
CARF Luzern 2020

Controlling.Accounting.Risiko.Finanzen.

Konferenzband

Konferenz Homepage: www.hslu.ch/carf



Quo vadis, management accounting education? Understanding the status quo of integrating sustainability accounting in management accounting education.

Extended Abstract

Anne-Katrin Nuzum

NORDAKADEMIE Hochschule der Wirtschaft, Elmshorn, E-Mail: anne-katrin.nuzum@nordakademie.de

Abstract

There have been various calls for sustainability and sustainability accounting to be included more widely in management accounting education. While there is some dated evidence that sustainability accounting is not yet being taught during an accountant's education, current and systematic evidence about the degree of dissemination is lacking. This paper conducts a systematic literature review of leading German, British and US-American accounting textbooks to analyze the current state of covering sustainability and sustainability accounting. The analysis addresses scope, topical contents, degree of disruptiveness, and specific tools, among others. The contributions of this paper are to provide a clearer understanding of the current state of dissemination of sustainability accounting concepts in conventional German and Anglo-Saxon accounting education in order to identify gaps in knowledge dissemination and to recommend textbook revisions as well as changes to accounting education.

1 Introduction and literature

There are many signs that humanity has exceeded the planetary boundaries of various earth systems (Steffen et al., 2015; Rockström et al., 2009; Sachs et al., 2017; WWF International, 2016). Companies have been identified as a possible societal actor and root cause of environmental degradation (e.g. Huisman & Sidoli, 2019; Málovics et al., 2008). Crutzen et al. (2017) argued that corporate sustainability should aim to improve the ecological and social performance to contribute to sustainable development. Corporate sustainability management should not only be integrated with measurement and reporting (Maas et al., 2016), it should also be an integral part of corporate strategy (Schaltegger & Wagner, 2006) and management control (Gond et al., 2012). Yet, empirical research has found that – in practice – there is still limited integration between corporate sustainability and management control (e.g. Bernatzky et al., 2018; Günther et al., 2017; Schaltegger et al., 2013; Albelda, 2011; CIMA, 2011; Zvezdov et al., 2010; Durden, 2008; Larrinaga - González & Bebbington, 2001; Wilmshurst & Frost, 2001).

Several journal papers conclude that management accountants need education to address sustainability issues (Egan & Tweedie, 2018; Schaltegger & Zvezdov, 2015; Williams, 2015; Spence et al., 2012; Evans et al., 2012; Wilmshurst & Frost, 2001; Gray et al., 1995). Specifically, Egan and Tweedie (2018) found that accountants might not have sufficient capabilities for addressing the complexities of sustainability and require training. Schaltegger and Zvezdov (2015) argued that, if accountants act as gatekeepers due to a lack of expertise, they need education to be involved more constructively. Evans et al. (2012) see a particular need for teaching the business cases for sustainability since education can disseminate new ideas and thus bridge research and practice. Education has also been found to be relevant to improve the sustainability performance of organizations, since new sustainability practices and tools have been found to be used when awareness and knowledge of them is high (Hörisch et al., 2015; Windolph et al., 2014). Some critical scholars see a need to question the ‘hidden curriculum’ in accounting education with a sole focus on financial values (Bebbington & Thomson, 2001), as well as a need to address the tension between training for vocational skills versus an education for wider transcendent roles (Gray & Collison, 2002). Additionally, there have been calls to integrate sustainability in management education by 50 global corporate sustainability leaders as part of the United Nations Global Compact and the Principles for Responsible Management Education (Weybrecht, 2015).

Despite these clear calls, there is some evidence that sustainability accounting is not yet being taught during an accountant’s education, neither in Germany (Günther et al., 2018), nor sufficiently elsewhere (Collison et al., 2014; Gray, 2013; Mangion, 2006). Thus, knowledge about applying sustainability practices and tools might not yet be disseminated sufficiently in education to apply them in practice. However, current and systematic evidence about the degree of dissemination of sustainability accounting in management accounting education is lacking.

Since the accounting education differs between countries (Heinzelmann, 2016; Messner et al., 2008), there might also be differences to what extent sustainability issues and sustainability accounting are covered in the educational contexts in different countries. Business schools play an important role in accounting education in the UK and Australia (Mangion 2006). Similarly, a large share of accountants in Germany have a college or university degree – possibly as high as 85% (Heinzelmann, 2016). Thus, it is critical to analyze the dissemination materials used in the educational practice of colleges and universities.

Knowledge about management accounting concepts and tools is generally shared with future accountants in their accounting education via different approaches, including lectures, case studies, and textbooks, with the latter playing a key role in disseminating new concepts in accounting (Zeff, 2009). Furthermore, the content of textbooks influences the content of syllabi as well (Strauß & Zecher, 2013), and ultimately, how far accounting professors consider integrating sustainability issues, sustainability accounting and/or specific sustainability accounting tools in their curriculum.

By looking at the coverage of sustainability and sustainability accounting in accounting textbooks, this paper will thus address the following research question: To what extent are current education practices influencing the research-practice gap of integrating management accounting and sustainability accounting?

Several authors have identified a research-practice gap, or a disconnect between discourses in academia and the lived practice of management accounting (e.g. Jansen, 2018; Tucker & Schaltegger, 2016; van de Ven & Johnson, 2006; Mitchell, 2002). Several papers have addressed the question how to close the gap and whether it should be bridged, brokered, or even closed at all (Neal et al., 2015; Tucker & Parker, 2014; Bansal et al., 2012; Bartunek, 2007). In particular, education has been named as a critical element in closing the gap via disseminating or exchanging knowledge (Burke & Rau, 2010; Starkey & Madan, 2001).

Tucker and Schaltegger (2016) analyzed research-practice gaps in management accounting across four stages of innovations: discovery, translation, dissemination, and change at the organizational level – based on the diffusion of innovations theory (Rogers, 1995). For the dissemination phase, the authors discuss a lack of practitioner access to journals; additionally, knowledge dissemination via education would fall into the category as well, yet has not been explicitly researched. This paper would thus focus on the dissemination phase of sustainability accounting as an innovation in conventional accounting.

2 Methodology

A literature analysis of management accounting textbooks will look at the coverage of sustainability accounting, similar to Strauß and Zecher (2013) as well as Hoffjan and Wömpener (2006), who reviewed the coverage of management accounting concepts in textbooks. In order to provide a cross-country comparison, leading German, British and US-American textbooks will be analyzed. The analysis will cover the extent of coverage and the content across different categories: definitions and strong/weak concepts of sustainability (Dyball & Thomson, 2013), purpose and degree of disruptiveness (Gray, 2019), tools and approaches (Hörisch et al., 2015; Windolph et al., 2014), and specific topics (e.g. Owen, 2013).

3 Preliminary results

Two German and two English-language textbooks (with a focus on USA and Europe) were analyzed so far. Sustainability in general and sustainability accounting are only addressed on 5.3-7.4% of total pages. Of the textbooks analyzed so far, only the two German textbooks (Britzelmaier, 2017; Fischer et al., 2015) provide a separate chapter on sustainability accounting, however these chapters are not connected to other chapters. These two books are fairly similar regarding the topic of analysis. Both offer definitions for sustainability and connect sustainability to the Triple Bottom Line. This latter concept drives an extension of traditional management control to track, steer and ultimately manage sustainability goals as well. However, specific environmental and social issues are only mentioned in passing, such as waste management or employee working conditions. The degree of disruptiveness is rather low, since the focus lies on increasing resource efficiency and maintaining (financial) value goals. While Fischer et al. (2015) recognize possible competitive advantages and new customer segments due to sustainability, both textbooks mention higher costs due to sustainability efforts. Social as well as environmental topics can be integrated into various existing strategic and operational accounting tools, including corporate goal setting, the Sustainability Balanced Scorecard, cost-benefit analyses, indicators, and managing costs by integrating product lifecycle thinking. Nearly all of the tools presented in Britzelmaier (2017) have a focus on cost reduction. Both books also clearly define tasks and challenges of sustainability accounting in management control. In comparison to other German textbooks for management accounting that were scanned in addition, these two include the highest number of pages on sustainability topics.

The two English-language textbooks (Anthony et al., 2014; Merchant & van der Stede, 2017) do not have separate chapters on sustainability and sustainability accounting. Instead they provide subsections on the importance of a broader stakeholder management. Connecting it to the stakeholder view, Anthony et al. (2014) identify Corporate Social Responsibility (CSR) as a major trend. They also include a substantial case study on managing stakeholders with environmental concerns. Merchant and van der Stede (2017) describe CSR as a “non-profit initiative” (p.

721), reflecting the interests of a wider stakeholder community. Neither group of authors connect CSR to management control. However, in contrast to the German textbooks, Anthony et al. (2014) explicitly address possible problems with an exclusive focus on value and profit maximization and Merchant and van der Stede (2017) state that “no group, not even owners, automatically has priority over the other stakeholders” (p. 677). These results can be viewed as carefully questioning the primacy of an exclusive shareholder value focus and indicating a slightly stronger degree of disruptiveness, compared to the German textbooks. Neither one of the English-language textbook describes tools and approaches for sustainability accounting, and neither one defines tasks nor challenges of sustainability accounting in management control. Similarly, specific environmental and social issues are only mentioned in passing, such as human rights and the impact on local communities.

Overall, sustainability accounting as well as the connection of corporate sustainability and management accounting are only addressed to a limited extent and in isolation from other management accounting topics.

References

- Albelda, E. (2011). The role of management accounting practices as facilitators of the environmental management. *Sustainability Accounting, Management and Policy Journal*, 2(1), 76–100. <https://doi.org/10.1108/20408021111162137>
- Anthony, R. N., Govindarajan, V., Hartmann, F. G. H., Krause, K., & Nilsson, G. (2014). *Management control systems* (1. Europ. ed.). McGrawHill Education Higher Education.
- Bansal, P., Bertels, S., Ewart, T., MacConnachie, P., & O'Brien, J. (2012). Bridging the Research–Practice Gap. *Academy of Management Perspectives*, 26(1), 73–92. <https://doi.org/10.5465/amp.2011.0140>
- Bartunek, J. M. (2007). Academic-Practitioner Collaboration Need not Require Joint or Relevant Research: Toward a Relational Scholarship of Integration. *Academy of Management Journal*, 50(6), 1323–1333. <https://doi.org/10.5465/amj.2007.28165912>
- Bebbington, J., & Thomson, I. (2001). Commentary on: Some thoughts on social and environmental accounting education. *Accounting Education*, 10(4), 353–355. <https://doi.org/10.1080/09639280210121141>
- Bernatzky, S., Eendenich, C., & Wömpener, A. (2018). Zur Integration von Nachhaltigkeit in das Controlling – Eine empirische Analyse. *Betriebswirtschaftliche Forschung und Praxis*(2), 202–226.
- Britzelmaier, B. (2017). *Controlling: Grundlagen, Praxis, Handlungsfelder* (2., aktualisierte Auflage). Pearson.
- Burke, L. A., & Rau, B. (2010). The Research-Teaching Gap in Management. *Academy of Management Learning & Education*, 9(1), 132–143. <https://doi.org/10.5465/AMLE.2010.48661196>
- CIMA. (2011). *Sustainability and the role of the management accountant*.
- Collison, D [D.], Ferguson, J., & Stevenson, L. (2014). Sustainability accounting and education. In J. Bebbington, J. Unerman, & B. O'Dwyer (Eds.), *Sustainability accounting and accountability* (pp. 30–47). Routledge.
- Crutzen, N., Zvezdov, D., & Schaltegger, S. (2017). Sustainability and management control. Exploring and theorizing control patterns in large European firms. *Journal of Cleaner Production*, 143, 1291–1301. <https://doi.org/10.1016/j.jclepro.2016.11.135>
- Durden, C. (2008). Towards a socially responsible management control system. *Accounting, Auditing & Accountability Journal*, 21(5), 671–694. <https://doi.org/10.1108/09513570810872969>
- Dyball, M. C., & Thomson, I. (2013). Sustainability and Accounting Education. *Accounting Education*, 22(4), 303–307. <https://doi.org/10.1080/09639284.2013.817787>
- Egan, M., & Tweedie, D. (2018). A “green” accountant is difficult to find. *Accounting, Auditing & Accountability Journal*, 31(6), 1749–1773. <https://doi.org/10.1108/AAAJ-03-2017-2891>
- Evans, E., Burritt, R., James, G., Laughlin, R., Roos, G., Pike, S., McKerchar, M., Chalmers, K., Wright, S., Cuganesan, S., Gainsford, L., Leung, P., White, L., Cooper, B., Carlin, T., Stevenson, K., Tingey-Holyoak, J., & Magarey, G. (Eds.). (2012). *Bridging the gap between academic accounting research and professional practice*. The Institute of Chartered Accountants in Australia.
- Fischer, T. M., Möller, K., & Schultze, W. (2015). *Controlling: Grundlagen, Instrumente und Entwicklungsperspektiven* (2., überarbeitete Auflage). Schäffer-Poeschel Verlag.
- Gond, J.-P., Grubnic, S., Herzig, C., & Moon, J. (2012). Configuring management control system: Theorizing the integration of strategy and sustainability. *Management Accounting Research*, 23, 205–223.

- Gray, R. (2013). Sustainability + Accounting Education: The Elephant in the Classroom. *Accounting Education*, 22(4), 308–332. <https://doi.org/10.1080/09639284.2013.817795>
- Gray, R. (2019). Sustainability Accounting and Education: Conflicts and Possibilities. In K. Amaeshi, J. N. Muthuri, & C. Ogbechie (Eds.), *Incorporating Sustainability in Management Education: An Interdisciplinary Approach* (pp. 33–54). Springer International Publishing. https://doi.org/10.1007/978-3-319-98125-3_3
- Gray, R., & Collison, D [David] (2002). Can't see the wood for the trees, can't see the trees for the numbers? Accounting education, sustainability and the Public Interest. *Critical Perspectives on Accounting*, 13(5-6), 797–836. <https://doi.org/10.1006/cpac.2002.0554>
- Gray, R., Walters, D., Bebbington, J., & Thompson, I. (1995). The Greening of Enterprise: An Exploration of the (NON) Role of Environmental Accounting and Environmental Accountants in Organizational Change. *Critical Perspectives on Accounting*, 6(3), 211–239. <https://doi.org/10.1006/cpac.1995.1021>
- Günther, E., Günther, T., Einhorn, S., Endrikat, J., Fietz, B., Heinicke, X., Janka, M., & Walz, M. (2017). *Internationale Studie zur Unternehmenssteuerung und zum Umweltmanagement: Eine Auswertung erster Ergebnisse* (Dresdner Beiträge zur Betriebswirtschaftslehre Nr. 178/17). Dresden. Technische Universität Dresden, Fakultät Wirtschaftswissenschaften. <http://nbn-resolving.de/urn:nbn:de:bsz:14-qucosa-202796>
- Günther, E., Günther, T., & Endrikat, J. (2018). Mehr Umwelt ins Controlling! *Controlling & Management Review*(5), 34–40.
- Heinzelmann, R. (2016). Comparing Professions in UK and German-Speaking Management Accounting. *Accounting in Europe*, 13(1), 103–120. <https://doi.org/10.1080/17449480.2016.1143560>
- Hoffjan, A., & Wömpener, A. (2006). Comparative Analysis of Strategic Management Accounting in German- and English-Language General Management Accounting Textbooks. *Schmalenbach Business Review*, 58(3), 234–258. <https://doi.org/10.1007/BF03396733>
- Hörisch, J., Johnson, M. P., & Schaltegger, S. (2015). Implementation of Sustainability Management and Company Size: A Knowledge-Based View. *Business Strategy and the Environment*, 24(8), 765–779. <https://doi.org/10.1002/bse.1844>
- Huisman, W., & Sidoli, D. (2019). Corporations, human rights and the environmental degradation–corruption nexus. *Asia Pacific Journal of Environmental Law*, 22(1), 66–92. <https://doi.org/10.4337/apjel.2019.01.04>
- Jansen, E. P. (2018). Bridging the gap between theory and practice in management accounting. *Accounting, Auditing & Accountability Journal*, 31(5), 1486–1509. <https://doi.org/10.1108/AAAJ-10-2015-2261>
- Larrinaga-González, C., & Bebbington, J. (2001). Accounting change or institutional appropriation?—A case study of the implementation of environmental accounting. *Critical Perspectives on Accounting*, 12(3), 269–292. <https://doi.org/10.1006/cpac.2000.0433>
- Maas, K., Schaltegger, S., & Crutzen, N. (2016). Integrating corporate sustainability assessment, management accounting, control, and reporting. *Journal of Cleaner Production*, 1–12. <https://doi.org/10.1016/j.jclepro.2016.05.008>
- Málovics, G., Csigéné, N. N., & Kraus, S. (2008). The role of corporate social responsibility in strong sustainability. *The Journal of Socio-Economics*, 37(3), 907–918. <https://doi.org/10.1016/j.socec.2006.12.061>

- Mangion, D. (2006). Undergraduate education in social and environmental accounting in Australian universities. *Accounting Education*, 15(3), 335–348.
<https://doi.org/10.1080/09639280600850844>
- Merchant, K. A., & van der Stede, W. A. (2017). *Management control systems: Performance measurement, evaluation, and incentives* (Fourth edition). Pearson.
- Messner, M., Becker, C., Schäffer, U., & Binder, C. (2008). Legitimacy and Identity in Germanic Management Accounting Research. *European Accounting Review*, 17(1), 129–159.
<https://doi.org/10.1080/09638180701819808>
- Mitchell, F. (2002). Research and practice in management accounting: improving integration and communication. *European Accounting Review*, 11(2), 277–289.
<https://doi.org/10.1080/09638180020017087>
- Neal, J. W., Neal, Z. P., Kornbluh, M., Mills, K. J., & Lawlor, J. A. (2015). Brokering the Research-Practice Gap: A typology. *American Journal of Community Psychology*, 56(3-4), 422–435.
<https://doi.org/10.1007/s10464-015-9745-8>
- Owen, G. (2013). Integrated Reporting: A Review of Developments and their Implications for the Accounting Curriculum. *Accounting Education*, 22(4), 340–356.
<https://doi.org/10.1080/09639284.2013.817798>
- Rockström, J., Steffen, W., Noone, K., Persson, A., Chapin, F. S., Lambin, E. F., Lenton, T. M., Scheffer, M., Folke, C., Schellnhuber, H. J., Nykvist, B., Wit, C. A. de, Hughes, T., van der Leeuw, S., Rodhe, H., Sörlin, S., Snyder, P. K., Costanza, R., Svedin, U., . . . Foley, J. A. (2009). A safe operating space for humanity. *Nature*, 461(7263), 472–475. <https://doi.org/10.1038/461472a>
- Rogers, E. M. (1995). *Diffusion of Innovations* (4th ed.). The Free Press.
- Sachs, J., Schmidt-Traub, G., Kroll, C., Durand-Delacre, D., & Teksoz, K. (2017). *SDG Index and Dashboards Report 2017*. New York. Bertelsmann Stiftung and Sustainable Development Solutions Network (SDSN).
- Schaltegger, S., Harms, D., Hörisch, J., Windolph, S. E., & Burritt, R. (2013). *International Corporate Sustainability Barometer: A comparative study of 11 countries. Corporate Sustainability Barometer: Vol. 2013*. CSM Centre for Sustainability Management.
- Schaltegger, S., & Wagner, M. (2006). Integrative management of sustainability performance, measurement and reporting. *International Journal of Accounting, Auditing and Performance Evaluation*, 3(1), 1–19. <https://doi.org/10.1504/IJAAPE.2006.010098>
- Schaltegger, S., & Zvezdov, D. (2015). Gatekeepers of sustainability information: Exploring the roles of accountants. *Journal of Accounting & Organizational Change*, 11(3), 333–361.
<https://doi.org/10.1108/JAOC-10-2013-0083>
- Spence, L. L., Agyemang, G., & Rinaldi, L. (2012). *Environmental Aspects of Sustainability: Smes and the Role of the Accountant: Research Report No. 128*. University of St Andrews, St Andrews. The Council of the Association of Chartered Certified Accountants. <https://research-repository.st-andrews.ac.uk/bitstream/handle/10023/3776/ACCA-2012-SMEs-Role-Accountant.pdf?sequence=1&isAllowed=y>
- Starkey, K., & Madan, P. (2001). Bridging the Relevance Gap: Aligning Stakeholders in the Future of Management Research. *British Journal of Management*, 12(s1), S3-S26.
<https://doi.org/10.1111/1467-8551.12.s1.2>
- Steffen, W., Richardson, K., Rockström, J., Cornell, S. E., Fetzer, I., Bennett, E. M., Biggs, R., Carpenter, S. R., Vries, W. de, Wit, C. A. de, Folke, C., Gerten, D., Heinke, J., Mace, G. M., Persson, L. M., Rama-

- nathan, V., Reyers, B., & Sörlin, S. (2015). Sustainability. Planetary boundaries: Guiding human development on a changing planet. *Science (New York, N.Y.)*, 347(6223), 1259855. <https://doi.org/10.1126/science.1259855>
- Strauß, E., & Zecher, C. (2013). Management control systems: A review. *Journal of Management Control*, 23(4), 233–268. <https://doi.org/10.1007/s00187-012-0158-7>
- Tucker, B., & Parker, L. (2014). In our ivory towers? The research-practice gap in management accounting: an academic perspective. *Accounting and Business Research*, 44(2), 104–143. <https://unisa.edu.au/SysSiteAssets/episerver-6-files/global/business/centres/cags/docs/seminars/tucker-parker-ivory-towers-jmar.pdf>
- Tucker, B., & Schaltegger, S. (2016). Comparing the research-practice gap in management accounting: A view from professional accounting bodies in Australia and Germany. *Accounting, Auditing & Accountability Journal*, 29(3), 362–400. <https://doi.org/10.1108/AAAJ-02-2014-1601>
- van de Ven, A., & Johnson, P. E. (2006). Knowledge for Theory and Practice. *The Academy of Management Review*, 31(4), 802–821.
- Weybrecht, G. (2015). *State of Sustainability Education in Management Education*. United Nations Global Compact.
- Williams, B. (2015). The local government accountants' perspective on sustainability. *Sustainability Accounting, Management and Policy Journal*, 6(2), 267–287. <https://doi.org/10.1108/SAMPJ-07-2014-0043>
- Wilmshurst, T. D., & Frost, G. R. (2001). The role of accounting and the accountant in the environmental management system. *Business Strategy and the Environment*, 10(3), 135–147. <https://doi.org/10.1002/bse.283>
- Windolph, E. S., Schaltegger, S., & Herzig, C. (2014). Implementing corporate sustainability. *Sustainability Accounting, Management and Policy Journal*, 5(4), 378–404. <https://doi.org/10.1108/SAMPJ-01-2014-0002>
- WWF International. (2016). *Living Planet Report 2016: Risk and resilience in a new era*. Gland, Switzerland.
- Zeff, S. A. (2009). The Contribution of the Harvard Business School to Management Control, 1908–1980. *Journal of Management Accounting Research*, 20, 175–208.
- Zvezdov, D., Schaltegger, S., & Bennett, M. (2010). The Increasing Involvement of Accountants in Corporate Sustainability Management. *Journal of the Asia-Pacific Centre for Environmental Accountability*(4), 20–31. [http://fox.leuphana.de/portal/de/publications/the-increasing-involvement-of-accountants-in-corporate-sustainability-management\(994d73fb-0014-4734-a2a0-c18852edffab\).html](http://fox.leuphana.de/portal/de/publications/the-increasing-involvement-of-accountants-in-corporate-sustainability-management(994d73fb-0014-4734-a2a0-c18852edffab).html)