



Contents lists available at ScienceDirect

Journal of Purchasing and Supply Management

journal homepage: www.elsevier.com/locate/pursup

Notes and Debates



Future business and the role of purchasing and supply management: Opportunities for ‘business-not-as-usual’ PSM research

Louise Knight^{a,*}, Wendy Tate^b, Steven Carnovale^c, Carmela Di Mauro^d, Lydia Bals^e, Federico Caniato^f, Jury Gualandris^g, Thomas Johnsen^h, Aristides Matopoulosⁱ, Joanne Meehan^j, Joe Miemczyk^k, Andrea S. Patrucco^l, Tobias Schoenherr^m, Kostas Selviaridisⁿ, Anne Touboulis^o, Stephan M. Wagner^p

^a University of Twente, Netherlands^b University of Tennessee, USA^c Rochester Institute of Technology, USA^d University of Catania, Italy^e Mainz University of Applied Sciences, Germany^f Politecnico di Milano, Italy^g Ivey Business School at Western University, Canada^h Audencia Business School, Nantes, Franceⁱ Aston University, Birmingham, United Kingdom^j University of Liverpool, United Kingdom^k ESCP Business School - London, United Kingdom^l Florida International University College of Business, USA^m Michigan State University, USAⁿ Lancaster University Management School, United Kingdom^o University of Nottingham, United Kingdom^p Swiss Federal Institute of Technology Zurich, Switzerland

ARTICLE INFO

Keywords:

Climate change
Sustainability
Innovation
Environment
Social

ABSTRACT

The raison d'être for this article is simple: traditional ways of researching, theorizing, and practicing purchasing and supply management (PSM) are no longer sufficient to ‘meet the moment’. Scholars need to advance a “business-not-as-usual” footing approach to their work, if they are to make a meaningful contribution to addressing the current and future emergencies, as highlighted by recent extreme weather and the COVID-19 pandemic. Yet, what can this, or should this, mean for a field rooted in traditional business thinking? This article builds on the Journal of Purchasing and Supply Management’s (JPSM) 25th Anniversary Special Issue editorial (2019); members of the JPSM’s editorial team advance their unique perspectives on what “business-not-as-usual” means for PSM. Specifically, we advocate both thinking much more widely, in scope and ambition, than we currently do, and simultaneously building our ability to comprehend supply chains in a more nuanced and granular way. We explore whether the bias toward positivist work has omitted potentially interesting findings, and viewpoints. This leads to a call to re-think *how* we approach our work: should the key criteria *always* be to focus on theory development or testing? Should academics “think bigger”? Turning to specific research themes, illustrations of how our current thinking can be challenged or broadened by addressing the circular economy, and role of purchasing and innovation. Specifically, the focus on the PSM function as an intrapreneur within the larger organization, and the role of innovation and technology in PSM work. Taken together, we hope the ideas and arguments presented here will inform and inspire ambitious and novel approaches to PSM research with significant and enduring impact on the transformation of business.

* Corresponding author.

E-mail address: l.a.knight@utwente.nl (L. Knight).<https://doi.org/10.1016/j.pursup.2022.100753>

Received 24 February 2022; Accepted 2 March 2022

Available online 18 March 2022

1478-4092/© 2022 The Authors. Published by Elsevier Ltd. This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>).

1. Introduction

“The new normal” and “post-pandemic futures”, along with numerous other similar terms, capture the zeitgeist into which COVID-19 has thrown us. Arguably, the multiple challenges that the world was already facing before the current pandemic, including the climate emergency, social crises, and rapid technological change, and variously framed as grand challenges, wicked problems, or existential threats, should have sufficed to gain broad attention to the need to re-consider previous ways of doing things and generate real, widespread commitment to radical change. But it took a pandemic to (at least temporarily) shift the rhetoric. What differentiates the fight against COVID-19 from previous, much more limited efforts is that governments, businesses and communities have demonstrated our capability to take sweeping, often novel or long unseen, measures to mitigate and adapt to threats. Rapid transition to positive ‘business not-as-usual’ is indeed possible.

Potential ‘not-as-usual’ approaches come from many quarters and a broad range of perspectives. Concepts such as degrowth, regenerative business and economics (Svenfelt et al., 2019; Hahn and Tampe, 2021; Raworth, 2017; Pirgmaier, 2017), shifting economic thinking to focus on value (Carney, 2021; Mazzucato, 2018), survival or flourishing (Figueres and Rivett-Carnac, 2020; Ehrenfeld and Hoffman, 2013; Krznaric, 2020), are all based on the premise that: the way we have been doing business and consuming its outputs (and continue to do so) is not sustainable; the impact of these practices must be articulated and acknowledged; and transformative action is essential. Notions of potential and suitable responses thus vary, but all can be captured under the umbrella term of business-not-as-usual (BNAU), which we use here as a short-hand for this radical shift in business.

The Editorial for the Journal of Purchasing and Supply Management’s (JPSM) 25th anniversary special issue (Knight et al., 2019) argued that PSM, as a function, profession, field or discipline, is well positioned to contribute to BNAU.¹ But now the attention that the COVID-19 pandemic has drawn onto PSM across politics, society and business provides a rare opportunity. People and companies have directly experienced supply chain failures. Pandemic-driven shortages in necessary consumer goods and in crucial materials and components for companies (such as semiconductors) have put a spotlight on systemic issues that existed well before the virus extended its grasp on the world including: long, geographically dispersed chains, a lack of visibility (or a lack of interest in seeing) beyond the first tier or two of suppliers, stripping local resources that would enable resiliency, and a lack of innovation capabilities to adapt to changing circumstances. All these issues have long since been problematized from the perspective of social as well as ecological sustainability and risk management, amongst others. However, it is in the light of the ongoing pandemic, that their gravity and urgency are becoming more widely recognized. Recent experiences in the pandemic help elucidate and elaborate the issues raised in the 2019 editorial. Many of the points raised in the context of the climate crisis apply also to pandemic crises. Exploring what BNAU means when related to PSM can help us understand and make the most of this unique opportunity, as discussed in this article.

PSM experts have a prominent role to play in BNAU. They should not limit themselves to merely responding to institutional leaders, but can pro-actively shape systemic change. As PSM researchers, there are many ways in which we can support this process. As noted in the 2019 editorial “We intentionally adopt an optimistic view, and assume society will be mobilised to engender positive, transformative change in the short and medium term. We recognize of course this optimism may be misplaced. In the case of business-as-usual, in the medium and long term, there will also be transformative, systemic change affecting whole sectors, governance, value networks etc. in dramatic ways, perhaps to the advantage of the few, but definitely to the detriment of wider

society”. (p. 5) Our² aim in this Notes and Debates article is to present opportunities for PSM research(ers) by answering the following question: how can our research practices and favored topics align with, and indeed shape, a BNAU agenda and so help accelerate the multiple transitions that are so urgently needed?

A selected set of these opportunities³ is elaborated in the sections below. The contributions are testament to the rich variety of perspectives among the authors, which in turn reflects the diversity enjoyed in the PSM community and the openness to debate and to different positions that has always been a feature of JPSM (Tate and Knight, 2017: 1). The intention was not to provide a comprehensive agenda. On the contrary, the opportunities presented here should be taken as an invitation to readers to open new topics and approaches within the field of PSM. The first pair of contributions address supply chain (SC) management challenges highlighted by the pandemic. While the prevalence and severity of SC disruptions have been much greater during the pandemic, the fundamentals are not new, having been experienced in several recent crises. The difference now is that supply chain issues have gained considerable (though not necessarily enduring) political and public attention. PSM scholars will need to ‘think big’ if they are to occupy effectively the space this offers for impact and influence, as argued in Schoenherr’s contribution to this article. However, as stressed in the piece by Matopoulos, contributing effectively at a policy level also places requirements on us to address some very practical needs to ‘see big’ – particularly to support better supply chain visibility.

Though the authors’ research perspectives differ significantly, the second pair of contributions follow the same core line of argument. Both call for new ways of framing and theorizing PSM. These are seen as essential if we are to break away from some traditional ways of working which do not just constrain, but can incapacitate, our ability to perform effective, future-focused research. Whereas Meehan and Touboulic draw attention to the implications for the research questions we need to ask, Johnsen, Miemczyk and Caniato’s contribution focuses on research outputs, by calling for expanding the PSM toolbox through the adoption of new theoretical lenses and questioning the theory vs. practice dichotomy.

Where the first and second pairs of contributions are focused on PSM research impact and process, the third and fourth themes concern critical focal topics for PSM research. In a combined contribution, Gualandris and Bals consider PSM and circular economy, connecting ‘circular sourcing’ with BNAU, and articulating the associated challenges through a series of four questions.

The final pair of contributions concern innovation and small firms. The importance of buying organizations’ ability to mobilize the innovation capacity of their suppliers is well recognized (see upcoming Special Topic Forum, JPSM, 2022 Issue 2), though usually with regard to implications for competitive advantage (in the commercial sector) and dealing with market failures (in the public sector). Wagner’s contribution discusses the implications for practice and research of corporations assimilating start-up suppliers in the supply base. Here, the connection is made with greater creativity and entrepreneurialism needed to cope with crisis-driven, increased pressures. By contrast, Selviaridis and Patrucco focus on the role of public sector buying organizations in

² This Notes and Debates article is co-authored by 16 members of the JPSM editorial team. Its timing marks a transition in JPSM leadership (outgoing EICs: Wendy Tate [Dec 2021], Louise Knight [Dec 2022]; incoming EICs: Carmela di Mauro and Steven Carnovale [Jan 2022]). It complements the EICs’ joint editorial (2022, Issue 1), which reviews 2016–2021 and sets out priority areas for 2022–2024. Beyond issues covered there, however, the four EICs share a particular commitment to addressing the issues discussed in this article.

³ A call for contributions to this article was circulated to all Associate Editors. Proposals were reviewed by the EICs, and 8 selected, organized in 4 pairs. The EICs then drafted the introduction and conclusion, with all authors subsequently reviewing and revising the article as a whole.

¹ The relevant section of the editorial is reproduced in full in the Appendix.

nurturing and mobilizing the innovative capacity of technology-based SMEs, recognizing their importance in agile responses to crises, which in turn depends on agile PSM. More generally, innovation-oriented public procurement contributes to transforming socio-technical systems to deal with grand challenges (Schot and Steinmueller, 2018). Creating new markets, rather than addressing market failures, is the main concern in this context.

2. Big ambitions, big picture

2.1. High impact PSM, for the greater good – “think big, PSM!” (Schoenherr)

While the importance of PSM is undisputed, we believe that our discipline needs to think in much broader terms and aim to make an even greater impact — be more courageous and risk taking and try to tackle the “big” problems for the greater good. This can be achieved either by producing real, valuable insight that can be immediately applied by practitioners, or by “planting the seed” in terms of ideas, concepts and frameworks, through our research and teaching.

It is a particularly unique opportunity for PSM now, during the pandemic, to step up. With the increased attention that supply chain management in general, and PSM specifically, has been receiving, it is our chance to demonstrate the true value of our discipline. As many of us can relate to, there has probably never been so much interest from the media to speak to PSM scholars. It is now up to the discipline to demonstrate the immense value PSM can provide and to maintain the momentum.

Significant progress has been made in elevating the position of purchasing in companies over the last century, which was often triggered by external events and developments, such as the oil crises, raw material shortages, recessions, natural catastrophes, global sourcing, and information technology (Monczka et al., 2020). Purchasing has been playing a major role in helping companies weather crises and challenges like these, and has become a major component of companies’ competitive differentiation.

While purchasing has been tasked to do a great deal, the level of responsibility and impact has risen to unprecedented levels due to the pandemic (Melnyk et al., 2021b). As such, companies and consumers alike have felt first-hand what it means when the needed supply is not available. The pandemic exposed supply vulnerabilities and put supply chain resilience to the test. Examples abound, such as the lack of PPE supply in the early phases of the pandemic (Finkenstadt and Handfield, 2021), the recent spike in commodity prices for steel, lumber and cotton, or the quadrupling of container shipping rates (Lott, 2021). No one is immune to these events, and many have been impacted by these disruptions in some form or another. It is therefore now the time for PSM to demonstrate its true value, responsibility and influence for the greater good. A powerful illustration in this vein is the collaboration between General Motors and Ventec, which led to the rapid mass production of critical care ventilators in response to the pandemic (General Motors, 2020).

The impacts possible with PSM is greater today than it has ever been, and we, as PSM scholars, must push the boundaries and take this opportunity to generate even larger insights for the greater good. Practically relevant research avenues abound where we can push these boundaries, with several recent special issues demonstrating this potential (Carnovale and DuHadway, 2021; Patrucco and Kähkönen, 2021). For instance, never in modern history have politicians and government officials talked about the criticality of supply chains more than they do today, with a recent White House Briefing Room blog entry noting that the term “supply chain” has now become a household name (Porcari et al., 2021). It is our chance to continue on this trajectory and help make supply chains more resilient, enabling better responses to future crises.

With rising consumer prices tied also to supply shortages, we further

have the unique opportunity to tackle inflation through our discipline. This can for instance be done by working with suppliers on their cost structures and drivers, or the design of more robust supply chains, ensuring the availability of supply to reasonable, or at least predictable, prices. We as PSM scholars are in a unique position to make an impact by the provision of insight in our publications, by working directly together with suppliers and buyers on these initiatives, and through our teaching in the classroom, equipping our students with such cutting-edge and relevant skills to make a difference.

Along similar lines, we need to promote a risk management culture, which is not a culture that easily takes risks, but a culture that recognizes risks as being part and parcel of doing business (Schoenherr et al., 2019). As such, risk considerations should be integrated in all PSM activities, striking a balance with the traditionally predominant focus on costs, yielding more resilient and robust supply chains. Cybersecurity has also come to the forefront, where problems can cripple a supply chain without notice — the attacks on Solar Winds (Mandia, 2020) and Colonial Pipeline (Morrison, 2021) are just two recent examples. As such, supply management professionals should also be concerned about the cyber vulnerabilities of their suppliers, especially SMEs, due to the interconnectivity of systems (Melnyk et al., 2021a,b). Overall, it is our task now to build on our research findings, on for instance the benefits of collaboration and integration, apply them to the new normal, and offer guidance for companies and governmental agencies on how they may be able to emerge stronger out of the pandemic than they went into it, all with the objective to foster the greater good.

The pandemic has caused wide-spread and ongoing challenges, bringing us to yet another tipping or inflection point for PSM. There are a multitude of opportunities now where we, as PSM scholars, are able to demonstrate the significant value that PSM can bring to the table, not only in the pursuit of corporate success, but more importantly, in the pursuit of the greater good.

2.2. Supply chain mapping: let’s get the fundamentals right – “see big, PSM!” (Matopoulos)

Businesses and governments have lately faced a range of challenges initially in their effort to mitigate the first waves of the pandemic and to secure PPE and medical supplies (Handfield et al., 2020) but also later in recovering from Covid-19 by securing raw materials and components (Schatteman et al., 2020; Finkenstadt and Handfield, 2021). The common denominator of the above, and possibly one of the (many) key lessons from the pandemic, was the lack of deep supply chain knowledge, in other words the limited understanding of the multi-tier nature of supply chains. This did not come as a complete surprise. Early signs of this “supply chain myopia” were first seen with the 2010 Volcanic eruption in Iceland (Cook, 2010), where many businesses realized how little they knew about where all of their products were being manufactured. While for many of these businesses it became urgent to fully understand the entire map of sources, at the end it never received the recognition or importance needed.

Choi et al. (2020) attribute this gap partly to the required resources for supply network mapping which are expensive. A new breed of software services companies is thought to be able to help acquire and analyze supply network data and organize the results in a user-friendly way. Some view the current solutions as incomplete, resource intensive, and expensive, but also limited in that they are only relevant and of potential value to very large companies with substantial global supply chain footprint, which unfortunately leaves out of scope most companies.

In February 2021, US President Joe Biden issued an executive order with a clear mandate to conduct sectoral supply chain assessments in order to strengthen the resilience of America’s supply chains in critical sectors such as: semiconductors, batteries, agricultural products, defense and strategic materials (e.g. minerals and rare-earth metals). Our initial positive surprise was quickly followed with the query: how will all these

supply chain assessments be conducted?

In the post-Covid era, for companies to be able to meaningfully influence change in their supply base, while protecting supply they will require the capability (and tools) to map their supply chain. The “humble” supply chain mapping, which is barely taught in undergraduate or postgraduate supply chain courses, could play a role. However, the reality is that supply chain mapping never really received the attention it deserved from practitioners and academics. For practitioners mapping the supply chain has been traditionally perceived as something unnecessary (“why do I need to do it?”), difficult (“how do I do it?”) and complicated (“where do I start?”). For academics, it has been a rather unexciting subject, perhaps too applied to excite. As a result, our supply chain mapping tools and techniques have not been widely applied, lacking standardization, which makes it even more difficult for the industry to follow.

Where does this leave PSM scholars?

Despite some efforts (e.g. Pettit, 2013), as a research community we have not put sufficient emphasis on developing standardized techniques or diagnostic tools to map the supply chain. The PSM community needs to do a better job to tackle society’s big problems. This does not necessarily mean that we must reinvent the wheel, but to further develop and improve existing supply chain mapping capabilities and to widely apply the tools. We, in the PSM community need to *think big*, but this can only be done if we are able to *see big*. Our mission to design better supply chains in the future, starts inevitably on the supply chain drawing board. Back to the fundamentals!

3. Framing and theorizing PSM

3.1. A new *modus operandi* for PSM: disrupting the dominant logic? (Meehan & Touboulic)

A new regenerative and caring economy will not be delivered by the extraction, production, and consumption model of business-as-usual. Opaque contracting, over-consumption, and resource depletion cumulatively add to the fragility of people and place (Knight et al., 2020). To move towards business-not-as-usual (BNAU), researchers stress that firms, policy makers, consumers, and governments must change their practices, sometimes radically, to accommodate truly ecocentric and socially responsible business models. As researchers, we too need to change what we research, and how.

Consideration of structural inequalities can reveal how supply chains are not just vulnerable to harm, but can *cause* harm (Wieland, 2021). Growing literature from allied fields of marketing, economics, and international development (to name just a few) is increasingly putting global supply chains under the spotlight. While diverse in scope, what connects the various studies is a recognition that business should not be artificially separated from social and ecological systems (Hahn and Tampe, 2021; Hernández and Muñoz, 2021). The research draws attention to historic patterns of uneven development (Werner and Bair, 2019), and to historical roots of globalization in “Euro-centered colonial/modern world power” (Quijano, 2000: 215), particularly in relation to the ‘sustainable development’ agenda (Banerjee, 2003, 2008, 2010). Political economists reveal the often unintended, and usually unacknowledged, ‘hidden costs’ in global supply chains (LeBaron and Lister, 2021) and case studies of transnational supply chains raise profound questions on the distribution of power, transparency, and corporate accountability (Cutler and Lark, 2020). Even sustainability initiatives can be counterproductive if they intensify income inequalities for workers (Diprose et al., 2020). Research positioned for BNAU can uncover supply chains hidden costs and help to avoid the “fallacy of centrality” (Westrum, 1978: 478) - the misconception that if something serious was happening, then we would know about it; and, since we don’t know about it, then it must not be happening.

Debates are gaining attention in PSM/SCM, notably in the acceptance that conventional CSR and supply chain auditing practices are

insufficient to address modern slavery (New, 2015), or human rights issues in the conflict minerals trade (Hofmann, Schleper & Blome, 2018). Yet, there are concerns that our field may not fare well under the lens of BNAU logics (Pagell and Wu, 2009). Dominant instrumental logics rest on the hegemony of growth (Johnsen et al., 2020), ubiquity of global supply chains (Gereffi and Lee, 2012), and externalization of natural and social risks (Sommer, 2017; New, 2015), and can frame unsustainable decisions as necessities for firms’ survival (Montabon et al., 2016; Matthews et al., 2016). Alternative logics for BNAU include: ‘ecologically dominant’ logics whereby environmental and social issues supersede economic interests (Montabon et al., 2016); and a ‘socio-economic’ logic where sustainability priorities consider the impacts of businesses on stakeholders, rather than how businesses are impacted by stakeholders (McLoughlin and Meehan, 2021).

Consideration is needed on how we, as producers of knowledge, disrupt or legitimize practice and logics, and whether our research choices marginalize or exclude alternative perspectives. Challenging the foundations that frame and embed our theories, ontologies, and epistemologies, requires courage to accept uncomfortable issues that may surface, or to embrace radical approaches that depart from the traditionally accepted ways of being and doing (Touboulic and McCarthy, 2021). In engaging in such reflections, we may ask: how could research communities work differently to facilitate BNAU?

To shift attention to the interactions within, and between, social and environmental performance, PSM/SCM researchers have been encouraged to adopt immersive methods, such as ethnography (Carter et al., 2020). Our field’s bias towards empiricism (Pagell and Shevchenko, 2014) however, can wed us to methods that observe, test, and explain. BNAU arguably requires future-focused critical perspectives exploring not what firms do, but what they could or ought to do, through notions of “re-imagining” (Touboulic and McCarthy, 2020), particularly in the face of the seemingly inescapable solutions and pathways (for example discussion on moving away from ‘technology as salvation’ see, Touboulic and McCarthy, 2021). This normative turn demands new theories, and crucially, new theorizations, to surface systemic inequalities in power structures and value distribution.

Theorization builds theory and requires different ways of thinking (Swedberg, 2016) to allow for different forms of understanding (Cornelissen et al., 2021). Theorization is an imaginative process (Kornberger and Mantere, 2020) that can transform a field’s development (Nadkarni et al., 2018). Engaged scholarship (Bäckstrand and Halldórsson, 2019) and critical engaged research (Touboulic et al., 2020) are identified as vital pathways for ‘re-imagining’ PSM’s theorization. BNAU research implies disrupting the status quo and enabling grand challenges to be (re)framed from diverse perspectives, attending to the experiences of, for example, NGOs (Moxham and Kauppi, 2014), workers (LeBaron, 2021), or advocacy groups representing the interests of communities, consumers, and the environment (Sodhi and Tang, 2021). For this, we need to be open to the possibilities of enrichment from different types of knowledge, and different ways of knowing, that consider history, place, and context (de Sousa Santos, 2018), to articulate inclusive and equitable research pathways.

Regenerative approaches in supply chain contexts provide positive examples of re-theorizing alternative ways of affirming human-nature connections, for example, the study of Finnish changemakers tackling biodiversity (Quarshie, Salmi, and Wu 2021), and another on implementing living wages in tea regions (van Hille et al., 2021). Regenerative concepts have their roots in built environment design and are defined as “a co-creative partnership with nature [...] to restore and regenerate the global social-ecological system” (du Plessis, 2012: 19). Regeneration addresses the root causes of (un)sustainability to reorient systems from reducing harm to creating net-positive outcomes and aligns well with progressive BNAU research that demands ambitious agendas across broader ecosystems (Knight et al., 2021). In theorizing for BNAU futures, how and why particular theories and logics became dominant can be questioned to provide insightful learning for PSM (Knight et al.,

2020). As scholars, we need to hold ourselves accountable and expose our own underlying assumptions. Accountability requires us to ask an uncomfortable question that we have been avoiding - 'how did we get here'? (Knight et al., 2021).

3.2. Rethinking the role of theory in PSM (Johnsen, Miemczyk, Caniato)

The trend in our field of PSM, and the wider field of OM/SCM, has been to insist on strong theory development or testing but the use of theories tend to be rather conservative: TCE, RBV and the other usual suspects dominate (Spina et al., 2016). If the goal of PSM research is to change how PSM is practiced the same old theories are inadequate as they focus on cost reduction (TCE), access to resources from traditional resource perspectives (e.g., RBV) and often a scope that is limited to direct supplier relations (Agency theory). PSM research and practice is therefore unlikely to *transform* but will only change incrementally. Given that the field faces pressures from megatrends such as climate change and resource scarcity, shifts in global economic powers, demographic shifts and rapid technological change it is likely that new ways of facing these challenges will be needed. Our argument is that the same old theories tend to lead to the same focus and the same conclusions. New theoretical lenses are required, which may be borrowed and adapted from other fields, or developed specifically for PSM.

We also call for a critical rethink on the necessity for all papers to be driven by theory development or testing. There is a risk that this comes at the expense of making (for lack of better word) real-life impact and may even miss novel phenomena that do not fit existing frameworks. We certainly do not dismiss the need for theory, as Kurt Lewin (1945) famously stated "Nothing is so practical as a good theory", but at least a rebalancing between theoretical and practical implications (whether managerial or policy) is required.

Research on sustainable supply chains is an example of where an over-focus or rather an overly-rigid focus on theory development or testing may be counter-productive. As Meehan and Touboulie argue in their contribution, business-not-as usual (BNAU) requires change to underpinning logics and questioning of basic assumptions about how supply chains function. However, if sustainable PSM and SCM research is going to have any real impact on practice, it is of little use to produce ever more theoretical propositions that introduce yet another fine-grained new mechanism within causal relationships between two variables. Theory developments are required but need to be more ambitious and challenging of existing assumptions. Where more profound theory development is not appropriate, and perhaps was never the intention of the research, authors should not be forced to develop theory for theory's sake, but instead focus on the empirical findings and expand on the practical implications of the research. As Pagell argues in Boer et al. (2015, p. 1244), fact building or fact testing may be at least as relevant – and important to publish – as theory building or theory testing. However, empirical findings are rarely seen as a contribution in themselves regardless of how novel these may be, and practical implications, whether for an individual company, a wider ecosystem or society, are often reduced to a few trivial points with little substance. This is a missed opportunity for us as researchers and risks alienating academia from practice.

Our plea is therefore for reviewers and editors to accept that novel empirical findings can be of (publishable) value and to push authors to develop practical implications instead of focusing purely on theoretical implications as the only real contribution of any value. If our research is to have impact on practice, authors should consider writing separate follow-up magazine articles (or use other media) to expand on, and 'translate', research findings and implications for a non-academic audience. However, this should not preclude that the journal articles upon which these are based also contain strong practical implications. We would go even further to suggest overcoming the dichotomy between theoretical and practical impact as different (and sometimes conflicting) dimensions, moving towards a more integrated vision, in

which sound and original theoretical development goes hand-in-hand with managerial and policy relevance.

4. PSM and the circular economy (Gualandris & Bals)

Large and small businesses around the world and across sectors are experimenting with circular sourcing to curb their greenhouse gas emissions and create economic and societal value. For example, *HP Inc.* has recently committed to 75% of its total annual product and packaging content (by weight) to come from recycled and renewable materials and reused products and parts by 2030 (Moorhead, 2021). In the food industry, small businesses such as *Loop Mission*, *Still Good*, and *Too Good To Go* are developing innovative sourcing processes to reduce food waste by repurposing the outcasts of our linear industrial system. Innovative waste management service providers such as *TerraCycle* and circularity brokers such as the *National Industrial Symbiosis Program* are helping businesses to productively source and use materials that are considered hard to repurpose, such as food loss, packaging scrap or personal safety equipment (Ciulli et al., 2019; Ranta et al., 2020).

Are these businesses and organizations good examples of BNAU? How do they challenge the status-quo? The task of PSM researchers with regard to circular sourcing should be to clarify what it is; whether it is really a new phenomenon; and to conduct research so as to contribute to both its science and its practice. This section represents a starting point for our efforts in this direction.

First, *how does circular sourcing manifest?* Whereas sustainable sourcing is generally understood as managing all aspects of the upstream component of the supply chain to improve suppliers' economic, social and environmental performance (Pagell et al., 2010), circular sourcing's ultimate goal is to shift the structure of our economy, from a linear model that takes, makes, and wastes, to a highly interconnected loop. As Fig. 1 illustrates, circular sourcing achieves this goal by embedding new, interdependent principles and metrics for reduced materials and recycled content in PSM processes. Future research should challenge and deepen this initial understanding so as to clearly define and operationalize the domain, boundaries and different manifestations of circular sourcing across diverse empirical settings. This would also help to bring circular sourcing forward as good practice.

Second, *what are the key outcomes of circular sourcing?* Circular sourcing can, in theory, tackle waste disposal, which is harmful to the natural environment, reduce extraction of virgin material, which depletes natural resources, and simultaneously improve economic efficiency (Guide et al., 2003; Hopkinson et al., 2018; De Angelis et al., 2018). The European Commission also claims that circular sourcing can contribute to higher supply chain resilience by identifying new sourcing opportunities that diversify businesses' supply bases (European Commission, 2017). However, to achieve these outcomes, will businesses' products, processes, supply chains and consumer attitudes and behaviors need to evolve? And if so, how? Future research should more closely examine the intended and unintended consequences of circular sourcing; Does it improve the environmental footprint and economic performance of a business? And, when or through what theoretical mechanisms does circular sourcing lead to the (re)configuration of a supply chain network (Miemczyk et al., 2016)? Research on sustainable and circular sourcing remains largely disconnected from studies of corporate ecological responsiveness and adaptation (Bansal and Roth, 2000), an area that has been identified as crucial for understanding the development of the circular economy (Hoffman et al., 2014).

Third, *what are the key antecedents of circular sourcing?* In order to successfully source and use circular products and materials, the focal business must first recognize the opportunity, then an enduring sourcing process must be established. Neither step is easily done; circular sourcing can be perceived as more expensive – because the price of virgin material is subject to externalities and because new materials may also incur higher production costs due to re-tooling as well as unknown safety hazards (Gualandris et al., 2021a). PSM professionals will face

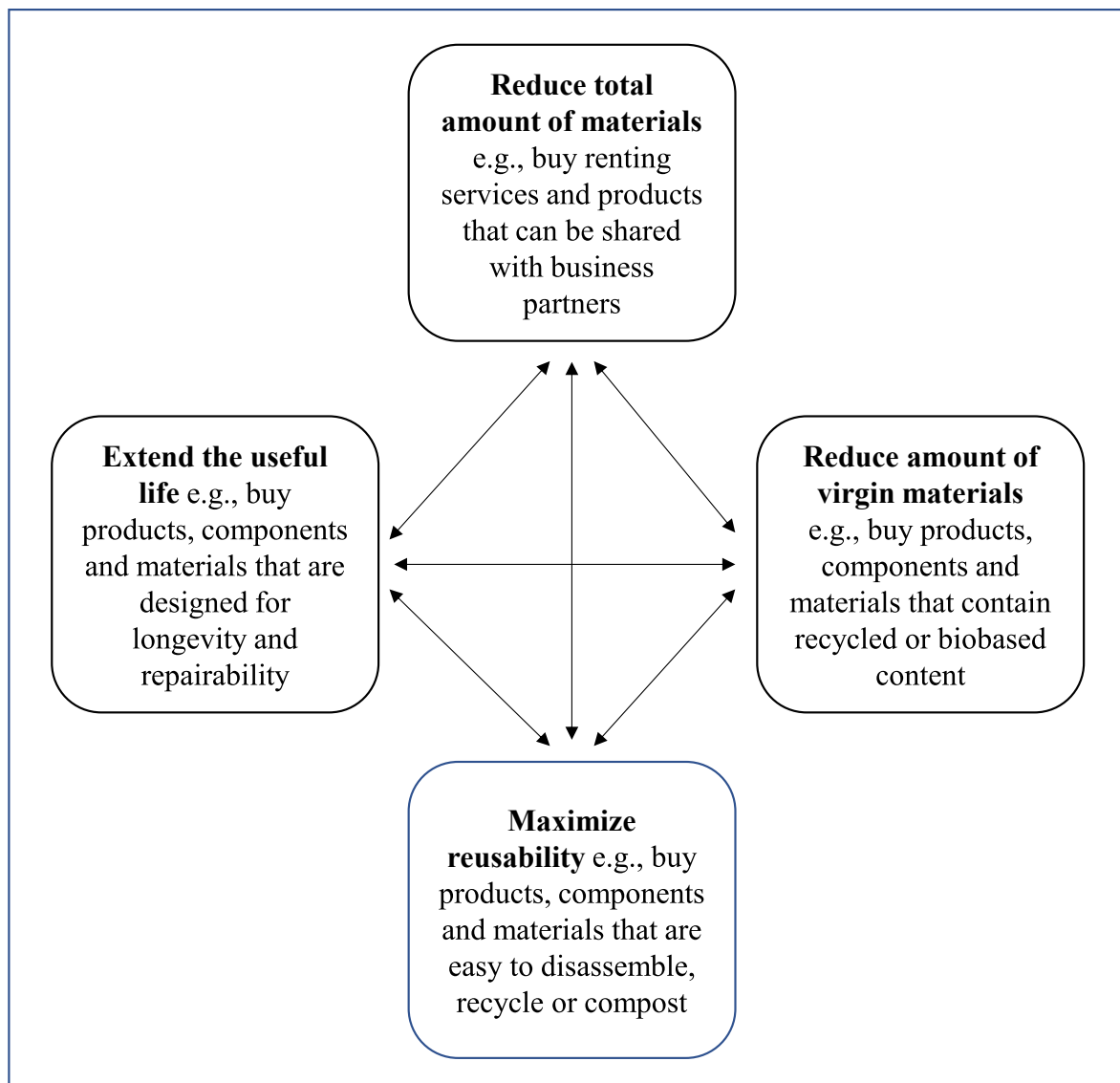


Fig. 1. Principles of circular sourcing, adapted from “The circular ambition chart” by Circular Flanders (2019).

high levels of uncertainty due to the innovative nature of the supply (Dhanorkar et al., 2019), the structure of its negotiations with suppliers offering new value propositions (Ranta et al., 2020), the potential competition with other buyers of repurposed content, and the potential need to develop new internal recovery processes (Magnusson et al., 2019). What cognitive frameworks (Baron, 2006; Nadkarni and Narayanan, 2007), departmental structures and incentives (Gualandris et al., 2018) and public policies (Gualandris et al., 2021b) help PSM professionals to accommodate such uncertainty in their decision-making process? This research could support the development of regenerative businesses, supply chains and markets by illuminating the cognitive, organizational and institutional enablers of emergent sourcing approaches that, similar to Total Value Contribution (Gray et al., 2020), overcome cost-first decision-making and its unintended consequences for environmental, societal and economic systems.

Next, *how can business eco-systems help or hinder the development and deployment of circular sourcing?* Tate et al. (2019) noted that from a biomimetic lens the current business ecosystem lacks the kind of underlying informational network that natural ecosystems use in order to keep track of and exchange resources, as for example in forests. With upcoming technological innovations, like blockchain technology enabling material passports (Tate et al., 2019) and facilitating reverse

logistics (Kouhizadeh et al., 2022), this might just be about to change. Furthermore, to emulate natural ecosystems, our business ecosystems will need to develop more reverse processes and disassembly capabilities, in analogy to scavengers and decomposers in nature (Tate et al., 2019). Business ecosystems will need to become more balanced (symbiotic), with different actors, from producers to consumers, scavengers and decomposers, recognizing the importance of their unique, yet interdependent, contributions to the system (Tate et al., 2019). Efficient secondary markets must connect diverse supply chains to find economically valuable applications for surplus, by-products and end-of-life materials in ways that avoid unintended consequences for the natural environment (Bryce, 2021). Open business models might be required, where a network of organizations jointly works to develop circular solutions and challenge “business-as-usual” strategies and practices (Spraul and Stumpf, 2022). Here, PSM might be a facilitator of such endeavors at the buyer-supplier interface and potentially bridging between multiple organizations and stakeholder groups. For example, in the context of public procurement (e.g., for workwear and laundry services) it has been noted that user groups are key contributors to the development of workable solutions (Huuilgaard et al., 2022). As PSM professionals involve these users into the solution development process, they become aware of the trade-offs (such as limited variety of colors,

etc. in order to ease product circularity) and more accepting of them. Studies regarding such aspects of business ecosystem evolution offer the opportunity to discover new inter-organizational alignment processes that affect (and are affected by) the work of PSM professionals.

Finally, to develop these new business ecosystems, another organizational hurdle worth further research is how PSM professionals collaborate with other internal stakeholders; *how can PSM further evolve intra-organizational collaboration with functions like R&D and production in order to enable circular products, processes and supply chains?* For example, when fashion retailer C&A developed a T-shirt that can be recycled into new fabric or composted, new suppliers for natural dyestuffs and bio-based inks helped the business to challenge its existing product designs, facilitating later resource recovery (Rogan et al., 2022). Cross-functional teams will need to unveil and overcome complex trade-offs such as, for example, those concerning durability and recyclability of plastic materials (Gualandris et al., 2021a), and, at a more strategic level, those concerning de-growth, profit and ecological performance (Roulet and Bourello, 2020). PSM has a key role to play to learn from but also educate other internal functions to better collaborate with innovative suppliers and non-traditional actors such as circularity brokers.

Despite posing such inter-organizational and intra-organizational challenges, circular sourcing seems to hold significant potential both for environmental and social sustainability as well as risk management of private businesses and public entities. PSM research has the opportunity to act as a catalyst to reap this potential and move practice to BNAU.

5. Unleashing the innovation capacity of startup and SME suppliers

The relational view suggests that suppliers who possess – either internally or in their value network – unique resources (e.g., knowledge, capabilities, technologies) can be a source of competitive advantage to the buying firm (Yan et al., 2017). While firms have traditionally selected suppliers and structured their supplier base to achieve their strategic goals concerning costs, quality, risk, delivery and responsiveness, they have increasingly put more emphasis on innovation (e.g., Choi and Krause, 2006). To face the challenges posed by BNAU events (e.g., societal and technological developments, health emergencies, climate change) that disrupt how entire industries and economies operate, organizations both in private and public sector settings have turned to startups and technology-intensive SMEs that are often at the forefront of these developments.

5.1. Integration of startup suppliers in corporates' supplier base (Wagner)

More and more corporates aim “to get access to innovations that increase competitiveness of products or productivity of processes by engaging with startups based upon supplier relationships” (Kurpjuweit and Wagner 2020, p. 64) and hence, add startup suppliers to their supplier base. Startups also and increasingly provide solutions that help corporates to cope with BNAU challenges (e.g., innovative solutions for sustainable operations or the mitigation of supply chain disruption risk). However, firms do not yet have good answers to the question “*whether and how to effectively integrate startup suppliers into the firms' supply base*”. In order to support corporates in integrating startup suppliers, additional theoretical and empirical research in the novel startup supplier context is urgently needed. First (1), it needs to identify novel, or amend existing, concepts, constructs and mechanisms, or causal relationships within and between them. Second (2), it needs to explore context-specific theoretical predictions and purported relationships between PSM practices and their outcomes. Third (3), it should explore the influence of context-delineating variables.

- (1) Ketchen and Craighead (2021) recently introduced the concept of supply chain entrepreneurial embeddedness (SCEE) which consists of mechanisms to enrich corporates' entrepreneurial capabilities (such as creativity or rapid decision-making), which in turn helps them to “navigate chaotic conditions” (p. 54) such as in BNAU situations. The three proposed mechanisms are acquisition, assimilation and alliance building. The former two could be implemented via traditional startup collaboration models (such as corporate venture capital, mergers and acquisitions, or corporate accelerators). For the latter, the novel concepts *new venture partnering capability* (NVPC) (Zaremba et al., 2017) and *startup supplier program* including the *startup supplier stage gate process* (Kurpjuweit and Wagner 2020) have been identified in practice and analyzed. How the concept of new venture partnering unfolds in organizations and results in desired relationship outcomes (e.g., realized innovations) for the corporate is determined by a number of corporate (e.g., experience with startup supplier partnering), startup supplier (e.g., resource endowments) and dyadic (corporate–startup industry similarity) antecedents. While these concepts are an important foundation, a better understanding and empirical test of mechanisms and relationships is still needed. For example, how do the proposed NVPC variables influence relationship outcomes?
- (2) PSM practices need to be reconsidered in situations where startups as opposed to established firms are suppliers. For example, a sourcing process begins with the identification of potential suppliers (in our case startup suppliers). Firms can either engage in active or passive identification to create a pool of potential startup suppliers that support the corporate's strategic goals (Kurpjuweit et al., 2021). How do the two supplier identification approaches influence the size, suitability and quality of the supplier pool, and how fast can such suppliers be identified? Should both approaches be applied synergistically? In other words, it is still up for future research to explore whether theoretical and empirical predictions of PSM practices hold in the startup supplier context. While the way many PSM practices are performed will need to be adapted to the startup context, the theoretical predictions of outcomes will be similar for some practices (e.g., frequency, quality and immediacy of buyer-supplier communication), and diverge for others (e.g., management of supplier intellectual property).
- (3) A more detailed exploration of context-delineating variables and empirical investigation how they alter theoretical predictions is needed. Experiments with buyers where they have to choose between established and startup suppliers could reveal how the startups' liability of newness and lack of organizational legitimacy (Singh et al., 1986) reduces the likelihood to be chosen for the buying firm's supplier pool. Alternatively, how does a buying firm's entrepreneurial orientation (Lumpkin and Dess, 1996) diminish the potentially negative effect of liability of newness on selection probability?

In sum, good practice firms, such as AT&T, BMW, Bosch, or LafargeHolcim have professionalized their approaches working with startups, integrated startups in their supplier pool and established relationships with startup suppliers (Wagner and Kurpjuweit, 2022). Going beyond descriptions of these exemplars, research should create generalizable insights and recommendations, so that many more companies can integrate effectively with startup suppliers.

5.2. Technology-based SMEs and innovation in public sector supply chains (Selviaridis & Patrucco)

Innovation is imperative to improve the delivery of public services and address grand societal challenges. Affordable and accessible healthcare, clean energy, digital government and improved national

security by leveraging AI-enabled cyber and space technologies are some example areas where public organizations and their large, first-tier suppliers can benefit significantly from engagement with technologically-adept SMEs. In addition, innovative SMEs possess specialized forms of knowledge that can help public agencies to respond rapidly and effectively to BNAU situations. For instance, Technology Partnership, an SME firm based in Cambridge, contributed significantly to the swift development of a new model of ventilator for hospital use during the first wave of COVID-19 in the UK. Despite the potential role of innovative SMEs, *how can public organizations effectively integrate SME innovations into their supply chains* remains an open question.

Research suggests that the ability of public buying organizations to tap into SME innovations is constrained by multiple factors. These pertain both to the SME supplier and to the public sector buying side. Technology-based SMEs face limitations owing to their smallness (Kull et al., 2018): lack of finance, capability and capacity shortfalls, and limited social capital and market reputation make their engagement with buying organizations challenging. Public buying organizations however lack capabilities to ask and contract for innovation, and are also constrained by rules, regulations and norms that impede collaboration with innovative SMEs (Bruce et al., 2019). For example, the English National Health Service (NHS), as a buying organization, is mandated to use standardized framework contracts with rigid pre-qualifications provisions and re-tendering windows which militate against SME innovation.

In response to these limitations, various public policies aimed at fostering SME innovation have been introduced. These policies emphasize the role of public procurement in promoting SME engagement in public sector supply chains in general (Harland et al., 2019), and in supporting the development and adoption of SME innovations in particular (Selviaridis and Spring 2022). Examples of policy measures to increase SME access to public sector contracting include the provision of financial assistance, lot-sizing of contracts, and buyer obligations for prompt payment. Beyond supporting innovative SMEs to bid for and win government contracts, public policies include innovation-specific interventions e.g. to improve SMEs' capabilities, promote interactions between innovative SMEs and public buying organizations, and incentivize collaborative R&D activity (Selviaridis, 2021). Policies geared towards open innovation and collaboration have played a prominent role in the fast development and proliferation of innovations required to respond to the COVID-19 pandemic (Patrucco et al., 2022). In the United States for example, the Department of Defense has been able to increase SME participation in innovation activities through the introduction of low-risk types of contracts such as rapid technology prototyping, staged contracts, milestone-based competitions and challenge-based acquisitions.

Despite these insights, research at the intersection between SME supplier innovation and public policy is still in its infancy. We need to understand better how PSM practices and procedures facilitate the development and adoption of SME innovations in public sector supply chains. One example area is the use of 'agile' contracting practices, which allow for more frequent and more responsive tendering. These practices are not only friendly to innovative SMEs but also promote supply resilience in case of disruptions such as COVID-19. Future PSM research should also examine the role of intermediary actors who connect SMEs with public organizations and their suppliers, fill in capability gaps, and shape rules and behaviors conducive to SME innovation. Importantly, we also see a need for more policy-oriented PSM research that purposefully engages with agencies designing and enacting public policy. The ambition is that PSM researchers, policy makers and practitioners co-create solutions that improve the alignment between public procurement policy on the one hand, and (SME) innovation policies on the other. Intervention-based research strategies (Oliva, 2019) are particularly promising for leveraging PSM expertise to help shape more effective SME innovation policies. Close engagement with policy makers could also help develop novel theoretical insights regarding the process

of designing and implementing public policy, and the role and limits of PSM therein.

6. Discussion and conclusion

Prior to 2020, many global manufacturing firms built capabilities to cope with significant supply chain disruptions (Craighead et al., 2007). Now, protecting against supply chain vulnerability is center-stage for all sectors, including the public and health sectors. It is widely argued – often in positive terms – that there are lessons to learn from how society coped with the pandemic which will help us deal better with the climate crisis and related biodiversity loss. For example, learning to fast-track the adoption of digital technologies, the development of public-private collaborations to strengthen SCs and better information sharing between buying organizations are all positive outcomes. There has also been plenty of learning related to securing or selling supplies through effective and yet unethical practices (e.g. corruption, profiteering), to deliver benefit to a few, to the detriment of others. Experience from the pandemic has demonstrated that one response pathway open to governments facing crises, whether caused by climate or disease, is a nationally-bounded, security-driven strategy focused on protecting resources.⁴ Here, evidently, PSM would have a crucial role to play in securing resources albeit within a questionable strategic context.

In the JPSM 2019 editorial, we took a more positive view, contemplating the potential contribution of strategic procurement to the transitions we face, which we aim to promote once again in this article. As shown in the introduction, these transitions are seen in many different ways, but all entail radical change to business; rather than wait to see details unfold, a proactive effort to understand the implications of these new directions is needed. Within the PSM community of practitioners and researchers, we know a lot about how PSM/SCM can help firms and buying organizations become less unsustainable, and about mitigating certain, specific supply risks. However, the field of PSM has a long way to go in understanding how it can contribute over the long term in helping to shape new ways of doing business which are resilient and agile, (with at least a prospect of) delivering genuinely ecologically and socially sustainable outcomes. What we – as PSM scholars – might do to begin to address that gap is the focus of this article and the associated editorials (2019 issue 5, and this issue).

Looking across the various contributions above, and considering what they tell us, directly or by implication, or what they do not address, various, intersecting points are noteworthy.

Attention on and (mis)conceptions of supply chains - The current level of political and societal attention on supply chains and mitigating future disruptions is likely to wane. In the news, 'supply chain management' is all too often used indiscriminately, with meanings ranging from inventory management and distribution, to (e.g.) industrial policy for domestic production capacity. In taking up Schoenherr and Matopoulos' advice, PSM scholars will need to articulate very clearly the connections between PSM, logistics, industrial policy and innovation policy etc. We need to recognize that there is currently a unique, and highly likely time-limited, opportunity for developing the status of PSM in industry and policy settings.

Differentiating less unsustainable PSM from BNAU PSM - Green PSM and the role of PSM in innovation are well established in practice and research. Teasing apart the complex web of drivers, strategies, practices, outcomes etc. that characterize the more radical vs the more

⁴ Termed the "armed lifeboat" strategy by Parenti (2012, cited in Ghosh, 2016: 143) which, in the context of the climate emergency, is centered on keeping climate refugees at bay and protecting the nation's resources – a 'Darwinian', 'unthinkable' approach (Ghosh, 2016: 144); "The trouble, however, is ... the ongoing changes in the climate, and the perturbations that will cause *within* nations, cannot be held at bay by reinforcing man-made boundaries" "(ibid).

traditional conceptions of PSM is not easy. We need to clearly articulate how circular sourcing and innovation as discussed here (i.e. with a BNAU emphasis) differ from more traditional conceptions of procurement's contribution. These are just two of many themes which can be addressed in this domain. New product and process technologies, and PSM/SCM digitalisation are focal themes for future research (Di Mauro and Giannakis, 2019; Srai and Lorentz, 2019). Entrepreneurialism in PSM, and PSM by entrepreneurs, are further themes that complement some of the points raised above. Important themes to reconsider related to the sustainability of sourcing decisions are value creation, appropriation and distribution (Bapuji et al., 2018) and firm purpose and competitive advantage (Harrison et al., 2020; Goranova and Vertegen Ryan, 2021).

Do we need to look back too? - Predictably, all the contributors to this article are – to varying extents – critical of the current state of business and PSM. In this article and associated editorials, we advocate looking forward to develop new ways of doing PSM to deliver new outcomes, but do we also need to look back? Gualandris, Bals, Meehan and Touboulis refer to regenerative economy/business which must displace our historical 'degenerative linear economy' (Raworth, 2017). The successful development trajectory mentioned by Schoenher has been in enabling the linear, extractive economy. How (if at all) does the PSM expertise to excel in supporting the 'take-make-use-lose' model of industry serve in enacting 'restore, preserve, and enhance' regenerative business strategies (Hahn and Tampe, 2021)? Similarly, how should PSM and SCM expertise evolve to reduce the vulnerability of supply chains and prepare for future crises? In attempting to move the field forward, we also must contextualize PSM research and consider how the past business practice shapes the way that global supply chains are structured, organized, and governed today. It is only through such considerations that we can surface taken-for-granted assumptions and innovate at the pace and scale required to meet the challenges.

Impact - ambition, voice and beneficiaries - Several pieces in this article advocate that PSM scholars become more ambitious in the research questions we ask and the intellectual 'space' we occupy. This may require overcoming our traditional caution to venture across disciplinary boundaries more often and more broadly than we have done so far. For example, combining Meehan and Touboulis's critical perspective with circular sourcing research – discussed by Bals and Gualandris – would connect PSM to ecological economics themes such as planetary boundaries, ecocentrism and degrowth. For a true long-standing and global impact, our research should connect to debates among economists, regulators and ethicists on resilience, efficiency and competition.

This involves relating PSM not just to business strategy but to industrial and economic policy, re-considering the epistemological foundations of our research, and using new channels to reach our audiences. This aligns with Johnsen, Miemczyk and Caniato's calls for reconsidering the value we place on practice-oriented findings. Wagner, Matopoulos, and Selviaridis and Patrucco all advocate spreading understanding and capacity building beyond large firms – a part of the business community which has to date enjoyed disproportionate attention from PSM researchers. Widening access to actionable knowledge and collaborative modes of working are common threads above (open innovation, open business models, widening impact, etc.)

In their recent essay, *Three Paradoxes of Climate Truth for the Anthropocene Social Scientist*, Jennings and Hoffman (2021) advocate a 'third way' for social scientists as an alternative to either disengaging from real world issues, or becoming emotionally over-burdened. Social scientists can embrace the paradoxes they identify and push back against the tensions in various ways, recognizing that:

"Holding these scientific and social truth variants in mind, and looking where we have been versus where we might imagine we could go, is the crux of the current tension faced by the social scientist working with the Anthropocene as a new reality." (p. 525)

"The application of broader social principles to our work – fairness, justice, equity, sustainability – go beyond standard values of profit maximization, efficiency, and theoretical relevance. These broader social principles are often present in our work and ourselves, but the drive toward 'objectivity' forces us to repress them." (p. 525)

and the importance of new skills in science communication and public engagement for the engaged scholar (Hoffman, 2016) alongside developments in research governance and management (Jennings and Hoffman, 2021: 526).

Relating Jennings and Hoffman's points to the above contributions and discussion can, we hope, provide some grounds for optimism and motivation for further effort to re-orient PSM research towards making an enduring, significant impact in (re-)shaping business. The various contributions show we have much to learn both in our research practice and the topics we investigate. They also indicate the JPSM editorial team's commitment to learning and innovating in this field. We encourage readers to reflect both on the details and the broader message, and to engage in deep and open discussions about the need for change and vision for BNAU. And when this leads to new PSM research findings suited to publication in an academic journal, we urge you to send your paper to this journal.

Endnote

This article went into production on the day Russia invaded Ukraine. In the days since, as we follow the news, learn of the terrible humanitarian consequences of the war and devise ways of offering support nationally, locally and individually, we are also urgently driven to understand some of the global direct, and indirect, implications for shortages, transport disruptions, and rising costs across many commodity groups, especially oil and grains (with projected producer prices at their highest values in 40 years). For PSM practitioners, this adds an extra layer of complexity to the pre-existing "perfect storm" caused by Covid-19. More importantly, we also recognise the global societal risks from rising prices of food and other basic living needs. The Covid-19 pandemic, and now the war in Ukraine, starkly highlight the PSM community's need for much greater awareness of the geopolitical environment, and associated expertise. From a BNAU perspective, there is much to learn, not only in how to cope with crises, but how changing approaches to PSM might help businesses, governments and other buying organizations operate in ways which mean their commercial decisions help alleviate systemic challenges, rather than deepen them.

APPENDIX. Extract from JPSM Editorial (2019)

3.2. PSM research priorities looking forward: adding business-NOT-as-usual

"Scientists have a moral obligation to clearly warn humanity of any catastrophic threat and to 'tell it like it is.' "... we declare ... clearly and unequivocally that planet Earth is facing a climate emergency".

Ripple, Wolf, Newsome, Barnard, Moomaw and 11000 + signatories, Bioscience, 2019

The climate crisis now has much greater attention from mainstream media and the public than it did even 18 months ago. If and how this rise in attention will drive faster, deeper and wider systemic change remains to be seen. Acknowledging that we face the climate emergency, growing inequalities, and rapid technological change [...] means accepting society faces a fundamental transition in the near term. 'Business-as-usual' is not an option and we can expect radical, systemic change across all sectors, and at all levels (Wright and Nyberg, 2017: 1657). As some business sectors disappear and others emerge, governance structures change, and value networks are re-shaped (Howard-Grenville et al., 2014), the commercial interface between organizations will change, strategic relationships and resources will be governed differently,

procurement decision making criteria will shift and many processes will be automated. Here, we consider how PSM, whether as a function, profession, field or discipline, is positioned to contribute to 'business-not-as-usual' (BNAU).⁵ We argue these changes represent opportunities for PSM to contribute more widely to 'grand challenges' (George et al., 2016), and propose avenues for greater engagement.

JPSM's launch roughly coincided with the advent of 'sustainable procurement'/'sustainable supply chain management' (SSCM), in which organizations reduce their net negative environmental or social impact by influencing change in their supply base and logistics. Tate et al. (2012) analysis of research on environmental PSM shows an early set of papers from the 1990s, with significant growth in publications about sustainability and PSM starting in 2007 (Quarshie et al., 2016), and the inclusion of social outcomes.

However, across business and management studies, in the last five years or so, there is an increasingly critical perspective, with many speaking against some of the developments in practice, and educators' part in promoting them. Criticisms include: the huge growth in pro-sustainability rhetoric is not matched by real change; key messages have been distorted and progress has stalled; where change is achieved it is only about becoming less unsustainable (Wright and Nyberg, 2017; Ehrenfeld and Hoffman, 2013). These arguments have fed into a critique of SSCM (see for example Montabon et al., 2016; Matthews et al., 2016).

Necessarily, most PSM research has been focused on meeting the near-term needs of organizations. The primacy of shorter-term, private and (mostly) economic benefit breaks down in the face of grand challenges, yet that is where historically – with good reason – PSM academics have focused their attention. Research on, for example, 'whole' supply chains and networks, on the concept of value in sourcing decision-making, on facilitating innovation, and on new PSM process technologies take the field in the right direction for engaging with BNAU. And yet this PSM research is important and necessary, but not sufficient.

It could be argued that PSM people should bide their time, waiting for clearer vision and direction from senior executives, business 'influencers', policy makers, public servants, etc, to frame PSM's supporting role in transformative change to address grand challenges. There is however an important and potentially immediate part to play for PSM leaders in all sectors to facilitate systemic BNAU change, for example: through generating demand for novel goods, services or technologies; by serving as commercial experts in interorganizational collaborative planning; facilitating innovation adoption; harnessing positive network effects from new tech; (re)configuring interorganizational networks; cooperating with other buying organizations; promoting social and business development; managing scarce resources; challenging traditional notions of relationship risk and opportunity, and value. All these activities are familiar facets of strategic PSM; what is different is the context. Wynstra et al. (2019) show a reduction in the volume of strategic PSM research, relative to operational PSM. This needs to change, with more strategic PSM research specifically targeting the context of BNAU/grand challenges. The complexity and emergent nature of these settings will mean bridging system-level and disciplinary divides (Molloy et al., 2011), working with economists, innovation policy leads, public agencies, NGOs, activist organizations etc.; adopting future focused, exploratory, participatory methods (Linnenluecke et al., 2017), placing renewed emphasis on engaged scholarship with genuine co-production; more critically and reflexively evaluating and developing our own role as educators and researchers. These priorities resonate with a critical management perspective, but should not be regarded as only relevant to critical, activist (Touboulis and McCarthy, 2020) PSM scholars. It will also lead to a renewed emphasis on theorizing as scholars assess the relevance of established theories and adapt them, or develop new theories.

JPSM actively encourages submissions from researchers working in one way or another on 'business-NOT-as-usual' – a term we use to refer to commercial exchange in general and therefore to include exchange

between organizations from any sector. To take this forward, in addition to topics listed in the 2016 issue 2 editorial, we would welcome papers on, for example, but not limited to:

Sectors

- Contracting for infrastructure
- PSM in emerging sectors
- PSM in networks with non-traditional actors, contesting the traditional public vs private sector divide

Management and governance

- PSM's role in business system transition
 - PSM and grand challenges, or in the context of mega-trends
 - Governance in commercial relationships and networks in novel settings
 - PSM related regulation (e.g., related to eco-environment or market concentration)
 - Leadership in/of PSM as a function and as a profession
- #### Digitalisation
- Data and systems expertise within the PSM domain
 - Risks and opportunities from new technologies in PSM processes (e.g. on the quality and outcomes of decision-making)
 - PSM analytics
 - Implementation of PSM digitalisation projects

Footnote 5 – We intentionally adopt an optimistic view, and assume society will be mobilised to engender positive, transformative change in the short and medium term. We recognize of course this optimism may be misplaced. In the case of business-as-usual, in the medium and long term, there will also be transformative, systemic change affecting whole sectors, governance, value networks etc. in dramatic ways, perhaps to the advantage of the few, but definitely to the detriment of wider society.

References

- Bäckstrand, J., Halldórsson, Á., 2019. Engaged scholar(ship) in purchasing and supply management (PSM): creative tension or squeezed in the middle? *J. Purch. Supply Manag.* 25 (4), 100557.
- Banerjee, S.B., 2003. Who sustains whose development? Sustainable development and the reinvention of nature. *Organ. Stud.* 24 (1), 143–180.
- Banerjee, S.B., 2008. Corporate social responsibility: the good, the bad and the ugly. *Crit. Sociol.* 34 (1), 51–79.
- Banerjee, S.B., 2010. Governing the global corporation: a critical perspective. *Bus. Ethics Q.* 20 (2), 265–274.
- Bansal, P., Roth, K., 2000. Why companies go green: a model of ecological responsiveness. *Acad. Manag. J.* 43 (4), 717–736.
- Bapuji, H., Husted, B.W., Lu, J., Mir, R., 2018. Value creation, appropriation, and distribution: how firms contribute to societal economic inequality. *Bus. Soc.* 57 (6), 983–1009.
- Baron, R.A., 2006. Opportunity recognition as pattern recognition: how entrepreneurs "connect the dots" to identify new business opportunities. *Acad. Manag. Perspect.* 20 (1), 104–119.
- Boer, H., Holweg, M., Kilduff, M., Pagell, M., Schmenner, R., Voss, C.A., 2015. Making a meaningful contribution to theory. *Int. J. Oper. Prod. Manag.* 35 (9), 1231–1252.
- Bruce, J., de Figueiredo, J., Silverman, B., 2019. Public contracting for private innovation: government capabilities, decision rights, and performance outcomes. *Strat. Manag. J.* 40 (4), 533–555.
- Bryce, E., 2021. Are clothes made from recycled materials really more sustainable? *The Guardian*. Available at: <https://www.theguardian.com/environment/2021/nov/06/clothes-made-from-recycled-materials-sustainable-plastic-climate>.
- Carney, M., 2021. Value(s): Building a Better World for All. William Collins, London.
- Carnovale, S., DuHadway, S., 2021. Continuity in the face of disruptions: purchasing and supply management research's persistence amidst COVID-19. *J. Purch. Supply Manag.* 27, 100720.
- Carter, C.R., Kaufmann, L., Ketchen, D.J., 2020. Expect the unexpected: toward a theory of the unintended consequences of sustainable supply chain management. *Int. J. Oper. Prod. Manag.* 40 (12), 1857–1871.
- Choi, T.Y., Rogers, D., Vakil, B., 2020. Coronavirus is a wake-up call for supply chain management. *Harv. Bus. Rev.* 27, 364, 0017-8012.
- Choi, T.Y., Krause, D.R., 2006. The supply base and its complexity: implications for transaction costs, risks, responsiveness, and innovation. *J. Oper. Manag.* 24 (5), 637–652.

- Circular Flanders, 2019. The circular ambition chart. Accessed date: November 2nd, 2021. Available at: <https://aankopen.vlaanderen-circulair.be/en/getting-started/the-ambition-map>.
- Ciulli, F., Kolk, A., Boe-Lillegraven, S., 2019. Circularity brokers: digital platform organizations and waste recovery in food supply chains. *J. Bus. Ethics* 1–33.
- Cook, J.A., 2010. Supply chain versus the volcano, supply chain quarterly, perspectives. Available at: <https://www.supplychainquarterly.com/articles/348-supply-chain-versus-the-volcano>.
- Cornelissen, J., Höllerer, M.A., Seidl, D., 2021. What theory is and can Be: forms of theorizing in organizational scholarship. *Organ. Theor.* 2 (3), 26317877211020328.
- Craighead, C.W., Blackhurst, J., Rungtusanatham, M.J., Handfield, R.B., 2007. The severity of supply chain disruptions: design characteristics and mitigation capabilities. *Decis. Sci. J.* 38 (1), 131–156.
- Cutler, A.C., Lark, D., 2020. The Hidden Costs of Law in the Governance of Global Supply Chains: the Turn to Arbitration, Review of International Political Economy. <https://doi.org/10.1080/09692290.2020.1821748>.
- De Angelis, R., Howard, M., Miemczyk, J., 2018. Supply chain management and the circular economy: towards the circular supply chain. *Prod. Plann. Control* 29 (6), 425–437.
- de Sousa Santos, B., 2018. *Decolonising the University*. Cambridge Scholars Publishing Cambridge.
- Dhanorkar, S., Kim, Y., Linderman, K., 2019. An empirical investigation of transaction dynamics in online surplus networks: a complex adaptive system perspective. *J. Oper. Manag.* 65 (2), 160–189.
- Di Mauro, C., Giannakis, M., 2019. Special issue of the 27th annual IPSE conference 2018-purchasing & supply management: fostering innovation. *J. Purch. Supply Manag.* 25 (4), 100573.
- Diprose, R., Kurniawan, N., Macdonald, K., Winanti, P., 2020. Regulating Sustainable Minerals in Electronics Supply Chains: Local Power Struggles and the 'hidden Costs' of Global Tin Supply Chain Governance, Review of International Political Economy. <https://doi.org/10.1080/09692290.2020.1814844>.
- du Plessis, C., 2012. Towards a regenerative paradigm for the built environment. *Build. Res. Inf.* 40 (1), 7–22.
- Ehrenfeld, J.R., Hoffman, A.J., 2013. *Flourishing: A Frank Conversation about Sustainability*. Stanford Business Books, Stanford, US.
- European Commission, 2017. Public procurement for a circular economy: good practice and guidance. Accessed on Oct 18th, 2021. Available at: https://ec.europa.eu/environment/gpp/circular_procurement_en.htm.
- Figueres, C., Rivett-Carnac, T., 2020. *The Future We Choose: Surviving the Climate Crisis*. Manila Press, London.
- Finkenstadt, D.J., Handfield, R., 2021. Blurry vision: supply chain visibility for personal protective equipment during COVID-19. *J. Purch. Supply Manag.*, 100689.
- General Motors, 2020. Ventec Life Systems and GM partner to mass produce critical care ventilators in response to COVID-19 pandemic. GM press release. March 27, 2020. <https://media.gm.com/media/us/en/gm/news.detail.html/content/Pages/news/us/en/2020/mar/0327-coronavirus-update-6-kokomo.html>.
- George, G., Howard-Grenville, J., Joshi, A., Tihanyi, L., 2016. Understanding and tackling societal grand challenges through management research. *Acad. Manag. J.* 59 (6), 1880–1895.
- Gereffi, G., Lee, J., 2012. Why the world suddenly cares about global supply chains. *J. Supply Chain Manag.* 48 (3), 24–32.
- Ghosh, A., 2016. *The Great Derangement: Climate Change and the Unthinkable*. University of Chicago Press, Chicago and London.
- Goranova, M., Verstege Ryan, L., 2021. The corporate objective revisited: the shareholder perspective. *J. Manag. Stud.* 59, 2. <https://doi.org/10.1111/joms.12714>.
- Gray, J.V., Helper, S., Osborn, B., 2020. Value first, cost later: total value contribution as a new approach to sourcing decisions. *J. Oper. Manag.* 66 (6), 735–750.
- Gualandris, J., Lee, D., Beattie, C., 2021a. HP Canada Co.: a circular supply chain for recycled plastic. Ivey Publishing. Available at: <https://www.iveypublishing.ca/s/p/roduct/hp-canada-co-a-circular-supply-chain-for-recycled-plastic/01t5c00000CwqXiAAJ>.
- Gualandris, J., Lee, D., Lin, R., 2021b. Policy-driven Innovation in Reverse Supply Chains for Post-consumer Plastic in Packaging and Electronic Waste. Smart Prosperity Institute. Available at: <https://institute.smartprosperity.ca/ReverseSupplyChains>.
- Gualandris, J., Legenvre, H., Kalchschmidt, M., 2018. Exploration and exploitation within supply networks: examining purchasing ambidexterity and its multiple performance implications. *Int. J. Oper. Prod. Manag.* 38 (3), 667–689. <https://doi.org/10.1108/IJOPM-03-2017-0162>.
- Guide Jr., V.D.R., Jayaraman, V., Linton, J.D., 2003. Building contingency planning for closed-loop supply chains with product recovery. *J. Oper. Manag.* 21 (3), 259–279.
- Hahn, T., Tampe, M., 2021. Strategies for regenerative business. *Strat. Organ.* 19 (3), 456–477.
- Hahn, T., Tampe, M., 2021. Strategies for regenerative business. *Strat. Organ.* 19, 456–477.
- Handfield, R., Finkenstadt, D.J., Schneller, E.S., Godfrey, A.B., Guinto, P., 2020. A commons for a supply chain in the post-COVID-19 era: the case for a reformed strategic national stockpile. *Milbank Q.* 98 (4), 1058–1090.
- Harland, C., Telgen, J., Callender, G., Grimm, R., Patrucco, A., 2019. Implementing government policy in supply chains: an international co-production study of public procurement. *J. Supply Chain Manag.* 55 (2), 6–25.
- Harrison, Jeffrey S., Phillips, Robert A., Edward Freeman, R., 2020. On the 2019 business roundtable "statement on the purpose of a corporation. *J. Manag.* 46 (7), 1223–1237.
- Hernández, M., Muñoz, P., 2021. Reformists, Decouplists and Activists: A Typology of Ecocentric Management. *Organization & Environment*. <https://doi.org/10.1177/1086026621993204> (in press).
- Hoffman, A.J., Corbett, C.J., Joglekar, N., Wells, P., 2014. Industrial ecology as a source of competitive advantage. *J. Ind. Ecol.* 18 (5), 597–602.
- Hoffman, Andrew J., 2016. Reflections: academia's emerging crisis of relevance and the consequent role of the engaged scholar. *J. Change Manag.* 16 (2), 77–96.
- Hofmann, H., Schleper, M.C., Blome, C., 2018. Conflict minerals and supply chain due diligence: an exploratory study of multi-tier supply chains. *J. Bus. Ethics* 147, 115–141.
- Hopkinson, P., Zils, M., Hawkins, P., Roper, S., 2018. Managing a complex global circular economy business model: opportunities and challenges. *Calif. Manag. Rev.* 60 (3), 71–94.
- Howard-Grenville, J., Buckle, S.J., Hoskins, B.J., George, G., 2014. Climate change and management. *Acad. Manag. J.* 57 (3), 615–623.
- Huulgaard, R.D., Kristensen, H.S., Remmen, A., Smink, C.K., 2022. Circular public procurement: a case study of workwear and laundry services. In: Bals, L., Tate, W., Ellram, L. (Eds.), *Circular Economy Supply Chains – from Chains to Systems*. Emerald.
- Jennings, P.D., Hoffman, A.J., 2021. Three paradoxes of climate truth for the anthropocene social scientist. *Organ. Environ.* vol. 34, 517–529.
- Johnsen, R.E., Lacoste, S., Meehan, J., 2020. Hegemony in asymmetric customer-supplier relationships. *Ind. Market. Manag.* 87, 63–75.
- Ketchen, D.J., Craighead, C.W., 2021. Toward a theory of supply chain entrepreneurial embeddedness in disrupted and normal states. *J. Supply Chain Manag.* 57 (1), 50–57.
- Knight, L., Meehan, J., Tapinos, E., Menzies, L., Pfeiffer, A., 2020. Researching the future of purchasing and supply management: the purpose and potential of scenarios. *J. Purch. Supply Manag.* 26 (3), 100624.
- Knight, L., Vos, F.G., Meehan, J., 2021. New procurement directions in SCM. In: Sweeney, E., Waters, D. Kogan (Eds.), *Global Logistics: New Directions in Supply Chain Management*, eighth ed., pp. 95–118 London.
- Knight, Louise, Tate, Wendy, Ellram, Lisa M., Asta Salmi, Erik, M., Van Raaij, Wagner, Stephan M., 2019. Looking back & looking forward. *J. Purch. Supply Manag.* 25 (5), 100582.
- Kornberger, M., Mantere, S., 2020. Thought experiments and philosophy in organizational research. *Organ. Theor.* 1 (3), 2631787720942524.
- Kouhizadeh, M., Zhu, Q., Alkhuzaim, L., Sarkis, J., 2022. Block-chain technology and the circular economy: an exploration. In: Bals, L., Tate, W., Ellram, L. (Eds.), *Circular Economy Supply Chains – from Chains to Systems*. Emerald.
- Krznicar, R., 2020. *The Good Ancestor: How to Think Long Term in a Short-Term World*. WH Allen, London.
- Kull, T., Kotlar, J., Spring, M., 2018. Small and medium sized enterprise research in supply chain management: the case for single respondent research designs. *J. Supply Chain Manag.* 54 (1), 23–34.
- Kurpjuweit, S., Wagner, S.M., 2020. Startup supplier programs: a new model for managing corporate-startup partnerships. *Calif. Manag. Rev.* 62 (3), 64–85.
- Kurpjuweit, S., Wagner, S.M., Choi, T.Y., 2021. Selecting startups as suppliers: a typology of supplier selection archetypes. *J. Supply Chain Manag.* 57 (3), 25–49.
- LeBaron, G., 2021. The role of supply chains in the global business of forced labour. *J. Supply Chain Manag.* 57, 29–42.
- LeBaron, G., Lister, J., 2021. The hidden costs of global supply chain solutions. *Rev. Int. Polit.* 1–27. <https://doi.org/10.1080/09692290.2021.1956993>.
- Lewin, Kurt, 1945. The research center for group dynamics at Massachusetts institute of technology. *Sociometry* 8 (2). <https://doi.org/10.2307/2785233>, 126–36.
- Linnenluecke, M.K., Verreynne, M.L., de Villiers Scheepers, M.J., Venter, C., 2017. A review of collaborative planning approaches for transformative change towards a sustainable future. *J. Clean. Prod.* 142, 3212–3224.
- Lott, J., 2021. The Global Supply Chain Isn't Improving. *Washington Examiner*. September 16, 2021. <https://www.washingtonexaminer.com/policy/the-global-supply-chain-isnt-improving>.
- Lumpkin, G.T., Dess, G.G., 1996. Clarifying the entrepreneurial orientation construct and linking it to performance. *Acad. Manag. Rev.* 21 (1), 135–172.
- Magnusson, T., Andersson, H., Ottosson, M., 2019. Industrial ecology and the boundaries of the manufacturing firm. *J. Ind. Ecol.* 23 (5), 1211–1225.
- Mandia, K., 2020. FireEye shares details of recent cyber attack, actions to protect the community. *FireEye Stories*. December 8, 2020. <https://www.fireeye.com/blog/products-and-services/2020/12/fireeye-shares-details-of-recent-cyber-attack-actions-to-protect-community.html>.
- Matthews, L., Power, D., Touboulic, A., Marques, L., 2016. Building bridges: toward alternative theory of sustainable supply chain management. *J. Supply Chain Manag.* 52 (1), 82–94.
- Mazzucato, M., 2018. *The Value of Everything: Making and Taking in the Global Economy*. Public Affairs, New York.
- McLoughlin, K., Meehan, J., 2021. The institutional logic of the sustainable organisation: the case of a chocolate supply network. *Int. J. Oper. Prod. Manag.* 41 (3), 251–274.
- Melnycyk, S.A., Schoenherr, T., Speier-Pero, C., Peters, C., Chang, J.F., Friday, D., 2021a. New challenges in supply chain management: cybersecurity across the supply chain. *Int. J. Prod. Res.* <https://doi.org/10.1080/00207543.2021.1984606> (in press).
- Melnycyk, S.A., Schoenherr, T., Verter, V., Evans, C., Shanley, C., 2021b. The pandemic and SME supply chains: learning from early experiences of SME suppliers in the U.S. defense industry. *J. Purch. Supply Manag.* 27, 100714.
- Miemczyk, J., Howard, M., Johnsen, T.E., 2016. Dynamic development and execution of closed-loop supply chains: a natural resource-based view. *Supply Chain Manag.: Int. J.* 21 (4), 453–469.

- Molloy, J.C., Ployhart, R.E., 2011. The myth of “the” micro-macro divide: bridging system-level and disciplinary divides. *J. Manag.* 37 (2), 581–609.
- Monczka, R.M., Handfield, R.B., Giunipero, L.C., Patterson, J.L., 2020. *Purchasing & Supply Chain Management*, seventh ed. (Cengage).
- Montabon, F., Pagell, M., Wu, Z., 2016. Making sustainability sustainable. *J. Supply Chain Manag.* 52 (2), 11–27.
- Moorhead, P., 2021. HP Celebrates Earth Day 2021 with Aggressive Climate Action Goals. *Forbes*. Accessed on Oct 18th, 2021 at: <https://www.forbes.com/sites/patrickmoorhead/2021/04/20/hp-celebrates-earth-day-2021-with-aggressive-climate-action-goals>.
- Morrison, S., 2021. How a major oil pipeline got held for ransom. *Vox*. June 8, 2021. <https://www.vox.com/recode/22428774/ransomware-pipeline-colonial-dar-kside-gas-prices>.
- Moxham, C., Kauppi, K., 2014. Using organisational theories to further our understanding of socially sustainable supply chains: the case of fair trade. *Supply Chain Manag.: Int. J.* 19 (4), 413–420.
- Nadkarni, S., Narayanan, V.K., 2007. Strategic schemas, strategic flexibility, and firm performance: the moderating role of industry clockspeed. *Strat. Manag. J.* 28 (3), 243–270.
- Nadkarni, S., Gruber, M., DeCelles, K., Connelly, B., Baer, M., 2018. From the Editors: new ways of seeing: radical theorizing. *Acad. Manag. J.* 61, 371–377.
- New, S.J., 2015. Modern slavery and the supply chain: the limits of corporate social responsibility? *Supply Chain Manag.* 20 (6), 697–707.
- Oliva, R., 2019. Intervention as a research strategy. *J. Oper. Manag.* 65, 710–724.
- Pagell, M., Shevchenko, A., 2014. Why research in sustainable supply chain management should have no future. *J. Supply Chain Manag.* 50 (1), 44–55.
- Pagell, M., Wu, Z., 2009. Building a more complete theory of sustainable supply chain management using case studies of 10 exemplars. *J. Supply Chain Manag.* 45 (2), 37–56.
- Pagell, M., Wu, Z., Wasserman, M.E., 2010. Thinking differently about purchasing portfolios: an assessment of sustainable sourcing. *J. Supply Chain Manag.* 46, 57–73.
- Parenti, C., 2012. *Tropic of Chaos: Climate Change and the New Geography of Violence*. Nation Books, New York.
- Patrucco, A.S., Kähkönen, A.-K., 2021. Agility, adaptability, and alignment: new capabilities for PSM in a post-pandemic world. *J. Purch. Supply Manag.* 27, 100719.
- Patrucco, A., Trabucchi, D., Frattini, F., Lynch, J., 2022. The impact of Covid-19 on innovation policies promoting open innovation. *R D Manag.* 52 (2), 273–293. <https://doi.org/10.1111/radm.12495>.
- Pettit, T.J., Croxton, K.L., Fiksel, J., 2013. Ensuring supply chain resilience: development and implementation of an assessment tool. *J. Bus. Logist.* 34 (1), 46–76.
- Pirgmaier, E., 2017. The neoclassical Trojan horse of steady-state economics. *Ecol. Econ.* 133, 52.
- Porcari, J.D., Fazili, S., Reynolds, L., 2021. Improving and tracking supply chains link by link. *The White House, Briefing Room*. November 3, 2021. <https://www.whitehouse.gov/briefing-room/blog/2021/11/03/improving-and-tracking-supply-chains-link-by-link/>.
- Quarshie, A., Salmi, A., Wu, Z., 2021. From equivocality to reflexivity in biodiversity protection. *Organ. Environ.* 34 (4), 530–558.
- Quijano, Anibal, 2000. Coloniality of power and eurocentrism in Latin America. *Int. Sociol.* 15 (2), 215–232.
- Ranta, V., Keränen, J., Aarikka-Stenroos, L., 2020. How B2B suppliers articulate customer value propositions in the circular economy: four innovation-driven value creation logics. *Ind. Market. Manag.* 87, 291–305.
- Raworth, K., 2017. *Doughnut Economics: Seven Ways to Think like a 21st-Century Economist*.
- Rogan, J., Fürstberg, F., Wieland, A., 2022. Shaping the transition from linear to circular supply chains. In: Bals, L., Tate, W., Ellram, L. (Eds.), *Circular Economy Supply Chains – from Chains to Systems*. Emerald.
- Roulet, T., Bothello, J., 2020. Why de-growth shouldn't scare businesses. *Harv. Bus. Rev.* February. Feb 14 2020. <https://bg.hbr.org/2020/02/why-de-growth-shouldnt-scare-businesses>.
- Schatteman, O., Woodhouse, D., Terino, J., 2020. *Supply Chain Lessons from Covid-19: Time to Refocus on Resilience*. Bain & Company, Inc., Boston, MA, pp. 1–12.
- Schoenherr, T., Mena, C., Choi, T., 2019. *Measuring and Managing Risks in Supply Chains*. CAPS Research Report, Tempe, AZ.
- Schot, J., Steinmueller, E., 2018. Three frames for innovation policy: R&D, systems of innovation and transformative change. *Res. Pol.* 47, 1554–1567.
- Selviaridis, K., 2021. Effects of public procurement of R&D on the innovation process: evidence from the UK small business research initiative. *J. Public Procure.* 21 (3), 229–259.
- Selviaridis, K., Spring, M., 2022. Fostering SME supplier-enabled innovation in the supply chain: the role of innovation policy. *J. Supply Chain Manag.* 58 (1), 92–123.
- Singh, J.V., Tucker, D.J., House, R.J., 1986. Organizational legitimacy and the liability of newness. *Adm. Sci. Q.* 31 (2), 171–193.
- Sodhi, M.S., Tang, C.S., 2021. Extending AAA capabilities to meet PPP goals in supply chains. *Prod. Oper. Manag.* 30, 625–632.
- Sommer, B., 2017. Externalisation, globalised value chains, and the invisible consequences of social actions. *Hist. Soc. Res. Hist. Sozialforsch.* 42 (4), 114–132.
- Spina, G., Caniato, F., Luzzini, D., Ronchi, S., 2016. Assessing the use of external grand theories in purchasing and supply management research. *J. Purch. Supply Manag.* 22 (1), 18–30.
- Spraul, K., Stumpf, S., 2022. Circular business models: a network approach to promote circularity and value co-creation from the producer's perspective. In: Bals, L., Tate, W., Ellram, L. (Eds.), *Circular Economy Supply Chains – from Chains to Systems*. Emerald.
- Srai, J.S., Lorentz, H., 2019. Developing design principles for the digitalisation of purchasing and supply management. *J. Purch. Supply Manag.* 25 (1), 78–98.
- Svenfelt, Å., Alfredsson, E.C., Bradley, K., Fauré, E., Finnveden, G., Fuehrer, P., Gunnarsson-Östling, U., Isaksson, K., Malmaeus, M., Malmqvist, T., 2019. Scenarios for sustainable futures beyond GDP growth 2050. *Futures* 111, 1–14.
- Swedberg, R., 2016. Before theory comes theorizing or how to make social science more interesting. *Br. J. Sociol.* 67 (1), 5–22.
- Tate, Wendy L., Ellram, Lisa M., Dooley, Kevin J., 2012. Environmental purchasing and supplier management (EPSM): theory and practice. *J. Purch. Supply Manag.* 18 (3), 173–188.
- Tate, W.L., Knight, L., 2017. A year at the helm: reflecting on roles, responsibilities and progress. *J. Purch. Supply Manag.* 23 (1), 1–4.
- Tate, W.L., Bals, L., Bals, C., Foerstl, K., 2019. Seeing the forest and not the trees: learning from nature's circular economy. *Resour. Conserv. Recycl.* 149, 115–129.
- Touboulic, A., McCarthy, L., 2020. Collective action in SCM: a call for activist research. *Int. J. Logist. Manag.* 31 (1), 3–20.
- Touboulic, A., McCarthy, L., 2021. (Re-)imagining ecologically harmonious food systems beyond technofixes. *Revue de l'Organisat. Responsable* 16 (2), 18–27.
- Touboulic, A., McCarthy, L., Matthews, L., 2020. Re-imagining supply chain challenges through critical engaged research. *J. Supply Chain Manag.* 56 (2), 36–51.
- van Hille, I., de Bakker, F.G.A., Groenewegen, P., Ferguson, J.E., 2021. Strategizing nature in cross-sector partnerships: can plantation revitalization enable living wages? *Organ. Environ.* 34 (2), 175–197.
- Wagner, S.M., Kurpjuweit, S., 2022. Startup suppliers on the rise: insights into the management of asymmetric buyer-supplier relationships. In: Choi, T.Y., Li, J., Rogers, D., Schoenherr, T., Wagner, S.M. (Eds.), *The Oxford Handbook of Supply Chain Management*. Oxford University Press, New York, pp. 685–704.
- Werner, M., Bair, J., 2019. Global value chains and uneven development: a disarticulations perspective. In: Ponte, S., Gereffi, G., Raj-Reichert, G. (Eds.), *Handbook on Global Value Chains*. Edward Elgar Publishing, Cheltenham, UK.
- Westrum, R., 1978. Science and social intelligence about anomalies: the case of meteorites. *Soc. Stud. Sci.* 8 (4), 461–493.
- Wieland, A., 2021. Dancing the supply chain: toward transformative supply chain management. *J. Supply Chain Manag.* 57 (1), 58–73.
- Wright, C., Nyberg, D., 2017. An inconvenient truth: how organizations translate climate change into business as usual. *Acad. Manag. J.* 60 (5), 1633–1661.
- Wynstra, F., Suurmond, R., Nullmeier, F., 2019. Purchasing and supply management as a multidisciplinary research field: unity in diversity? *J. Purch. Supply Manag.* 25 (5), 100578.
- Yan, T., Yang, S., Dooley, K., 2017. A theory of supplier network-based innovation value. *J. Purch. Supply Manag.* 23 (3), 153–162.
- Zaremba, B.W., Bode, C., Wagner, S.M., 2017. New venture partnering capability: an empirical investigation into how buying firms effectively leverage the potential of innovative new ventures. *J. Supply Chain Manag.* 53 (1), 41–64.