How to Define, Identify, and Measure Societal Value

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ABSTRACT

At the same time as the productivity of academics have become more formalized and institutionalized with increasing emphasis on counting publications in high-ranking journals, citations, h-index, and so on, there is an increased demand on academics to contribute to what is referred to as societal value, societal relevance, public value, societal impact, and/or similar phenomena. This editorial is an attempt to provide an overview and hopefully a clarification. We propose to use the concept 'societal value' as the overarching concept. This can be achieved only if the research has 'societal relevance' and if it has 'societal impact'. These two sub-components of societal value measure different qualities, but they are dependent on each other and the total absence of one of them results in no societal value. In fact, we shall argue that societal value is the multiplum of societal relevance and societal impact. After defining societal relevance and societal impact, we describe how to identify relevant societal value, as well as how to measure the extent to which an individual or an organization might contribute to societal value. Following that, we suggest a number of ways to increase the societal value of academic research. Finally, we reflect on the role of academic journals and their editors in the societal value agenda.

Keywords: assessment; enhancement; measurement; societal value; societal relevance; societal impact.

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1. INTRODUCTION

For universities, societal value represents an added demand, beyond academic capacities (Di Benedetto et al., 2019; Lindgreen et al., 2020a, 2020b). This societal value agenda is particularly demanded by a society that turns to universities for solutions to global issues; some national governments even have started to use societal value as a criterion to allocate funding (Lindgreen et al., 2019). When the value of business-school research to business practice itself is being questioned (Bennis and O'Toole, 2005; Glick et al. 2018), academics need to define and document how their research adds value to business and wider society.

We examine societal value in order to provide inspiration to academics such that they can provide helpful and productive contributions (Bornmann, 2013). To achieve this, we understand societal value as the product of two sub-components: societal relevance and societal impact. First, we define societal relevance and provide examples of how academics can integrate societal relevance to define their vision and contributions to business and the wider society. Second, we define societal impact and propose ways by which academics can measure the societal impact of their research. Accordingly, we hope that this editorial offers some clarity and ideas to the broad, sometimes messy societal value agenda.

The inclusion of societal value in *Industrial Marketing Management* is appropriate, considering one of the journal's principles, as detailed by the founding editor Derek Medford in the inaugural issue. Medford stated that it was not intended that the journal "should exclusively cater to either the highly numerate theoretician or the more practically motivated specialists. The aim is to provide information relevant to the whole spectrum of industrial marketing, which will be of interest to all" (1971: 2). That is, from its start, *Industrial Marketing Management* has sought to build on and contribute with research that offers societal value, not only to practitioners, but to society as a whole.

In more recent years, societal value has emerged in universities and beyond as part of an important process of measuring, benchmarking, and documenting that resources invested (in this case in university research) are not wasted. Accordingly, some journals now also ask for a discussion of the broader societal value of authors' submitted work, prompting academics to seek out research topics with relevance for society (Martin, 2011; Ozanne et al., 2017; Salter et al., 2017; Trencher et al., 2017).

Three main drivers seemingly have prompted this ongoing shift from solely academic impact to the inclusion of societal value. First, universities are being held more accountable for how they spend public funding. National governments seek appropriate measures of societal relevance and societal impact (we shall return to a discussion of these two constructs in the

following section of this editorial) that they can use to determine funding allocations. Research that highlights its societal value invites public validation that the universities are spending the funding to benefit society (Olmos-Peñuela et al., 2014). For example, in the UK Research Excellence Framework (REF) 2021, 'impact cases' will count for 25% (up from 20% in REF 2014) of the score of a university's submission, while research output will count for 60% (down from 65% in REF 2014) (Research England, 2020). Accordingly, universities have begun to communicate, legitimize, and brand themselves according to a societal value agenda, designed to create societal relevance and societal impact for partners from other parts of society (Phillips et al., 2018). In cases where academics seek private funding, the corporate partner is usually most interested in business-performance improvement; but even here there may be indirect societal benefit: businesses provide employment to taxpaying individuals, business taxes can be used by governments for social programs, and so on.

Second, global challenges in society—big data, climate change, emigration/immigration, energy and environmental sustainability, human health, and national security, among others—demand input from experts and scholars who can take big-picture perspectives (Boon and Edler, 2018; Hughes et al., 2011; Martí, 2018; Purcell et al., 2019). In examinations of the consequences of a closer link between producers of research and users of research (Newig et al., 2019; Rau et al., 2018; Sivertsen and Meijer, 2020), some academics (Bornmann, 2013; Hill, 2016) highlight a radical change in knowledge production, from "normal" (Mode 1) to "post-normal" (Mode 2) science. Mode 1 science is academic, disciplinary, homogeneous, autonomous, and subject to traditional quality controls; Mode 2 science instead is transdisciplinary, heterogeneous, socially accountable, reflexive, subject to novel forms of quality control, and generated in an application context. This distinction reflects the different *foci* (internal to the research community or external to the society) and accountabilities (to peer academics or a broader set of stakeholders) of the modes, though the distinctions are not necessarily mutually exclusive. Rather, academics can satisfy the requirements and norms of their peers, but also address societally valuable problems with partners from other parts of society (Gibbons et al., 1994; Hill, 2016).

Third, some critics complain that universities only produce knowledge for a small community of peer academics (Bennis and O'Toole, 2005; Butler et al., 2015, Lambert, 2019; Narasimhan, 2018; Pfeffer, 2007; Stentoft and Freytag, 2018) and measure success solely by the number of publications in highly ranked journals. Yet, other measures of research quality are available, suggesting the need for a wider perspective on the meaning of academic contributions (Lindgreen et al., 2020b). Accordingly, some universities have come to

acknowledge that publications in highly ranked journals may not always be the best and certainly not the only way to document the social, cultural, environmental, and economic returns of universities' publicly or privately funded research (Bornmann and Marx, 2013; Ozanne et al., 2017).

Instead of further arguing these points, we take a pragmatic approach that recognizes that the societal value of research depends on its contributions to, and effects over time in, complex, often indirect processes with multiple, multidirectional influences (Morton, 2015). For example, societal value may be fostered both by Mode 1 or Mode 2 knowledge-production processes. Regardless of the process, academics need to close the gap between academic research on the one hand and societal value on the other, both for accountability reasons and for moral/ethical reasons. How can we with good conscience as researchers use funds from taxpayers and students for research if our research does not contribute to societal value? Excellent research should improve business practice, should have societal relevance, and should result in measureable, documented societal value. In other words, hard-to-solve, real-world problems and societal challenges should drive academics to seek concrete, applicable solutions (Rau et al., 2018).

2. DEFINING SOCIETAL VALUE

Typically, research has been thought of in terms of its academic impact that implies "research, which breaks the dominant paradigm and influences future research investigations" (Reale et al., 2018, p. 299). Academic impact refers to an intellectual contribution to an academic's field of study (Wolf et al., 2013), often measured by proxies such as the number and rank of publications, number of citations, and/or h-index. Academic impact measures are easily available and quantifiable through databases such as Google Scholar, Scopus, and Web of Science, and are widely used to determine the quality of journals, research projects, academics, and research groups.

What about the societal value of research? Its first sub-component—societal relevance—can take on several meanings, including research with "third stream activities, societal benefits, societal quality, usefulness, public values, knowledge transfer" (Bornmann 2013, p. 217). Its second sub-component—the societal impact—is the effect that such research has over time. However, the ambiguous definitions and related terminology of societal value create problems (Reale et al., 2018), so in an effort to detail how to identify research with societal value and how to measure and enhance the research's societal value, we seek to consistently distinguish between the two sub-components of societal value. We do this because societal value only can

be achieved if the research has both societal relevance and societal impact. According, we argue that:

- Societal relevance entails "research activities providing results for use and benefit beyond science (e.g., [benefits to] practitioners and society)" (Wolf et al., 2013, p. 105), often conducted through productive interactions of researchers with society (Spaapen and Van Drooge, 2011), individual beneficiaries, organizations, or nations (ESRC, 2020). In short, societal relevance relates to whether the researcher is working with issues of interest to others. It is important to accept that the issues can cover issues from economy and health to environment and culture.
- Societal impact, on the other hand, is concerned with value measured in terms of monetary, quantitative, or qualitative measures. Societal impact can be defined as the demonstrable contribution that research "makes to society and the economy, and [in] its benefits to individuals, organizations, and/or nations" (ESRC, 2020). This could include, for example, who cares about the research, to what extent is the research noticed, and does the business community await the research results. The contribution can be measured directly or indirectly.

3. IDENTIFYING RELEVANT SOCIETAL VALUE

Most academics consider societal value as a complex, indirect process with multiple, multidirectional influences (Morton, 2015). Societal value is intrinsically domain specific and diverse, and may be difficult to capture in one indicator or a small set of indicators. For example, we often forget or suppress that highly used measures like publication counts and h-index are influenced strongly by research discipline. For instance, the number of co-authors per article is typically high in fields like medicine and astrophysics, and length and effort of writing and documenting research in articles in social science is on average much higher than in fields like medicine or physics. Equally, it is evident that the societal value of research is multifactored, created in non-linear multi-interaction with many approaches, channels, and instruments (Van den Akker et al., 2017). As a consequence, 'one-size-fits-all' assessments cannot account for all scientific disciplines or capture all types of long-term impacts in addition to all types of direct effects in society (Bornmann, 2013; GECES, 2014). In fact, in the latest REF (which took place in 2014), 150 different forms of impact were identified (Martin, 2011).

Despite societal value being multi-factored, there have been some recent attempts to develop meaningful assessments of societal value, and it is instructive to see how these have been

constructed, and what factors are considered most relevant. Thus, some academics have taken it upon themselves to define and promote societally valuable research, having initiated a network (Responsible Research in Business and Management, or RRBM) and developed a set of principles to guide and reward research that is socially responsible. The principles include (RRBM website, quoted in Davison and Bjørn-Andersen, 2019):

- service to society (the knowledge benefits society broadly, not only business);
- stakeholder involvement (non-academics are involved, without compromising the objectivity of the research);
- effect on stakeholders (the knowledge impacts non-academics and helps to build a better world);
- values basic and applied contributions (the research should advance theory and also have applied implications that address societal issues);
- values multidisciplinary contribution (interdisciplinary collaboration is necessary to address complex societal issues);
- strong methodology (scientific methods are not compromised in terms of either theoretical or empirical contributions); and
- broad dissemination (knowledge is transmitted widely to academic and non-academic audiences).

In line with the varied ways in which societal value can be created, multiple approaches might be operationalized in different research areas, depending on the type of relevance the academic wishes to achieve. Among 3,428 Danish university academics who reported their engagement with practitioners, for example, the most common forms of engagement were attending conferences with business executive participants (71%), providing informal advice to public or private actors (69%), giving public lectures (60%), publishing in non-scientific outlets (56%), conducting joint research with public partners (52%), training employees (44%), contracting research with public partners (42%), working with private partners (42%), and television or radio appearances (28%) (Kongsted et al., 2017).

Building on these insights, we now consider six dimensions of societal valuable research actitivities, as listed in Table 1. Although measures for societal relevance and societal impact also are included in the table, we will discuss those issues in the following section.

Table 1: Societal Value: Activities and Measures

Dimensions	**Activities Contributing to Societally Relevant and Impactful Research**	**Measures for Societal Value**
Dissemination of knowledge (i.e., informing)	• Public in academic journals • Produce books (college texts or guides for executives), reports, manuals, and guides • Publish in managerial journals, trade magazines, and social media • Present at academic conferences and practitioner events • Provide interviews with press and in news channels	• Number of publications or (paid) presentations to industry • Attention outside of academia (e.g., social media) • References in popular media • Number of citations in academia • Number of awards from academia and industry/society
Education (university and executive training)	• Conduct executive training • Design undergraduate and graduate courses • Perform action research	• Evaluation of training/teaching activities • Use of method or model by the company
Consulting (contract research)	• Provide consultancy services • Undertake contract research • Discuss research outcomes with managers	Depends on type of consultancy
Commercial activities (e.g., patents and licensing)	• File patents for a concept, procedure, method, measure, or tool for managers • License • Set up spin-offs	• Amount, effect, and monetary value • Number of companies implementing method/tool
Contribution to public policy	• Publish policy papers • Interact with policy actors such as politicians or interest groups • Sit on committees and conduct commissioned research	• Change in policy • Number and type of committees joined • Effects of commissioned research • Citations in calls for research or in policy documents
Interaction and collaboration (e.g., co-creation, action research, and learning)	• Participate in workshops • To engage in intervention-based research • To conduct experiments • To theorize with managers	• Degree to which the practitioner problem is solved • Changes in firms' behaviors, strategy, or structure, including the extent to which the other entity adopts a concept, procedure, or measure that shapes legislation and improves practices. • Change in stakeholders' experience, performance, relationships, and systems • Change in behavior among citizens (e.g., healthier living, rehabilitation, or less consumption) • Extent of dissemination

We want to make the disclaimer that societal value may depend on time periods and durations (Alvesson, 2017). The effects of research happen over time and traditionally do not follow a linear process, but result from a wide range of interactions (Amo, 2007). Academics have to be aware of how to increase the likelihood that their projects and research can create societal value. If a research project integrates a series of activities over time, that effort ultimately might produce societal value. Therefore, across these dimensions, academics should consider ways to increase the relevance of their research over time and in an overall sense.

3.1. Dissemination of knowledge

Dissemination of academic knowledge to a nonacademic audience often relies on indirect channels such as books, reports, manuals, guides, managerial journals, trade magazines, practitioner events, and social media since direct contact among parties is rare (Olmos-Peñuela et al., 2014). This is not surprising. Practitioners rarely read academic journals, which they find largely incomprehensible; some research even finds that academic articles increasingly are becoming unreadable (Brown et al., 2005; Crosier, 2004). Accordingly, practitioners are more likely to obtain academc knowledge through indirect channels (Anderson 2017; Hughes et al., 2011).

Few publication arenas, however, create a space for academics and practitioners to share and debate knowledge (Hughes et al., 2011), with the exception of some successful hybrid journals that explicitly aim to appeal to both practitioner and academic audiences such as *Harvard Business Review*, which we will explore later. Promoting societal value often involves external, third-party channels such as interviews with press and in news channels, as well as contributions to professional events and social media. Using these outlets, it is possible to summarize findings and spread awareness among the general population (Levin, 2004).

Promotion in the mass media or through social media can be a slippery slope, however, and the urge to ‘game’ the system must be avoided. ‘Brownie points’ should not necessarily be handed out every time there is a media mention. A small-scale study (possibly conducted among undergraduates) should not be presented to the media to get a quick publicity boost, as the caveats and limitations will not be mentioned by the media and, ultimately, there may be no (or even negative) societal value, if the results are unrepresentative of society as a whole.

We can present a successful example of dissemination of academic knowledge. One of the authors of this editorial published an article (Cooper, Lambert, and Pagh, 1997) on the definition and scope of supply chain management, which caught the attention of the Vice President of the Council of Logistics Management (CLM, now CSCMP). A short time later,

CLM modified its definition of logistics to state that it was only part of supply chain management, making it clear that the two terms were not synonyms. The article has been very widely cited, but more importantly, it has had an impact on the academic study and has been contributing to the management practice of supply chain management.

3.2. Education (university and executive training)

Contributions to education span a broad range in that education can convey new understanding, knowledge, and questions (Amo, 2007). Unlike broad education, formalized courses are tailored to the specific needs of a business, government agency, or professional group (Olmos-Peñuela et al., 2014), with a short-term, targeted consideration of a limited range of issues. Anderson et al. (2017) propose relational management education as a societally valuable intervention that expands management education beyond an instrumental-solutions teaching approach to foster critical thinking.

Here is an example illustrating the effective use and application of executive training. In 1992, one of the editorial's authors started a research center consisting of a team of academics and executives, which later became The Global Supply Chain Forum. The mission of the Forum was to provide the opportunity for leading practitioners and academics to pursue critical issues related to achieving excellence in supply chain management. The Forum developed the cross-functional, cross-firm supply chain management framework, which uniquely focused on value co-creation to drive revenues and profit. The framework has since been delivered in week-long executive programs at leading companies and universities worldwide.

3.3. Consulting (contract research)

Consultancies and contract research require direct contacts. Olmos-Peñuela et al. (2014) designate consultancy as service work commissioned by nonacademic actors that does not need to involve original, academic research. In contrast, contract research requires original research, conducted by academics at the behest of nonacademic organizations. In Germany, 17% of academics serve as formally paid consultants, and 20% of academics have jointly published with industrial partners, according to one survey (Grimpe and Fier, 2010). Both academic consultancy and contract research both can expand knowledge and training options, in interaction and discussion with clients (Hughes et al., 2011), so they can broaden clients' perspective, expertise, and knowledge and thereby potentially influence their nonacademic practices. In parallel, the clients might help identify new research issues for the academic community (e.g., Ruiz and Holmlund, 2017). Researchers who have had an effect tend to have

significant industry knowledge, as well as theoretical knowledge, and they also have an ability to apply their theory-based understanding to a business or industry context (Hughes et al. 2011).

Consider the following example of contract research. One of the authors of this editorial contacted a manager at Herman Miller, Inc. about funding a Ph.D. student's dissertation, after the student had successfully completed a project for the company that substantially lowered logistics costs. A research proposal to study marketing services that provide competitive advantage and improve profitability was funded for $70,000, which covered the Ph.D. student's stipend, the cost of research assistants, and all other costs. In addition, several publications came out of the research.

3.4. Commercial activities (e.g., patents and licensing)

Commercial activities such as patents, licensing, and spin-offs are also a form of knowledge transfer (Olmos-Peñuela et al., 2014), though they tend to be more common in STEM disciplines than in the social sciences and humanities (Olmos-Peñuela et al., 2014). Broader forms of commercial activities also include tools, educational materials, programs, and games such as learning tools for education or games developed to encourage certain habits (Amo, 2007).

Let us consider three examples. First, for their research project, Nissen et al. (2014) developed a set of tools for private firms and public actors to use in different phases of their public–private innovation projects. The tools were made available through a Danish national innovation cluster (www.welfaretech.dk/opiguide).

The second example concerns the development and validation of a multidimensional scale of knowledge brokering that BrainCompass uses to assess and profile how potential job candidates perform, and how they might improve, their current activities (http://www.braincompass.com; see also, for example, Van den Berg et al., 2014).

In the third example, the Global Supply Chain Forum, having studied 18 corporate relationships that were identified as successful by forum members, developed The Partnership Model, which has been used to structure more than 100 corporate relationships worldwide.

3.5. Contributions to public policy

Researchers can contribute to improved policy making, provide a foundation for policy decisions at different levels in society, stimulate new approaches to social issues, and inform public debates (Bornmann, 2013; Pettigrew, 2011). Societal value in relation to policy might

be direct, but more often, it appears indirect and diffuse (Amo, 2007). For example, politicians and officials might learn about research findings from intermediaries such as lobbyists, interest organizations, or think tanks, then use those findings to advance or define their political agenda (Levin, 2004). End users also might seek to leverage research to influence policy, such as farmers or people diagnosed with diseases (or associations representing them) who need data to support their causes (Bornmann, 2013). Finally, societal value might arise if researchers participate in policy committees or commissioned research, then actively engage in research that is directly applicable to policy problems, such as defining parameters for new laws or evaluating the potential impacts of proposed legislation (Bandola-Gill, 2019).

For example, one of the authors of this editorial sits on the international scientific advisory panel that engages with New Zealand Food Safety Science & Research Centre. This center co-ordinates food safety research and provides a collective resource that enhances New Zealand's reputation as a source of safe food. Three Crown Research Institutes, three Universities, and the Cawthron Institute form a partnership with the industry and the government. The international scientific advisory panel helps to provide a credible voice for food safety, as well as a strong science base for decision-making in public health and the food industry.

3.6. Interaction and collaboration (e.g., co-creation, action research, and learning)

Sharing knowledge across communities can be challenging (Brown and Duguid, 1998); in particular, academic approaches tend to be ineffective for bridging the knowledge gap between academia and practice (Tranfield et al., 2003). Increased collaboration between researchers and practitioners might aid this effort (Butler et al., 2015; Hughes et al., 2011; Möller and Parvinen, 2015), such that in a two-way coproduction of knowledge, practitioners can participate in essential ways in problem formulation, design, explication, and knowledge creation (Hughes et al., 2011; Shapiro et al., 2007; Van de Ven and Johnson, 2006), beyond practical outcomes (Hatchuel, 2001). The aforementioned Global Supply Chain Forum is an illustrative example of successful collaboration.

In collaborative, intervention-based research projects, the goal is not solely to collect data, but also to offer some solution (Arnaboldi, 2013). Different approaches to establish partnerships of businesses with universities include action learning, action research (Gustavsen, 2003), theorizing with managers (Nenonen et al., 2017), and collaborating with practitioners (Shapiro et al., 2007) through facilitation and workshops (Storvang et al., 2018), tangible interviews (Buur, 2018), experiments (Haug, 2018), improvising (e.g., theater, role

playing; Larsen and Friis, 2018), value cocreation, focus groups, and participant observation (Marroun and Young, 2018).

Evers et al. (2017) illustrate insights that can emerge from collaborations with firms for business development when researchers apply pluralistic data, obtained from a combination of participatory workshops and one-on-one interviews. Laursen and Andersen (2016), in a quasi-experimental study, also document how new product development task ambiguity affects buyer–supplier interactions over time. Using action research designs, Abrahamsen et al. (2016) worked with a group of managers over a three-year period to study how they use network pictures to make strategic decisions. Alternatively, Ozanne et al. (2017) propose a relational engagement approach, aimed at research cocreation with practitioners, and argue that persistent interactions are more likely to effect positive social change; and Di Benedetto et al. (2019) offer suggestions for how academics can collaborate with practitioners.

Consider, for example, that the Global Supply Chain Forum research on partnerships and supply chain management would not have occurred without the involvement of business executives, who identified the topics for research priority. Academic-practitioner collaboration on this forum has been very productive: since 1996, 36 publications have resulted from Forum research (Lambert and Enz, 2017) including the most cited and downloaded paper in *Industrial Marketing Managenent* (Lambert and Cooper, 2000).

4. MEASURING SOCIETAL VALUE OF RESEARCH

Societal value increasingly is weighted as a measure of the value of research. It may be possible to use proxies to roughly measure the benefits accruing to businesses involved in academic research (financial performance, letters from business executives supporting a promotion and tenure decision, and so on). However, there are no generally accepted proxies (criteria and methods) for the calculation of bibliometric (quantitative) values for societal value that would be comparable to, for example, the h-index or journal impact factor (Galletta et al., 2019).

The above-mentioned difficulties highlight the need for being thoughtful when considering how to measure societal value (Lauronen, 2020), keeping in mind that societal value may need to be measured at different levels such as the level of institutions, research groups, programs, projects, or individuals, as well as over time, just to mention a few.

4.1. Frameworks for Understanding Societal Value

The question is whether it is possible to come up with an overall common framework for research assessment as generic as, for example, the h-index, which in spite of its many methodological flaws is used extensively. Such an alternative measure would be relevant to be used on the aggregate for comparison of institutions, departments, projects, and individuals. The further we drill down using the framework, the more detailed the criteria will have to be in order to adjust and modify for each research discipline.

In assessing research quality in UK higher education institutions, the REF system, among others, requires academics to demonstrate and document the effect of their societally valuable research: "effect on, change or benefit to the economy, society, culture, public policy or services, health, the environment or quality of life, beyond academia" (Research England, 2020).

In addition to the REF, several other initiatives exist, as Social Impact Assessment Methods Productive Indicators (SIAMPI) is a European Union-funded initiative including studies from various countries in Europe, which now is used as a metric for societal impact assessment in the Netherlands. Other programs include IMPACT-EV (developed by the European Union), STAR Metrics (from the U.S. National Science Foundation), and the ERC Impact Framework (developed by the European Research Council). Further, the Hong Kong government has increased the importance of societal relevance when assessing research funding, and is developing a metric similar to the UK's REF (Davison and Bjørn-Andersen, 2019).

Other recent attempts to develop meaningful measures of societal value is the Academic Rigour and Relevance Index, which is a theoretical model for measuring the societal value of academic journal articles based on a variety of different dimensions thereby providing a more holistic assessment of societal value:

- significance of the contribution;
- academic scholarly intelligence;
- relevance to business system;
- perceived content by society and citizens;
- implications and recommendations; and
- citations and impact factor (Phillips et al., 2018).

Furthermore, there can be different approaches to a measurement analysis. The case study approach has been used frequently to capture the societal value of research and to assess and demonstrate the societal value of research on the advancement of knowledge, society, and/or the economy. The case study approach often is preferred when measuring societal value, as a

multitude of methods can be used to collect and triangulate data (Bornmann and Marx, 2013; Lauronen, 2020; Samuel and Derrick, 2015). An example is the UK REF, which contains a variety of methods for documenting societal value, including case descriptions of knowledge collaboration, idea development, counselling, media presence, and other knowledge dissemination.

Popular metrics for measuring societal impact is the use of altmetrics. Altmetrics in scholarly and scientific publishing is defined by Wikipedia as "non-traditional bibliometrics, proposed as an alternative or complement to more traditional citation impact metrics, such as (academic) impact factor and h-index." The large publishing house Wiley is argueing that a "single research output may live online in multiple websites and can be talked about across dozens of different platforms. At Altmetric, we work behind the scenes, collecting and collating all of this disparate information to provide you with a single visually engaging and informative view of the online activity surrounding your scholarly content" (www.altmetric.com). Altmetrics is a fast growing field (see www.aesisnet.com), and a substantial part of the academic community is embracing analytic results primarily stemming from social media data since such results represent one measurement of the extent to which society notices an academic's research.

No matter what approach is taken to measure societal value, and whether the measurements are done *ex ante* or *ex post*, four problems often are cited (Martin, 2007; Sivertsen and Meijer, 2020):

- causality problem: the relationships between research and innovation inputs, activities, outputs, and the effects of societal value are often unclear or nonlinear. It is not clear which societal impact can be attributed to which cause;
- attribution problem: it is difficult or even impossible to separate the societal value of research and innovation from other inputs and activities. It is not clear what should be attributed to research or other inputs;
- internationality problem: the effects of the societal value of research and innovation are international by nature. It is not possible to identify activities in specific relations; and
- evaluation timescale problem: the societal value in the science, as society relations are generally realized over a very long time and only extraordinarily over a short time. It is not possible to avoid premature measurement of societal value if research, which yields only short-term benefits, is emphasized.

Even though difficulties in assessing and measuring societal value exist, decision makers and funding bodies still wish to stimulate and allocate funds based on the value for society of successful research (Martin 2011; Salter et al., 2017), and researchers and universities still wish to justify and argue for their societal relevance, societal impact, and, accordingly, necessity.

We recognize the 'relevance versus elegance' criticism of academic research, and the implication that academic research does not have much relevance to business and the wider society. Despite the obvious challenges of measuring societal value, we acknowledge that the agenda of societal value is here to stay. Accordingly, we should support efforts in bringing forth meaningful frameworks for measuring societal value, and we propose that a full consideration of the societal value of academic research should be considered more broadly.

4.2. v-index

A meaningful example is the v-index (Davison and Bjørn-Andersen, 2019; Galletta et al. 2019), designed to be a complement to the h-index, but focused on societal research. So far, the v-index has not been used except in smaller isolated settings, although a larger test is proposed. The v-index measures societal value in terms of both relevance and impact. In v-index framework, societal value can be assessed in terms of the potential contribution to at least one of five areas, which are similar to those included in the UK REF: economic or commercial benefit; health and welfare; public policy and service; culture and entertainment; and quality of life and work. To measure societal value, the v-index framework recommends a five-point self-assessment scale, measuring the extent to which:

- the academic uses public presentations, public media, and so on to disseminate research to non-academics;
- the results (methodologies, conclusions, etc.) have been implemented by non-academics;
- the academic is involved in non-academic networks, committees, and so on and actively offers research advice;
- the academic partners (through collaboration, consulting, action research, etc.) with non-academics to address societal issues; and
- the research is funded by non-academic stakeholders from industry or government.

In Table 2, we present an extended framework based on five dimensions of engagement and dissemination, suggested by the v-index measure. The horizontal axis for each dimension is a continuum, where "Low" represents a baseline of pure academic contribution, and "High"

Table 2: Societal Value: The Societal Relevance and Societal Impact of an Individual's Research

Dimensions of engagement and dissemination	Low **Examples of contributions to academia**	Intermediate ⟺	High **Examples of contributions to business and wider society**
1. Where research results are published	I am writing only for academics, and I am not likely to be giving public presentations outside academia	• I take part in industry and exhibition events, where I might enter into dialog with practitioners to learn and to provide research-based comments. • I give presentations at public conferences attended by practitioners, write on blogs, write articles for newspapers or other media, etc. • I am invited to provide presentations for private companies, governments, and/or international bodies and will often take part in public debates	I am a key public figure, and I am often called upon for comments by media, politicians, and/or international organizations
2. The extent to which my research results (theories, methodologies, tools, and conclusions) have been picked up by 'relevant' non-academic stakeholders	My research is pure or basic academic research where results exclusively are published for other academics	• It is possible to identify potential beneficiaries of my publications, but nobody outside the academic environment are likely to have read the publications, or have used the results • There will be individuals (e.g., former students) who are familiar with my research results, but recognition is limited and results not likely to have had direct effect • It will be fairly easy to identify organizations or sectors of society actually using my tools, theories, methodologies, and conclusions	There is widespread use of my published research in individual organizations and/or on societal level in global associations, regions, global NGOs, supra-national bodies, international courses, etc.
3. Offering oral research-based advice in networks, committees, etc. outside academia	I will typically not take part in any activities in industry or societal organizations	• I am member of an informal networks outside academia having practitioners as members • I am member of formal practitioner networks attend seminars and conferences in order to offer advice to practitioners • I take an active role in advisory boards, board of companies, assessment-committees, national/international policy committees, etc.	I am a member or director on advisory boards, governance boards, assessment-committees, government committees, national or international-committees, etc.
4. Partnership (interaction, collaboration, consulting, action research, engaged scholarship, etc.) with non-academics like industry or government in order to solve societal challenges	My basic research results are not directly applicable to current societal challenges; my focus is on issues of theoretical interest	• I will discuss with practitioners on an *ad hoc* basis, for example, at conferences or other events influencing but without any sustainable commitments for action • I develop research reports useful for social actors, typically responding to requests from practitioners, societal institutions or government agencies • I collaborate with social actors or organizations on solving practical challenges, for example, through action research	I consult to industry and/or local, regional, or government agencies, taking time off for brief assignments outside research environments for solving societal problems, developing reports for societal actors
5. Obtaining research funds from relevant external stakeholders	I obtain research funds exclusively from academic sources for basic research	• I obtain funds from academic sources for research in industry • External stakeholders have taken part in formulating my research application from academic sources • I have joint applications with external stakeholder from non-academic funding bodies	I have major research grants from industry, government agencies, professional associations, etc., or have developed and manage a research center

represents an extremely high level of business or societal contribution (maybe exceedingly high in most cases). So, for example, for the first dimension (where research results are published), "Low" is the "academics writing for other academics" case, while "High" represents the academic as a public figure who regularly makes presentations for politicians or multinational companies.

A criticism may arise because some academic contributions are not recognized by business or wider society. This could be because some academic business research rightfully has been criticized for lacking in relevance or value to the business community (Storbacka, 2014), but it could also signal that the accepted definition of what constitutes 'societal value' is too narrow. Table 2 is designed to provide specific recommended guidelines on how academics can approach their research and, especially, disseminate the results of their research in multiple ways, corresponding to the five dimensions, depending on the research domain and/or particular project.

While it may be not realistic for most academics to consistently aim for the "High" target with every research project, Table 2 does present some specific recommendations on how one can increase societal value, as shown in the "Intermediate" suggestions (appearing between the "Low" and "High" endpoints in Table 2). For example, through the research conducted by academics, universities contribute to the education of future generations, which is both societally relevant and impactful. This societal value can be measured, for example, by the extent to which the research is used in the classroom for degree programs or executive education seminars, at the researcher's university or elsewhere.

Table 2 presents the dimensions of the v-index as an expanded framework. At least three of the dimensions can arguably be evidence of the direct value of academic research on the non-academic community (1: research results […] published at industry and public events, in articles for newspapers, etc.; 2: the extent […] research results […] have been picked up by […] non-academic stakeholders; and 4: partnerships […] with non-academics […] to solve societal issues). A similar argument could be made for the other dimensions in this index.

The framework depicted in Table 2 can be used as a dynamic tool for individual academics scaling up the societal value of their research through time. Different societal value approaches may develop over time, as academics become more familiar with different forms of societal value. The framework thus can be used to track the progress toward greater societal value, or to suggest alternative approaches to increase societal value. The Table 2 framework can be used as a template for how individuals in research groups or departments can improve societal value. The template provides the research group with an overview by which overall research

patterns can be identified and, based on these patterns, research groups, departments, or universities can work actively in broadening the societal value approaches. We explore this issue further in the next section.

5. THE WAY FORWARD

At this point, we tie together the ideas presented above, and provide suggestions on how to increase the societal value of academic research.

5.1. How can individual researchers be supported when undertaking societally relevant research?

Academics benefit from fostering societal value. In particular, a societal relevant research objective can strengthen the research and its usefulness, which tends to improve the academic's research profile, increase funding opportunities, and produce more positive career review assessments.

Nevertheless, academics seeking to create societal value face notable challenges, especially in early stages of their career. They do not yet have a pool of research results, reputational resources, or network contacts. Efforts to collaborate often are time-consuming and offer uncertain, long-term payoffs, particularly if they require the academic to establish a strong network first. It takes time to build relationships with essential stakeholders and gain legitimacy as a contributor to a field, two features that increase access to good research data, as well as funding. At the same time, academics need to invest effort to gain expertise before they can determine what issues are socially relevant and might provide valuable insights to relevant stakeholders. In this sense, creating societal value cannot be the sole responsibility of individual academics; research organizations and systems must create career structures to support impactful research.

In their survey of academics in the social sciences and humanities, Olmos-Peñuela et al. (2014) found that a deliberate focus on societal value relates strongly to the active engagement of research groups in various knowledge transfer modes. Academics need to consider questions of relevance and impact upfront to ensure these goals are inherently included in the research design and its definition of the societally valuable activities, communications, and measures that the research will feature.

Because both research and societal value processes are dynamic, though, the plan also must be open to continuous change and revision. Academics should remain open-minded, but also

selective when considering new opportunities. We recommend basing the research planning on the answers to three questions, which define the following subsections.

5.2. Who might benefit from societally relevant research, and when should practitioners be involved?

To incorporate collaboration with practitioners into the research process, academics need to identify several relevant details:

- which practitioner level is appropriate for engaging in the process, according to the underlying goal, such as to ensure political support, gain resources and ideas, influence organizations, or gather research data;
- at which stage in the research process will the practitioners be integrated (mutually decided by researcher and practitioner);
- which benefits the practitioners will receive from their collaboration in the research and when they will be available, to ensure practitioners' buy-in; and
- an updated map of practitioners who might be essential to the project and in which order to engage them to acquire necessary research data at the appropriate moment.

Different levels of engagement have implications for the societal value of the research, due to their distinct links with time, scale, and finances, as well as audiences. For example, business-to-business marketing research might be especially relevant for policy in areas such as industrial policy, employment, and regional development. Alternatively, an academic might actively seek to become an industry specialist, attend industry-related conferences, cultivate networks, and build a strong reputation. In this case, the research may align with industry priorities, offering societal value for the sector. Finally, academics also might seek collaborations with other academics who specialize in a specific research method. Case studies bring issues to light for practitioners and policymakers; quantitative studies usually identify measurable outcomes and effects. Both methods are pertinent.

5.3. What societally valuable activities and measurements should be applied in research?

In Table 1, the different activities and measurements, which all potentially may contribute to the creation of societal value, are categorized. Applying this, an academic should determine:

- what societal value approach one might apply, and how this approach will be implemented;

- the desired relevance/impact dimension and outcome such as policy changes, new practices, innovation, or business development;
- how to ensure the achievement of the desired societal value;
- whether the societal value might be diffused through partners and stakeholders; and
- the time and method for communicating societal value, both during and after the research process (e.g., articles, social media, trade magazines, briefs, and reports).

A clear engagement strategy should include considerations of the diffusion process for wider audiences, which might cite social media, trade associations, press releases, or university channels. The communication strategy also should be included in grant applications, reports, and releases that highlight best practices. Wider awareness also might be achieved through link on social media sites or short 'so what?' videos.

5.4. How can societal value be demonstrated and documented?

Demonstrating societal value requires a plan that addresses whether the effect is likely to be shorter or longer term, whether the impact is evident, and how it might be captured, using various methods. Therefore, the research, societal value, and funding strategies all should be developed in conjunction. To identify new or additional sources of funding for business-to-business marketing-related questions, researchers can consider working across disciplines. For example, relatively substantial resources are available to support business-to-business marketing efforts to address issues in healthcare, infrastructure, networks, manufacturing, and food and agriculture. Indeed, academics may need to modify their research interests and become more customer-focused (a concept that should not be new to marketing academics!). The days of deciding what research to conduct based exclusively on researcher interests may be over.

5.5. How can increased societal value be supported through knowledge exchange?

Knowledge exchange, or the enabling of two-way exchange between academics and research users to share ideas, research evidence, experiences, and skills is fundamental to our understanding of what makes excellent research partnerships (Bullock and Hughes, 2016). In many ways, knowledge exchange thus is mutually dependent on a relationship between academic and non-academic stakeholders in order to guide societally valuable research. Moreover, knowledge exchange often is associated with activities, which can be planned and costed; from seminars and workshops to placements and collaborative research. However, good

knowledge exchange is equally about approach, mindset, personal qualities, and researcher mission. This means that the scope of actions included in the plan for societal value should be wider rather than narrower in nature and include ways of encouraging reflection, conceptual advancement, and adjustment among the research team as well as users.

Through evaluation and commissioned work on knowledge exchange, we have found that more co-productive forms of research (that is, research undertaken *with* rather than *on* people in a collaborative, iterative process of shared learning) offer a particular high potential for academic impact and societal value. We encourage such applications, which can include working with people in community, public policy, and business settings. The Global Supply Chain Forum research stream is an example of successful research co-production. Additionally, anecdotal feedback from academics who have participated in such co-production have reported benefits for their networks, job satisfaction, and careers, as well as financial benefits, balancing out the challenges faced in undertaking collaborative research.

Academics are encouraged to include proven and innovative methods for undertaking high-quality collaborative research, for example:

- include people from user organizations as co-investigators;
- request funding to meet the practical costs that research partners incur when they partake in projects; and
- include activities that enable innovation, reflection, and negotiation at key points during the research (e.g., learning events with research partners).

Having funded hundreds of research projects in the UK, the Connected Communities Program documented several key considerations when forming a successful collaborative research venture (Facer and Enright, 2016):

- Research partners should explore why they want to collaborate. In the case of academic-non-academic collaboration, the reasons might include a shared personal interest in the research topic, a need to gain access to resources, or even to strengthen the university's relationship with the outside community. The executives usually enter the collaboration with a problem they want to solve, which provides a useful starting point. The motives for collaboration, and their implications, should be well understood.
- Accountabilities may compete and should therefore be established. Research partners have accountability to internal stakeholders (the partners themselves), as well as external (personal networks, the 'public good'). The executives will have to justify their

expenditures inside the company based on achieved results. Some negotiation may be required if these accountabilities are not compatible.

- The collaborative approach and its implications should be considered. Partners should answer several questions that have implications for the design and implementation of the research. These questions include the potential contribution by the partners, whether the partners will have a relationship that extends past the duration of the research, and research topic choice, governance, and accountability.
- Financial resources and time commitments need to be discussed, as well as how these resources will be administered.
- Other considerations include tangible products, new relations and networks created, contribution to knowledge, effect on the partners' institutions, and groundwork for future collaborations.

As illustration, we will return to a research study previously presented in our How-to series. A recent research stream examined managerial assumptions about ecological sustainability, recommending transformational marketing strategies for firms with respect to both the business and the natural environments (Borland et al., 2016; Borland and Lindgreen, 2013). Consider Dimension 1 of Table 2 (where the results are published). The research is on a topic of great interest to firms seeking to establish more sustainable business practices, and potentially also to politicians and other involved decision makers. Societal value can be increased to the intermediate range if the authors attend practitioner conferences, events, and exhibitions. The university's communications department may be able to generate publicity and do outreach to appropriate practitioner associations to facilitate these opportunities. Another strategy is to seek publication in one of the journals that are targeted to the business community (*Harvard Business Review*, *Sloan Management Review*, *California Management Review*, *Business Horizons*, *McKinsey Quarterly*, or *Journal of World Business*).

As a second example, Beverland et al. (2008) studied how brands project authenticity through advertising message ambiguity. In addition to seeking out practitioner-oriented publications, the authors can apply some of the recommendations for Dimension 2, namely identify non-academics from business or government who might benefit from this knowledge, former students and other contacts who may be familiar with the authors' work and who can recommend it within their work organizations, or possibly identify some companies who are actually using the results and leverage that positive implementation.

As a third example, consider the Maon et al. (2009) study of disaster relief operations, and its effect on commercial supply chain and logistics management operations. According to Dimension 4 (partnership with non-academics to solve societal challenges), the authors can develop research reports showing the managerial implications of their theoretical model, which would be useful to societal institutions or government agencies, or may collaborate with social actors in future projects using an action-research approach.

Finally, Vallaster et al. (2020) applied a theory-generative approach to develop a conceptual framework of the micro-foundations of the dynamic capabilities of for-profit hybrids. To develop the framework, the authors engaged in a qualitative, multiple-case study over a 15-month period. After presentation of the framework to the for-profit hybrids, the research was written up as an academic journal article.

Similar examples could be constructed for the other dimensions in Table 2.

In all of the above examples, we are recommending activities that would increase the contribution to business or society to "Intermediate" levels. As noted earlier, the "High" level might be unachievable or unrealistic in most cases, but it is not impossible. Academics with a stellar track record, at the top of their game in terms of research funding and industry connections, and possibly part of a well-funded institute within their universities, may well attain "High" status (be viewed as a public figure, frequently seen in media as a topic expert, or invited to serve on or manage national or international committees; their work is used as a basis for national guidelines). This will not always happen, but that is not important. Keep in mind that the goal is to increase societal value without sacrificing academic rigor, and that moving from "Low" to "Intermediate" is respectable progress in the right direction.

5.6. How can business schools support research with societal value?

Business schools must provide support and infrastructure that encourage researchers to get interested in and conduct societally valuable research, in varying forms and at different levels. The business school overall, as well as its individual departments and research groups, need to develop societal value strategies to define optimal approaches, important stakeholders, strategies for dissemination, measures, and documentation methods. In particular, the school should take responsibility to identify explicitly which local, regional, and national constituencies are critical.

In addition to establishing a general research norm that societal value is important (e.g., by posting small case examples on school webpages), the business school should offer incentives to encourage academics who aim to deliver findings with relevance to society. Ideally, research

funding from the institution should be contingent on evidence of societal value; the research objective should not exclusively be a narrow, incremental contribution to established theory (Storbacka, 2014). Further, the promotion system should acknowledge societally valuable activities or even require them for career advancement. The criteria for bonuses also should include this standard. A creative approach might offer department-shared professorships. The University of Aalborg and Bang & Olufsen Electronics maintain a shared professorship in which the professor split his time between the two institutions to help transfer knowledge from one to the other. Encouraged collaborations also should focus on various departments within the school or outside it (e.g., STEM departments). Finally, a school could invest seed money in strategic societal challenges, then apply for external funding to support them further.

In terms of infrastructure and support, business schools should realize that it may feel transgressive for academics, with no prior experience in designing socially relevant research or extensive collaborations, to start engaging with practitioners. To help such academics build this capability, the school could provide training to early-stage academics in engagement, cocreation, project management, interpersonal and dialogue skills, and so forth. Furthermore, the school could establish programs in which academics devote some of their time to working in public or private organizations to gain relevant experience. Such efforts also encourage closer dialogue with businesses, public organizations, and industries, enabling involved partners to find common ground and closer relationships. Research engagement programs could connect younger with more experienced academics, likely at the research group or team level. Olmos-Peñuela et al. (2014) demonstrate the critical role of research group leaders in ensuring the group's engagement in knowledge transfer activities.

For communicating the results, business schools have a role as well. Some UK universities grant academics additional time to document the effects of their projects if these projects are used as REF impact cases. Another option is to launch business review magazines, positioned as an outlet for sharing relevant research by academics within the school. Furthermore, the school could develop overview reports of research trends of interest and list potential collaborators. A research support unit should have resources to help academics incorporate relevance and societal value considerations in their grant applications, including budgeting for expenses required to perform societal value–related activities.

Considering these incentive and support schemes, business schools should not limit their quality measures to journal rankings or citations counts; they must find a way to acknowledge academics who achieve additional broad societal value with their research. Doing so requires that each school clearly define what it means when it calls for societally valuable research by

its academics. These definitions also must integrate stakeholders' perspectives (i.e., the targets of these socially relevant efforts). Although the business school should set the directions and priorities for societal value in these various ways, the school also must take care not to restrict academic freedom. For example, a business school might encourage research on sustainability but must avoid micro-managing academics' activities.

Business school deans should articulate a vision and work to remove the barriers to faculty entrepreneurship. Faculty should be encouraged to look for research funding from industry. The benefits would be twofold: research that addresses real business problems and a faculty who are able to support executive education. It is reasonable to expect faculty members' research to be of sufficient practical value that businesses or organizations outside of the business school would view it as worthy of financial support (Lambert and Enz, 2015).

Rather than being rewarded solely for the number of 'A' journal articles written, faculty members also should be rewarded for the effect of their research on practice and the extent to which the research can be integrated into degree program curricula and executive education programs. Faculty who by the nature of their research do not interact with practitioners should be encouraged to engage in consulting activity in order to help them focus on solving business problems (Raju, quoted in Brown, et al., 2005). The metrics used to judge the contributions of faculty members should be different, as they progress through career stages. For example, senior faculty might develop and/or serve as directors of research centers, write books, or obtain large research grants. The specific metrics chosen to evaluate faculty members should be aligned with the institution's mission (Lambert and Enz, 2015).

5.7. How can academic journals support research with societal value?

An increased demand to undertake societally valuable research with high relevance and high impact puts pressure on academic journals and their editors. Practitioners are not likely to turn to academic journals and seek out research studies on management strategy or practice, when making business decisions (Rynes, Bartunek, & Daft, 2001). Often, practitioners experience that collaborations turn out as unsuitable outputs that do not meet the needs of their businesses (Pertuzé et al, 2010; Marzo-Navarro, Pedraja-Iglesias, & Rivera-Torres, 2009). From the outset of a business-university collaboration project, most businesses expect the collaboration to show feasibility and practical usefulness of the businesses' innovative ideas. Characteristically, however, universities work at a slower pace, and businesses may not be able to influence the collaboration process (Lazzarotti et al, 2016). Businesses, therefore, sometimes find it almost

painful to work with universities that focus on long-term academic endeavors (Darabi & Clark, 2012).

Most journals require authors to offer evidence that the presented research is relevant and important. A strong managerial implications section may be required by the target journal to increase relevance, visibility, and impact to the practitioner community, and it is valued by business schools who increasingly prioritize societal value of academic research. The managerial implications section should not be an afterthought, and unsupported phrases such as "may make an impact" or "might be useful to managers in the future," which cast doubt and uncertainty about the importance or usefulness of the findings, should be avoided. The writing of managerially-oriented intepretations of one's research helps to expand one's readership outside the academic community, since practitioners probably will not read the academic journals.

Journal editors have a role here. They can prioritize research that is cross-functional, process oriented, and problem driven. Research that influences management practice should be favored over research that only make incremental advances in theory. According to Kerin (quoted in Brown et al., 2005), "…research, regardless of topic, should explore multifunctional, business-level issues; identify cause-and-effect relationships; and, focus on metrics that matter to CEOs and corporate boards" (p. 13). Business executives can be added to the editorial review board to ensure that an article potentially influences management practice. Including an epilogue to each article in which an executive or an editor speaks to the merit and quality of the research could be an excellent addition. If the research is conducted with a company, an estimate of the resulting company benefits should be included (Lambert and Enz, 2015). In fact, this is already a requirement at *INFORMS Journal on Applied Analytics* (formerly *Interfaces*). Articles submitted for review must be accompanied by a signed letter from a company representative, verifying that the research was used, and that the company benefited as a result. The letter is published along with the article. The benefit of providing support for the value of the research in financial terms will be twofold: first, it is a measure of the value of the research beyond the journal in which it is published and citations by other faculty members; second, the participating company will benefit because management behavior is influenced by the numbers (Enz and Lambert, 2015). In some cases, non-financial performance measures may be appropriate as well (e.g., improved performance of hospitals or disaster relief).

At *Industrial Marketing Management*, we have decided to serve our managerial constituency by fostering academic-practitioner collaboration and by encouraging research projects that design specific solutions to managerial challenges. With its new Academic-

Practitioner section, *Industrial Marketing Management* invites manuscript submissions co-authored by academics and practitioners. This type of manuscript addresses current topics in the area of industrial and business-to-business markets. The objective of academic-practitioner research is to develop managerially relevant and actionable insights using rigorous scientific methods. Journals such as *Harvard Business Review* and similar managerially-oriented journals are other outlets for authors to submit articles, which focus on managerial takeaways from their academic research such as improved strategic decision-making or competitiveness.

Suitable manuscripts should report how specific marketing actions, processes, or systems were designed, implemented, and evaluated with regards to achieving specific outcomes. Academic-Practitioner manuscripts thus build pragmatic knowledge developed by engaging with real-life problems, challenges, or opportunities in the realm of industrial and business-to-business marketing. The journal will evaluate manuscripts submitted to the section based on pragmatic validity and practical relevance. In a forthcoming editorial, we will discuss this exciting new section in more depth.

6. CONCLUDING REMARKS

We advocate that high-quality research is at the foundation of all undertakings of a business school. Quality research is, in a sense, the 'license to operate' as a academic business institution. Governments and institutions fund academic institutions, and their investments in academic research provide non-academic payoffs when the findings are valuable to the practitioner community, or more indirectly, when the academic's store of knowledge is applied to support managerial decision-making. In addition, teaching is an impactful outcome of the investment, as graduates become business leaders and entrepreneurs, as well as educators of future generations of business students.

While some of the above outcomes are measured using conventional metrics (number of articles or citations, h-index, or monetary value of grants received), some of the other outcomes, perhaps seen as more indirectly related to business school funding (collaboration or consulting partnerships), are not as clearly measured yet, but they should not be overlooked in assessing the results of the funding. Traditional metrics do not provide a totally accurate picture of the value of academic research. For example, the societal value of basic or pure research, particularly in non-business areas, may not be recognized immediately, and would remain underestimated using conventional metrics. The commercial value of pure scientific research in quantum mechanics or advanced mathematical theory may not be known for many years. As

an ongoing example, neuromarketing research is an emerging branch of consumer behavior with its roots in neuroscience research in medical schools.

Other measures probably also underestimate the societal value derived from the governmental appropriation to fund universities. Pure 'outside' consulting to industry is generally considered a (possibly lucrative) side job rather than an outcome of business school funding. But what about academics who provide their insights and expertise in collaborating with a new business startup, or support entrepreneurial student teams developing a real-life business plan as part of a course requirement? This activity might have large effect on the local economy or community. In other cases, there may be broad measures that do not correlate clearly with governmental appropriations. For example, one measure of business school teaching is the number of graduates from bachelors' or masters' degrees, or the number of graduates who stay local and thereby contribute to the local economy, but better measures might more convincingly argue for the societal value of the business school (number of local jobs created by entrepreneurs, indirect economic impact of industry growth within a community, etc.). In short, the need for better measurement of some of the outcomes in Table 1 is an issue that remains to be addressed and further discussed, so that the true societal value of the governmental investment in academic research and teaching can be assessed accurately.

By adopting metrics as we have presented (cf. Table 2), business school administration makes it clear to its faculty that aspects other than pure academic research (that is, societal value) are considered and valued when assessing research output. In fact, the 'relevance versus elegance' dichotomy is arguably a false one: it assumes that in order for academics to produce societally valuable research, they must sacrifice academic quality. Academic administration has a vested interest in motivating and rewarding faculty to attain the highest quality publishing standards; faculty will not want to spend valuable research time on projects with low publication potential. We hope that our discussion here (and summarized in Table 2) provides guidelines for how academics can approach their research so that they can ramp up the effect on business and on wider society.

6.1. *Industrial Marketing Management*

Academics in the business-to-business marketing discipline contribute to public value agendas, historically through publications in journals such as *Industrial Marketing Management*. However, mounting pressures to establish and demonstrate societal value coming from governments, research funds, business schools, and even academics themselves, implies an even stronger motivation for such efforts. We have sought to inspire academics with

examples and suggestions for how to work to attain relevance, by defining their vision and approach to ensure public value. Specifically, academics should address three broad considerations when planning their future research to ensure their thoughtful, deliberate focus on societally relevant research and its impacts:

- who benefits from the research, and when should practitioners be involved?
- which societally valuable approaches and activities should be applied across research phases? and
- how can the effect of the societal value be demonstrated?

This editorial, however, does not define what counts as sufficient societal value or how far academics should go to ensure their findings are useful and influential. These questions need to be addressed by each academic, research group, department, or business school; societal value is intrinsically domain specific and diverse, so it depends on the domain being investigated. There are no easy ways to measure relevance and impact, which together constitute societal value; no one-size-fits-all assessment could account for all scientific disciplines or capture all the long-term impacts across society. Accordingly, each academic or research group must decide whether to adopt existing approaches, activities, and measurements to achieve societal relevance and societal impact, or else to supplement them with new, innovative approaches, methods, and activities. Such efforts will be helpful in that we recognize the ongoing need for new, innovative approaches, methods, and activities to advance the still nascent theme of societal value.

We call for academics to explore how closer links between those who produce scientific knowledge and those who can use it might redefine traditional views on the relationship of science with society. The capacity to do so depends on the expertise and resources available for such research. However, for most academics, intellectual curiosity is a primary motive, suggesting that they are unlikely to settle for existing solutions. Business schools must encourage such endeavors, providing support and infrastructure that can help researchers achieve societal value in varying forms and at different levels, through closer dialogue with businesses, public organizations, and industries. Academic journals can also support this valuable dialogue, for example, the introduction of the Academic-Practitioner section at *Industrial Marketing Management*, designed to serve its managerial constituency and encourage academic-practitioner collaboration.

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This editorial is the final one in a series of the co-editors-in-chief's reflections on important aspects of planning, undertaking, and publishing research in business-to-business marketing management, designed to help prospective and early career researchers publish their findings in *Industrial Marketing Management* and other top journals.

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