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Transfer of performance measurement system innovations across economic sectors

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TRANSFER OF PERFORMANCE MEASUREMENT SYSTEM INNOVATIONS ACROSS ECONOMIC SECTORS

K. J. Euske and Mary A. Malina

ABSTRACT

Purpose – This chapter studies the transfer of performance measurement system (PMS) innovations across the three sectors of the economy: private, public, and nonprofit.

Methodology/approach – The spread of organizational innovations and learning from best practices is slow and complicated (Lillrank, 1995). Based on differences in languages used by writers and readers and differences in employee characteristics among the three sectors as well as cognitive biases, we expect the transfer of PMS innovations to be easier within sectors than across sectors. We use the frequency and timing of journal articles written about activity-based costing and the balanced scorecard as a proxy for the actual transfer of the innovations within and across economic sectors.

Findings – Our empirical results indicate that the transfer of the ideas across economic sectors does not happen as quickly as the transfer of the ideas within sectors. We provide evidence that it is the practitioners,

not the academics, who lead the transfer of ideas in the open literature from one sector to another. Viewing a sector as unique limits the applicability of available solutions and applications, thereby inhibits useful change.

Originality/value of paper – *By focusing on differences, the exchange of ideas and techniques among the three economic sectors can be hindered.*

Keywords: Activity-based costing; balanced scorecard; performance measurement system; transfer of ideas; economic sectors

INTRODUCTION

Much has been written comparing and contrasting organizations in the three sectors of the economy: private, public and nonprofit. Multiple authors discuss the differences among the three sectors (e.g., Nutt & Backoff, 1992; Perry & Rainey, 1988; Roberts, 1993) including profit focus versus a political focus, the social good versus the bottom line, rational versus political decision making, measurability of objectives, and the degree of control of the executive. Focusing on the purpose, funding, and customers of the three sectors, private sector organizations are established with the goal of profit maximization through sales to customers. Funding comes from operations and/or financial capital markets. Public sector organizations are established by law and are publicly funded to implement the policies adopted by elected officials. The goal of a public sector organization is to spread the given resources evenly over affected populations (Lipsky & Smith, 1989). Nonprofit sector organizations are typically established by individuals or small groups interested in carrying out a specific mission to serve a narrowly specified group of clients. Funding to meet this goal comes from donations from interested individuals and granting organizations. No matter the organizational purpose or market sector, managers need accounting information to assess the degree to which they are meeting stakeholder needs and satisfying owner or funder requirements.

This chapter focuses on management control systems, specifically innovations within a performance measurement system (PMS) within organizations in the three sectors. Management control has been defined as the systems and processes management uses to ensure workers focus their efforts on achieving the organization's goals (Anthony & Govindarajan,

2001). The predominant view is that management control systems should be designed to promote efficiency. However, control systems differ because success or what is valued in organizations in the three sectors is assessed from fundamentally different perspectives or values (Meyer, Scott, & Deal, 1983). A recent trend highlighted in the popular press and addressed in journal articles is the adoption of PMS developed in private sector organizations by public and nonprofit sector organizations. During the 1990s, the US government enacted several initiatives, including the Government Performance and Results Act of 1993 (GPRA), aimed at promoting efficiency and effectiveness in government operations. The stated goals of these initiatives are to increase Congressional oversight, to foster greater accountability for achieving results, and to enhance performance-based decision making. The GPRA and similar initiatives in other countries can be traced to private sector initiatives that mandated reporting of result-oriented, strategic performance indicators to improve efficiency by increasing accountability (Atkinson & McCrindell, 1997; Jones & McCaffery, 1997; Osborne & Gaebler, 1993). However, as Rutgers and van der Meer (2010) point out, the conceptualization of efficiency may differ between the private and public sectors. Simple adoption of a PMS without a critical look at the specific performance measures incorporated into the PMS could lead to questionable results.

Nonprofit sector organizations are also focusing attention on PMS. They are facing increasing competition from a growing number of agencies all competing for limited resources from donors, foundations, and governments. In this tight economy wrought with budget cuts, nonprofit sector organizations have to run smarter and more effectively in order to support the increased need at a time when donations and contributions are decreasing and operation costs are climbing. Regardless of economic sector, managers need accounting information upon which to base decisions.

LITERATURE REVIEW AND RESEARCH QUESTION

Our study investigates the transfer of PMS innovations across private, public, and nonprofit sector organizations. This section highlights the theoretical underpinnings that promote the diffusion of PMS across economic sectors as well as those that impede or slow the diffusion process. While private sector organizations largely use PMS to promote efficiency, public and nonprofit sector organizations may also use PMS to project an

image of legitimacy to the organizations' publics (Meyer & Rowan, 1977). A common means of gaining legitimacy is alignment with some rationalized institutional myth (Meyer & Rowan, 1977), which is occasionally manifested by the adoption of attributes and practices displayed by other significant organizations through some isomorphic process (DiMaggio & Powell, 1983).

Another impetus for adoption of PMS innovations by government and nonprofit sector organizations is that some funders are more and more interested in outcome-based measures in order to address accountability concerns and/or as a prerequisite for granting funds (Hatry & Lampkin, 2001). As with GPRA mentioned previously, public and nonprofit sector organizations may use PMS because external bodies impose organizational practices as a condition for remaining eligible for funding. As a result, diffusion across sectors may occur, but the changes tend to be superficial and loosely tied to employees' actions (Scott, 1987).

Even though these theories promote the transfer of PMS innovations across economic sectors, the majority of theory suggests that the spread of organizational innovations and learning from best practices is slow and complicated (Lillrank, 1995). Although superior management practices are reasonably well known, diffusion proceeds slowly and fit fully, and backsliding is common (Pfeffer & Sutton, 1999). Lillrank (1995) points out that the transfer of management concepts are affected by culture, society, and history. Lillrank uses a model (Fig. 1) to posit that management concepts need to be abstracted before they can be transferred and applied in a new environment. The new ideas and practices are abstracted into concepts and models. Then, through iterations of interpretations, the

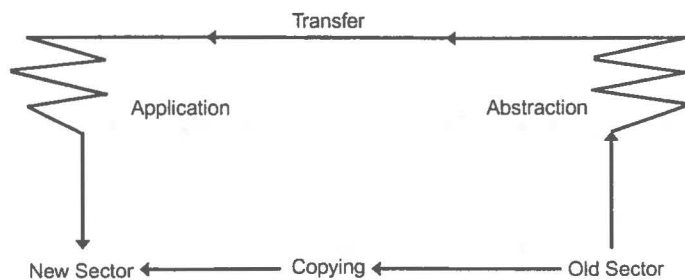


Fig. 1. Transfer of Complex Systems Requires Abstraction and Application.
Source: Adapted from Lillrank (1995). © Sage, reused with permission.

abstraction is applied in accord with local conditions. The process becomes more difficult as the differences in the characteristics of the organizations increase. The model also admits to an easy transfer through the direct copying of ideas, which is compatible with DiMaggio and Powell's (1983) concept of the use of systems for legitimation mentioned above. Although Lillrank was specifically focused on the transfer of Japanese management concepts to Western cultures, the argument and his basic model have applicability to the transfer of PMS innovations among economic sectors.

The capacity of an organization to apply the experiences of another is increased with a shared language that organizational groups by economic sector may create. The shared language is an element of being a discourse community, that is, a group of people who share common assumptions about the attributes of the discourse conventions and standards of evidence that must be employed for a written text to claim authority as knowledge (Palmeri, 2004). Using the language of the discourse community assures readers, particularly more powerful ones, that the individuals involved in the discourse view knowledge from the same philosophical and ideological perspective which facilitates the exchange of ideas (Suchan & Dulek, 1990). Recent research on discourse communities explores the way values, assumptions, and methods shared by readers and writers in a given community affect the type and nature of communication produced and accepted by both the readers and writers in that community (e.g., Melville, 2008; Mostafa & Street, 2009; Venclova, 2007). If the organizations in the three sectors comprise separate discourse communities, the transfer of PMS innovations will be challenging. Researchers such as Meyer et al. (1983), Perry and Rainey (1988), Nutt and Backoff (1992), and Roberts (1993) argue that the three sectors have fundamentally different assumptions regarding the philosophical and ideological perspectives for defining how to frame reality and what counts to verify knowledge.

In this vein, the social psychology research shows that we prefer to associate with like-minded people (Gilovich, Keltner, & Nisbett, 2006). Rawls, Ullrich, and Nelson (1975) demonstrate that individuals preferring one sector over another are significantly different along certain personality, value, and behavioral dimensions. The individuals generally have strong and stable sector preferences, discriminate among the sectors, and find employment in the sector that matches their desires (Tschirhart, Reed, Freeman, & Anker, 2008). In addition to this self-selection bias, there are barriers to movement across sector boundaries (Su & Bozeman, 2009). Compared to employer and professional career boundaries, which are increasingly fluid (Arthur & Rousseau, 1996; Hall, 2002), sector boundaries appear to be strong. The

biases and barriers help to promote relatively non-diversified groups within each sector. These non-diversified groups facilitate the transfer of experience within the sector because they are engaged in similar activities, and the knowledge of one organization is typically most valuable to other organizations that are similar (Ingram & Simons, 2002). The boundary conditions along with the similarity of the individuals within a sector as compared to the relative dissimilarity of individuals in the other sectors may contribute to the lack of transfer of PMS innovations across sectors.

In addition to providing evidence of a self-selection bias, research from cognitive psychology also helps inform the challenge of transferring PMS innovations across sectors through the identification of other subconscious, systematic errors (i.e., biases). Scholars in cognitive psychology identify a number of biases that individuals are subject to in making judgments under uncertainty (Bazerman, 1994; Hogarth, 1980; Kahneman & Tversky, 1973; Tversky & Kahneman, 1974). Two specific cognitive biases are particularly relevant to the transfer of PMS across sectors: selective perception and inside view. Hogarth (1987) describes selective perception as (i) people structure problems on the basis of their own experience, (ii) anticipations of what one expects to see bias what one does see, (iii) people seek information consistent with their own views/hypotheses, and (iv) people downplay or disregard conflicting evidence. Kahneman and Lovallo (1993) use the term "inside view" to describe another bias of the tendency of decision makers to treat their problems as unique.

The adoption of PMS innovations for legitimacy or by mandate from outside bodies supports the transfer across sectors. Conversely, differences in language used by writers and readers, sector self-selection bias of employees, and cognitive biases suggest a slow or difficult transfer across economic sectors. If these factors do in fact create frictions, we would expect the transfer of PMS innovations to be easier within sectors than across sectors. As such, our research question is:

RQ Do PMS innovations transfer within economic sectors before transferring across economic sectors?

In investigating our research question, we use the frequency and timing of journal articles as a proxy for the actual transfer of PMS innovations within and across the sectors. One purpose of academic and practitioner literature is to share ideas, experiences, and explanations of advances in the field. Therefore, one would expect discussion in the literature as PMS ideas are developed and transferred. If none of the factors discussed above impact the transfer of PMS innovations across sectors, then journal articles written on

the topic should appear relatively simultaneously in the literatures of the three sectors. If there is a lag in timing, some combination of the factors could be at play.

METHODS AND RESULTS

The PMS innovations we selected to investigate are activity-based costing (ABC) and the balanced scorecard (BSC). ABC was introduced in 1988 in an article written by Cooper and Kaplan in the primarily practitioner-oriented *Harvard Business Review*. Kaplan and Norton introduced the BSC in 1992 and subsequently revised and extended their framework in subsequent articles and books. Their initial article was published in *Harvard Business Review* and was directed toward the private sector (e.g., the financial perspective is described as "how do we look to shareholders"). Since ABC and the BSC had identifiable seed articles and are popular topics to both academics and practitioners throughout the world, we chose to focus our study on these particular PMS innovations. Importantly, we are interested in the specific innovations known as ABC and the BSC not the first presentation of the underlying ideas in the literature. Similar ideas to ABC and the BSC can be found in the literature that pre-date the introduction of the two innovations. For instance, one can trace the basic concepts found in ABC to Taylor (1911) and Staubus (1971). The basic ideas underlying the BSC can also be found in Lynch and Cross (1991) and Fitzgerald, Johnston, Brignall, Silvestro, and Voss (1991).

The first step in determining the population of relevant work was to search for ABC and BSC articles appearing in academic journals, periodicals, and trade publications. A keyword search was performed for articles containing "activity-based costing" or "activity based costing" in the author-supplied keywords or article abstracts written between 1988 and 2011. The same process was used for BSC articles searching for "balanced scorecard" or "balanced score card" between 1992 and 2011.¹ The search resulted in 1,187 articles written on ABC and 1,070 on the BSC. Next, we coded each article as to which economic sector (i.e., private, public, nonprofit) was the primary topic of the article. For articles published in journals serving multiple sectors, the abstract and/or article was examined in order to determine the sector addressed. Additionally, we coded each article as being either academic-oriented or practitioner-oriented, depending upon the intended audience of the article.²

Tables 1 and 2 present the number of articles by sector, by audience, and by sector and audience for ABC and the BSC, respectively. Articles on ABC

Table 1. Number of ABC Articles per Year, by Sector, by Audience, and by Sector and Audience.

	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	Total
Private	2	5	24	50	85	127	53	36	55	68	52	63	41	42	46	35	45	39	25	31	40	27	29	24	1044
Public	0	0	0	1	4	11	6	5	7	15	10	9	14	8	5	6	4	9	7	7	3	5	4	1	141
Nonprofit	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	2
By sector total	2	5	24	51	90	138	59	41	62	83	62	72	55	50	51	42	49	48	32	38	43	32	33	25	1187
Practitioner	2	5	24	49	77	128	50	36	56	69	54	57	45	37	37	30	39	36	26	28	29	25	28	17	984
Academic	0	0	0	2	13	10	9	5	6	14	8	15	10	13	14	12	10	12	6	10	14	7	5	8	203
By audience total	2	5	24	51	90	138	59	41	62	83	62	72	55	50	51	42	49	48	32	38	43	32	33	25	1187
Private, practitioner	2	5	24	48	72	117	46	32	49	54	44	48	31	30	32	26	35	28	22	23	27	22	27	16	860
Private, academic	0	0	0	2	13	10	7	4	6	14	8	15	10	12	14	9	10	11	3	8	13	5	2	8	184
Public, practitioner	0	0	0	1	4	11	4	4	7	15	10	9	14	7	5	4	4	8	4	5	2	3	1	1	123
Public, academic	0	0	0	0	0	0	2	1	0	0	0	0	0	1	0	2	0	1	3	2	1	2	3	0	18
Nonprofit, practitioner	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Nonprofit, academic	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1
By sector and audience total	2	5	24	51	90	138	59	41	62	83	62	72	55	50	51	42	49	48	32	38	43	32	33	25	1187

Table 2. Number of BSC Articles per Year, by Sector, by Audience, and by Sector and Audience.

	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	Total
Private	5	3	12	3	14	20	38	41	46	54	43	67	101	95	66	60	52	56	51	43	870
Public	0	0	1	0	1	2	6	6	8	13	13	16	20	14	9	17	21	17	9	15	188
Nonprofit	0	0	0	0	0	0	0	1	0	2	1	0	1	2	0	0	2	2	1	0	12
By sector total	5	3	13	3	15	22	44	48	54	69	57	83	122	111	75	77	75	75	61	58	1070
Practitioner	5	3	12	3	14	20	41	39	48	56	46	68	99	91	63	68	61	58	42	43	880
Academic	0	0	1	0	1	2	3	9	6	13	11	15	23	20	12	9	14	17	19	15	190
By audience total	5	3	13	3	15	22	44	48	54	69	57	83	122	111	75	77	75	75	61	58	1070
Private, practitioner	5	3	11	3	14	18	36	35	42	43	35	52	81	79	55	53	43	44	35	32	719
Private, academic	0	0	1	0	0	2	2	6	4	11	8	15	20	16	11	7	9	12	16	11	151
Public, practitioner	0	0	1	0	0	2	5	4	6	11	10	16	17	10	8	15	17	13	6	11	152
Public, academic	0	0	0	0	1	0	1	2	2	2	3	0	3	4	1	2	4	4	3	4	36
Nonprofit, practitioner	0	0	0	0	0	0	0	0	0	2	1	0	1	2	0	0	1	1	1	0	9
Nonprofit, academic	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	1	0	0	3
By sector and audience total	5	3	13	3	15	22	44	48	54	69	57	83	122	111	75	77	75	75	61	58	1070

peaked in 1993 with a total of 138 articles, 5 years after the initial ABC article was published. Nearly 88% of ABC articles were written about the private sector and 83% of articles were written by practitioners. Publications on the BSC peaked in 2004 with a total of 122 articles, 12 years after the initial BSC article was published. Approximately 81% of BSC articles were written about the private sector and 82% of the articles were written by practitioners.

Graphs of the percent of total articles per year by sector for ABC and the BSC are shown in Figs. 2 and 3, respectively. ABC articles on the private sector appeared first, with public sector and nonprofit sector articles appearing 3 and 4 years later, respectively.³ ABC articles on the private sector grew early, peaked in 1993, and gradually tapered off. ABC articles on the public sector lagged the private sector, peaked in 1997, and surpassed public sector after 9 years. ABC articles across all sectors began to taper off 10 years after the initial article was published.

BSC articles on the private sector appeared first, with public sector and nonprofit sector articles appearing 2 and 7 years later, respectively. Private and public sector articles follow a similar trend until 2005 when private sector articles began a general decline and public sector articles reflected

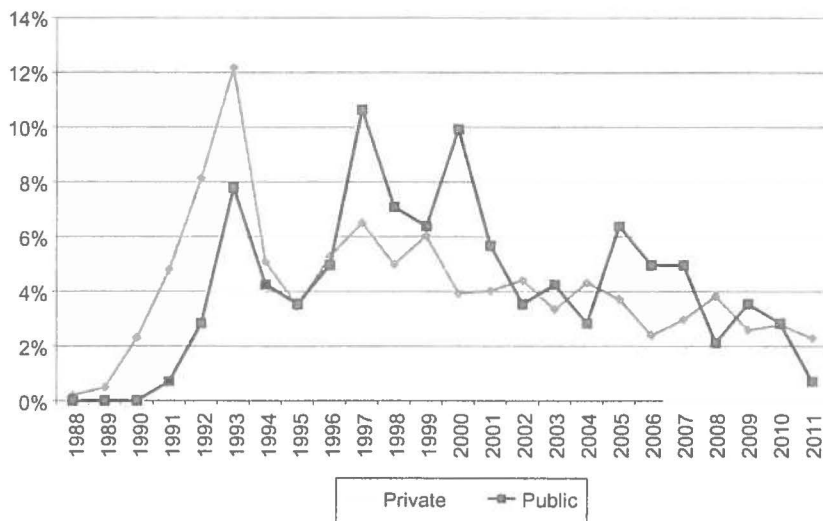


Fig. 2. ABC Articles by Sector Percent of Total Articles per Year.

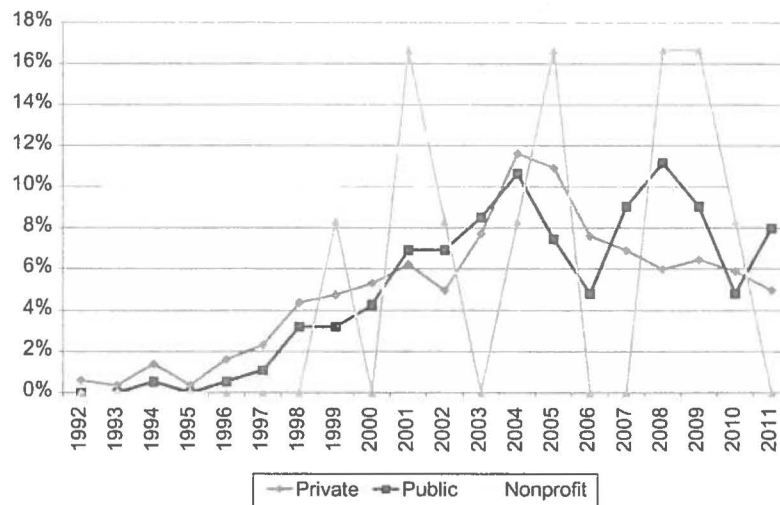


Fig. 3. BSC Articles by Sector Percent of Total Articles per Year.

renewed interest. Articles written about the BSC in the nonprofit sector were erratic characterized by a late start and peaks and valleys.

Graphs of the percent of total articles per year by audience across sectors are shown in Figs. 4 and 5. ABC articles written by practitioners appeared first, with academic articles appearing 3 years later. Practitioner interest grew quickly, peaked in 1993, then gradually faded. Academic ABC articles initially lagged, surpassing practitioner articles after 10 years, and generally remaining steady throughout the time period. Similar to ABC, practitioner articles on the BSC appeared first with academics following 2 years later. Practitioner and academic trends parallel each other until 2007 when practitioner interest falls off and academic interest resurges.

Graphs of the percent of total articles per year by sector and audience are shown in Figs. 6 and 7.⁴ For ABC, private sector articles precede public and nonprofit sector articles whether written by practitioners or academics. Practitioner articles preceded academic articles across all three sectors of the economy. For the BSC, private sector articles precede public sector articles whether written by practitioners or academics. Also, practitioner articles precede academic articles for both the private and public sectors. Articles written about the BSC in nonprofit sector organizations are the only exception to the trends found in this chapter. One article on

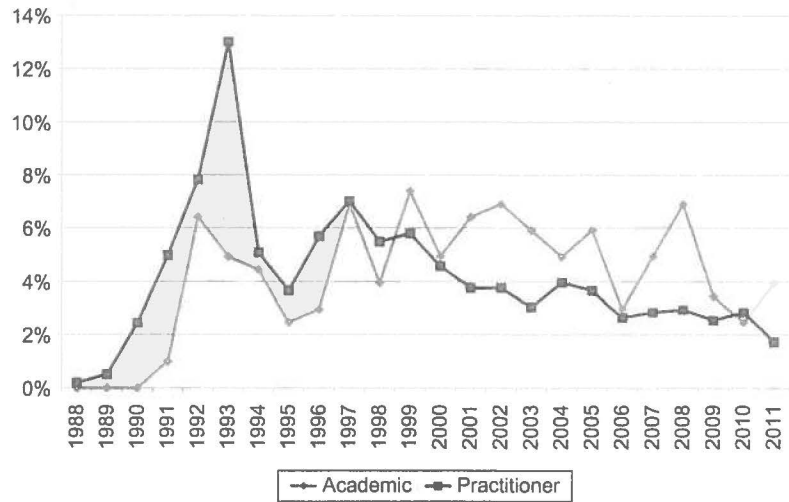


Fig. 4. ABC Articles by Audience Percent of Total Articles per Year.

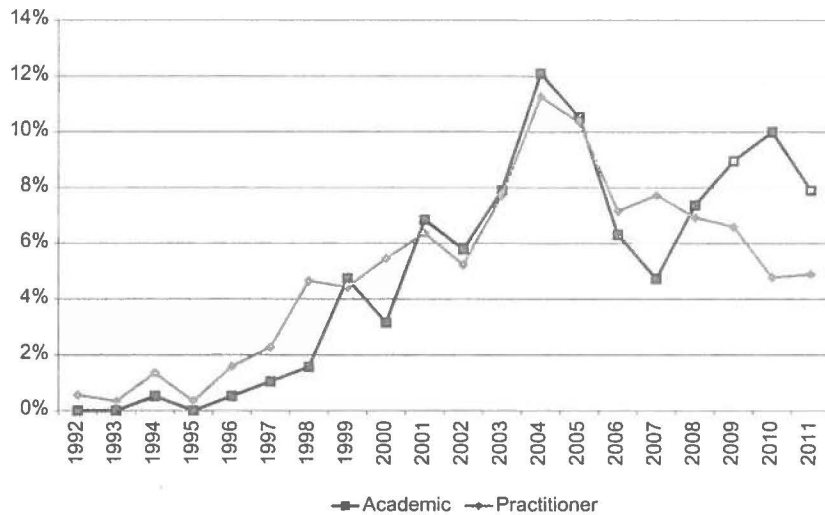


Fig. 5. BSC Articles by Audience Percent of Total Articles per Year.

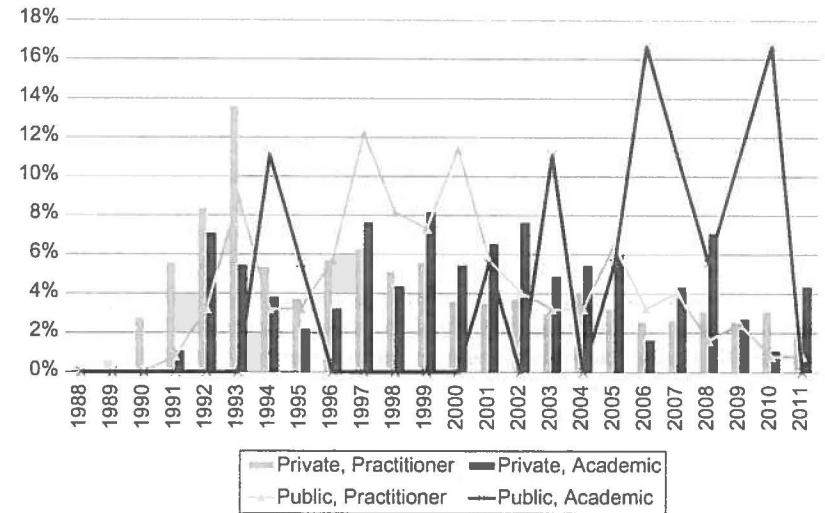


Fig. 6. ABC Articles by Sector and Audience Percent of Total Articles per Year.

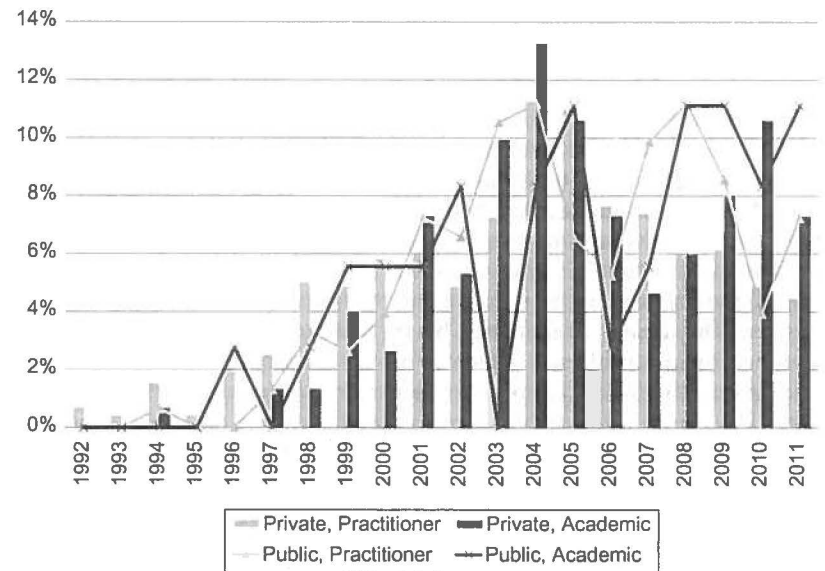


Fig. 7. BSC Articles by Sector and Audience Percent of Total Articles per Year.

the BSC in nonprofit sector organizations written by an academic in 1999 preceded practitioner articles which began appearing in 2001.⁵

CONCLUSION AND DISCUSSION

An organization's knowledge base, or the collective knowledge that it uses for its productive purposes, can be increased by searching for knowledge already existing in other organizations (Saviotti, 1998). The transfer of organizational innovations and best practices facilitates organizational learning that may lead to performance improvements. The empirical results from the entire population of ABC and BSC articles indicate that the transfer of the ideas across economic sectors does not happen as quickly as the transfer of the ideas within sectors. Authors transferred ideas through journal articles within the private sector for several years before being discussed in the public sector. For ABC an additional year passed until the ideas transferred to nonprofit sector authors and for the BSC it was an additional 5 years.

Interestingly, the journal publications indicate that it is the practitioners who first capture the ideas found in a related literature. At least for ABC and the BSC, academics do not appear to be the individuals who brought the idea to the literature in the other sectors. This finding is congruent with the results of the work of Euske, Hesford, and Malina (2012) and Bjørnenak and Mitchell (2002) that academics can be very insular in their communities and do not necessarily reach out to other communities to find or share new ideas. Note that Ittner and Larcker (1998) called for research into the role of practitioners or consultants in the adoption of new PMS practices. The findings of this study provide evidence that it is the practitioners who are leading the transferring of ideas in the open literature from one sector to another. This could be explained by the need of the practitioners to find solutions to real problems, which is not necessarily a motivation for the academics. Practitioners appear to be the innovators who are looking for better ideas while academics appear to play the role of reporters of practice in their particular sector and to add theory to substantiate the practices in the economic sector. This behavior is consistent with the arguments of Kahneman (2011), Kool, McGuire, Rosen, and Botvinick (2010), Hull (1943), and Suchan and Dulek (1990) that academics can minimize effort to do their work of publishing by using the language of the economic sector in which they participate.

Although there may be differences among the economic sectors, does the focus by some on the differences rather than the similarities miss possible benefits? We suggest that by focusing on differences, the exchange of ideas and techniques among the three economic sectors can be hindered. Recognizing that there are differences, similarities do exist. For instance, the concept of value added is identical across all three sectors. A common gauge of performance is whether the organization is adding value measured by the excess of output value over input value (Mosso, 1999). Granted there may be more intangible values and a greater focus on outcomes in the public and nonprofit sector equations. However, this is not unique to the public and nonprofit sectors. A service-based organization in the private sector, even though there is a bottom line to measure efficiency, has value added during a process that may be ephemeral at best. Viewing a sector as unique limits the applicability of available solutions and applications thereby inhibiting useful change.

Individuals need data upon which to base decisions regardless of the economic sector or whether the decision model is focused on outputs or outcomes (Euske, 2003). No matter the sector, managers need relevant performance data to make decisions about availability and uses of resources to achieve the goals of the organization. The same type of data may be used for a common purpose such as demonstrating the need for additional resources or be used differently by the three sectors. A private sector manager may use the data to evaluate a product line, a public sector manager to show state government how much of certain funds are being spent in a particular county, and a nonprofit sector manager to convince funders that the funds are being used for a particular program. The issue here is that the need for performance information is common across the sectors.

The results of the study indicate missed opportunities for process improvement. One way to address the issue is for academics to reach outside of their sector comfort zone and report the advancements in their particular sector in the literature of the other sectors. Academics are well-suited to take on the role of the "abstractor" in Lillrank's model, thereby facilitating the transfer of management techniques across sectors.

NOTES

1. Since a singular database was incomplete for the entire research timeframe, both Business Source Premier and ProQuest Business databases were used for the article searches. Business Source Premier was used to search for articles written from

1994 through 2011 while ProQuest Business was used for articles written prior to 1994.

2. In this chapter, we assume academics write academic-oriented articles and practitioners write practitioner-oriented articles. While we acknowledge that this might not be a perfect analogy, we argue it is true for most authors. We attempted to code the journal articles by academic or practitioner authors but could not find a reliable coding scheme, for example, articles written by Kaplan and Norton.

3. In Fig. 2, the two articles written about ABC in the nonprofit sector were suppressed in order to improve readability.

4. Nonprofit sector articles are suppressed in Figs. 6 and 7 to improve readability.

5. The article was a case study on the BSC in nonprofit sector organizations published in *Issues in Accounting Education*.

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THE EFFECT OF PERSONALITY TRAITS AND FAIRNESS ON HONESTY IN MANAGERIAL REPORTING

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ABSTRACT

Purpose – There has been a call for additional managerial accounting research that examines the effect of non-pecuniary preferences (such as those for honesty and fairness) on managerial reporting decisions.

Methodology/approach – Drawing from trait theory, agency theory, and psychological contracts theory, Kidder (2005) suggests that personality traits and perceived unfairness in the workplace both help predict detrimental workplace behaviors, with perceived fairness affecting the honesty in reporting of some individuals but not others. We test Kidder's (2005) theory in an experimental setting where participants have opportunity and incentive to report dishonestly.

Findings – Participants' honesty preferences and ethical values (idealism and relativism) were measured, and the fairness of the participants' employment contracts was manipulated. As predicted, higher preferences