of Table 4). Some of these statements were intended to be a theory of accounting (e.g., *The Basic Postulates of Accounting* (ARS No. 1), 1961; *A Tentative Set of Broad Accounting Principles for Business Enterprise* (ARS No. 3), 1962). Other statements attempted to list and describe accounting principles (e.g., *Inventory of Generally Accepted Accounting Principles for Business Enterprises* (ARS No. 7), 1964). Other statements were concerned with accounting principles (e.g., *A Statement of Accounting Principles* by Sanders, Hatfield, and Moore, 1938).

In the second category, the statements were sponsored and issued by the AAA (see the second part of Table 4). Some of those statements were proposed as a theory of accounting (e.g., *A Statement of Basic Accounting Theory,* 1966). Other statements can be viewed as a survey and an evaluation of the proposed theories (e.g. the *Statement on Accounting Theory and Theory Acceptance*, 1977). The statements published by the AAA between 1936 and 1957 are related to each other (for a brief introduction see Zeff, 1999, p.90).

In the third category, the statements were sponsored and issued by the Financial Accounting Standards Board (FASB). Collectively, these statements by FASB were intended to create the conceptual framework of financial accounting (see the third part of Table 4). This conceptual framework is a composite of seven statements issued during the years between 1978 and 2000. Although SFAC No. 4 is not for corporations aiming for profits, and although some accounting writers do not include it when they discuss the conceptual framework (e.g. Kieso et al. 2004; Nikolai et al. 2007, p.33, footnote 3), it is considered as part of the conceptual framework. This study is concerned with whatever efforts were put in place toward establishing a theory for accounting. Belkaoui (2004), King (2006) and Wolk et al. (2004) include it in their discussions of the conceptual framework. Objective number 11 (see Table 1) recognizes that nonprofit organizations are obligated to supply financial information and statements that assist in evaluating how they manage resources.

Furthermore, the tendency toward building the conceptual framework was a result of not reaching agreement upon a theory of financial accounting. Accountants turned to building a conceptual framework as an alternative to self-regulating the accounting

profession (Archer, 1993). An attempt toward establishing an intellectual basis for setting accounting standards replaced the efforts to build a theoretical basis for financial accounting (Archer, 1993).

These standards are to be derived deductively from the conceptual framework (Power, 1993) that FASB started working on in 1976. Belkaoui (2004 p.173) states, the conceptual framework is planned to be a constitution for the standards-setting development. The term "conceptual framework" is used to characterize the perceived need that has to be met (FASB, 1974 as cited in Archer 1993 p.63). That is, "The FASB has…realized that the whole problem of standard-setting rests not only on the objectives, but on an established body of concepts and objectives" (Belkaoui, 2004, p.173). The conceptual framework of FASB is the longest and the most expensive project in the history of accounting (Gore, 1992).

Framework building is a part of the "traditional normative literature" (Dyckman and Zeff, 1984, p.236 footnote 5). Wolk et al. (2004, p.196, emphasis added) state, "The conceptual framework is thus *an attempt* to provide a meta-theoretical structure for financial accounting." Some parts of the conceptual framework might be viewed as a theory (Gaa, 1988).

This study considers the framework project as an attempt to create a theoretical foundation that was hoped to help in developing accounting. This study is not focused on evaluating or judging the proposed accounting theories nor the suggested alternatives for accounting theory (for example the conceptual framework). This study is rather focused on the decline in such efforts. Therefore, references to FASB's statements that create the conceptual framework will be considered while measuring the accounting theory

variable. Table 4 contains major statements published by the AICPA, the AAA, and the FASB[7].

[Insert Table 4 here]

4.3.1.2. References to Accounting Theorists

In addition to relying on topics addressing "the structure of accounting theory," references of the articles will be examined searching for references to well known accounting theorists. Table 5 offers names of accounting theorists. For some accounting theorists, specific work is listed. For example, Edwards and Bell are cited for their book written in 1969. Some works are listed as examples for other well known accounting theorists.

Table 5 is not intended to be exhaustive in that those individuals who are not included may be theorists or scholars in the accounting discipline. Rather, the motivation of limiting the list to what is included in Table 5 is to provide well known accounting theorists who are less likely to be debated. Hatfield, Littleton, Paton, and Sprague are examples of such theorists included in Table 5. In addition, Table 5 counts for only a sub-dimension of the accounting theory variable. An article published in *TAR* during the sampled periods still has a chance to be considered to be about accounting theory if the article is about any of the other two sub-dimensions. For example, if the article cites the *Fund Theory of Accounting and Its Implications for Financial Reports* by Vatter (1947)

[7] Early formal efforts to govern the form of the balance sheet by adopting a resolution at the 1894 American Association of Public Accountants meeting, the AICPA forerunner, provide evidence of normative thinking, but are not considered for our purposes in this study to be sufficiently developed to be evidence of a normative theory but an effort to advanced a preferable practice (The American Institute of Accountants, 1938).

given that Vatter is not listed in Table 5, the article will still be considered to be about accounting theory because the fund theory is part of the structure of accounting theory suggested by Belkaoui (see Table 3).

[Insert Table 5 here]

4.3.2. The Use of the Empirical Archival Method

Webster's dictionary (1991, p.408) provides the following definitions for the term empiricism:

1. A former school of medical practice founded on experience without the aid of science or theory.
2. A) The practice of relying on observation and experience esp. in the natural sciences.
   B) A tenet arrived empirically.
3. A) A theory that all knowledge originates in experience.
   B) Logical positivist.

From these definitions, empiricism is apparently associated with experience. The *Dictionary of Qualitative Inquiry* by Schwandt (2001) states that, "Empiricism is the name for a family of epistemological theories that generally accept the premise that knowledge begins with sense experience" (p.67). The definitions in *Webster's* dictionary also point out that prior knowledge must not affect the observer. Knowledge is accumulated through observing and then finding data to support what has been observed. Observations have to be supported by data in order to assert a claim of knowledge. According to empiricism as an epistemological philosophy, knowledge is induced from data. Empiricists maintain that the foundation of science "is provided by the data of immediate experience" (Dewey 1938 as cited in Kaufmann 1959 p. 828).

Schwandt (2001) identifies two schools of empiricism. The first one is the strict (also called naïve) empiricism which "holds all knowledge is experiential, and that knowledge claims can be justified only by appeal to the evidence of the senses" (2001, p.67). That is, it "relies exclusively on perception and induction in building knowledge claims and eschews any important role whatsoever for concepts and theories" (2001, p.67). This form is what is known as logical positivism. Schwandt documents that historians and philosophers such as Kuhn and Stephen support the idea that scientists' prior knowledge, beliefs, and concepts take part in justifying and testing scientific claims. Dewey (1938 as cited in Kaufmann 1959 p. 827) asserts that empirical knowledge "must have an immutable basis which is provided by logic." Dewey (1938 as cited in Kaufmann 1959 p. 828) adds, "Isolated sense data or introspective data are not objects of knowledge; they acquire cognitive functions only when they are employed as signs of something beyond themselves." These challenges called for a new form of empiricism. Logical empiricism was introduced to combine the importance of empirical observation and the role of concepts and theories in constituting valid knowledge (Schwandt, 2001). See Schwandt (2001, p.67-69) for the complete definition, related terminology and definitions.

Schwandt's (2001) first definition is similar to *Webster's* definition in that knowledge is induced from data. For a claim of knowledge to hold and thus to be accepted, a claim of knowledge has to be supported by data. An observer is not assumed to be influenced by *a priori*. Prior knowledge, concepts and theories must not play a role in constructing knowledge.

Furthermore, empiricist ideology is "a claim to independence and objectivity" (Sy and Tinker, 2005, p.63). Methodologically speaking, empirical research can be conducted using several research methods such as: case study, experiment, field study, survey, laboratory, and archival. The lack of common and accepted definitions for most of these categories makes classifying empirical studies under these categories difficult (Fulbier and Sellhorn, 2006).

In their attempts at defining empiricism, some writers compare and contrast empiricism against other research methodologies. Some writers contrast empiricism with pragmatism, which according to Schwandt (2001, p.67), "holds that action, not only just any kind of experience, is both the source and test of all knowledge". For example, Beams (1969), an accounting writer, explains and defines empiricism in contrast to pragmatism. Other writers contrast empiricism to rationalism which according to Schwandt (2001, p.67) "holds that reasons is the primary way of acquiring knowledge."

Some writers, on the other hand, compare empirical theories to normative theories. For example, Roberston (1993, p.585) makes it clear that her call for empiricism in business ethics research should not be interpreted as a call for excluding normative theorization. Roberston's clarification manifests the latent construct relationship between empiricism and normative types of theorizing in the minds of some writers.

Another example of comparing empirical theories to normative theories is Dopuch (1979) who compares empirical to non-empirical accounting research. He (1979, p.67) argues that non-empirical researchers propose theories that are not subject to verification, and that early models in managerial and auditing were abstracted from real-world corresponding items. He makes it clear that the two forms of research are not two

different options, but instead they supplement each other. While empiricism needs theories to guide the research design, empiricism confirms and disconfirms theories (Dopuch, 1979). Early empirical research conducted in accounting research before 1950 suggested that empiricism was utilized by accounting researchers to support their normative positions (Buckmaster and Theang, 1991).

Later in his article, Dopuch rejects some types of normative theorization. Specifically, he rejects normative theorizing that does not recognize that "accountants, managers and users of accounting information must take decisions under uncertainty and often within markets which are less than perfect" (p.80).

Contrasting empiricism to normative theorization might be an inaccurate way of defining and describing empiricism and thus suggests a misunderstanding of empiricism. In the case of accounting research, Tinker et al. (1982, p. 167) argue that positive or empirical theories are "normative and value-laden in that they usually mask a conservative ideological bias in their accounting policy implications."

Mis-conceptualizing the term empiricism is expected to occur because the term empiricism, according to Benjamin (1954, p.171), is "vague." No wonder some writers in their calls for promoting empirical research in their fields have chosen to define what they meant by the term empirical research. These writers have done so in order for them not to be misunderstood and for their arguments not to be confused. For example, in calling for empiricism in business ethics research, Roberston (1993, p.585) defines empirical research very broadly as "research on observable phenomena pursued scientific method." Other writers have operationally defined the term "empirical research." For instance, Buckmaster and Theang (1991, p. 58) state, "Empirical research is operationally

interpreted to include any work that uses, identifies, and reports observations of real events." Buckmaster and Theang (1991) make it clear that they have no intention in to be involved with the philosophical conceptualization of empiricism.

Therefore, it might be difficult to rely on a single definition or on one's own understanding of empirical research. However, since this study is concerned with the empirical archival method, it might be easier to focus on defining such a method. Fulbier and Sellhorn (2006) provide a definition. They define it as driven from a "data base or archive."

The investigation for articles utilizing the empirical archival method will take two steps. First, identifying empirical articles by relying on the topics in which an empirical method was employed. Second, each one will be viewed to decide whether the research method was archival or another type of research method such as laboratory or survey.

A good source of identifying these topics is *TAR*'s editors. Some of those editors, for example Sundem (1987) and Kinney (1990), listed examples of empirical research in accounting published in *TAR*. Relying on a means to identify empirical work has been suggested by Kothari (2001). Kothari depends on the underlying theory and alternative hypotheses in his efforts to identify empirical capital market studies. He rationalizes his decision by saying, "Empirical research is (or should be) informed by theory, since interpretation of empirical analysis is impossible without theoretical guidance" (106). While Kothari relied on theories and hypotheses in identifying empirical capital market work, in this study articles published in *TAR* that utilized empirical archival method will

be pinpointed by indentifying the topics that Sundem[8] (1987) has recognized as examples of empirical work.

Sundem (1987, p.196-200) listed four categories of empirical methods: general empirical, capital market, behavioral and survey. First, general empirical research includes the:

> Relative accuracy of different earning prediction models, effect of different treatments of convertible securities on EPS numbers, lobbying positions taken on accounting standards, differences in financial ratios under different reporting methods, economic characteristics of firms using different capital budgeting models, characteristics of audit firms that account for differences in audit fees, measures of aggregate taxpayer decisions in response to tax law change, market concentration of audit firms, and comparison of reporting standards in a sample of countries (p.198)

Second, the topics in empirical capital market include:

> Studies using stock market prices to measure reaction to accounting reports or standards of market risk measure with various accounting numbers, effect of qualified audit opinions on stock prices, and relation of reporting or auditing methods to markets prices, of municipal bonds (p.198)

In the last two categories (behavioral and survey), the data sources used were not archival. In empirical behavioral studies, data were obtained through a laboratory or a questionnaire from subjects who were either students or professionals. In empirical survey studies, data were collected through questionnaires. Since the type of data is not archival, these two types of empirical methods will not be considered as empirical archival method for the purpose of measuring the use of the empirical archival method variable. An article that employed any of these two research methods will not be considered as using the empirical archival method.

[8] Sundem was *TAR*'s editor during the period 1982-1986.

4.3.3. The influence of Economics and Finance

In order to evaluate the influence of economics and finance, citations to economic and finance books, journals and other materials will be examined. Accounting writers have employed citation technique (e.g. Brown and Gardner 1985a, 1985b; Brown 1996; Bricker 1988, 1989; Tahai and Rigsby 1998). Fleming et al. (1990, 1991, 2000) utilize citation technique in examining the journals and books that had major influences on *TAR's* leading authors, as defined and included in their studies, in three subsequent periods: 1926-1945, 1946-1965 and 1966-1985.

Citing previous works is essential for advocating the author's point of view (Oppenheim, 1996) because "those [cited] texts provide the article with the authority it needs to assert a knowledge claim" (Williams and Rodgers, 1995, p.279). Citations indicate knowledge dependent on the cited work (Baumgartner and Pieters, 2003). Accordingly, the journals and books which *TAR* authors have cited manifest the field of knowledge having a great influence on authors.

In this study, citations to economic and finance books, journals and other materials have to be listed in the reference table in order for them to be considered for the purpose of measuring the influence of economics and finance. This will limit the place to search for such data within the reference tables. A citation listed in the article will be used in case of the unavailability of a reference table.

4.3.4. Financial Accounting Topics

Disagreement upon a definition for financial accounting is expected to occur. Estes (1981, p.51) defines financial accounting as, "a broad field of accounting concerned

primarily with external financial reporting, including the normal financial statements." Davidson et al. (1984, p.36) specify that external users are the users of financial accounting. On the other hand, the definition of Kieso and Weygandt (1998) extend the users to include internal users. Financial accounting is defined, according to Kieso and Weygandt (p.3), as "the process that culminates in the preparation of financial reports on the enterprise as a whole for use by parties both internal and external to the enterprise."

Ambiguity surrounds the term financial accounting. Nobes (2002, p.133) describes financial accounting as "a fairly vague term." For example, the distinction between financial accounting and managerial accounting is indistinguishable when taking into account questions related to the principal-agent problem (Gould, 1982). An example of a research question that is related to the principle-agent problem would be a research question that addresses managers' compensations as a means to create incentives for the managers (the agent) and to align their interest with those of shareholders (the principal). Such research questions can be viewed as related to managerial and financial accounting.

While some might classify such research questions as managerial, others might classify them as financial accounting. The emphasis of an article may differ from one person to another. Such a disagreement is likely to occur. Fleming, Craci and Thompson (1991, p.28) documented disagreements occurred among them in classifying some articles published in *TAR* during the period 1946-1965. They justified such differing views over the primary emphasis of such articles. As a solution for research questions addressing the principal-agent problem, Gould (1982) suggests that viewing such questions as a type of financial accounting research questions may be enlightening and informative.

Relying on a single definition might not be a good way in deciding whether an article can be classified as financial accounting or not. Alternatively, some editors of *TAR* have supplied classifications of financial accounting topics. The classifications related to financial accounting can be utilized to operationally define the financial accounting variable in this study. For example, Kinney (1990) suggests four areas of financial accounting: financial accounting choices (excluding markets studies), financial accounting forecasts (excluding market studies), financial accounting standards (excluding market studies) and, finally, other financial accounting which includes articles that do not fit under the three previous categories. These four categories can be viewed as four different dimensions of the financial accounting variable (see Diagram 4).

This study is concerned with the dimension(s) where it can be argued they would not have emerged had not developments in the economics and finance disciplines taken place and had data and software not become available. Heck and Jensen (2007) assert that developments in statistical software, the emergence of capital asset pricing model (CAPM) and the availability of CRSN stock price pushed accounting research to capital market research. Fogarty et al. (1999) claim that the study of Ball and Brown (1968), which was the opening of the new empirical paradigm (Dopuch, 1979), has attracted many accounting researchers to investigate the relationship between the usefulness of accounting information and corporate stock performance. Therefore, the operational definition of the financial accounting variable includes capital market studies. It does not matter under what classification of Kinney's an article can fit as long the article investigates the market reaction to accounting information.

In addition, Fogarty et al. (1999) argue that after the publication of Ball and Brown's study (1968), the work of accounting researchers has centered on financial statements. Accordingly, financial statements as a topic discussed in academic accounting research is another dimension for the financial accounting variable. Articles about the audit of financial statements[9] will be considered as part of the financial accounting variable as well. Sundem (1987, p.198) points out that capital market research includes studies that measure the "effect of qualified audit opinions on stock prices."

In short, the financial accounting variable, as defined in this study, has three dimensions: market reaction to accounting information, financial statements, and the audit of financial statements. Diagram 4 shows the four dimensions inferred from Kinney's classification and dimensions developed and used in this study.

[Insert Diagram 4 here]

4.4. Research Method

4.4. 1. An Illustration of Coding the Articles Included in the Sample

Each article will be categorized under each variable of interest. Numerical codes will be used for categorizing the articles. The 0 or 1 coding is suitable because it will result in variations of the variables. Another feature that the 0 or 1 coding offers is that it will allow transforming such values to interval scales.

[9] In the second decade of the twentieth century the Federal Reserve Board produced documents with references to uniform accounting (1917) and approved methods of presentation (1918), and subsequently the organized CPA profession produced a document addressing the verification of financial statements (1929) as its topic. The earliest two of these is identified by Chatfield (1977) as guidance for auditors, and the latter is a continuation of this effort. These may be potentially interesting sources for the study of the origins of US auditing theory.

If an article possesses the characteristics of the variables of interest, the article will be given a numerical value of 1 for each variable whose characteristic is found in the article. Otherwise, a numerical value of 0 will be assigned, an indication of the absence of the characteristic of the variable from the article.

4.4.1.2 Two Steps of Coding

The process of collecting the data will be done in two stages. First, the main articles will be identified in each issue. Second, the main articles will be coded either 0 or 1 four times. Each time corresponds to a variable.

4.4.1.2.1. Articles Included in the Sample

Only main articles will be considered and included in the sample. Other publications will be excluded. The excluded items include:

1. Committee reports: whether those reports appeared in sections in issues or whether a whole issue was exclusively for publishing such reports. An example of the latter would be the supplement issue published in volume 52 in 1977. Because this supplement issue was a publication of Committee Reports, it was excluded.
2. Comments.
3. Reply to these comments.
4. Articles that appeared in the department sections such as Educational Research and Financial Reporting. These departments no longer appear because other journals (*Issues in Accounting Education* and *Accounting Horizons*) have been publishing similar articles (Flesher, 1990, p.170). These department sections are found in the

volumes published in the second and the third periods (1926-1930 and 1952-1956, respectively).

5. Teacher Clinic and Accounting Exchange.
6. Book Reviews.
7. Editorials.
8. Articles related to the symposium on appreciation which took place in 1930. The entire symposium was excluded from the sample. The articles were written without authors. These articles were prepared by students under the direction of Littleton. Comments followed each article. The EBSCO database (http://web.ebscohost.com) treats all that is related to the symposium as a single document.

4.4.1.2.2. Coding the Main Articles

Once an article is identified as a main article, it will be coded four times, one for each of the variables of the study. If the criteria established in the measurement section is found in the article, a value of 1 will be assigned for the article. Otherwise, a value of 0 is assigned.

After the coding is completed, the obtained data will be in a qualitative form (0's and 1's). The qualitative data will then be transformed to quantitative data by asking the question: how many articles are coded 1 in each issue? The obtained scores are quantitative in nature with interval scales which Anderson et al. (1994, p.5) describes as "a variable is interval when the data have the properties of ordinal data [and when] the

difference or interval between data value indicates how much more or less of a variable one element possesses when compared to another element."

[Insert Diagram 5 here]

After coding all the main articles published during the four periods sampled in the study, for each issue the articles that have values of 1 will be summed. This procedure will leave us with scores for each issue. In other words, by this procedure, the observational unit becomes the issue and the scores of the issues can be read by the number of articles possessing the characteristics of the variable of interest per issue. For example, an issue with a score of three under the accounting theory variables can be read as three articles on accounting theory published in that issue.

During 2006 and 2007, five issues were published in each of *TAR*'s volume. Volume 52 appearing in 1977 was supplemented by a special issue. This special issue as previously discussed also was excluded from the sample because it was a publication of Committee Reports. For the remaining years of the sample, four issues were in print in each volume. The maximum observational unit that each variable can have is 82. The procedure of counting the articles which receive the values of interest 1 will allow transforming the dichotomous values to interval scores.

4.4. 2. The Criteria of Coding the Main Articles

In this part of the study, the criteria used to decide whether a main article will get 0 or 1 under each variable is presented and discussed. The criteria related to each variable are presented in a sub-section. Four sub-sections discuss these criteria.

4.4.2.1 Accounting Theory

As stated previously in Section **4.3.1.** three alternatives are available for an article to be coded 1 under the accounting theory variable. A reference to an element of the structure of accounting theory, a reference to one of the statements listed in Table 4, or a reference to one of the accounting theorists listed in Table 5 will qualify an article to be coded 1 under this variable. One count of reference to any of these three dimensions is sufficient to determine whether a main article focuses on accounting theory. One count of reference is considered the threshold of a main article's content. The reason for such a low threshold, as discussed in Section **4.3.1.,** is to increase the chance of articles published in recent years to get a 1 under this variable. Below a count of one, an article would be considered to contain nothing of significance, as far as references to any of these three dimensions.

4.4.2.1.1 Reference to the Elements of the Structure of Accounting Theory

In this study, for the purpose of determining whether an article is concerned with accounting theory or not, Belkaoui's understanding of "the structure of accounting theory" will be utilized. Articles published in *TAR* discussing any of the elements of the "structure of accounting theory" suggested by Belkaoui will be considered as articles about accounting theory and thus a value of 1 will be assigned to such articles under the variable labeled "**Acc_Th**"; otherwise, a value of 0 will be assigned under such a variable.

4.4.2.1.2 Reference to Major Statements Related to Accounting Theory

To consider an article referring to one or more of these statements as an article that is concerned with accounting theory, and assigning a value of 1 to it under the variable labeled "**Acc_Th**," at least one of three different factors and criteria must be met. The first criterion is whether the article makes a reference(s) to one or more of the well known accounting theorists listed in Table 5. The second criterion, if there is no reference to an accounting theorist, the title of the article will be considered. Bricker (1988) relied on the titles of the articles in deciding whether an article belonged to a historical group or a non-historical group. The third criterion, if the title is vague, making it difficult to decide whether the article is about accounting theory, the contents of the article will be examined then a decision will be made based on the contents. Reading the article would be an optimal factor that provides more assurance whether the article is about accounting theory or not.

The reason for imposing these additional criteria upon discussing the statements is that an author of an article might make a statement for a reason other than proposing an accounting theory. For example, an author might refer to the *Statement on Accounting Theory and Theory Acceptance* (1977) for the purpose of supporting a claim of the existence of "user needs" as an approach for building accounting theory, but not intending to propose a theory of accounting. Another example, an author might refer to SFAC No.1, which was issued in 1978 by the FASB as part of the conceptual framework, for the purpose of stressing users' needs, not to discuss the objectives of financial accounting or accounting theory.

4.4.2.1.3. Reference to Accounting Theorists

Articles published in *TAR* which refer to any accounting theorists listed in Table 5 will be treated as articles concerning accounting theory, and thus a value of 1 will be assigned to these articles. Otherwise a value of 0 will be assigned.

Part A of Table 5 is important for the first period (1926-1930). Some of the authors of the articles that appeared during that period cite pre-classical writers, listed in part A of Table 5.

The authorship is not a sufficient criterion to assign a 1 to an article under the accounting theory variable. Most accounting theorists who are listed in Table 5 are deceased. The authorship criterion may not be applicable to recent years. Articles in recent years will not get a 1 because these articles were authored by a deceased accounting theorist. If the authorship criterion were implemented, such a criterion may make the operational definition problematic.

The purpose of this extra step represented by checking the reference Tables looking for references to major statements published by the AICPA, the AAA, and the FASB and to accounting theorists is to double check. Similarly, there might be articles concerning accounting theory but not necessarily discussing the elements of the structure of accounting theory suggested by Belkaoui (2004).

4.4.2.2. The Use of the Empirical Archival Method

Sundem (1987) acknowledges the built-in subjectivity associated with his classification utilized in this current study to identify empirical studies. Despite such subjectivity, Fleming et al. (1991, 2000) employed Sundem's taxonomy and his list of

definitions in their studies. Kinney (1990, p.259), who was also *TAR*'s editor during the period 1987-1989, admits that having a single scheme that is perfectly and completely informative is impossible.

Relying on the proposed criterion of using specific topics as guidance for identifying the empirical archival method and on Fulbier and Sellhorn's (2006) definition may, however, have a consequence. The consequence is the possibility of preventing some empirical articles published in *TAR* to be given the value of 1 under the variable "the use of the empirical archival method" while those articles are empirical in nature. Gaffikin (2005a) claims that empiricism existed prior to 1970. The discussion by Beams (1969) regarding empiricism and pragmatism identified these as two lines of accounting research strengthening Gaffikin's claim (2005a). Buckmaster and Theang (1991) found that empiricism existed in accounting research in the pre-1950 era. Gaffikin (2005a) calls empirical accounting research that has appeared after 1970 "neo-empiricism" to distinguish it from that which existed previously.

The two forms of empiricism are rather different. Early accounting researchers exploited empiricism for the purpose of developing accounting theory from best practices (Gaffikin, 2005a). They additionally employed it to bolster their normative positions (Buckmaster and Theang, 1991). However, during approximately the past 40 years, contemporary accounting researchers have been predominately utilizing empiricism in relation to the archival method. The new empiricism which occupied American accounting research (including *TAR*) is employed in data related to publicly traded corporations in which this study is explored with great interest. This study is intended to

explore the association between the use of this of method and the decline of accounting theory.

Therefore, the exclusion of empirical articles published prior to 1970 does not impact or threaten the construct validity because in this study a specific empirical method (archival) is intended to be measured. All types of empirical methods do not need to be considered. Accounting research that emerged prior to 1970 can be named as "pre-neo-empiricism."

The articles in which the empirical archival method was employed will be given a value of 1, whereas for articles in which other methods were utilized a value of 0 will be assigned. This variable is labeled in this study "**Using_Emp_ Arc."**

4.4.2.3. The influence of Economics and Finance

Objective measures based on citation accounts are available to measure a journal's influence (Baumgartner and Pieters, 2003). For example, Doreian (1988, p.47) suggests that "the ratio of citations received to citations relative to citable items published" used as a measure of a journal's influence. Baumgartner and Pieters (2003, p.125) paraphrase such a measure as "the ratio of citations received to citations made."

In this study, a measure based on citation counts is developed to measure whether a main article was influenced by the economic or the finance disciplines. This modified measure is similar to Doreian's measure in that it is a ratio. The ratio will be obtained by dividing the number of citations to economic and finance journals, books, and other materials listed in an article on the total citations listed in the article. The ratio can be organized as followed:

$$\% = \frac{\text{Citations to economic and finance journals, books and, other materials listed in an article}}{\text{The total citations listed in the article}}$$

The cut off ratio proposed is 25% (the first quartile). If the ratio of citations to economics and finance is 25% or more, the article will be considered to be influenced by these two disciplines and thus a value of 1 will be assigned for the article. The value of 0 will be assigned to those whose ratio of citations is less than 25%, indicating they are not influenced by the two disciplines. Using such a percentage, one would still reach a similar decision that Oler et al. (2008) did with regards to Beaver's article (1989). The ratio of citations of accounting articles in Beaver's article total is 18% (3/17) which is less than 25%. For this reason, the article would not be deemed as an accounting article. This variable is labeled in this study "**Influence_Econ_Fin.**"

Distinguishing between the nature of economics and finance may be difficult. One reason for this difficulty lies with the argument that finance is a sub-discipline for economics (Smith, 2003). However, since the influence of economics and finance variable has two dimensions: economics and finance, such multi-dimensionality should overcome this difficulty during the coding process. An article will get a value of 1 under the variable "**Influence_Econ_Fin**" as long as the author of the article refers to economic or finance journals or books. Classifying a reference as an economic reference or a finance reference does not impact measuring this variable. That is, as far as measuring this variable is concerned, whether the source of influence is from the economics discipline or from the finance discipline does not matter because the article will be assigned a value of 1 under this variable assuming the cut off ratio of 25% is achieved.

4.4.2.3.1. A Special Consideration for Coding the Articles under the "Influence_Econ_Fin" variable

The influence of economics and finance is measured by dividing the number of references to these two disciplines over the total number of references. While examining the references, serious consideration will be paid to all that are listed. For the ones which are ambiguous, efforts will be made to discover whether they are related to economics and finance. The consequences of identifying such work lie in the fact that for some articles deciding upon one or two cited works might make a difference in coding an article 0 or 1 under the **Influence_ Econ_Fin** variable. For example, if an author cited many works that are difficult to determine whether they are from the economic and finance disciplines or not, and if it is decided not to consider such works, then the percentage of references to economics and finance to the total references may be less than 25% (the threshold). Such a percentage disqualifies the article to be coded 1 under the variable of interest (**Influence_ Econ_Fin**).

4.4.2.3.1.1. Deciding upon ambiguous works

The following is a detailed list of categories of material that will be potentially faced when bibliographies and reference Tables are examined. The list demonstrates how each category will be searched in order to decide whether a cited work is considered as an economic or finance source.

4.4.2.3.1.1.1. Journals

Home pages on the internet will be the best place to look for information about the journals, especially their aims and scopes. Stating that a journal is concerned with economics and finance or their related topics leads to classify such a journal as an

economic/finance journal. An example would be *International Journal of Forecasting,* which is considered as economic/finance journal. If a journal is mainly concerned with accounting and some related fields, even economics and finance, such a journal will not be considered as an economics or a finance journal. Instead, it will be deemed as an accounting journal. Such journals are similar to the *Journal of Accounting and Economics*, whose home page indicates it is an accounting journal.

4.4.2.3.1.1.2. Books

Library catalogs, for example Kelvin Smith Library's (KSL) located at Case Western Reserve University, are reasonable places to find out under what subject(s) the book is categorized. If a book is not listed in KSL's catalog, Amazon offers a book's description which can be viewed and read online. If the subject of a book is economics or finance, the book will be deemed so. In the case of uncertainty even after doing the previous two steps, reading the introduction and the preface will be the next step, seeking the author(s) indication that would assist in deciding upon the subject of the book.

4.4.2.3.1.1.3. Online magazines

A magazine's home page on the internet may reveal information about the magazine. Examples of such information would be the journal's interest and the type of articles the magazine publishes.

4.4.2.3.1.1.4. Reports

Investigating and searching for information about the organization that prepares and publishes a report may help classify whether or not such a report belongs to economic or finance disciplines.

4.4.2.3.1.1.5. Article from the world web

The article will be downloaded. Then it will be carefully read and examined.

4.4.2.3.1.1.6. Dissertations and Theses

A database called "*ProQuest LLC*" available through KSL Case Western Reserve University is very helpful in identifying the academic department granting degrees. Based on the department, theses and dissertations will be classified. If a dissertation or a thesis had been granted by a finance department then such a dissertation or a thesis is finance work. On the other hand, if it had been granted by an accounting department then it will be deemed as an accounting work.

4.4.2.3.1.2. Stopping the search for unclear cited works

In two points, concluding the search for information on unclear works is optimal. First, if while coding an article, the ratio of citations to economics and finance reaches the threshold (25%) and there are still cited works that are not clearly economics or finance, then attempts to do further search are stopped because they are no longer needed. That is because even if such works end up to be from the economics or finance disciplines, it will make no difference since the ratio is already met. The other occasion is when the ratio of citations to these two disciplines (economics and finance) would not reach the threshold. If the remaining unclassified works end up being from these two disciplines and yet the ratio will not reach the threshold, there is no point of exerting efforts in identifying unrecognizable works.

4.4.2.3.1.3. Cited works and material that are considered as neither economics nor finance

The first type is working papers. It is not clear or known where such papers will appear. However, if a working paper is cited from the source that will publish the paper, such a paper is considered. For example, a cited working paper that is listed in National Bureau of Economic Research will be deemed as an economic reference.

Second, daily newspapers such as *Wall Street Journal* (*WSJ*) and *Washington Post* as well as magazines such as *Fortune* and *Business Week* are not considered. The justification and rationale for not considering it lies in the fact that newspapers and magazines are not entirely focused on one field. It is difficult to say that *WSJ* is mainly about finance while articles related to accounting may appear. These newspapers and magazines are unlike *CFO* which is published by an Association known for its focus. *CFO* is considered as a finance magazine.

4.4.2.3.1.4. The total number of citations[10]

The total number of citations (the denominator of the ratio of citations used to decide whether an economic or finance influence exists or not) is obtained from the EBSCOHOST data base (http://web.ebscohost.com).

[10] In actuality, I started the coding process with the fourth period, then the third period, the second period, and finally the first period. While coding the main articles which appeared during the fourth period, I relied on this database. However, during the third period, I occasionally found differences between the total I arrived and what is listed in the database. For the sake of accuracy, I decided to continue my own counting the totals of the cited works listed in the articles during the other three periods and used this count for the denominator.

4.4.1.4. Financial Accounting Topics

What this study is concerned with is the proportion of financial accounting articles whose emergence can be associated with the rise of imported theories from the economic and finance disciplines. In this study, the dimensions of financial accounting emerging in later years are hypothesized to be correlated with the rise of imported theories from the economic and finance disciplines. The first dimension of the operational definition of financial accounting proposed in Section **4.3.4.** characterizes part of such a proportion. The second dimension, which is concerned with financial statements, exemplifies another part of this proportion of financial accounting. The third dimension, which is concerned with the audit of financial statements, represents the remaining part of this proportion.

Although auditing is a distinct area of inquiry, the audit of financial statements is an exception. The audit of financial statements is an aspect of auditing that focuses on the relationship between the capital market and the information produced by the agent (managers). This allows the imported theories from the economic and finance disciplines to migrate to articles about the audit of financial statements.

The "Auditing Section" of the AAA suggests that auditing is a distinct area of inquiry (Bonner et al. 2006). With the exception of the audit of financial statements, research in the area of auditing utilizes a variety of theoretical foundations, making the influence of the imported theories from economics and finance upon research in sub areas of auditing other than the audit of financial statements of less interest when compared to the influence of those theories upon research concerning with the agent's reporting to the principal. Associating the increase in research in the area of auditing with the increase of

the imported theories from economics and finance may not be clear. Developments in other disciplines may promote research in the area of auditing. For example, research in auditing related to making decisions, group dynamics, interaction with team members, interaction with management, ethical judgment, and moral reasoning can be promoted by advancements in research in several disciplines such as psychology, sociology, cognitive science, ethics, and law.

Articles about the audit of financial statements seem to be an exception to other areas of auditing. Two reasons justify such an exception. First, one aspect of audit research focuses on the relationship between the capital market and the information produced by the agent (Oler et al, 2008). This particular aspect is what distinguishes articles that are related to this aspect focusing on the audit of financial statements from other sub-areas of the audit function. The audit of financial statements affects the agent's reporting to the principal, allowing imported theories from economics and finance to migrate to articles concerning the audit of financial statements. For example, viewing auditors as economic agents who serve their own interests allows utilizing theories such as agency theory. Employing agency theory allows deducing hypotheses that suggest auditors are not serving the interest of shareholders. Second, audit opinions can affect stock market prices. There are published articles in *TAR* that utilize stock market prices as data to study the effect of auditors' qualified opinions on the capital market (Sundem, 1987, p.198). Thus, articles that focus on the audit of financial statements are related to external financial reporting.

The multi-dimensional definition of financial accounting will serve the purpose of this study in correlating a proportion of financial accounting with the rise of the imported

economic and finance theories. Accordingly, the articles concerned with financial accounting as defined in this study will be given a value of 1, while for those that do not fit under the financial accounting as defined in this study a value of 0 will be assigned. That is, if the topic of a main article is about one or more of these three areas: market reaction to accounting information, financial statements, or the audit of financial statements, then such an article will be given a value of 1 under the financial accounting variable. If the topic of a main article is about other topics, a value of 0 will be assigned.

To sum up, during the examination of the articles published in *TAR*, having the characteristics of a variable will qualify an article to have a value of 1 under the variable, while not the having characteristics of a variable will qualify an article to get the value of 0 (see Table 6). For example, if the ratio of references to finance or economics to the total references is 25% or above, a value of 1 will be assigned to the article under variable **Influence_Econ_Fin**. If the same article is not about accounting theory, a value of 0 will be assigned under the variable **Acc_Th.**

[Insert Table 6 here]

These criteria were summarized in a form of guidelines directing the coding procedure. These guidelines were created to assure consistency and help reduce subjectivity. These guidelines are in Appendix 1.

4.5. Data Analysis

The data analysis will be conducted in two stages. In each stage, a suitable statistical technique will be employed to test the set of hypotheses.

The first stage is concerned with the trend or pattern of accounting theory variable over time. Single-factor ANOVA is suitable to test the trends for this variable over time, specifically to test $\mathbf{H_1}$. ANOVA will be used to test whether or not the means of the scores for this variable are different in the four periods, included in this study. The independent factor is time, which will be coded **Time_1, Time_2, Time_3,** and **Time_4**. Such coding corresponds to the four periods of *TAR*'s age included in the study. An SPSS software package will be used to perform ANOVA. The F-statistic and its level of significance will be relied on in testing the mean differences of the accounting theory variable over time. ANOVA supplies *post hoc* analysis which compares the means in pairs. While the F-statistic is a comprehensive and global measure of the differences, *post hoc* analysis is valuable to locate differences between each two periods to enhance our knowledge more thoroughly of the pattern that the accounting theory variable has taken throughout time.

Second, bivariate correlation will be employed to measure to the extent of which variables are related. A correlation analysis is conducted in a pair fashion. That is, the association between each pair of variables is tested. A correlation matrix summarizes the magnitudes of the associations among variables and presents their levels of significance. Correlation will thus be used to test $\mathbf{H_2}$**,** $\mathbf{H_3}$**,** $\mathbf{H_4}$**,** $\mathbf{H_5}$**, and** $\mathbf{H_6}$**.** An SPSS software package again will be used to perform the Pearson's product-moment correlation coefficient calculations.

CHAPTER FIVE

RESULTS AND FINDINGS

5.1. Introduction

During the four periods included in the study, 820 main articles were published in 12445 pages. Table 7 displays the total number of main articles that appeared in issues published in each period. As Table 7 shows, the second period has the highest number of main articles, while the first period has the lowest number of main articles. The third period has the next lowest. This may be due to the fact that during the third period *TAR* contained departments, such as, Financial Reporting and Educational Research. Articles that appeared in those departments might have otherwise been published as main articles.

[Insert Table 7 here]

The articles that are coded 1 are summed on an issue basis. The articles that are coded 1 in a single issue are summed. These summations are scores for the issues. The process of summating the articles which are coded 1 allows the unit of analysis to be transformed from the articles to the issues. While the scores of the articles are dichotomous, the scores of the issues are intervals. Intervals scores allow using commonly used and familiar statistical techniques such as ANOVA. Table 8 lists the total number of articles that are coded 1 under each variable for each period included in this study.

[Insert Table 8 here]

Several comments are worthy of mentioning about Table 8. First, this Table does not have a grand total. Adding up the totals in the last column yields the number 820, while adding up the totals in the last row yields the number 728. While the first total (820) represents the total number of the main articles identified in this study, the latter total is meaningless. An article might have received 1 under the four variables. Therefore, the latter total has no meaning.

Second, this Table is constructed with two dimensions: the variable dimension (vertical dimension) and the period dimension (horizontal dimension). Looking vertically at the Table, the numbers represent the main articles that were coded 1 under each variable, grouped on a periodic base (based on each period included in this study). For example, for the **Influence_Econ_Fin** variable, there are 10, 12, 37, and 77 articles that are coded 1 in the first, second, third, and fourth period, respectively. The total number of articles coded 1 under **Influence_Econ_Fin** variable across all the four periods is 136. Looking horizontally, the numbers represent the total numbers of main articles that were coded 1 for each period across the four variables. For example, for the first period, the total number of main articles that were coded 1 under the **Influence_Econ_Fin** variable is 10. For the same period, the total number of articles that were coded 1 under the **Using_Emp_Arc** variable is zero. For the first period, the total number of main articles that were coded 1 under the **Fin_Acc** variable is five. Finally, for the same period, the total number of main articles that were coded 1 under the **Acc_Th** variable is 63.

The last column represents the total number of the main articles that appeared in issues published in each period. These totals are taken directly from Table 7. Adding up the numbers vertically does not yield the totals listed in the last column. The last column

was added to the Table for the purpose of comparing the numbers listed in the second, third, fourth, and fifth columns to the total number of the main articles published in each period. For example, the number 63, which represents the number of articles coded 1 under the **Acc_Th** variable in the first period, can be more meaningful when it is compared to the total number of the main articles that appeared in issues published in the first period. 161 main articles were published in the first period. Dividing the number 63 with the number 161 thus yields 39.13%. This percentage can be stated as 39.13% of the main articles published in the first period about accounting theory (coded 1 under the **Acc_Th** variable).

Fourth, starting from the third issue of 1978, *TAR* began to have a department called Financial Reporting. This might contribute to the lower number of articles coded 1 under the **Fin_Acc** in the third period in comparison to those coded 1 in the fourth period. Articles that appear in such a department during the third period might have been considered to be financial accounting. This department was eliminated when *Accounting Horizons* was established (Flesher, 1990, p.170).

5.2. Descriptive Statistics

Describing the data will be done in two parts. The first part is focused on the variables as a whole across all issues. The first stage describes the sample as a whole. The second part describes each of the four periods included in the sample separately. Describing the data in two parts should provide more insight into each period.

Before going deeply into the descriptive statistics and analysis, it should be emphasized that the issues with their interval scales are used in the analysis. The analysis

is conducted at the issue level, not at the article level for the reasons listed in Section **4.4.1**. The number of unit of analysis is 82 (n = 82).

5.2.1. Descriptive Statistics for the Sample as a Whole

Table 9 presents descriptive statistics for the four variables for the 82 issues included in the sample. There are no missing values for any of the four variables. While the four variables have in common their minimum values, the maximum values vary across the four variables. The maximum values represent the total number of the articles coded 1 in a single issue across the 82 issues. For example, the maximum value for the variable **Influence_Econ_Fin** means that seven articles that are coded 1 that have an economic or finance influence have appeared in a single issue. All the other issues have seven articles or less in each issue. Any issue can have any number between zero and seven of articles that are influenced by economics or finance.

The **Fin_Acc** variable has the highest mean and standard deviation (2.62 and 3.321, respectively). The **Influence_Econ_Fin** variable has the lowest mean and standard deviation (1.66 and 1.701, respectively). The means and the standard deviations of the remaining two variables are slightly over two (2.16) and almost three (2.891) for the **Using_Emp_Arc** variable, and almost two and a half (2.44) and slightly over two (2.061) for the **Acc_Th** variable.

[Insert Table 9 here]

5.2.2. Descriptive Statistics for Each Period Included in this Study Separately

The second part of the descriptive statistics focuses on each period separately. The same statistics obtained and presented in the previous part for the whole sample are obtained for the four variables in each period.

Table 10 presents descriptive statistics for the four variables in the first period that covers the years 1926-1930. On average, an issue published in the first period had a half article (for every two issues there was one main article) that had an economic or finance influence. The empirical archival method was not employed in main articles that appeared in issues published during the same period. An issue that published during the first period had on average one fourth (0.25) main articles (for every four issues there was one main article) that can be classified as financial accounting, as defined in this study. On average, an issue published during the same period contained three main articles that were about accounting theory.

The minimum and maximum values represent the range that the scores of the issues could get under each variable. For example, for the last variable (**Acc_Th**), the number of main articles that are about accounting theory in an issue published in the first period could be eight, zero, or any number between zero and eight. Some issues published in the first period did not have main articles about accounting theory while some issues had as many as eight main articles about accounting theory during the same period.

[Insert Table 10 here]

Table 11 shows descriptive statistics for the four variables in the second period that covers the years 1952-1956. On average, an issue published during that period had sixth tenths (0.6) main article (for every two issues there was one main article) that had an economic or finance influence. Similar to the last period, no single issue contained a main article that employed the empirical archival method. Only one issue contained a main article that can be classified as financial accounting, as defined in this study. On average, an issue published during that period had four main articles about accounting theory. As compared to the previous period, on average there is an increase by one main article per issue. As the last two columns in Table 11 show, every issue appearing in the second period had at least one main article about accounting theory. A single issue would contain at least one main article about accounting theory. The maximum number of main articles that were about accounting theory published in the same period is seven main articles per issue.

[Insert Table 11 here]

Table 12 summarizes descriptive statistics for four variables in the third period which covers the years 1977-1981. On average, an issue published during that period had almost two (1.85) main articles that were influenced by economic or finance. Stated differently, two issues would contain three main articles. An issue published during the same period contained on average two main articles employing the empirical archival method. Such a method was absent in the first two periods as Tables 8 and 9 show. An issue published during the third period had on average almost two and a half main articles that can be classified as financial accounting, as defined in this study. That is, two issues

would contain five main articles that can be classified as financial accounting. The number of main articles that were about accounting theory is, on average, two main articles per issue. As compared to the averages in the previous two periods, the average of the per issue number of main articles that were influenced by economics or finance, that used the empirical archival method, and that were classified as financial accounting in the third period increases. The opposite occurred to the main articles that were about accounting theory. In comparison to the second period, in the third period the average number of main articles that were about accounting theory declined by more than half, from slightly over four articles per issue (4.3) to slightly over two articles per issue (2.05).

The data show another change in the first three variables (**Influence_Econ_Fin**, **Using_Emp_Arc,** and **Fin_Acc**). Looking at the range of the values, the maximum values of the first three values have increased. The highest number of main articles that are influenced by economics or finance per issue was two in the last two periods. In the third period, four main articles that were influenced by the economic discipline or the finance discipline were published in a single issue. While employing the empirical archival method was absent in the past two periods, six main articles, in which the research method was the empirical archival method, were published in a single issue appeared in the third period. The maximum number of main articles in single issues that can be classified as financial accounting, as defined in this study, was six. Such a number is higher than what a single issue published in the first two periods received. The third period is a decade after the publications of the studies of Ball and Brown (1968) and Beaver (1968).

The range of the remaining variable (**Acc_Th**) is not much different from those of the previous two periods. The maximum number of main articles that are about accounting theory and that appeared in a single issue is six. There is a difference with regard to the minimum. While in the second period not a single issue was published without containing at least one main article about accounting theory. In the third period it happened that four issues were published without having a single main article about accounting theory (see the first shaded row in Appendix 5).

[Insert Table 12 here]

Table 13 displays descriptive statistics for the four variables in the fourth period for the years 2003-2007. The number of issues is higher than those of the previous three periods. In this period, 22 issues were published.

Similar to the statistics in the third period, the statistics of the fourth period are quite different in direction to the statistics of the first two periods. On average, the influence of economics and finance has almost doubled: an issue appearing in the fourth period had three and a half main articles (for every two issues there were seven main articles) that were influenced by economics and finance. The influence of economics and finance has extended such that no single issue was published in the fourth period without having at least a main article that was influenced by either of these two disciplines (the minimum = 1). The highest number of main articles influenced by any of these disciplines that appeared in a single issue was seven.

On average, six main articles that were published in the fourth period employed the empirical archival method. The use of the empirical archival method increased in the

fourth period to the extent of which at least three main articles out of the main articles that appeared in a single issue employed such a method. The maximum for some issues increased to as many as 12 main articles employing such a method. Financial accounting as a topic has experienced a similar increase. On average, seven main articles out of the total main articles published in a single issue were financial accounting, as defined in this study. A single issue had at least four main articles out the total main articles that can be classified financial accounting. A single issue could get as many as 12 main articles that can be classified as financial accounting. Main articles about accounting theory declined in number. On average, an issue contained approximately a half (0.455) main article (or two issues contained one main article) about accounting theory. An issue could have been published without containing a main article about accounting theory (minimum = 0). The maximum number of main articles that were about accounting theory that appeared in a single issue went down to three main articles.

[Insert Table 13 here]

5.3. A Decreasing Trend in Accounting Theory over Time

A new variable was created and named **Time** which is an independent variable. The **Acc_Th** variable is plotted against time (see Diagram 6). As Diagram 6 clearly shows, the overall trend of the **Acc_Th** variable over time is declining. The relation between the variable is linear with a negative slope. The number of main articles about accounting theory per issue decreased over time.

[Insert Diagram 6 here]

To test the significance of this decreasing trend, the mean of each period was compared to the means of the other periods. The existence of statistically significant

differences among the means indicates that this decreasing trend is statistically significant. Analysis of variance (ANOVA) will be used to test whether the means of the **Acc_Th** variable are statistically different or not.

5.3.1. ANOVA Design

The independent variable (**Time**) was coded such that it has four values corresponding to the four periods included in the study. The value of one was assigned to the main articles that appeared in issues published in the first period covered in this study. The value of two was assigned to the main articles that appeared in issues published in the second period. The value of three was assigned to the main articles that appeared in issues published in the third period. Lastly, the value of four was assigned to those main articles that appeared in issues published in the fourth period. These values were labeled **Time_1**, **Time_2**, **Time_3**, and **Time_4**, consecutively.

Table 14 presents descriptive statistics for the **Acc_Th** across the four periods. The same statistics were discussed previously in Section **5.2.2.** in which the statistics of the four variables are presented in four Tables (from Table 10 to Table 13). Each Table is devoted to a period followed by a discussion. Table 14 summarizes the **Acc_Th** variable in a single Table**.**

[Insert Table 14 here]

In Table 14, each of the first three periods coded, **Time_1, Time_2** and **Time_3,** respectively, contain 20 units of analysis (issues). **Time_4** contains 22 units of analysis. Each mean represents the average of the number of main articles about accounting theory

that appeared in issues published in a period. For example, the mean of **Time_1,** which is slightly over three (3.15), represents the average number of articles about accounting theory that appeared in issues published in such a period. Looking at these means in Table 14, **Time_2** appears to have the highest mean, which is slightly over four (4.3), while **Time_4** has the lowest mean, which is under a half (0.45). The means of **Time_1** and **Time_3** are slightly over three (3.15) and slightly over two (2.05), respectively. With only one exception, the means of the number of main articles about accounting theory per issue decreased over time. The exception is the mean of **Time_2**. Relative to the mean of **Time_1,** the mean of **Time_2** has increased. The four means are plotted in Diagram 7. Such a Diagram displays vividly the means of the four periods.

[Insert Diagram 7 here]

Examining the frequencies of the **Acc_Th** variable in both periods (**Time_1** and **Time_2**) reveals a reason for the mean increase in **Time_2**. Tables 15 and 16 show the frequencies of the **Acc_Th** variable of **Time_1** and **Time_2**, respectively.

[Insert Tables 15 and 16 here]

Table 15 indicates that 75% of the per issue number of main articles about accounting theory that appeared in issues published in the first period are between two and five (see the shaded rows in Table 15). Table 16 points to 80% of the per issue number of main articles about accounting theory that appeared in issues published in the second period are between four and seven (see the shaded rows in Table 16). Appendix 3 presents two histograms for the **Acc_Th** variable in both periods (**Time_1** and **Time_2**).

A comparison between the two histograms reveals that many issues in **Time_2** scored higher than those in **Time_1**. In other words, many issues published in **Time_2** have a higher number of main articles about accounting theory as compared to issues published in **Time_1**. A comparison between the two histograms also reveals that issues in **Time_2** frequently score high. Therefore, the mean of the **Acc_Th** variable is higher in **Time_2** because most issues (80%) of *TAR* that were published during **Time_2** had more articles about accounting theory than those published in **Time_1**.

The noted changes in means is not, however, enough to draw conclusions about the decreasing trend, which is shown in Diagram 6. A test that demonstrates the statistical significance of these different means is needed. A difference between a mean and the subsequent mean should be positive and statistically significant in order for the first hypothesis **(H_1)** to be supported. A statistically significant negative difference between a mean and the subsequent mean does not support such a hypothesis. The term "the subsequent mean" stands for the mean of the period (say **Time_2**) that follows the period (say **Time_1**) whose mean is being used as the basis for a comparison. The following analysis pursues a test for four means of the **Acc_Th** variable plotted in Diagram 7.

5.3.2. Testing the Differences among the Means of the "Acc_Th" Variable

ANOVA was performed to test whether there are statistically significant differences among these means or not. ANOVA is suitable because it tested the four means in one time using one α. A T-test is not suitable for such a test because had such a test been used, the test would have been conducted several times for each pair, which would have inflated α.

5.3.3. Checking ANOVA Assumptions

Three assumptions ought to hold in the ANOVA design. The first assumption is normality. By examining the scatter plot and histogram (see appendix 2), the distribution of the **Acc_Th** variable seems to be normal and thus this assumption seems to hold. Besides, acknowledging that a small sample comprises thirty observations, the sample analyzed in this study contains 82 units of analysis. Because the size of the sample is 82, normality becomes a non-issue (Gravetter and Wallnau, 2004, p.465). In addition, the dependent variable (**Acc_Th**) is not skewed and thus does not need to be transformed. The basis for reaching such a conclusion is that a variable needs to be transformed if the skewness is above positive two or less than negative two (between +2 and -2). If Kurtosis is above positive seven or less than negative seven (between +7 and -7), the variable needs to be transformed. The skewness of the dependent variable (**Acc_Th)** is a half (0.5), while Kurtosis is slightly less than a negative half (-0.65).

The second assumption is independency of values of observations. The values that the dependent variable obtained in each period do not depend on and are not affected by the values that the variable took on in other periods. That is, the value that the dependent variable can get in any period neither does it have an effect on the values that the dependent variable could get in other periods nor is it affected by such values. Thus, the independence assumption holds.

The third assumption is the equality of variances of the populations from which the samples are drawn. Levene's test which is to ascertain the equality of variance is found to be significant at the 95% level of significance (or $\alpha = 0.05$).

However, the *p*-value is 0.043 which is close to α. Using α = 0.01, the null hypothesis (the variances are equal) will fail to be rejected. Despite the possibility of not rejecting the null hypothesis, the Dunnett C which does not require the equality of variances was used for testing the multiple comparisons. Reporting the Dunnett C can be viewed as a conservative decision, knowing that the same results would have occurred had the Tukey HSD or the Bonferroni been utilized for conducting multiple comparisons (see footnote 11 of this chapter).

5.3.4. ANOVA Results

ANOVA results reveal that the means are significantly different, F (3, 78) =25.09, p<0.05. *Post hoc* tests were performed to conduct multiple comparisons in a pairwise fashion in order to locate which pair of means is different and which is not. The results of the pairwise comparisons are presented in four Tables (17, 18, 19, and 20). Each Table uses a period as a basis for the pairwise comparisons. Since the variances of the means are not equal, Levene's (3, 78) =2.85, p<0.05, the results of Dunnett C's test are reported[11] in Tables (17, 18, 19, and 20).

Table 17 shows comparisons between the mean of **Time_1** on one hand and those of **Time_2**, **Time_3**, and **Time_4** on the other hand. Differences exist between the mean

[11] Other tests, for example, the Tukey Honesty Significance Difference (Tukey HSD) as well as the Bonferroni, are often used for comparing the means. The Tukey HSD test is the most commonly used test in psychological research (Gravetter and Wallnau, 2004, p.427). In order to use these commonly used tests (the Tukey HSD and the Bonferroni), the variance of the means need to be equal (Levene's test needs not to be significant). That is, the equality of variance has to be assumed. In this study, for the **Acc_Th** variable, the three results of the three tests related to the multiple comparisons (*post hoc*) are identical. That is, the differences occur in the same pairs. This might be because Levene's test is barely significant (p=0.043).

of **Time_1** and those in others. Each mean difference is obtained by subtracting a mean in other times (in column J in Table 17) from the mean of **Time_1** (in column I of Table 17). A negative difference indicates that the mean of **Time_1** is smaller than the mean from which such a mean is subtracted. The first row in Table 17, which compares the mean of **Time_1** to the mean of **Time_2**, presents such a case. The negative difference (-1.15) demonstrates that the mean of **Time_1** is smaller than that of **Time_2**. However, such a difference is not significant which does not threaten or weaken the support of the first hypothesis ($\mathbf{H_1}$) being tested in this sub-section. This particular comparison is the most important one in Table 17. That is because the basis established at the end of Section **5.3.1.** states that the difference between a mean and a subsequent mean needs to be positive and significant in order for the first hypothesis **($\mathbf{H_1}$)** to be supported. Applying such a basis, the difference between the mean of **Time_1** and of **Time_2** though negative is not significant which does not threaten the validity of the first hypothesis ($\mathbf{H_1}$).

The difference between the mean of **Time_1** and that of **Time_3** is not significant, but positive. Such positivity goes along with the hypothesized decreasing trend. The difference between the mean of **Time_1** and that of **Time_4** is positive. While no statistical differences between the mean of **Time_1** and those of **Time_2**, and of **Time_3**, the mean of **Time_1** is significantly different from that of **Time_4**.

[Insert Table 17 here]

Table 18 presents comparisons between the mean of **Time_2** on one hand and those of **Time_1, Time_3,** and **Time_4** on the other hand. The focus here is on the differences between the mean of **Time_2** and those of **Time_3** and **Time_4**. The

difference between the mean of **Time_2** and that of **Time_1** is already discussed in the previous discussion related to Table 17.

The differences among the means of **Time_2, Time_3,** and **Time_4** are obtained using the same procedures as was done previously. The only difference is that the base for the comparison becomes **Time_2**. The differences between the mean of **Time_2** and the means of **Time_3** and of **Time_4** are positive and significant. Such significant positivity suggests a decreasing trend which provides support to the first hypothesis **(H_1)** being tested in this part.

[Insert Table 18 here]

Table 19 presents the results of comparing the mean of **Time_3** on one hand with those of **Time_1, Time_2,** and **Time_4**. The mean differences are obtained using the same procedure as was done previously. The differences between the mean of **Time_3** and those of **Time_1** and **Time_2** are negative thus demonstrating that the mean of **Time_3** is smaller than each of the means of **Time_1** and of **Time_2**. These mean differences are the same ones reported in Table 17 and 18, but with positive as opposed to negative signs. They were positive because **Time_1** and **Time_2** were the bases for the comparisons in Tables 17 and 18, respectively.

The remaining difference, which is the aim of Table 19, is between the mean of **Time_3** and the mean of **Time_4**. Such a difference appears to be positive and significant which provides support for the first hypothesis **(H_1)** being tested in this sub-section. The positive mean difference demonstrates that the mean of **Time_4** is smaller than that of **Time_3**.

[Insert Table 19 here]

Table 20 shows the mean differences between the mean in **Time_4** on one hand and those of **Time_1**, **Time_2,** and **Time_3**. The differences are obtained using the same procedure as was done previously. All the differences are negative and significant demonstrating that the mean of **Time_4** is the smallest among all the means of the four periods. This draws attention to the contemporary state of accounting theory. The decrease in the importance of accounting theory, which is measured by the number of articles about accounting theory per issue, has reached its lowest level in the last period (**Time_4**). This conclusion is the essence of Table 20.

[Insert Table 20 here]

In summary, six mean differences exist among six pairs. The mean of **Acc_Th** of **Time_4** is significantly different from each of the means of the other periods (**Time_1, Time_2** and **Time_3**). These differences account for three mean differences. The fourth difference exists between the means of **Time_2** and of **Time_3**. The fifth mean difference exists between the mean of **Time_1** and the mean of **Time_2**. But this increased difference is not significant. The sixth mean difference exists between the mean of **Time_1** and the mean of **Time_3**. With the exception of the difference between **Time_1** and **Time_2**, every other difference between a mean and its subsequent mean is positive and significant. Therefore, the general results suggest that the accounting theory as a topic discussed in *TAR* has decreased over time. Thus, the first hypothesis ($\mathbf{H_1}$) is supported.

5.4. Associations among the Variables

Testing the associations among the variables is done in two steps. First, a scatter plot is used to explore and inspect the association between each pair of variables. Second, if an association is noticed, the direction and the strength of such a relation are measured using a suitable statistical measure. If an association appears to be linear, then bivariate correlation is suitable. These two steps are conducted for each association that was hypothesized to relate a pair of variables separately. Each sub-section of the following sub-sections is devoted to report the results of a relation between two variables. Five sub-sections, each of which is devoted to an association, are followed. Then, the last sub-section illustrates comprehensibly the relations among variables where all variables are plotted on a single scatter plot. Such a Diagram shows **Acc_Th** in relation to other variables.

5.4.1. First Association: Accounting Theory and the Use of the Empirical Archival Method

In Diagram 8, the scores of the accounting theory variable are plotted on the horizontal axis, while the scores of the use of the empirical archival method variable are plotted on the vertical axis. 82 observations corresponding to the 82 issues published during the four periods included in this study are plotted. Each observation in the Diagram represents an issue with two scores, that is, the number of main articles. As the per issue number of articles about accounting theory decreases, the per issue number of articles employing the empirical archival method increases. The Diagram thus shows a

negative relation between the two variables. The best fitting line was inserted in Diagram 8 to help visualize this negative relation.

[Insert Diagram 8 here]

The best fitting line in Diagram 8 suggests also that the relation between the two variables is linear. The relation between the two variables can reasonably be assumed to be linear. Assuming a linear relation allows the use of the product moment correlation (**r**), or Pearson's correlation, as a means to measure the strength of the relation. Pearson's correlation is found to be -0.582 (see appendix 4). This statistic was calculated using the 99% level of significance (or $\alpha = 0.01$). The second hypothesis (**H_2),** which expected a negative relation between the use of the empirical archival method and accounting theory, is hence supported.

This finding can be incorporated with the conclusion of Section **5.3. w**hich concludes that the accounting theory variable has decreased over time. The combination of this conclusion and this subsequent finding leads to a further presumption that the use of the empirical archival method has increased over time. Diagram 9 represents an overlay scatter plot in which the use of the empirical archival method variable is plotted on the top of the accounting theory variable. Both variables are then plotted against time which is an independent variable. The horizontal axis represents time. At each point of time, an issue of *TAR* was published. On the horizontal axis, 82 points of time are included.

Two scores on the vertical axis correspond to each point of time. One score (symbolized by stars) is for the accounting theory variable. The second score (symbolized

by circles) is for the use of the empirical archival method variable. The Diagram clearly shows that while accounting theory decreases over time, the use of the empirical archival method increases over time. Diagram 10 further shows an increasing trend in the use of the empirical archival method over time. The increase of the use of the empirical archival method in academic accounting research over time is consistent with the literature.

[Insert Diagrams 9 and 10 here]

5.4.2. The Second Association: The Use of the Empirical Archival Method and the Influence of Economics and Finance

In Diagram 11, the scores of the use of the empirical archival method variable are plotted on the horizontal axis, while the scores of the influence of economics and finance variable are plotted on the vertical axis. 82 observations corresponding to the 82 issues published during the four periods included in this study are plotted. Each observation in the Diagram represents an issue with two scores. As the per issue number of articles that employing the empirical archival method increases, the per issue number of articles that are influenced by the economic discipline or finance discipline increases. The Diagram thus shows a positive relation between the two variables. The best fitting line is inserted in Diagram 11 to help visualize this positive relation.

[Insert Diagram 11 here]

The best fitting line in the previous Diagram 11 suggests that the relation between the two variables is linear. The relation between the two variables can reasonably be assumed to be linear. Pearson's correlation is found to be + 0.737 (see Appendix 4). This

statistic is calculated using the 99% level of significance (or $\alpha = 0.01$). The third hypothesis (**H_3**), which expected a positive relation between the use of the empirical archival method and the influence of economics and finance, is therefore supported.

5.4.3. The Third Association: Accounting Theory and the Influence of Economics and Finance

In Diagram 12, the scores of the accounting theory variable are plotted on the horizontal axis, while of the scores of the influence of economics and finance variable are plotted on the vertical axis. 82 observations corresponding to the 82 issues published during the four periods included in this study are plotted. Each observation in the Diagram represents an issue with two scores. As the per issue number of articles about accounting theory decreases, the per issue number of articles that are influenced by the economic discipline or finance discipline increases. The Diagram thus shows a negative relation between the two variables. The best fitting line was inserted to assist visualizing this negative relation.

[Insert Diagram 12 here]

The best fitting line in Diagram 12 suggests also a linear relation between the influence of economics and finance variable and the accounting theory variable. The relation between the two variables can reasonably be assumed to be linear. Pearson's correlation is found to be -0.582 (see appendix 4). This statistic is calculated using the 99% level of significance (or $\alpha = 0.01$). The fourth hypothesis (**H_4**), which expected a

negative relation between accounting theory and the influence of economics and finance, is thus supported.

Section **5.3.** concludes that accounting theory decreased over time. Given such a conclusion, and recalling the relation between the accounting theory variable and the influence of economics and finance variable, which is linear and negative, the influence of economics and finance has presumably increased over time. Diagram 13 presents an overlay scatter plot where the influence of economics and finance variable is plotted on top of the accounting theory variable. Both of the variables are then plotted against time. The horizontal axis represents time. At each point of time, an issue of *TAR* was published. On the horizontal axis, 82 points of time are thus included.

Two scores on the vertical axis correspond to each point of time. One score (symbolized by stars) is for the accounting theory variable. The second score (symbolized by circles) is for the influence of economics and finance variable. The Diagram clearly shows that while the accounting theory variable decreases over time, the influence of economics and finance variable increases over time. Diagram 14, further, shows an increasing trend in the influence of economics and finance over time. The increase of the influence of economic and finance disciplines in academic accounting research over time is consistent with the literature.

[Insert Diagrams 13 and 14 here]

5.4.4. The Fourth Association: The Influence of Economic and Finance Disciplines and Financial Accounting Topics

In Diagram 15, the scores of the influence of economics and finance variable are plotted on the horizontal axis, while the scores of the financial accounting variable are plotted on the vertical axis. 82 observations corresponding to the 82 issues published during the four periods included in this study are plotted. Each observation in the Diagram represents an issue with two scores. As the per issue number of articles that were influenced by economics or finance increases, the per issue number of articles that were classified as financial accounting increases. The Diagram thus shows a positive relation between the two variables. The best fitting line was inserted in Diagram 15 to help visualize this positive relation.

[Insert Diagram 15 here]

The best fitting line in the previous Diagram 15 suggests that the relation between the two variables is linear. The relation between the two variables can reasonably be assumed to be linear. Pearson's correlation is found to be + 0.755 (see Appendix 4). This statistic is calculated using the 99% level of significance (or $\alpha = 0.01$). The fifth hypothesis ($\mathbf{H_5}$), which expects a positive relation between financial accounting and the influence of economics and finance, is thus supported.

5.4.5. The Fifth Association: Accounting Theory and Financial Accounting

In Diagram 16, the scores of the accounting theory variable are plotted on the horizontal axis, while the scores of the financial accounting variable, as measured in this

study, are plotted on the vertical axis. 82 observations corresponding to the 82 issues published during the four periods included in this study are plotted. Each observation in the Diagram represents an issue with two scores. As the per issue number of articles about accounting theory decreases, the per issue number of the articles that are influenced by the economic discipline or the finance discipline increases. The Diagram thus shows a negative relation between the two variables. The best fitting line was inserted to help visualize this negative relation.

[Insert Diagram 16 here]

The best fitting in Diagram 16 suggests a linear relation between financial accounting and accounting theory. The relation between the two variables can reasonably be assumed to be linear. Pearson's correlation is found to be -0.520 (see Appendix 4). This statistic is calculated using the 99% level of significance (or $\alpha = 0.01$). The sixth hypothesis (**H_6),** which expected a negative relation between accounting theory and financial accounting, is therefore supported.

Section **5.3.** previously concludes the accounting theory variable decreases over time. Given such a conclusion and recalling the relation between the accounting theory variable and the financial accounting variable, which is linear and negative, the per issue number of articles that are classified as financial accounting, as defined in this study, presumably increases over time. Diagram 17 presents an overlay scatter plot where the financial accounting variable is plotted on the top of the accounting theory variable. Then both of these variables are plotted against time. The horizontal axis represents time. At

each point of time, an issue of *TAR* was published. On the horizontal axis, 82 points of time are included.

Two scores on the vertical axis correspond to each point of time. One score (symbolized by stars) is for the accounting theory variable. The second score (symbolized by circles) is for the financial accounting variable. The Diagram clearly shows that while the accounting theory variable decreases over time, the financial accounting variable increases over time. Diagram 18, further, shows an increasing trend in the financial accounting topics over time. The increase of the use of financial accounting topics in academic accounting research time is consistent with the literature.

[Insert Diagrams 17 and 18 here]

5.4.6. A Comprehensive Illustration

Diagram 19 presents an overlay scatter plot. The scores of the four variables are plotted. Similar to the other previous overlay scatter plots, the horizontal axis represents time. At each point of time, an issue of *TAR* was published. On the horizontal axis, 82 points of time are included. Four scores at the vertical axis correspond to each point of time when an issue was published. As illustrated several times in the text, each score indicates the per issue number of the main articles that possess the characteristics of the variable of interest. For example, a score of the accounting theory variable means the number of main articles about accounting theory per issue.

Diagram 19 shows four fitting lines. The line with a negative slope is for the accounting theory variable. The three other fitting lines with positive slopes are for the other three variables. The first fitting line with the highest positive slope represents the

financial accounting variable. The fitting line that is in the middle with a positive slope represents the use of the empirical archival method variable. The last fitting line with the lowest positive slope represents the influence of economics and finance variable.

Diagram 19 demonstrates that accounting theory decreases over time. At the same time the use of empirical archival method, the influence of economics and finance, and financial accounting topics all increase over time. The latter three trends vary in their magnitudes and rates of change over time. Yet, all of them evidently increase over time.

[Insert Diagram 19 here]

CHAPTER SIX

Discussion, Conclusions, Limitations, and Further Research

6.1. Discussion

6.1.1. The Emerging Financial Empirical Paradigm and the Decline of Accounting Theory in Academic Accounting Research

Since the advent of financial empirical accounting research this study provides evidence of the diminished level of published papers to advance accounting theory. The part of Lee's (2009) speculation which links the emergence of empirical finance-based accounting research to the decline of normative theorization is empirically confirmed in this study. This study clearly demonstrates consistent evidence of the decline of accounting theory while the use of the empirical archival method, the influence of economics and finance disciplines, and financial accounting topics increased. Evidence provided supports the view that the focus on a scientific approach to academic accounting research has restricted the development of accounting theory (Gaffikin, 2006).

When empirical research becomes the dominant base for judging claims of knowledge to be published and claims not to be published, claims of knowledge based on other research methods seem to be ignored. "Generally speaking, empirical research has been *prescribed* as the only acceptable form of research" (Gaffikin, 1988b, p.29, emphasis in original). Mainstream research in accounting has restricted the range of the use of research methods (Chua, 1986). As the empirical archival research method dominates academic accounting research, claims of knowledge that are based on research methods other than the empirical archival method are unlikely to have a place in

academic accounting research. As a result, the mainstream of contemporary academic accounting research does not yield rich veins of scholarship (Fogarty, 2007b).

This narrowing of research methods can lead to additional dilemmas in academic accounting research. Mainstream research in accounting limits the range of problems studied in academic accounting research (Chua, 1986). Interesting, researchable, and essential questions for accounting practice have been ignored in accounting (Granof and Zeff, 2008). Among the ignored questions are the normative ones that contribute to build general accounting theory. Researchers in the positive accounting field claim that in order to affect "what should be," researchers need to understand "what is" (Tinker and Puxty, 1995). Later, researchers in positive accounting research argue that answering normative questions is "generally (logically)" impossible (Tinker and Puxty, 1995, p.6).

In addition, it appears that the way accounting academics employ empiricism is concerning in that accounting researchers use empiricism in a narrow way. In a speech, Sorter (1979) describes the issue by saying, "We equate empiricism today as numbers, but empiricism means 'based on experience,' our experience is not restricted to numbers." Academic accounting journals "publish empirical studies only if they have statistical validity" (Granof and Zeff, 2008, p.A34). Without employing the empirical archival method in a study, the likelihood of such a study being published in top-tier accounting journals is diminished. The scope of accounting research has thus become narrow (Garnof and Zeff, 1986).

Without having its own theory or theories, a discipline overly exposed to empiricism may subject itself to the need borrow theories from other disciplines. Empiricism has required the accounting discipline to borrow theories from neighboring

disciplines, namely the fields of economics and finance, in order to guide the design of the empirical accounting studies and interpret their findings. The tendency toward doing such empirical studies is connected with utilizing theories from economics and finance to guide such studies. As the data show, the positive association between the use the empirical archival method and the influence of economics and finance demonstrates an increasing reliance on these two disciplines. The data support the assertion that accounting researchers who do empirical archival studies cite studies from economics and finance for the purpose of borrowing theories, methodologies and models from these disciplines (see Dyckman and Zeff, 1984, p.227-229).

Those imported theories from economics and finance, it may be asserted, are becoming the theoretical foundations for accounting theory that guide the empirical studies and help interpret their findings. As the data show, the negative association between the influence of economics and finance on one hand and accounting theory on the other indicates such a replacement. Restricting the theoretical foundation in accounting academia has placed accounting in a "subservient" position to economics (Reiter and Williams, 2002, p.591). Accountants have been described as slaves of economists (Tinker, 1985). Tinker (1985) applies Keynes' remark (1936 p.383 as cited in Tinker 1985 p.111) that "every practical person, who feels that he is free of intellectual influences, is usually the slave of some defunct economist", to accountants.

With the passage of time, the continuation of borrowing of theories from other disciplines demolishes the independence of such a discipline from those disciplines. In the case of academic accounting research, the excessive citing from economic and finance sources (books, journals, and others) makes the contents of accounting

knowledge published in accounting journals to a large extent not different from those published in economic and finance journals. Rodgers and Williams (1996, p.82) find that *TAR* "has increasingly depended upon more extensive citing of scientific texts from other social science, most notably financial economics." By 1990, articles that appeared in *TAR* were constructed through extensive citing from other fields: economic and finance (Williams and Rodgers, 1995). The excessive reliance on economics and finance to the extent that some accounting researchers make no distinction between economics and accounting (Williams, 2000) can be viewed as an embarrassment that positive accounting has brought to the accounting discipline.

The market for financial accounting studies that investigate the market reaction to accounting information using archival data related to publicly traded corporations has risen. The emergence of the market for financial accounting topics has been at the expense of another, arguably more important, market. The market for accounting theory has declined (see Rodgers and Williams, 1996; Previts and Robinson, 1997). The opposite relation between accounting theory and financial accounting topics, which the data in the previous chapter show, demonstrate such a market takeover. As the number of empirical studies that can be classified as financial accounting papers increased, the number of papers about accounting theory decreased.

6.1.2. A Discourse about the Theoretical Foundation of the Emerging Financial Empirical Paradigm

The new 'science' of accounting empiricism is largely connected to "positive accounting theory" (Lee, 2009, p.153). West (2003, p.127) asserts "…the pursuit of

'positive accounting theory'…has been a dominating feature of contemporary accounting research…" The spread of positive accounting research is a confirmation of the domination of empiricist philosophy (Whitley, 1988).

6.1.2.1. Changes in Society Dictate the Winning Theories

"The rise and fall of theories lies ultimately…in the mutual adaption of ideological, social, cultural, economic…conditions" (Tinker et al. 1982 as cited in Tinker and Puxty 1995, p.10; Tinker 1985 as cited in Tinker and Puxty 1995 p.10). The prevalence of financial empirical research in general and contemporary positive accounting research which was launched by Watts and Zimmerman in particular can be attributed to changes in society. The era in which positive accounting theory emerged can be identified with two characteristics.

The first characteristic is conservatism. In an environment where conservatism is deemed a criterion for judging theories, a theory has to claim objectivity in order to gain acceptance. Positive economic theories have in general been presented as being objective (Strassmann, 1993; see also Reiter, 1998, p.153). In the case of accounting, positive accounting theory "was designed to mesh and resonate rhetorically with the conservative social context of the Reagan era" (Mouch, 1992, p.37; see also Reiter, 1998, pp.153-154). Watts and Zimmerman's claim of scientific inquiry has contributed to the success of their positive research (Mouck, 1992).

The second characteristic is deregulation. The Reagan era of deregulation was a contributing factor of the success of positive accounting research (Mouch, 1992). Watts and Zimmerman came up with the so called positive accounting research to "rescue"

accounting from "influential congressional investigations that threatened the profession's autonomy and self-regulatory status" (Tinker and Puxty, 1995, p.5). Positive accounting research has rejected normative theorizing in accounting (Tinker and Puxty, 1995), claiming that the proposed normative accounting theories serve as excuses for policy makers (Watts and Zimmerman, 1979).

6.1.2.2. Escaping the Label

While Watts and Zimmerman (1978) labeled normative theories as excuses, Okcabol and Tinker (1990) questioned how positive accounting research had escaped being labeled as an excuse. Using Watts and Zimmerman's theory-of-excuses reasoning, Tinker and Puxty (1995, p.10) state that Watts and Zimmerman "have supplied the apology that has the broadest appeal to powerful vested interests." Positive accounting research is an extension of the responses provided by early proprietary theorists (Merino, 1993) whom Watts and Zimmerman deem apologists. Several accounting researchers have criticized positive accounting research and its logic (e.g., Belkaoui 1996; Chambers, 1993; Chabrak, 2005; Christenson, 1983; Mouck, 1992; Okcabol and Tinker 1990; Sterling, 1990; Tinker et al. 1982; Tinker and Puxty 1995; West, 2003; Whitley, 1988; Williams, 1989; Williams, 2003).

While Watts and Zimmerman speculate that their economics-based research methodology "may be fundamentally flawed" (1990, p.147) and concur that debating methodology is a "no win" situation (p.144), they "declared themselves the winners" (Mouck, 1991, p.54). The only defense that Watts and Zimmerman (1990 as cited in Tinker and Puxty 1995 p. 10) supplied for their positive research is to claim that since

the academic market place has judged their work to be superior, they had to be right. In contrast, Tinker and Puxty (1995, p.7, emphasis added) argue that "positive accounting ideology…became an ideological *embarrassment*." Believing in this ideology prevents the believers in such an ideology from seeing what others who do not subscribe to the same ideology have said or written. Believers in positive accounting ideology reject others' claims or at best view them as opinions (Tinker and Puxty, 1995). Watts and Zimmerman establish "demarcation lines between legitimate and illegitimate, between science and non-science" (Mouch, 1992, p.54). By doing so, McCoskey (1985 p.26 as cited in Mouck 1992 p.54) argues, Watts and Zimmerman limit "conversation to people on our side of the demarcation line." "Today…many, if not most, accounting academics are ignorant of the literature written by accounting scholars from the 1920s through the 1960s" (Granof and Zeff, 2008, p.A3). In addition to their ignorance about their own literature, mainstream accounting researchers lack knowledge in other fields outside of economics and finance. Restricting the theoretical foundations prevents accounting research from benefiting from other branches of knowledge. Accounting research is seen to inadequately "embrace novel insights and bodies of knowledge" (Hopwood, 2007, p.1370). For example, mainstream accounting researchers are in isolation from organizational concern (Hopwood, 1978, p.8).

6.1.3. The Dominance of the Financial Empirical Paradigm: Due to Usefulness or by Imposition

The dominant financial empirical paradigm in accounting academia may be accepted due to its usefulness. But, it can also be compelled. The following sub-sections

detail these two viewpoints. The first sub-section addresses the argument of the usefulness of the prevailing financial empirical paradigm. The second sub-section offers an alternative perspective that suggests a group of accounting academics may have enforced the predominant financial empirical paradigm.

6.1.3.1. On the Usefulness of the Prevailing Financial Empirical Paradigm

In order for the dominant empirical paradigm to be useful, its theoretical foundations must take into consideration the accounting environment. Financial empirical research assumes that the capital market is efficient. However, the intellectual father of the efficient market hypothesis, Eugene Fama, in a conference that was held in his honor at the University of Chicago Graduate School of Business confessed that the market may not be efficient (as reported in Hilsenrath 2004 p. A.1; for more see Hilsenrath, 2004; Gaffikin 2005a). The impact of financial empirical research in general and capital market studies in particular, which assume such efficiency, may be limited in accounting. The *Statement on Accounting Theory and Theory Acceptance* (1977, pp.34-35) acknowledges that the inherent simplifications limit the interpretation of accounting measures used in empirical research that associates "information flows with unexplained variations in rate of return on securities."

Agency theory as a theoretical foundation relied upon by mainstream accounting researchers in their studies is incomplete. The agency model of Watts and Zimmerman assumes an agency problem between shareholders and managers. Financial intermediaries need to be considered in the agency model (Bricker and Chandar, 1998). In the accounting environment, an agency problem exists between shareholders and

financial intermediaries (for more see Bricker and Chandar, 1998; Previts, 1992). Such an agency relation needs to be considered so that observed phenomena in accounting are well modeled if they are to be properly using an agency model.

It may not be surprising to find what positive accounting theory produces is not as profound as it was once thought or expected. West (2003, p.129) argues "…the finding of positive accounting theory are not profound and, in connection with the issues of accounting policy choice, not new."

6.1.3.1.1. Judging the Prevailing Financial Empirical Paradigm: Its Relevance to Accounting Practice

An ideal criterion upon which one should rely upon in evaluating the products of accounting academicians is the extent to which practitioners benefit from their products and outcomes (McCredie, 1957). Accounting academicians are obligated to conduct research that is of interest to and relevant to the accounting profession (Granof and Zeff, 2008).

In arguing for shifting academic accounting research toward the financial empirical paradigm so that accounting research can be situated within the scientific style of research, some accounting academics who identify themselves as empiricists employed the argument of bringing accounting academia closer to accounting practice. In the first *Journal of Accounting Research* (*JAR*) conference held at the University of Chicago, Davidson (1966, p.181, emphasis added) was "extremely pleased that research practitioners in accounting have discovered numbers" and "believed the cumulative

efforts of many empirical investigations will have radically changed the nature of the *accounting profession's* thought."

Similar to the argument of accounting practice used by accounting academics who promote financial empirical accounting research, accounting academics who opposed normative accounting theories argue that the normative type of theorization has no impact on accounting practice. Watts and Zimmerman (1979, p.273-274) argue that due to the basic methodological weakness in the prescriptive type of financial accounting theory, such research "has had little substantive, direct impact on accounting practice."

The ability to guide accounting practice was used as a criterion to judge a prior research. Writing in 1978, Bedford argued that in the past ten years little a prior research contributed to accounting regulations and rules issued to guide accounting practice. Therefore, the argument whether contemporary academic accounting research has an impact on accounting practice can be used for judging financial empirical accounting research.

While empirical accounting research has increased the understanding of the effect of financial information on the decisions of investors and managers (Granof and Zeff, 2008), the schism between accounting academics and accounting practitioners (Bloom et al. 1994; Bricker and Previts, 1990; Bricker, 1993) has increased as accounting research continues to be based on economics (Reiter and Williams, 2002). Commenting on Davidson's statement made in 1966, Reiter and Williams (2002) state that a decade later the schism between accounting academics and accounting practitioners broadened.

The accounting practice community was enthusiastic about the empirical revolution in academic accounting research (Reiter and Williams, 2002). However, due to

the way that accounting researchers utilize economics in their studies (Rieter and Williams, 2002), empirical research in accounting has not been able to live up to academics' and practitioners' hope. West (2003, p.113) asserts "…accounting discourse – and particularly that of accounting researchers- has turned away from the practical concern of improving the serviceability of financial reports." Academic accounting research lack relevance to practice (Tuttle and Dillard, 2007). Academic accounting research has failed to "address the problems arising out of practice" (Zeff, 1989, p.171) to the extent that accounting academics who have expressed concerns about the state of accounting research have noticed "the lack of significant impact of accounting research on practice" (Reiter, 1998, p.144). Mapping out advances in accounting practice to accounting research, which has been published in accounting journals is difficult (Heck and Jenson, 2007). Accounting researchers it seems have little regular or meaningful impact on accounting practice (Hopwood, 2007) or with the establishment of new practices (Granof and Zeff, 2008). "What is considered empirical accounting research lies outside the domain of accounting practice" (Buckmaster and Theang, 1991, p.65). Accounting researchers are more interested in "accountics" than in accounting practices (Heck and Jensen, 2007). The developments of the 1960s have noticeably changed the nature of accounting research, but weakened its impact on and tie with accounting practice (Granof and Zeff, 2008). Research results that contemporary accounting academics produce are restricted in that such results can be understood by "elite" researchers, but not necessary by accounting practitioners (Reiter, 1998).

Robbins (1929, p.126) asserts that, "when theory and practice do not coincide, there is something wrong with the theory." Kinney (1986, p.339) states that, "empirical

accounting research…addresses the question: 'Does how we as a firm or as society account for things make a difference'." The observed weak tie between accounting practice and empirical accounting research leads one to question the theories that are employed in empirical accounting research to address such a research question.

6.1.3.2. Dominating Academic Accounting Research by Imposing the Prevailing Financial Academic Paradigm: An Alternative Viewpoint

Despite the criticisms and the concerning issues surrounding the theoretical foundations upon which contemporary accounting researchers have been relying, such theoretical foundations continue dominating others. Regardless of its limitations, this study provides evidence which supports the concern that "positive accounting theory" drove other types of accounting research, which are concerned with normative theorization, from leading research journals (Lee, 2009, p.154).

Since the argument for the usefulness of the dominant financial empirical paradigm is not well supported, the dominant financial empirical paradigm may be imposed by a group of accounting academics. Belkaoui (1998, p.10) asserts:

> For some of the accounting paradigms, some accounting academics may gain access to power and privilege, not because of the usefulness of their research, but because of the monopoly on some form of cultural capital (e.g., capital market research, positive accounting research).

West (2003, p.131) asserts that the market success claimed by Watts and Zimmerman may be attributed "to systematic and self perpetuating academic cliques."

A group of accounting academics may have shifted the focus of academic accounting research from building normative theory of accounting to the mainstream of contemporary academic accounting research. Put differently, the shift from the "convention accounting paradigm" to the financial empirical paradigm may not be a random phenomenon. Without being able to offer its characterization or description, Kuhn argues that the replacement and thus the superiority of a latter paradigm to its predecessors is an appeal to an authority in a scientific community (Chalmers, 1999). Kuhn (1996, p.178) states before the transition from the pre- to the post-paradigm period in the development of a scientific community, "a number of schools compete for the domination of a given field." Accounting researchers (e.g., Lee 1995, 1997, 1999; Lee and Williams, 1999; Rodgers and Williams 1996; Williams and Rodgers 1995) found a cumulated amount of evidence suggesting that a certain group of accounting faculties, who share a background grounded in the economic and finance disciplines, have obtained predominance in American accounting academia. The heavy importation of theories from the economic and finance disciplines has created a dominant school of accounting research that is "dependent on economics and finance-based theories and methodologies" (Lee, 1995, p.258). The dominant schools have the highest regarded economic and finance departments (Heck and Jensen, 2007). This particular view leads one to believe that the three increased trends (the use of empirical archival method, the influence of economics and finance, and financial accounting topics) may be designed to occur at the expense of normative accounting theory.

6.1.4. Background for the Change

As accounting faculties worked on meeting the written accreditation standards set by the Association to Advance Collegiate Schools of Business (AACSB), accounting research was progressing away from accounting problems of the profession (Langenderfer, 1987). Articles that are applied to practice have seemed to have less chance of being published in leading journals (The Association to Advance Collegiate Schools of Business (AACSB-International), 2008). Faculty members in business fields, including accounting, are discouraged from working on such articles (The Association to Advance Collegiate Schools of Business (AACSB-International), 2008). The result was "more isolation of research-oriented faculty members from real-world problems and less contact with professional accountants" (Langenderfer, 1987, p.312).

Accounting academicians have delayed the marriage with accounting practice or have selected not to accelerate the matrimony. Reiter (1998, p.145) asserts that, "The technical training necessary to pursue empirical economics-based research excluded practitioners from accounting academia and increased the barriers to entry into the field." Institutional barriers prevent practitioners from taking part in the process of producing accounting knowledge (Williams and Rodgers, 1995).

In addition, the AAA contributed to widening the gap between research, education and practice (Lee, 1995). The editorial policy of *TAR* on January 1990 states that, "The primary…audience should be…academicians, graduate students, and others interested in accounting research" (the AAA, 1990). By being too focused on research methodologies, the AAA discouraged accounting researchers from maintaining close relationships with the practitioners.

Accounting academia may be at the stage when it should not be dominated by a single research method. Multiplicity in research methods is appropriate and useful for accounting academia because "each approach offers a different angle of investigation" and because "no research method possesses a 'universal comparative advantage'" (Demski, 1987, p.93).

6.1.5. A Call for a Change

An opposing system is needed in academic accounting research (Subotnik, 1988, p. 103). There are at least two ways of establishing such a system to change the current state of academic accounting research. First, through dominating the accounting academic community, the current paradigm can be shifted. This fits Kunh's account of how scientific communities change. This shift can be described as a change from top to bottom. It is described from top to bottom because a group of academicians who dominate the accounting community dictate the research agenda. Such a group of academicians can impose a line of research, research traditions, methodologies, and philosophy on other members of the academic accounting community through several means (see Whitley, 2000).

The second way can be viewed as a change from bottom to top. It starts with doctoral students. Doctoral programs play an important role in standardizing research methods (Reiter, 1998). This current study takes into consideration doctoral students and targets them as potential readers of this study. This study endorses such a way to change the current state of the academic accounting community. This way has the potential of working in accounting academia. Accounting academics and leaders have in one way or

another suggested this way for changing the current state of academic accounting research. In a panel held at the 2007 National Meeting of the AAA, Thomas Dyckman encouraged doctoral students to choose the kinds of problems on which they want to work. He also urged them to resist their advisors' pressures and not to choose research topics the latter would have suggested. Demski (2007) has called for a "strike." Reiter (1998) has called for prompting radical thoughts in accounting research. Manninen (1996) endorses the idea of publishing controversial, but well-reasoned and well written ideas in academic accounting research. These four individuals seem to suggest a change from bottom to top. However, the power of advisors restricts this type of change. The extent to which doctoral students can resist is limited by their willingness to do so. This study encourages the view that doctoral students choose topics that enrich the development of accounting theory.

6.1.6. Bringing Accounting Practice and Accounting Academia together

The schism between the practice community and the academic community was not an issue during the era prior to the shift to the financial empirical paradigm. Prior to such a shift, standard-setting boards, CPAs, and corporate officers have benefited from academic accounting research (Granof and Zeff, 2008). The Paton and Littleton monograph which was an extension of the 1936 statement of the AAA (Lee, 2009) had an important impact on accounting practice (Storey 1981 as cited in Zeff 1999 p.91).

"The two sides of the equation—practice and academia—" can yet work together (Bricker, 1988, p.54). Accounting theory represents a possible common ground for accounting academics and accounting practitioners for working together. Because "early

doctorates awarded to accounting academics…were in economics," practitioners were the ones to suggest "the development of a coherent accounting theory" for accounting academicians as a direction for research in accounting (the *Statement on Accounting Theory and Theory Acceptance*, 1977, p.6). Early accounting practitioners recognized the negative consequences of building academic accounting research based on other disciplines. Decades after detaching academic accounting research from the influence of economics, academic accounting research is currently becoming closer to economics. Fogarty (2006, p.521) describes economics as the "mothership" to accounting when portraying the relationship between the two disciplines.

Accordingly, researchers need a theory of accounting in their attempts to explain and predict accounting phenomena. Accounting theory is an important topic. Specifying such a topic assists in establishing and limiting the boundaries of accounting as an organized discipline (Mautz, 1965).

6.1.7. The Existing Need for Normative Accounting Theory

Accounting theorization is expected to yield "a sufficient and compelling basis for specifying the content of external financial reports" (the *Statement on Accounting Theory and Theory Acceptance*, 1977, p.31). Several reasons have been suggested for the dissatisfactions with the accounting theories that have been proposed thus far. Accounting theories lack coverage or breadth, and none of them has taken into consideration the real world's complexity (the *Statement on Accounting Theory and Theory Acceptance*, 1977). If a theory of accounting is to overcome the problem of incomplete specifications, it will become complex and complexity is a weakness in a

theory (the *Statement on Accounting Theory and Theory Acceptance*, 1977). Accountants have to trade off one against the other. That is, accountants have to choose either to have a simple accounting theory that is incomplete or a complete accounting theory that is complex. The choice should not to be an arbitrary one. Rather, the environment in which accounting operates should be considered. The business environment is complex and changeable. Some past accounting theorists were selective and different in their approaches in accounting theorization. The variety of interests prevents general agreement on accounting theory (Tinker and Puxty, 1995, p.21).

Positive accounting theory might have had the potential of telling "what ought to be." Citing Jensen (1983), Watts and Zimmerman (1990, p.148) acknowledge that "once the objective function is specified[,]" a positive theory can have normative implications. Now however doubt has been raised about the methodology of positive accounting research. There appears to be little hope left for learning "what ought to be" relying on positive accounting theory. In general, the empirical scientific method "is not the method that is likely to generate new theories…" (Sundem, 1993, p.3; see also Heck and Jensen, 2007).

Moreover, the conceptual framework of the FASB was hoped to work as a normative theory for accounting. The conceptual framework is part of the normative literature (Dyckman and Zeff. 1984) in that it was intended to serve as a basis for deducing accounting standards. The conceptual framework was based on principles (Schipper, 2003).

However, the conceptual framework suffers from a major concern. A deductive framework is an intention to make the accounting discipline a formal one and a tendency

to develop accounting like a natural science (Stamp, 1981, p.218). Utilizing a meta-theorization approach, Power (1993, p.49) argues the conceptual framework "suffers from a significant meta-theoretical error" and thus lacks a scientific approach. Accepting the conceptual framework is justified jurisprudentially, but not as "a theory embodied in the document" (Wolk et al. 2004, p.221). Archer (1993 as cited in Wolk et al. 2004, p.222) hoped the conceptual framework would be more than jurisprudence. To Kieso et al. (2004), the conceptual framework is a constitution.

Zeff (1999, p.107) argues "…preconceptions and predispositions made it difficult for the [FASB] to impose a decision usefulness objective on a profession that had been accustomed to view accounting as basically a passive record-keeping activity." Recently, the entire approach of decision usefulness has been reevaluated and rethought (see Williams and Ravenscroft, 2009)

Macve (1997 p.xxii as cited in Zeff 1999 p.119) states, "…it remains unrealistic to expect official attempts to develop 'conceptual framework for the resolution of accounting problems…" Zeff (1999, p.119) reports that "commentators" on the conceptual framework (such as Solomons, 1986; Joyce et al. 1982; Wolk et al. 1992; Macve, 1997) "have generally rendered a negative assessment of the…conceptual framework."

In short, while accounting principles and accounting practice are used in accounting interchangeably (Grady, 1965), in the current time, to think through problems in practice from theoretical principles may not be possible (Lee, 2009). Building general theory for accounting that is capable of guiding practice and that is founded on a normative foundation becomes a necessity. Such a theory assists the corporate accountant

to decide how to account for transactions and to choose among accounting methods and procedures. Such a theory also offers the public accountant a means to do the same. In this regards, even if the corporate accountant is not able to account for transactions the way it ought to be due to the pressure exercised upon him or her by executive management, the public accountant will have the basis to disagree with the management, and to resist the managers' demands.

6. 2. Conclusions

Given that our discipline is not suited to adopt an epistemic "positive frame of reference" (Yu, 1976, p.104) along with not possessing a general theory, accounting academia is ill-equipped to absorb empirical research. As times passes, the claim of independence of the accounting discipline from the economic and finance disciplines has weakened.

While a financial empirical paradigm dominates academic accounting research, efforts toward building general theory for accounting appear to be limited (e.g. Rodgers and Williams, 1996; Previts and Robinson, 1997; Lee, 2009). General accounting theory remains neglected. As the limitations of financial empirical research in general and positive theorizing in particular are now acknowledged, it is time to reestablish research and activity supporting normative theorization.

6.3. Limitations

The number of *TAR*'s issues sampled in this study is relatively small. The years sampled in current study represent only one fourth of the *TAR*'s volumes (20 out of 84).

However, the span of the sample is aimed at covering different stages of *TAR*'s existence. Some of the periods sampled in this study are important. The sampling procedure used in this current study permits the inclusion of critical years of *TAR*'s history. For example, the middle 1950s can be labeled as a golden age for accounting theory in *TAR*'s history. Chatfield (1975, p.5) characterizes this era as an epoch when "a broader view of the possibilities of accounting theory" were reflected in the articles that were published during this time.

The extent to which this analysis depends on Belkaoui's structure of accounting theory may be a concern. However, the structure of accounting theory that Belkaoui offers is believed to be broad in that it encompasses many aspects and elements of accounting theory. Such a broad structure serves this study avoiding criticism that the accounting theory variable is narrowly defined in order to support the decline of accounting theory finding.

Recall also that Belkauoi does not propose his own theory of accounting. Rather, he describes the structure of accounting theory as it develops throughout time by academic accounting organizations, professional accounting bodies, and accounting academics and theorists. He attempts to synthesize such efforts and organize them chronologically.

This study limits the names of accounting theorists who are listed in Table 5. Scholars such as Bedford, Devine, Mattessich, Stamp, and Vatter were excluded from Table 5. Their exclusion neither disqualifies any of them nor disregards any of their great contributions to academic accounting research in general and to accounting theory in particular. When creating Table 5, the researcher had to select a cutoff point. While

collecting the data for this current study, very few of the authors of the articles included in the sample refer to those scholars listed above who were excluded from Table 5. Thus, the exclusion should not affect the results. Other researchers may still want to consider adding whom they believe should be included in Table 5 and observe to what extent including such names change the results.

The International Accounting Standards Board (IASB) and its new joint framework was not considered in this current study while measuring the accounting theory variable. This current study is mainly focused on efforts that took place in the United States.

6. 4. Further Research

The articles that got 1 under the four variables deserve attention. A future study can be focused on analyzing those articles. Such an investigation may yield a pattern of thought that will enhance our knowledge.

The shift from building accounting theory to the new financial empirical paradigm can further be discussed philosophically. Specifically, the discourse about such a shift can be investigated and evaluated epistemologically in the light of John Demey's *Theory of Inquiry* (1938). As the poverty of accounting discourse was already observed (see Chambers, 1999), the accounting discipline will benefit from furthering such a discourse. John Dewey's theory of inquiry (see Kaufmann, 1959) represents a prospective framework for analyzing the discourse.

Another extension of this study is to supplement Kuhn's previous account about shifting the focus of a scientific community through competing for the domination of the

scientific community with Whitley's (2000) social theory of elitism. An application of such a theory will potentially lead to identifying a particular group of accounting academics who have had the power and the means and thus the authority to shift the focus of academic accounting research, particularly that which appeared in *TAR*. Applying such a theory to American accounting research, accounting researchers (e.g. Lee 1995, 1997, 1999; Lee and Williams, 1999; Rodgers and Williams 1996; Williams and Rodgers 1995) found a cumulated amount of evidence pointing toward the domination of a certain group of accounting faculties, which have achieved an imposing influence over America's accounting academics.

A future study may consider incorporating the findings of this study about a paradigm shift with what has been found about the dominant group of academics. Such integration can be done by attributing such a shift to what has been deemed as an authority in accounting academia. That is, attributing the increase in the three trends (the use of the empirical archival method, the influence of economics and finance, and financial accounting topics) and the decrease in accounting theory to a dominant group of accounting academics.

List of Tables

Table 1: A list of the objectives of financial statements proposed by the Trueblood Committee (as cited in Belkaoui, 2004, pp.169-172)	
1	The basic objective of financial statements is to provide information on which to base economic decisions.
2	An objective of financial statements is to serve primarily those users who have limited authority, ability, or resources to obtain information and who rely on financial statements as their principal source of information about enterprise's activity.
3	An objective of financial statements is to provide information useful to investors and creditors for predicting, comparing, and evaluating potential cash flows to them in terms of amount timing and related uncertainly.
4	An objective of financial statements is to provide users with information for predicting, comparing and evaluating enterprise earning power.
5	An objective of financial statements is supply information useful in judging management's ability to utilize enterprise resources effectively in achieving the primarily enterprise goal.
6	An objective of financial statements is to provide factual and interpretive information about transactions and other events that is useful for predicting, comparing and evaluating enterprise earning power. Basic underlying assumptions with respect to matters subject to interpretation, evaluation, prediction or estimation should be disclosed.
7	An objective is to provide a statement of financial position that is useful for predicting, comparing and evaluating enterprise earning power. This statement should provide information concerning enterprise transactions and other events that are part of incomplete earnings cycles. Current values should also be reported when they differ significantly from historical cost. Assets and liabilities should be grouped or segregated by the relative uncertainly of the amount and timing of prospective realization or liquidation.
8	An objective is to provide statement of periodic earnings useful for predicting comparing and evaluating enterprise earning. The net result of completed earning cycles and enterprise activities resulting in recognizable progress toward completion of incomplete cycles should be reported. Changes in the values reflected in successive statements of financial position should also be reported, but separately, since they differ in terms of their certainty of realization.
9	An objective is to provide a statement of financial activities useful for predicting, comparing and evaluating enterprise earning power. This statement should report mainly on factual aspects of enterprise transactions having or expected to have significant cash consequences. This statement should report data that require minimal judgment and interpretation by the preparer.
10	An objective of financial statements is to provide information useful for the predictive process. Financial forecasts should be provided when they enhance the reliability of users' predictions.
11	An objective of a financial statement for governmental and not-for-profit

	organizations is to provide information useful for evaluating the effectiveness of the management of resources in achieving the organization's goals that are primarily nonmonetary. Performance measures should be expressed in terms of the not-for-profit organization's goal.
12	An objective of financial statements is to report on those activities of the enterprise affecting society which can be determined and described or measured and which are important to the enterprise in its social environment.

Table 2: A list of the qualitative characteristics of information that the Trueblood Report lists (as cited in Belkaoui, 2004, p.172)	
1	Relevance and materiality
2	Form and substance
	Reliability
4	Freedom from bias
5	Comparability
6	Consistency
7	Understandability

Table 3: A detailed list of levels 2 and 3 of the structure of accounting theory suggested by Belkaoui (2004, pp.210-230)
The accounting postulates
The entity postulate
The going-concern postulate
The unit-of-measure postulate
The accounting-period postulate
The theoretical concepts of accounting
The proprietary theory
The entity theory
The fund theory
The accounting Principles
The cost principle
The revenue principle
The matching principle
The objectivity principle
The consistency principle
The full disclosure principle
The materiality principle
The uniformity and comparability principle
The timeliness of accounting earnings and conservatism

Table 4: List of the statements published by AAA and AICPA concerning with accounting theory and by FASB concerning the conceptual framework	
First: AICPA's Statements	**Year**
A Statement of Accounting Principles by Sanders, T. H., Hatfield, H. R and Moore, U.[12]	1938
The Basic Postulates of Accounting (ARS. No. 1) by Moonitz, M	1961
A Tentative Set of Broad Accounting Principles for Business Enterprises (ARS. No. 3) by Sprouse, R. T. and Moonitz, M	1962
Reporting the Financial Effects of Price-Level Changes (ARS.6) by the Staff of the Accounting Research Division	1963
Inventory of Generally Accepted Accounting Principles for Business Enterprises (ARS. 7) by Paul Grady	1965
Second: AAA's Statements	
Accounting Principles underlying Corporate Financial Statements	1936
Accounting Principles underlying Corporate Financial Statements	1941
Accounting and Reporting Standards Underlying Corporate Financial Statements	1957
A Statement of Basic Accounting Theory (ASOBAT)	1966
Report of the committee on Accounting Theory Construction and Verification	1971
Report of the Committee on Foundations of Accounting Measurement	1971
Statement on Accounting Theory and Theory Acceptance (SATTA)	1977
Third: FASB's Statements	
Objective of Financial Reporting by Business Enterprises (SFAC No.1)	1978
Qualitative Characteristics of Accounting Information (SFAC No.2)	1980
Elements of Financial Statements of Business Enterprises (SFAC No.3)[13]	1980
Objectives of Financial Reporting by Nonbusiness Organizations (SFAC No.4)	1975
Recognition and Measurement in Financial Statements of Business Enterprises (SFAC No.5)	1984
Elements of Financial Statements (SFAC No.6)	1985
Using Cash Flow Information and Present Value in Accounting Measurements (SFAC No.7)	2000

[12] It was first published when the Institute used to be named the American Institute of Accountants (AIA). In 1957, the name was changed to the American Institution of Certified Public Accountants (AICPA) (see http://www.aicpa.org). The statement was later reprinted several times (1959, 1963, 1968, 1974 and 1977) by the American Accounting Association.

[13] Later, SFAC No. 3 was replaced by SFAC No. 6.

Table 5: List of names of accounting theorists		
Name	**Example of works (This list is not intended to be exhaustive):**	**Year**
A: Pre-classical 1900-1920 (suggested by Previts, 1980, p.5)		
Cole, William Morse	*Accounts: Their Construction and Interpretation**	1908
Dickinson, Arthur	*Accounting Practice and Procedure**	1914
Esquerre, Paul-Joseph	*Applied Theory of Accounts**	1914
Hatfield, Henry Rand	*Modern Accounting: Its Principles and Some of its Problems**	1909
Kester, Roy Bernard	*Accounting Theory and Practice**	1916
Montgomery, Rober	*Auditing Theory and Practice**	1912
Sprague, Charles Ezra	*Philosophy of Accounts**	1907
Wildman, John Raymond	*Principles of Accounting**	1913
B: Others (suggested by this study)		
Alexander, Sidney, S.	*Income Measurement in Dynamic Economy*	1950
Canning, J. B.	*Economics of Accounting*	1929
Chambers, R. J.	*Accounting, Evaluation, and Economics Behavior*	1966
Edwards, E. O. and Bell, P. W.	*The Theory and Measurement of Business Income*	1969
Gilman, Stephen	*Accounting Concepts of Profit*	1939
Ijiri, Y.	*Theory of Accounting Measurement*	1975
Littleton, A.C.	*Accounting Evolution to 1900;* *The Structure of Accounting Theory*	1933; 1953
MacNeal, K.	*Truth in Accounting*	1939
May, G. O.	*Financial Accounting;* *The Nature of Financial Reporting Process.* Published in *TAR*	1943; 1943
Moore, U.	*A Statement of Accounting Principles* (coauthored with Sanders, T. H. and Hatfield, H. R).	1938
Paton, W. A.	*Accounting Theory;* *An Introduction to Corporate Accounting Standards*	1922; 1940
Sterling, R.	*Theory of the Measurement of Enterprise Income*	1970
Sweeney, Henry W	*Stabilized Accounting*	1936

*For a complete list of their works see the appendix in Previts (1980, pp.203-241)

Table 6: A Summary of the Criteria for Coding the Articles

Name of Variables	Values to Be Assigned to the articles	
	1	**0**
Acc_Th	The article is mainly about accounting theory or refers to an accounting theorist.	The article has nothing to do with accounting theory and does not refer to an accounting theorist.
Using_Emp_ Arc	The article fits under Sundem's (1987 p.196-200) taxonomy and the research method is the empirical archival.	The article does not fit under Sundem's (1987 p.196-200) taxonomy or the research method is not the empirical archival.
Influence_Econ_Fin	The ratio of citations to economics and finance to the total citations listed in the article is 25% or more.	The ratio of citations to economics and finance to the total citations listed in the article is less than 25%.
Fin_Acc	The topic is categorized as market reaction to accounting information, financial statements or auditing financial statements.	The topic is categorized as something other than market reaction to accounting information, to financial statements and to auditing financial statements.

Table 7: The total number of <u>main articles</u> that appeared in each period included in the study

The sampled periods	The number of the main published articles
The First Period:1926-1930	161
The Second Period: 1952-1956	271
The Third Period: 1977-1981	166
The Fourth Period:2003-2007	222
Total	820

Table 8: The summations of each variable for each period included in this study

Variable / Period	The Influence of Economics and Finance (Influence_Econ_Fin)	Using Empirical Archival Method (Using_Emp_Arc)	Financial Accounting Topics (Fin_Acc)	Accounting Theory (Acc_Th)	Total number of the main articles in each period
First Period: 1926-1930	10	0	5	63	161
Second Period: 1952-1956	12	0	1	86	271
Third Period: 1977-1981	37	43	49	41	166
Fourth Period: 2003-2007	77	134	160	10	222
Total	136	177	215	200	————

Table 9: Descriptive statistics for the four variables for the whole sample in which 820 main articles appeared in 82 issues

Variable	Mean	Std. Deviation	Std. Error	Minimum	Maximum
Influence_Econ_Fin	1.66	1.701	0.188	0	7
Using_Emp_Arc	2.16	2.891	0.319	0	12
Fin_Acc	2.62	3.321	0.367	0	12
Acc_Th	2.44	2.061	0.228	0	8

Table 10: Descriptive statistics for the four variables in the first period (the number of issues published in this period is 20, n=20)

Variable	Mean	Std. Deviation	Minimum	Maximum
Influence_Econ_Fin	0.5	0.761	0	2
Using_Emp_Arc	0	0	0	0
Fin_Acc	0.25	0.716	0	3
Acc_Th	3.15	1.872	0	8

Table 11: Descriptive statistics for the four variables in the second period (the number of issues published in this period is 20, n=20)

Variable	Mean	Std. Deviation	Minimum	Maximum
Influence_Econ_Fin	0.6	0.681	0	2
Using_Emp_Arc	0	0	0	0
Fin_Acc	0.05	0.224	0	1
Acc_Th	4.3	1.593	1	7

Table 12: Descriptive statistics for the four variables in the third period (the number of issues published in this period is 20, n=20)

Variable	Mean	Std. Deviation	Minimum	Maximum
Influence_Econ_Fin	1.85	1.565	0	4
Using_Emp_Arc	2.15	1.694	0	6
Fin_Acc	2.45	1.701	0	6
Acc_Th	2.05	1.605	0	6

Table 13: Descriptive statistics for the four variables in the fourth period (number of issues included in this period is 22, n=22)

Variable	Mean	Std. Deviation	Minimum	Maximum
Influence_Econ_Fin	3.500	1.439	1	7
Using_Emp_Arc	6.091	2.136	3	12
Fin_Acc	7.273	2.251	4	12
Acc_Th	0.455	0.739	0	3

Table 14: Descriptive statistics for accounting theory variable measured by the number of main articles about accounting theory per issue across the four periods

Time	N	Mean	Std. Deviation	Std. Error	Minimum	Maximum
Time_1	20	3.15	1.872	0.418	0	8
Time_2	20	4.3	1.593	0.356	1	7
Time_3	20	2.05	1.605	0.359	0	6
Time_4	22	0.45	0.739	0.157	0	3

Table 15: Frequency of the accounting theory variable in the first period (Time_1)

Per issue number of main articles about accounting theory	Frequency	Percent
0	1	5
1	2	10
2	5	25
3	5	25
4	3	15
5	2	10
6	1	5
8	1	5
Total	20	100

Table 16: Frequency of the accounting theory variable in the second period (Time_2)

Per issue number of main articles about accounting theory	Frequency	Percent
1	2	10
2	1	5
3	1	5
4	6	30
5	6	30
6	3	15
7	1	5
Total	20	100

Table 17: First part of the results of Dunnett C's test for multiple comparisons of the means of accounting theory: Time_1 being the base for the comparisons

(I) Time	(J) Time	Mean Difference (I-J)	Std. Error	95% Confidence Interval	
				Lower Bound	Upper Bound
Time_1	Time_2	-1.15	0.55	-2.7	0.4
	Time_3	1.1	0.551	-0.45	2.65
	Time_4	**2.695(*)**	0.447	1.44	3.95

***The mean difference is significant at the.05 level.

Table 18: Second part of the results of Dunnett C's test for multiple comparisons of the means of accounting theory: Time_2 being the base for the comparisons

(I) Time	(J) Time	Mean Difference (I-J)	Std. Error	95% Confidence Interval	
				Lower Bound	Upper Bound
Time_2	Time_1	1.15	0.55	-0.4	2.7
	Time_3	**2.250(*)**	0.506	0.83	3.67
	Time_4	**3.845(*)**	0.389	2.75	4.94

***The mean difference is significant at the .05 level.

Table 19: Third part of the results of Dunnett C's test for multiple comparisons of the means of accounting theory: Time_3 being the base of the comparisons

(I) Time	(J) Time	Mean Difference (I-J)	Std. Error	95% Confidence Interval	
				Lower Bound	Upper Bound
Time_3	Time_1	-1.1	0.551	-2.65	0.45
	Time_2	**-2.250(*)**	0.506	-3.67	-0.83
	Time_4	**1.595(*)**	0.392	0.49	2.7

***The mean difference is significant at the .05 level.

Table 20: Fourth part of the results of Dunnett C's test for multiple comparisons of the means of accounting theory: Time_4 being the base of the comparisons

(I) Time	(J) Time	Mean Difference (I-J)	Std. Error	95% Confidence Interval	
				Lower Bound	Upper Bound
Time_4	Time_1	**-2.695(*)**	0.447	-3.95	-1.44
	Time_2	**-3.845(*)**	0.389	-4.94	-2.75
	Time_3	**-1.595(*)**	0.392	-2.7	-0.49

*****The mean difference is significant at the .05 level.

List of Diagrams

Diagram 1: Hypothesized relations among the variables

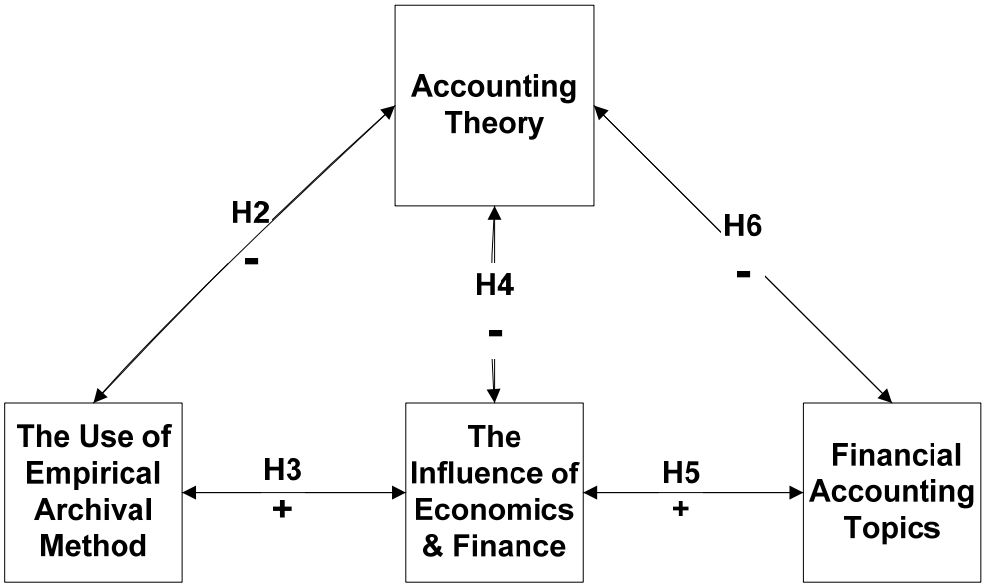


Diagram 2: A time line of *TAR*'s age divided into four periods that are included in this study

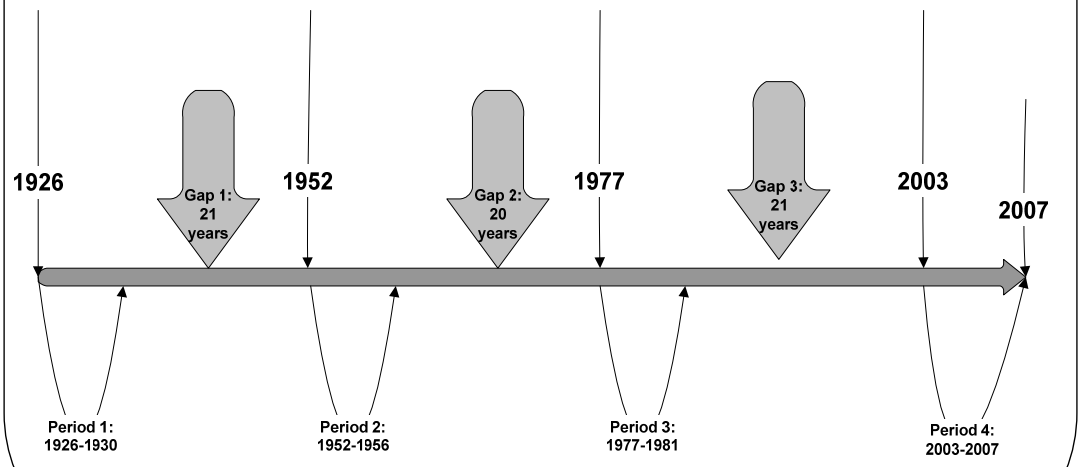


Diagram 3: Measuring the accounting theory variable

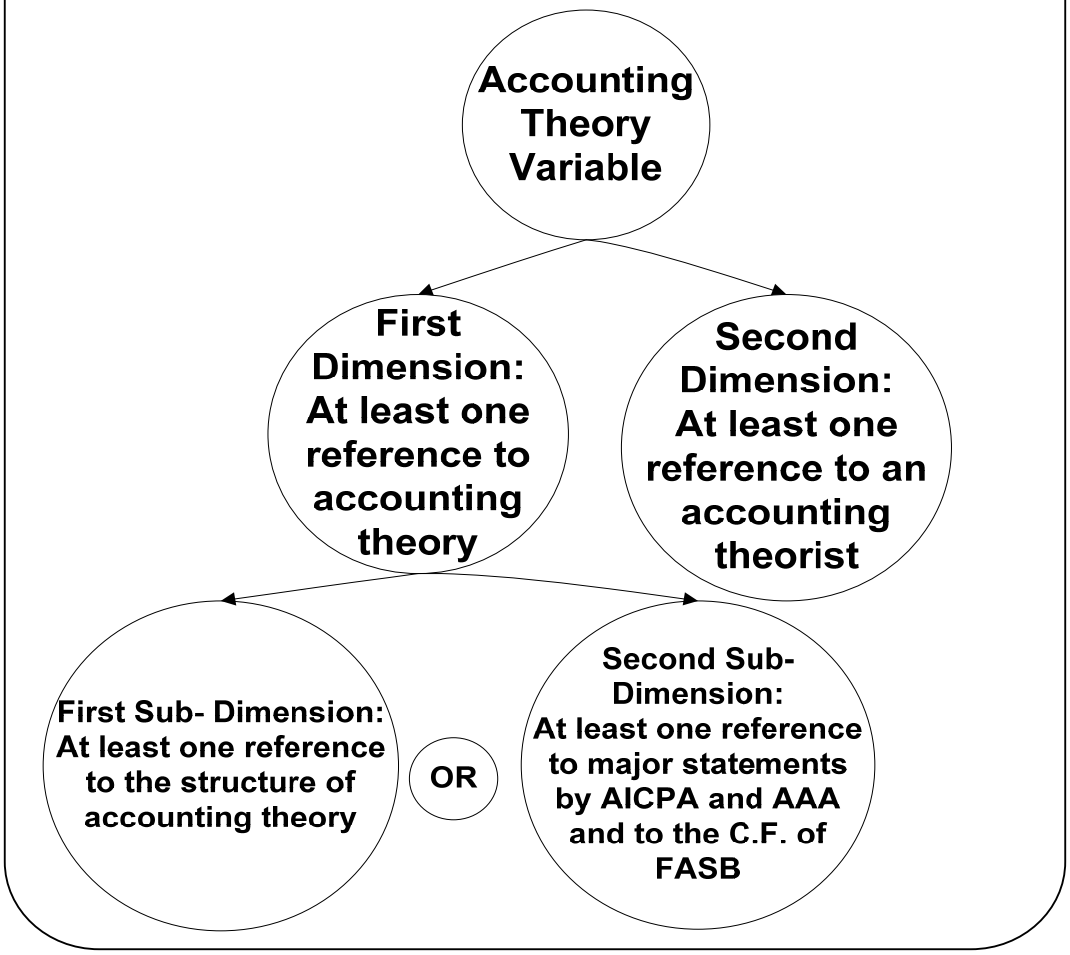
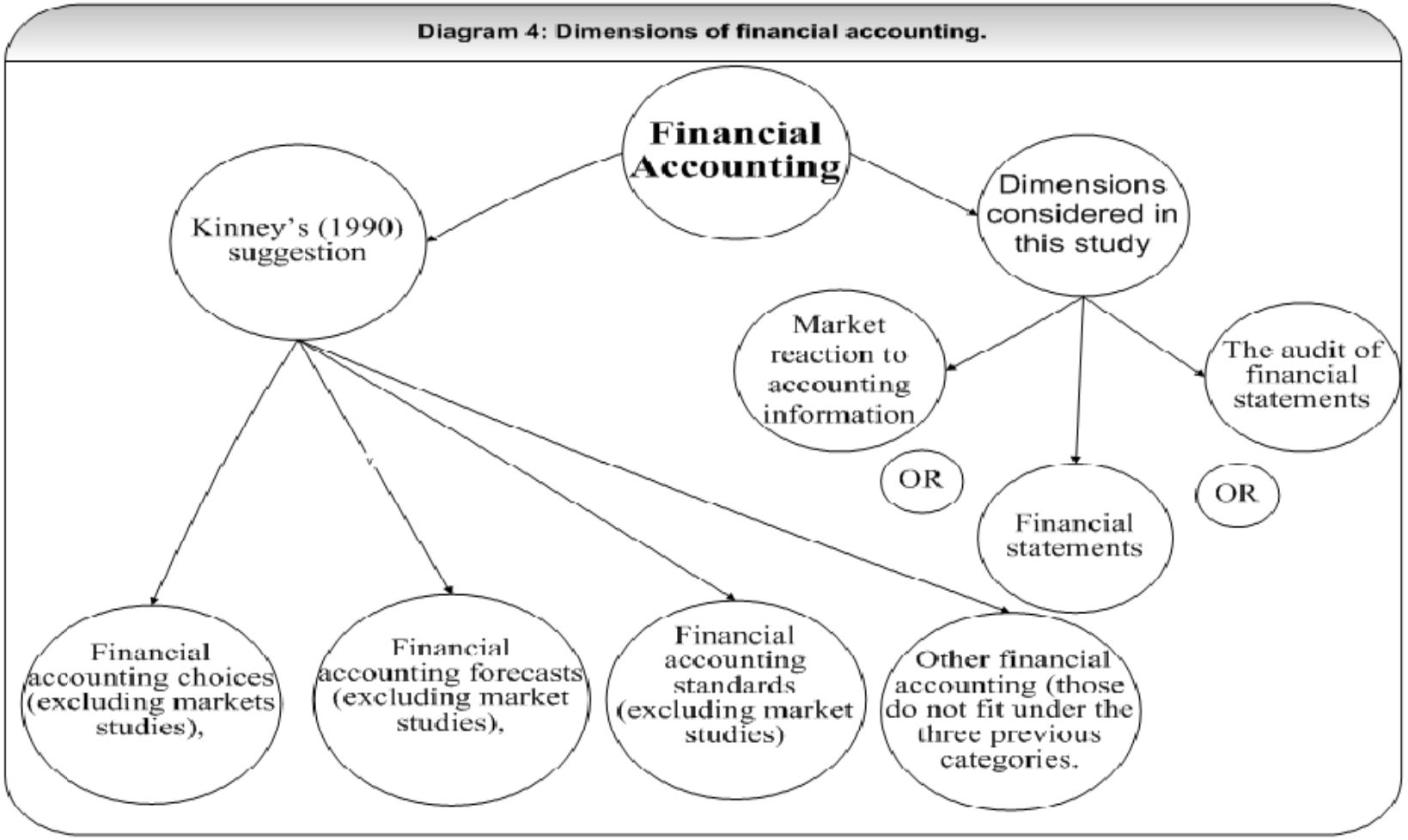


Diagram 4: Dimensions of financial accounting.



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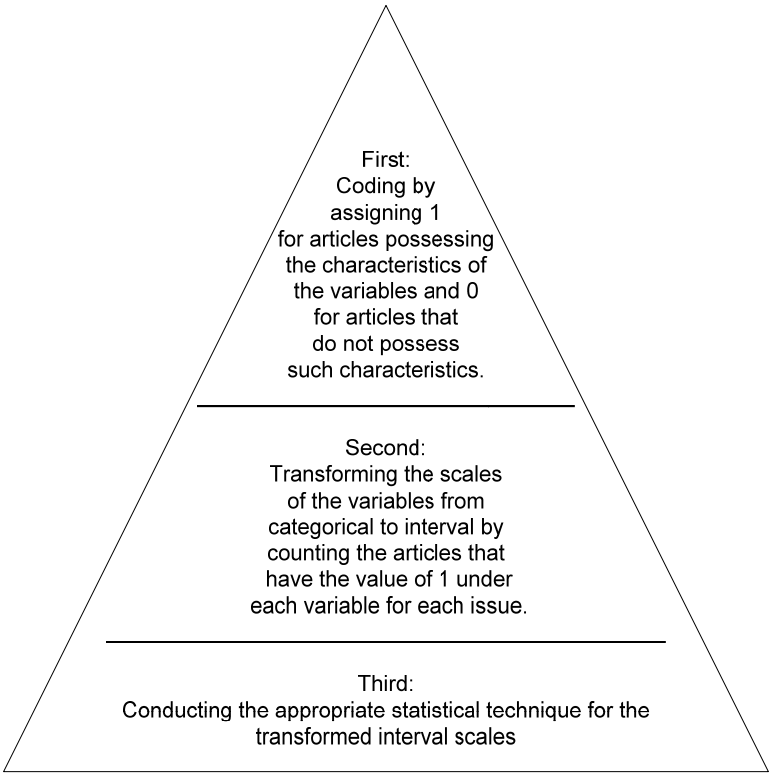
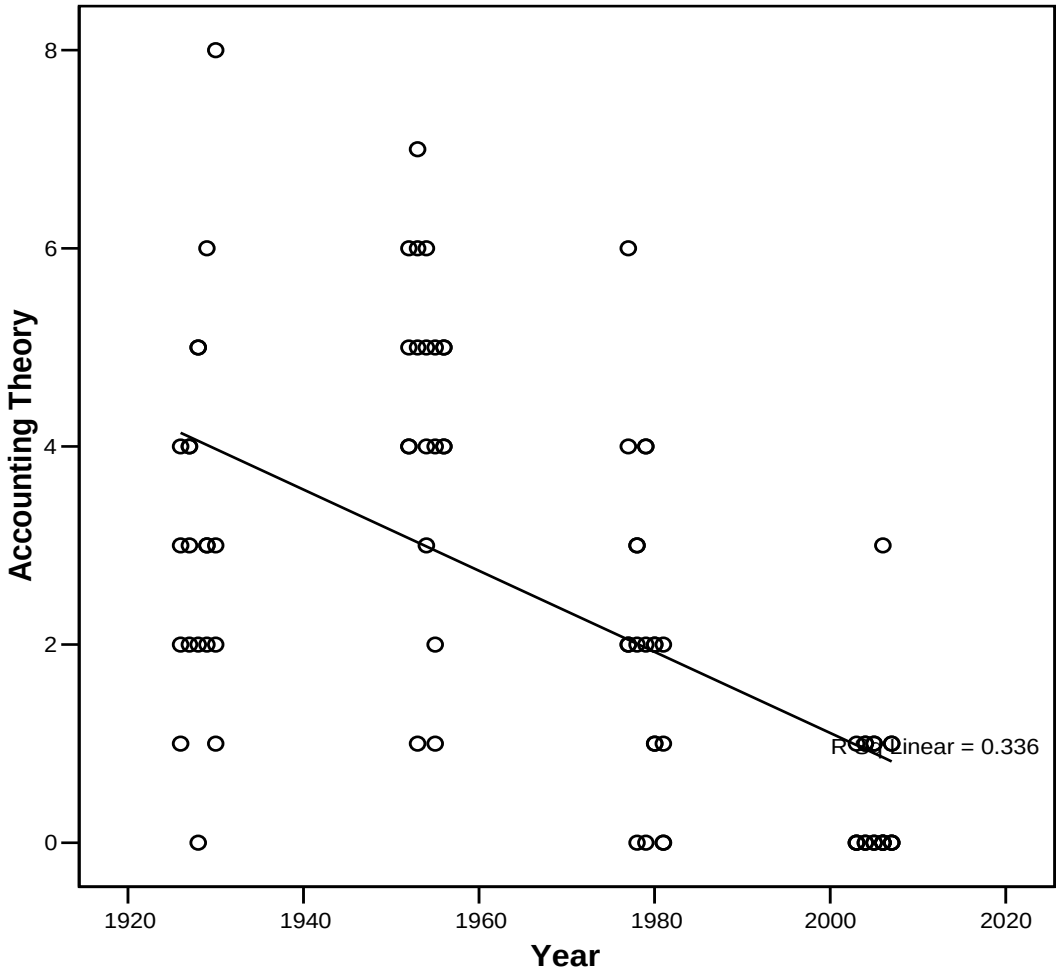


Diagram 6: The accounting theory variable against time



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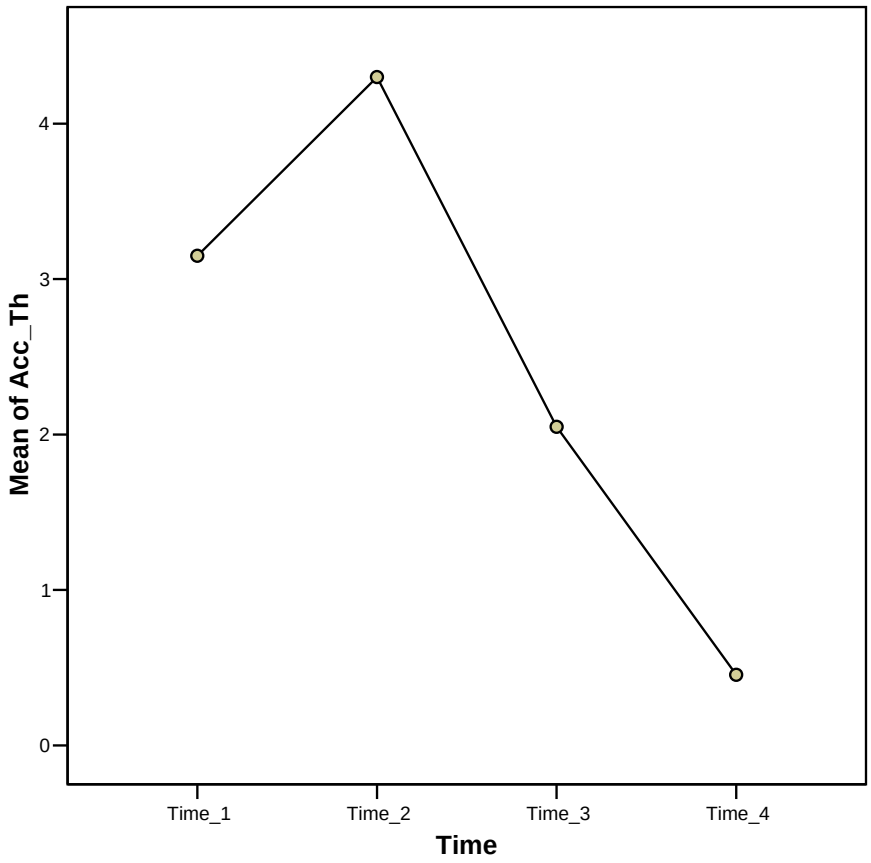


Diagram 8: The use of the empirical archival method variable plotted against the accounting theory variable

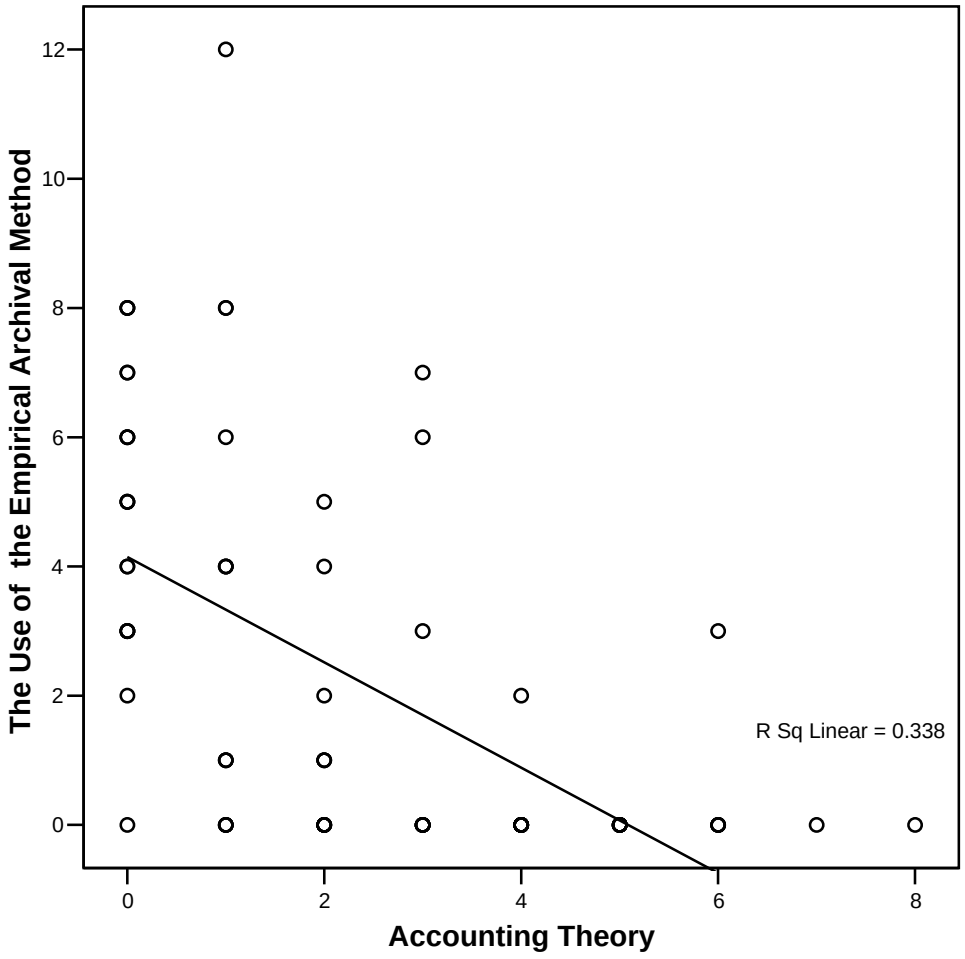


Diagram 9: The use of the empirical archival method variable plotted on top of the accounting variable (both variables are plotted against time)

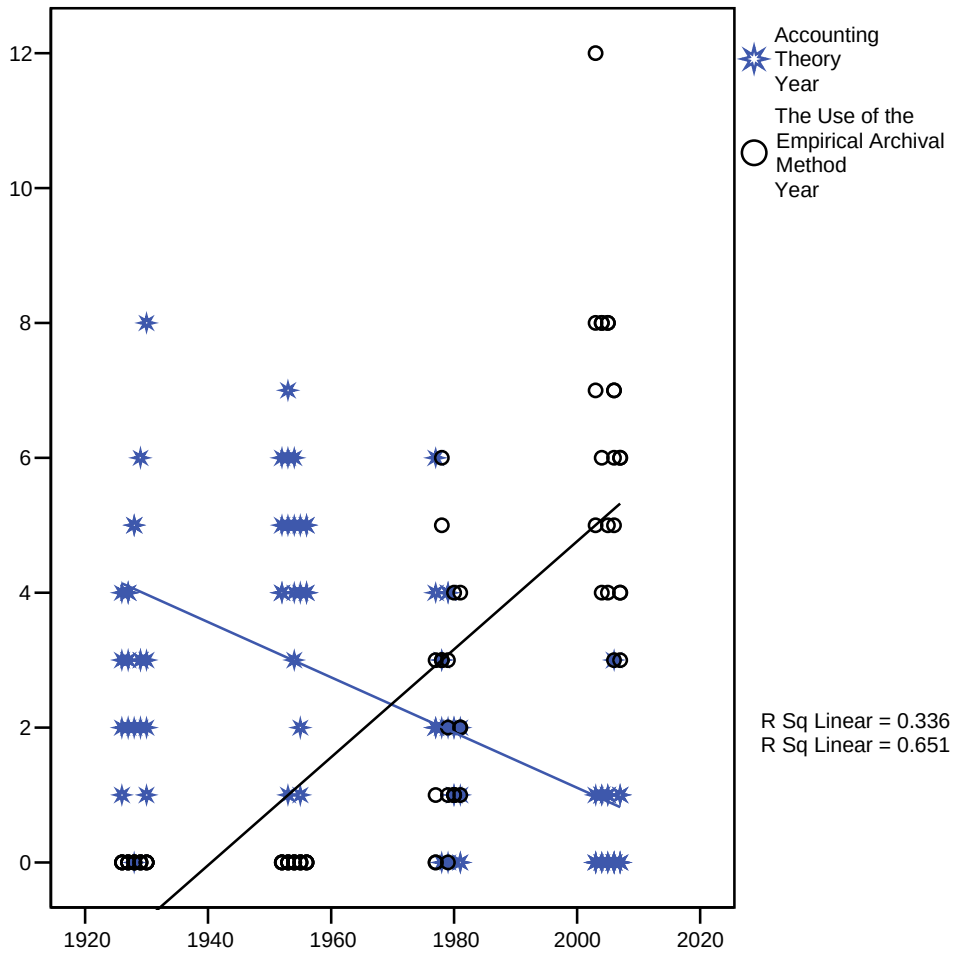


Diagram 10: The use of the empirical archival method plotted against time

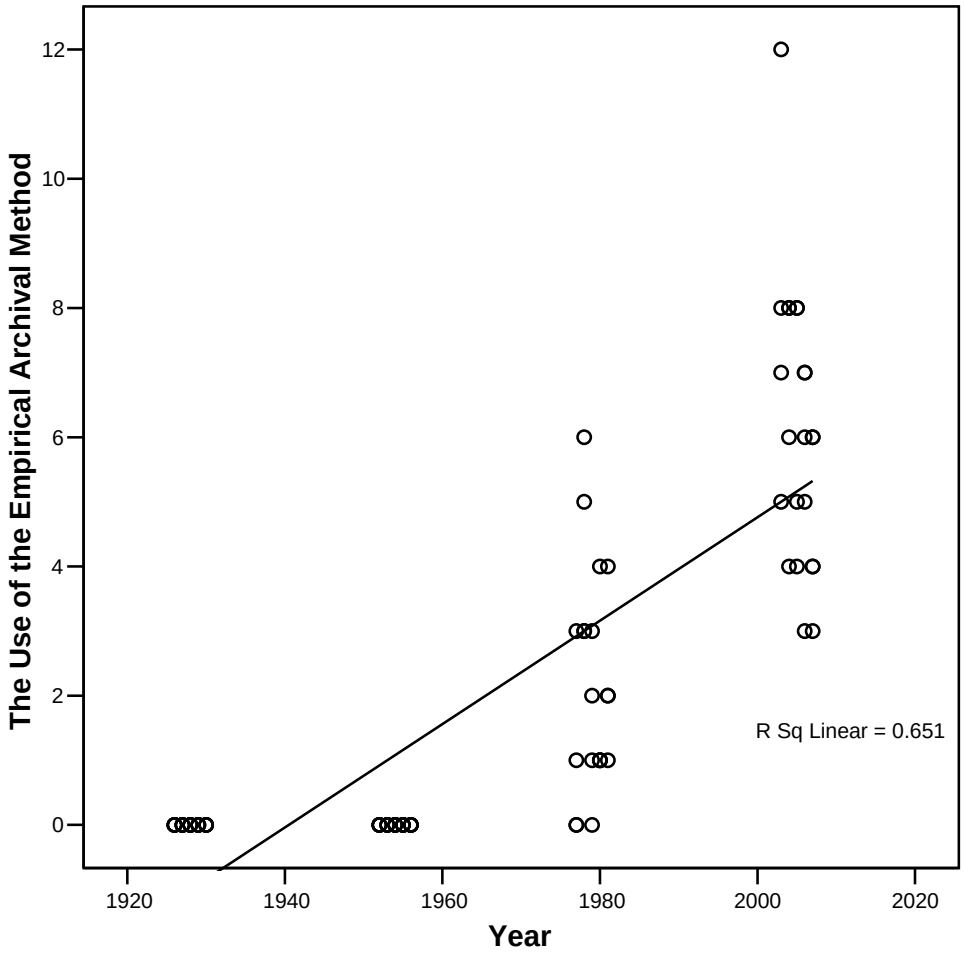


Diagram 11: The use of the empirical archival method variable plotted against the influence of economics and finance variable

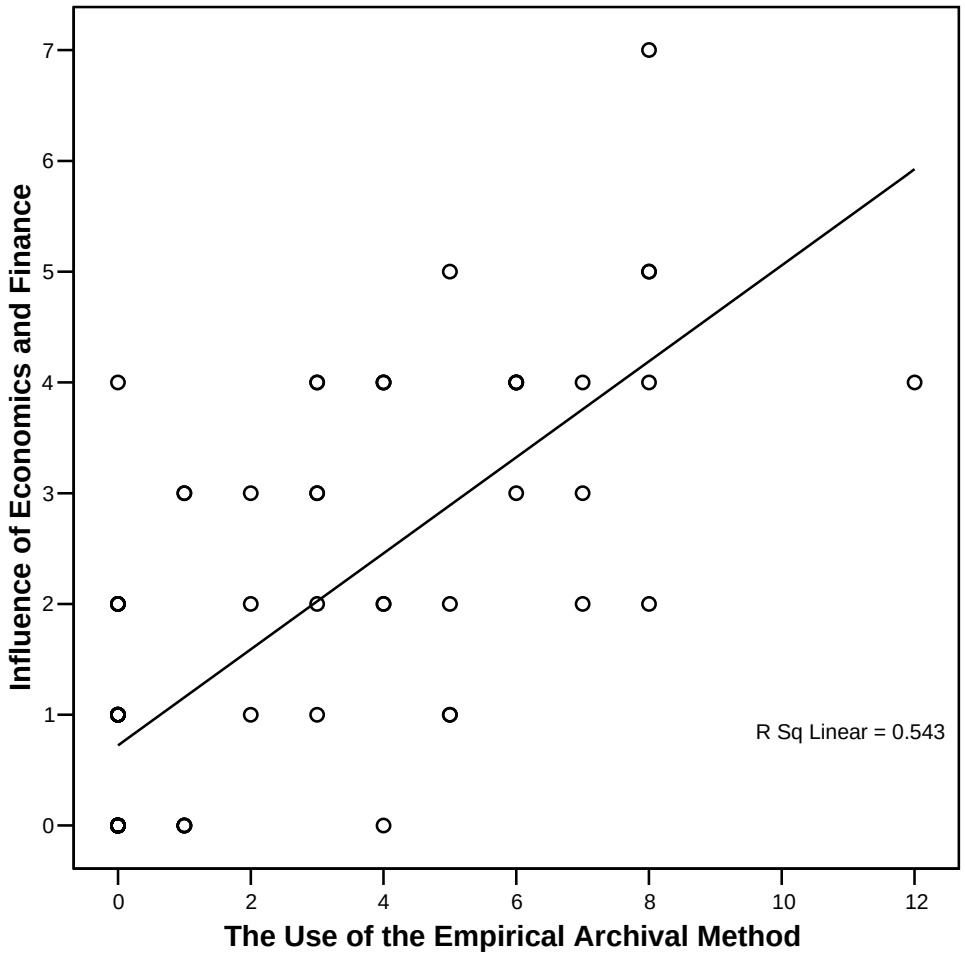


Diagram 12: The influence of economics and finance variable plotted against the accounting theory variable

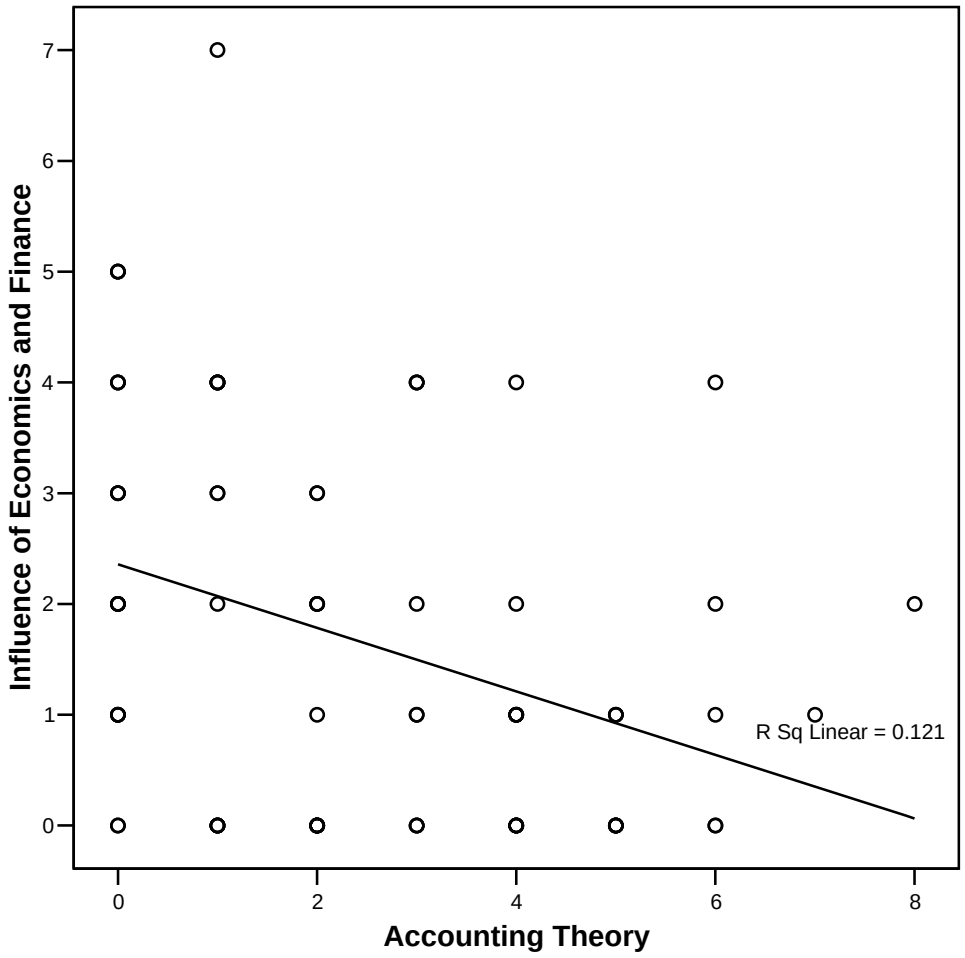


Diagram 13: The influence of economics and finance variable plotted on top of the accounting theory variable (both variables are plotted against time)

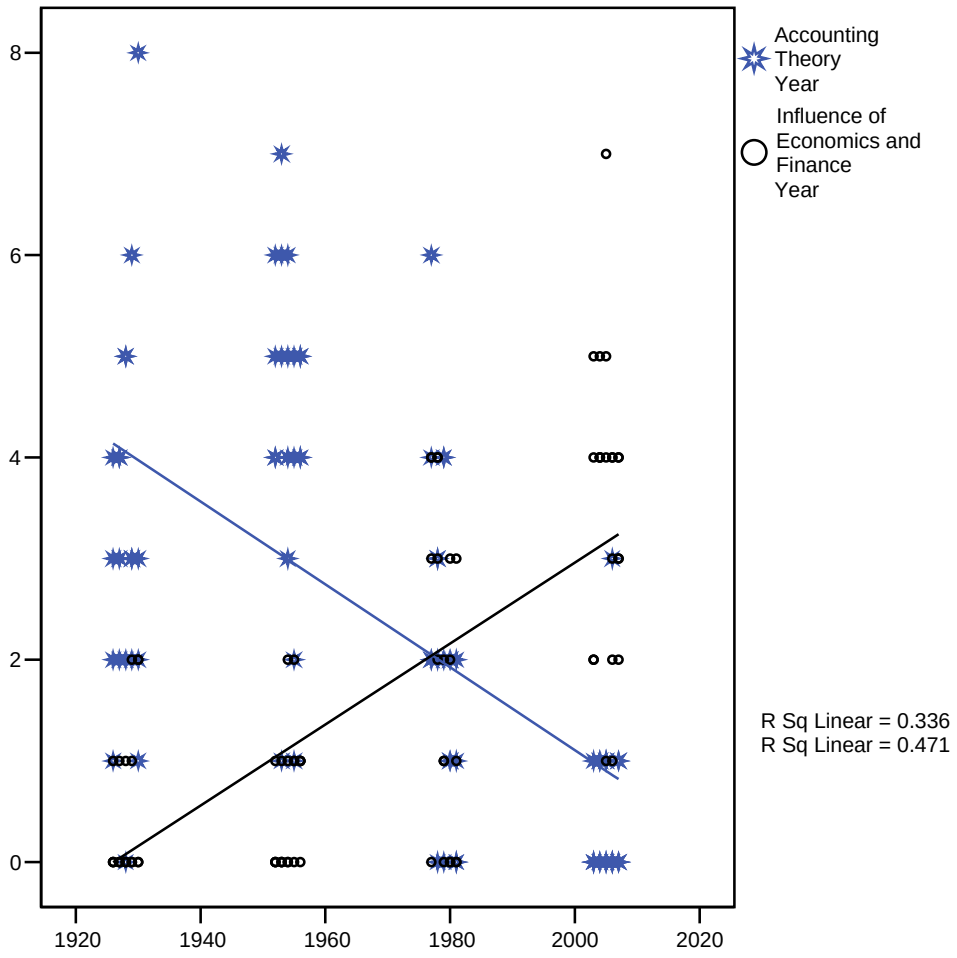


Diagram 14: The influence of economics and finance variable plotted against time

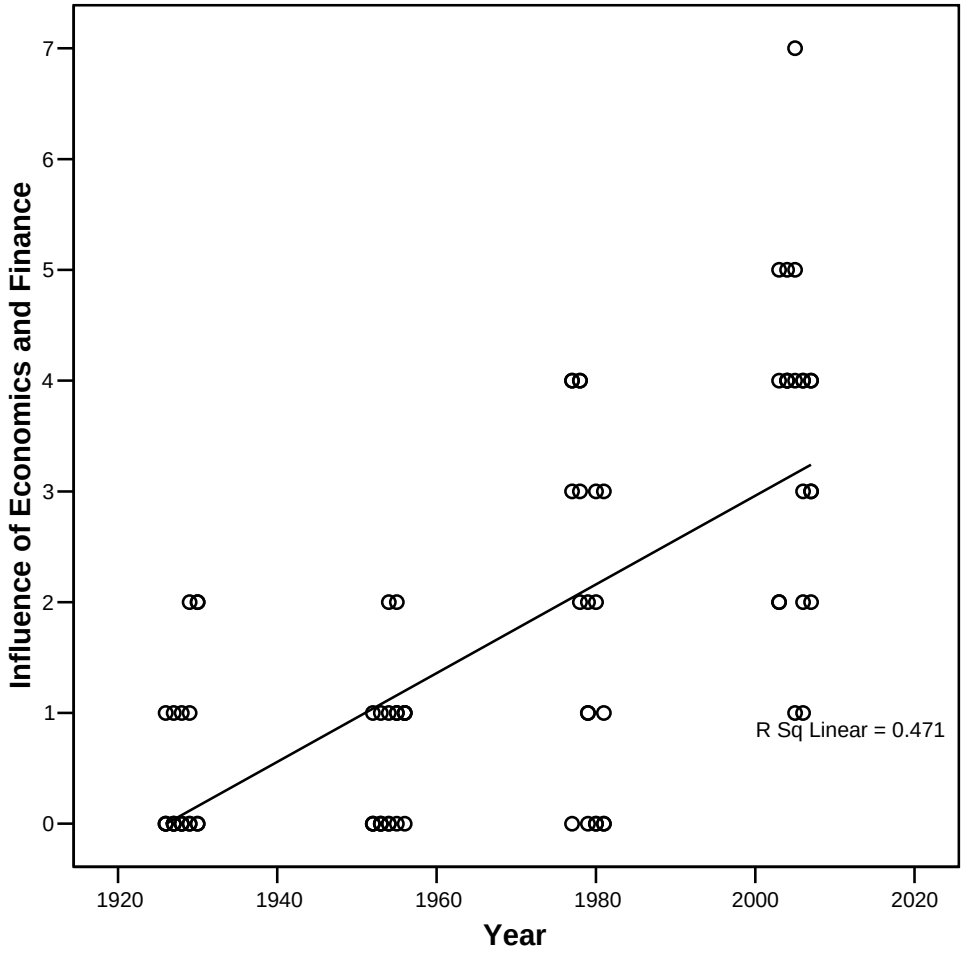


Diagram 15: The influence of economics and finance variable against the financial accounting variable

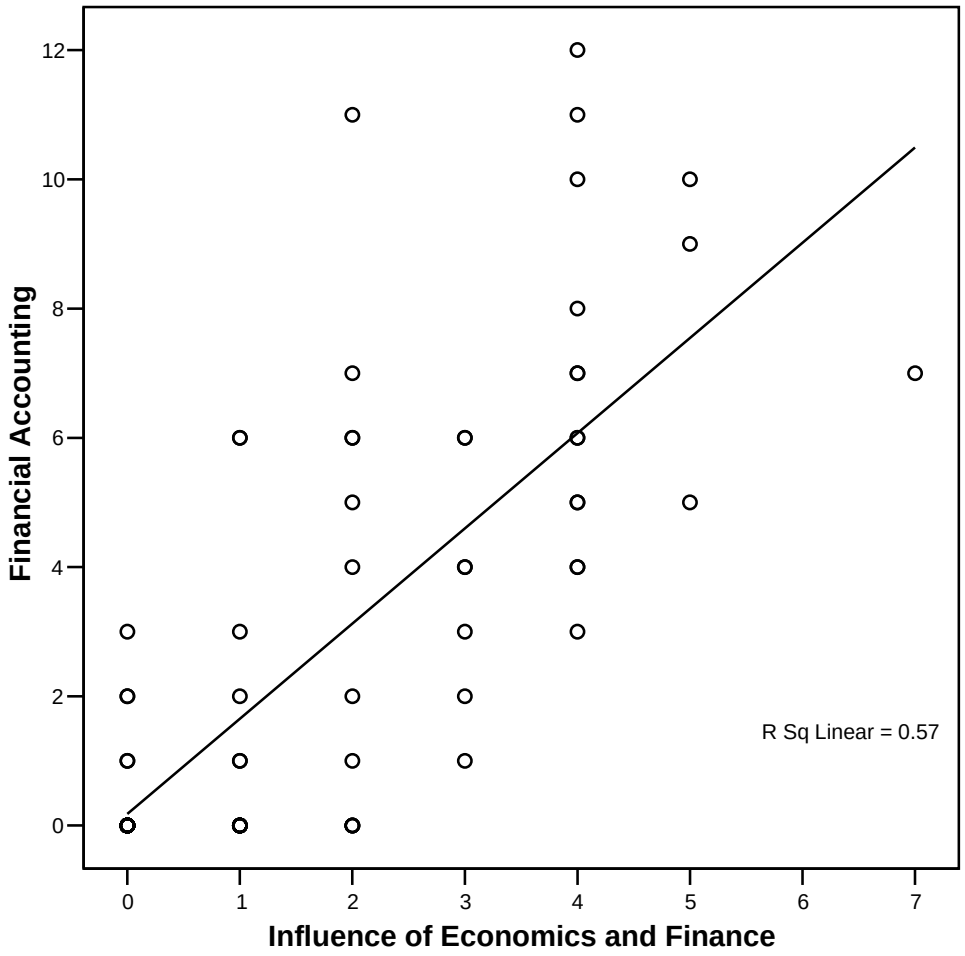


Diagram 16: The financial accounting variable plotted against the accounting theory variable

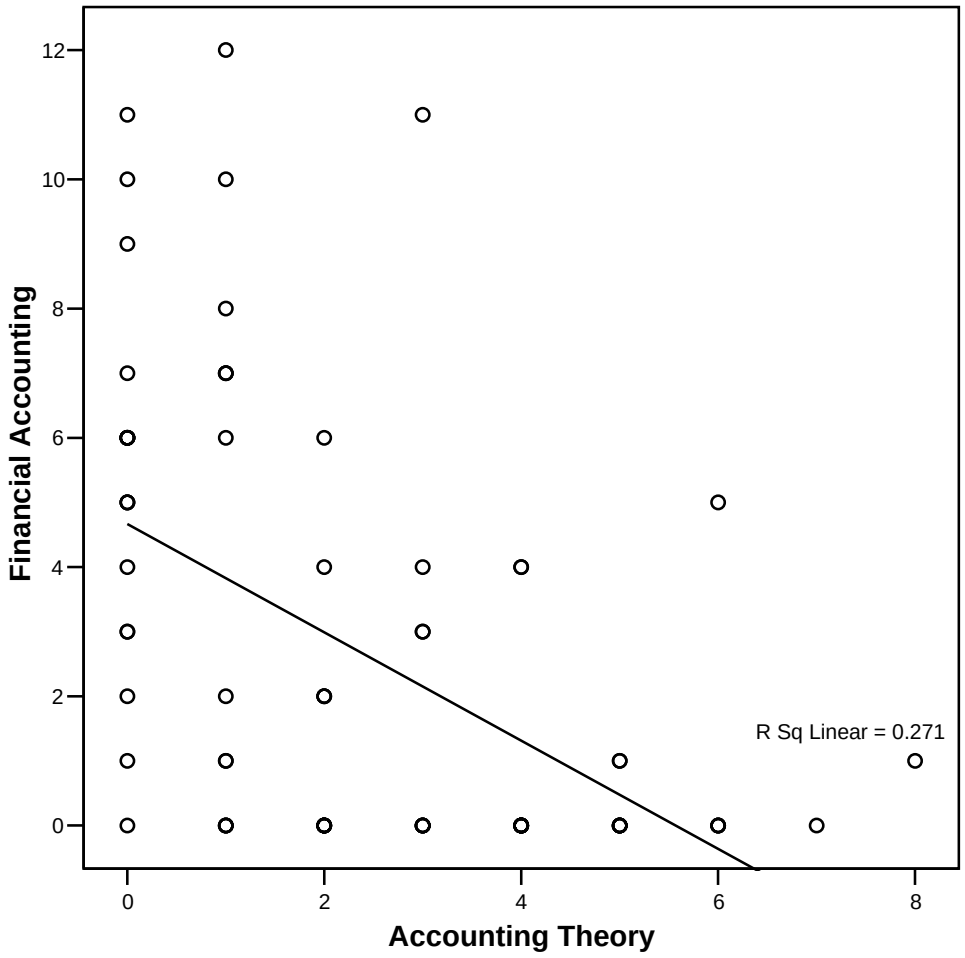


Diagram 17: The financial accounting variable plotted on top of the accounting theory variable (both variables are plotted against time)

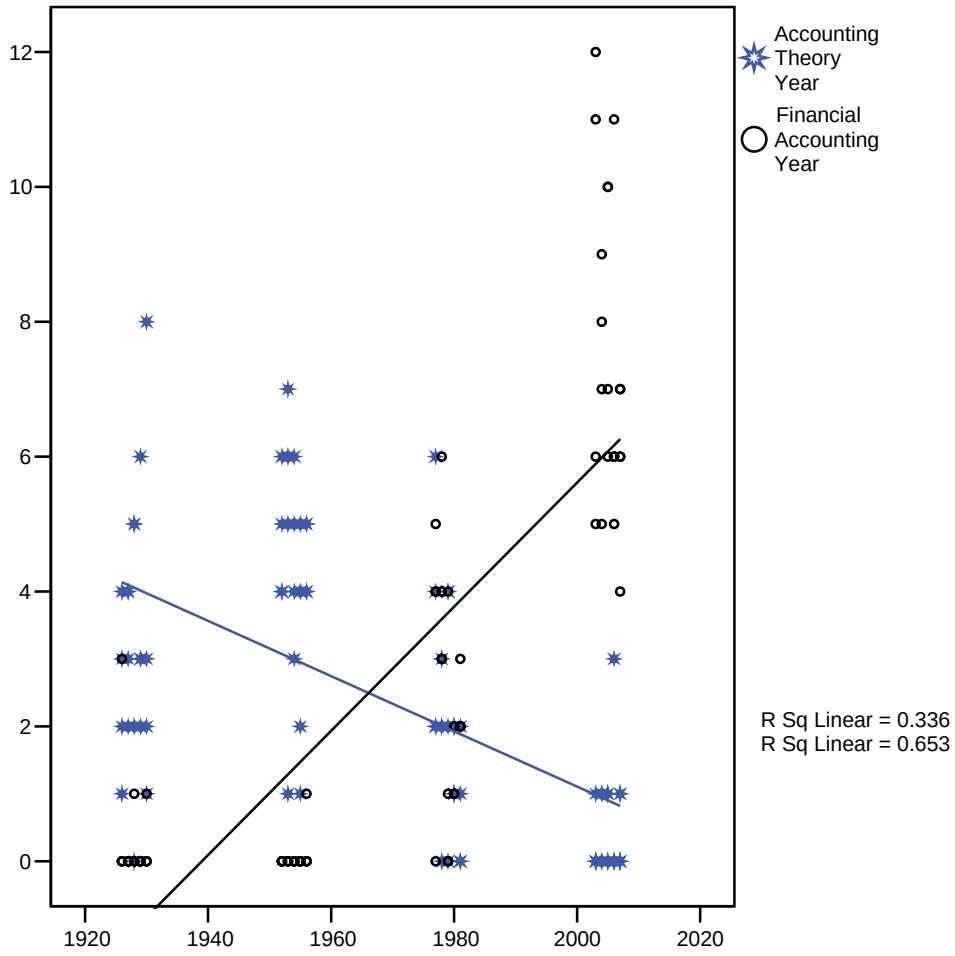


Diagram 18: The financial accounting variable plotted agianst time

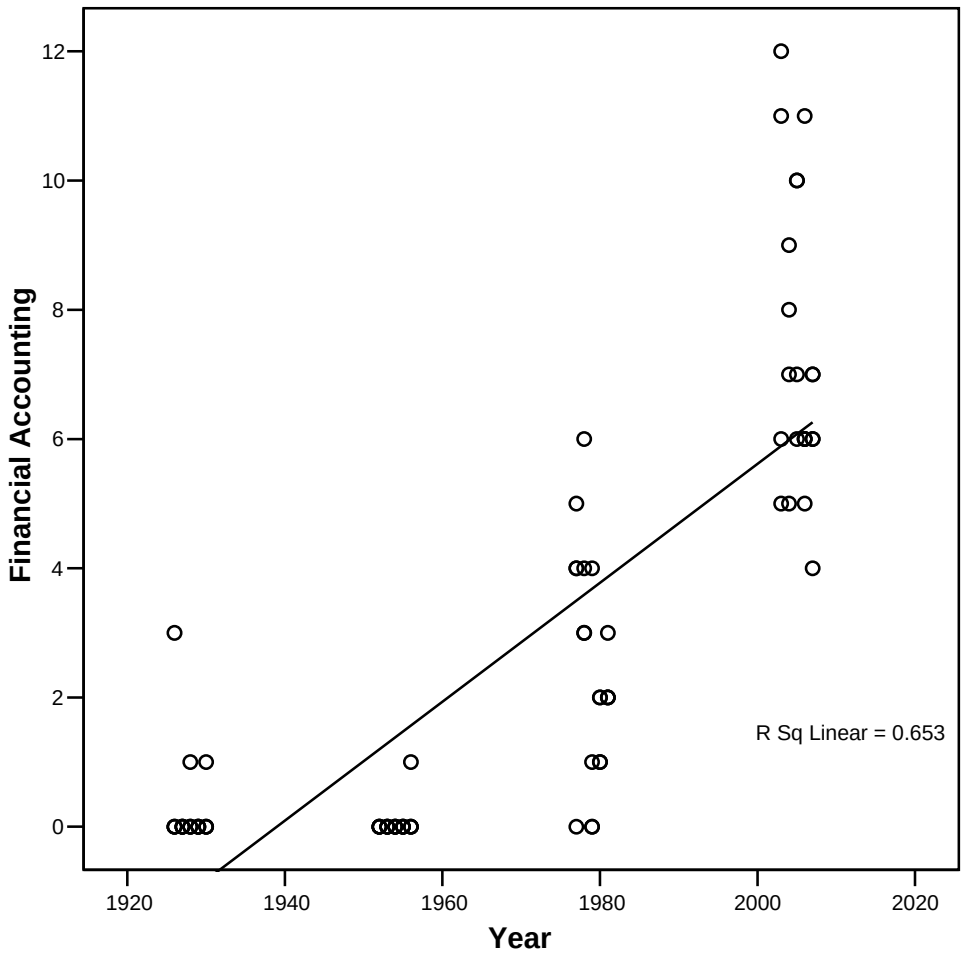
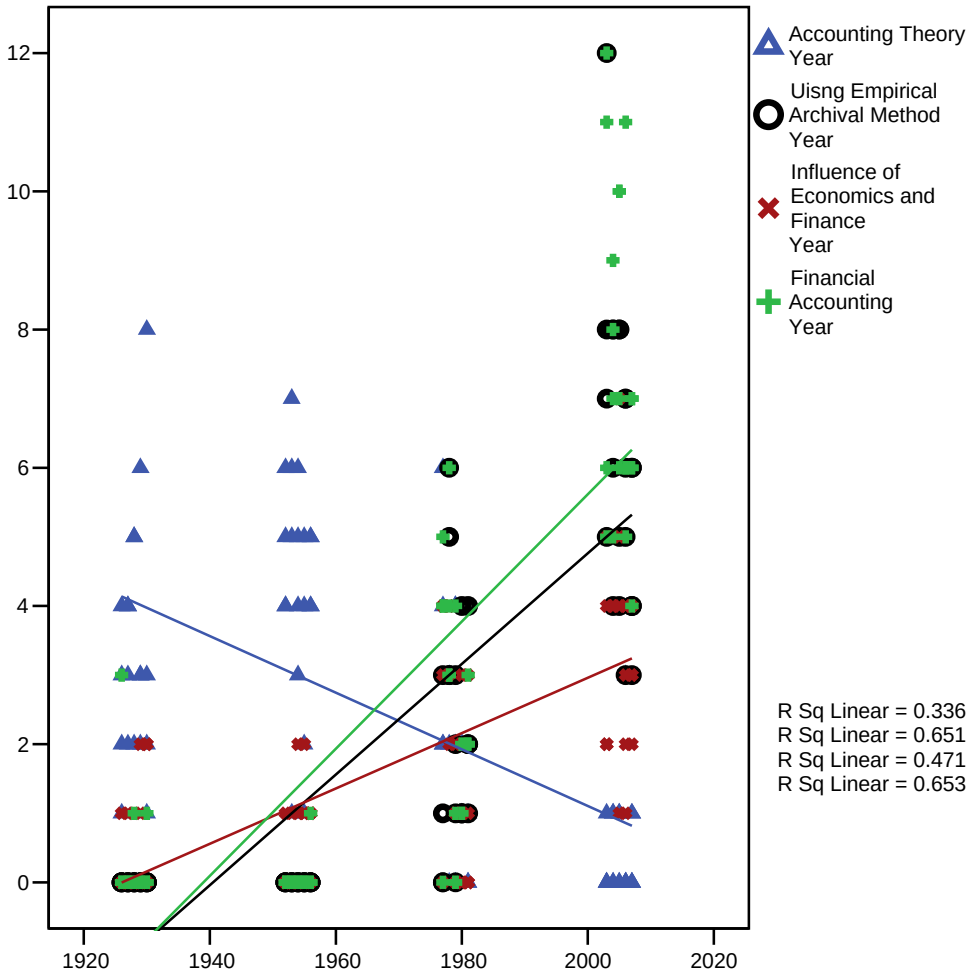


Diagram 19: The use of the empirical archival method variable, the influence of economics and finance variable, and the financial accounting variable plotted on top of the accounting theory variable (all 4 variables are plotted against time)



Appendices

Appendix 1

Guidelines for Coding the Articles

1. Accounting Theory Variable: Generally In Three Dimensions

1. 1. The first one is to refer to an element or more of the structure of accounting.

1. A statement of the objectives of financial statements.
2. A statement of the postulates and the theoretical concepts of accounting concerned with the environment[al] assumptions and the nature of the accounting unit.
3. A statement of the basic accounting principles based on both the postulates and the theoretical concepts.
4. A body of accounting techniques derived from the accounting principles.

Table 1 of this study listed in the measurement section was considered.

Articles published in *TAR* that directly discuss any of the elements of the "structure of accounting theory" suggested by Belkaoui will be considered as articles on accounting theory. A value of 1 will be assigned to these articles under the variable labeled "**Acc_Th**"; otherwise, 0 will be assigned under such a variable.

2. The second one is to refer to a statement listed in Table (2) of this study listed in the measurement part (chapter four) concerning with accounting theory and to meet one of the following criteria:

In order for an article to refer to one or more of these statements to be considered as an article concerned with accounting theory a value of 1 will be assigned to it under the variable labeled "**Acc_Th**,"

I rely on three different factors and criteria in order to decide whether an article is about accounting theory or not. One of the factors is whether the article refers to one or more of the well known accounting theorists listed in Table 3. Second, if there is no

reference to an accounting theorist the title of the article will be considered. Third, if the title was vague making it difficult to decide the contents of the article will be examined and a decision will be made based on the content. If the article is a discussion about accounting theory or one or more of its elements the value of 1 will be assigned under the variable "**Acc_Th**." Reading the article would be an optimal factor that provides more assurance whether the article is about accounting theory or not.

1.3. Reference to Accounting Theorists:

Articles published in *TAR* which refer to any of accounting theorists listed in Table 3 in the measurement section of this study will be treated as articles concerning with accounting theory. A value of 1 will be assigned to these articles. A value of 0 will be assigned if such articles do not make reference to accounting theorists. Again, this variable is labeled in this study as "**Acc_Th."**

2. *The Financial Accounting Variable*

This study is concerned with the dimension(s) that would not have emerged if developments in the economics and finance disciplines had not taken place along with data and software availability. The operational definition of the financial accounting variable includes capital market studies. It does not matter under what classification of Kinney's classifications an article can be fit as long the article investigates the market reaction to accounting information. Also, financial statements as a topic discussed in academic accounting research is another dimension for the financial accounting variable. Articles about auditing financial statements will be considered while measuring this variable.

3. *The Influence of Economics or Finance Variable:*

In order to inspect the articles for economic and finance influences, citations will be examined. If the article has a reference Table the search for citation will be limited to it. In the case of the unavailability of a reference Table a bibliography wherever listed in the article will be examined. The latter is important for the article appearing in the early years when no reference Table was included.

The ratio of citations to economics and finance journals and books to the total citations listed in an article will be used to measure the influence of these two disciplines. The cut off ratio is 25%. If ratio of citations to economics and finance is 25% or more, the article will be deemed to be influenced by these two disciplines and thus a value of 1 will be assigned to the article. The value of 0 will be assigned to articles that have a ratio of citations less than 25% indicating they are not influenced by the two disciplines.

4. The Use of Empirical Archival Method Variable:

This study is concerned with empirical *archival* method. Fulbier and Sellhorn's (2006) definition of the term "empirical-archival" will be considered in this study in deciding whether a research method is empirical archival or not. Fulbier and Sellhorn (2006) decided that the term "empirical-archival" meant "data base or archive." The type of topics in which this method is utilized is taken from Sundem (1987). Sundem's taxonomy is important to distinguish empirical from non empirical studies. Some papers may contain data but Sundem's classification is helpful in deciding whether such papers are empirical or not.

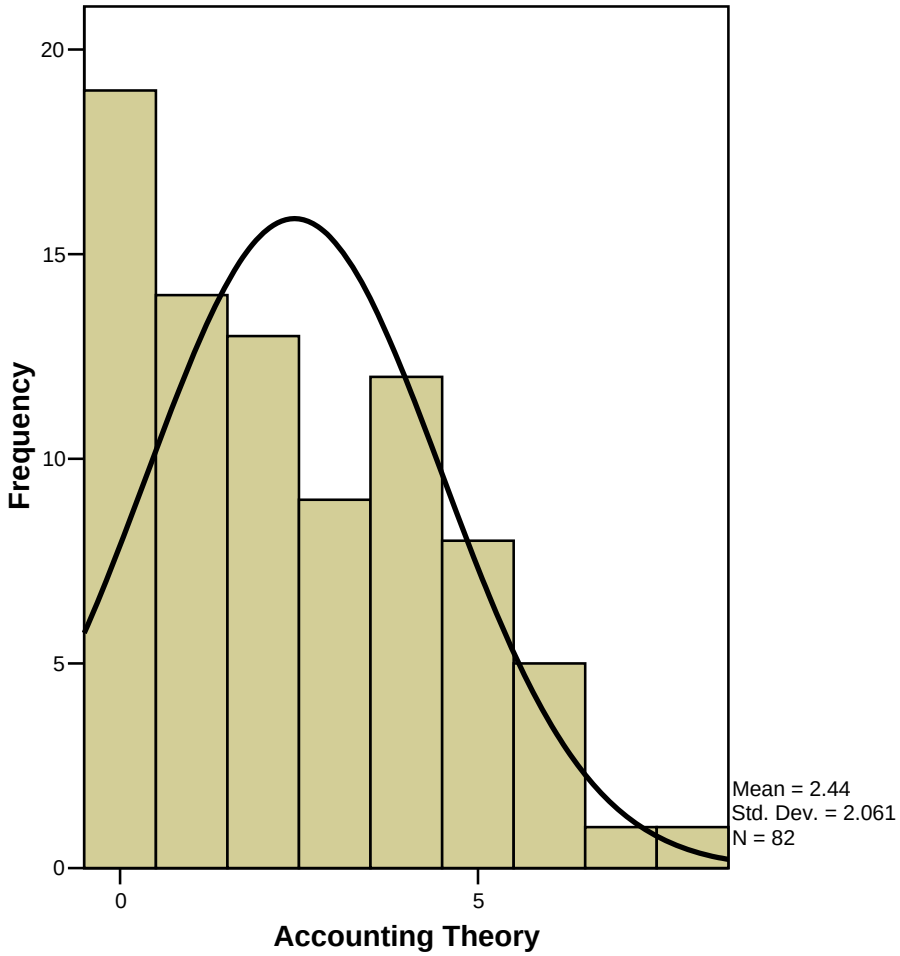
The articles in which empirical archival method was employed will be given the value of 1, whereas articles in which other methods were utilized a value of 0 will be assigned. This variable is labeled in this study "**Using_Emp_ Arc."**

What if two sources are used?

If one of them is archival, I assign one to the article whose author(s) utilizes archival. For example, Phillips, John D. (2003) uses archival (Compustae and survey).

Appendix 2

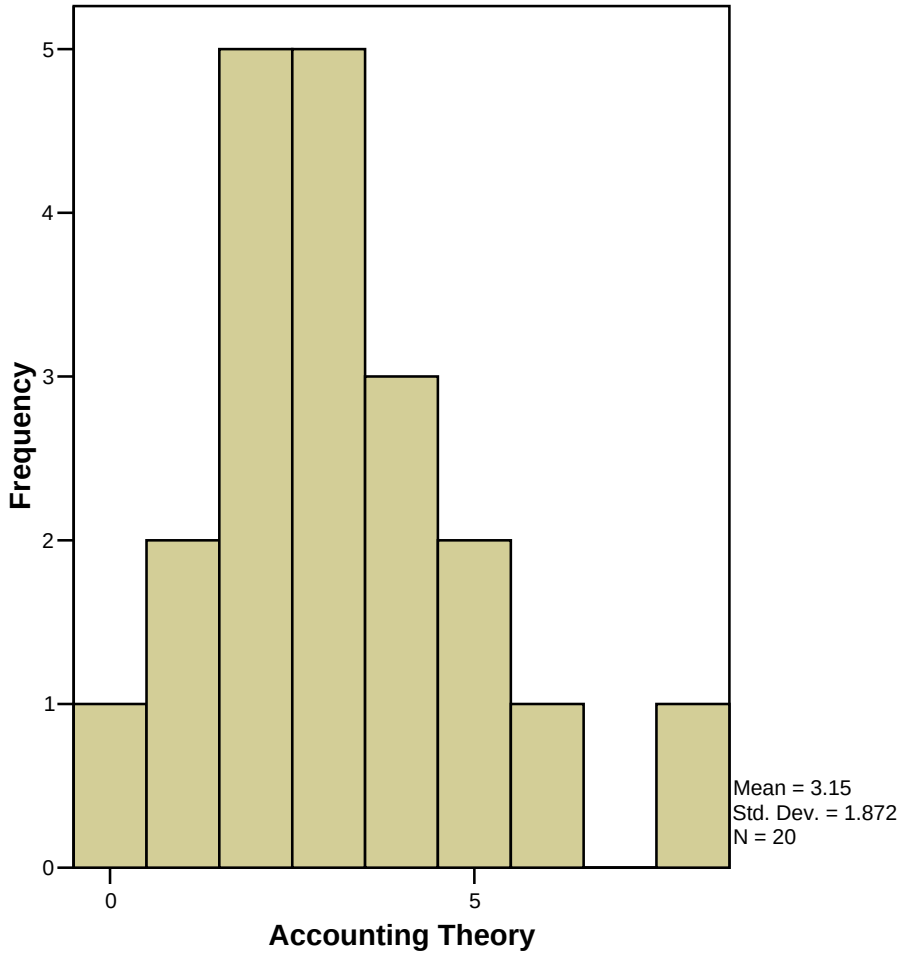
Histogram of the frequency of the accounting theory “Acc_Th” variable



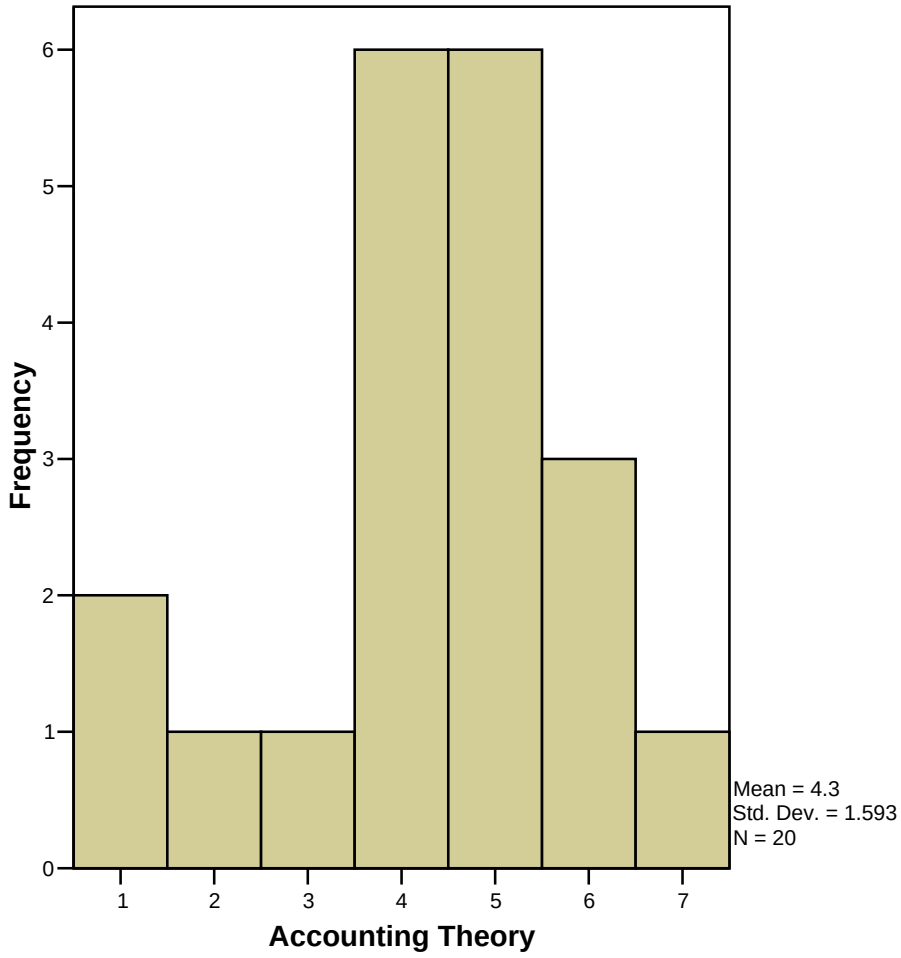
Appendix 3

Histograms for the accounting theory variable in the first and second periods (Time_1 and Time_2)

A Histogram showing the distribution of the accounting theory in the first period (Time_1)



A Histogram showing the distribution of the accounting variable in the second period (Time_2)



Appendix 4

A Table of Correlation Matrix Summarizes the Associations among the Variables

The direction and strength of the relation each pair of variables measured using Pearson's correlation. Spearman correlation was reported as a supplement. (N=82)

Pearson / Spearman	Influence_Econ_Fin	Using_Emp_Arc	Fin_Acc	Acc_Th
	Pearson Corr.	Pearson Corr.	Pearson Corr.	Pearson Corr.
	Sig. (2-tailed)	Sig. (2-tailed)	Sig. (2-tailed)	Sig. (2-tailed)
Influence_Econ_Fin		.737(**)	.755(**)	-.347(**)
	_____	.000	.000	.001
Using_Emp_Arc				
Spearman's rho	.714(**)		.914(**)	-.582(**)
Sig. (2-tailed)	.000	_____	.000	.000
Fin_Acc				
Spearman's rho	.762(**)	.922(**)		-.520(**)
Sig. (2-tailed)	0	0	_____	0
Acc_Th				
Spearman's rho	-.360(**)	-.683(**)	-.590(**)	_____
Sig. (2-tailed)	.001	0	0	

** Correlation is significant at the 0.01 level (2-tailed).

Note:

The relation between financial accounting and the use of the empirical archival method is reported for potential interested reader even though it was not discussed in the text.

Appendix 5

Frequency for the Accounting Theory Variable in the Third Period

Number of main articles about accounting theory	Frequency	Percent	Valid Percent	Cumulative Percent
0	4	20	20	20
1	3	15	15	35
2	7	35	35	70
3	2	10	10	80
4	3	15	15	95
6	1	5	5	100
Total	20	100	100	

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