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Hans Rawhouser
University of Nevada, Las Vegas, hans.rawhouser@unlv.edu

Michael Cummings
University of Arkansas

Scott L. Newbert
Baruch College

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SOCIAL IMPACT MEASUREMENT: CURRENT APPROACHES AND FUTURE DIRECTIONS FOR SOCIAL ENTREPRENEURSHIP RESEARCH

Hans Rawhouser

hans.rawhouser@unlv.edu

Michael Cummings

mcummings@walton.uark.edu

Scott L. Newbert

Scott.Newbert@baruch.cuny.edu

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Abstract: Despite the importance of social impact to social entrepreneurship research, standards for measuring an organization's social impact are underdeveloped on both theoretical and empirical grounds. We identify a sample of 71 relevant papers from leading (FT50) business journals that examine, conceptually or empirically, the measurement of social impact. We first describe the breadth of definitions, data sources, and operationalizations of social impact. Based on this analysis, we generate a typology of four approaches to conceptualizing social impact, which we use to organize insights and recommendations regarding improved measurement of the social impact of entrepreneurial ventures.

INTRODUCTION

Researchers are increasingly attending to the mix of economic and societal impacts of market-based organizations (Husted & Salazar, 2006; Kent & Dacin, 2013). This emphasis is particularly evident in social ventures and hybrid organizations that combine social missions with market approaches to address global social problems (Battilana & Dorado, 2010; Dacin, Dacin, & Tracey, 2011; Short, Moss, & Lumpkin, 2009). The market-based approaches that are characteristic of a social entrepreneurial approach inherently involve measuring societal impact and social performance (Grimes, 2010; Miller & Wesley II, 2010).

Yet, despite extant research and practice demonstrating interest in creating and measuring social impact, standards for measuring this important construct are underdeveloped (Salazar, Husted, & Biehl, 2011). While research and practice have conceptually grounded social performance in social responsibility, new approaches to measurement have been proposed that have different basic assumptions and require fundamentally different measurement (Kroeger & Weber, 2014; Salazar et al., 2011). With such a heterogeneity in approaches, the literature lacks cumulative insights that could help social entrepreneurship research to progress more rapidly and more effectively.

The purpose of this paper, therefore, is to describe the relevant similarities and differences among approaches to studying social impact, and to use these insights to provide a more clearly-articulated path for future research. To accomplish this task, we undertake a broad survey of papers published in the *Financial Times* list of 50 highly-ranked business journals (FT50) that focus on social impact. The 71 papers that we identify from our search differ along two dimensions: degree of generalizability and stage in impact process. Specifically, while some papers limit their definition and/or measurement of social impact to a *single-sector*, others can be applied across *multiple sectors*. Moreover, while some authors define and/or measure *activities* that may lead to beneficial social outcomes and impact, others focus on defining and measuring the *outcomes* themselves. Relying on these dimensions, we organize our sample into a typology, highlighting some of the exemplary contributions, and then discuss directions for future research that leverage the insights gleaned from this multi-disciplinary sample of papers.

THEORY AND BACKGROUND

Social impact is an important piece of the phenomenon of social entrepreneurship (Dacin, Dacin, & Matear, 2010; Lumpkin, Moss, Gras, Kato, & Amezcua, 2011). While social impact might be considered to be the relevant performance-based dependent variable related to social entrepreneurship, insights regarding social impact have struggled to cohere given a proliferation in terminology and a diversity of contexts. For example, social impact has been conceptualized in the literature using terms such as social value (Moss, Short, Payne, & Lumpkin, 2011; Santos, 2012), social performance (Husted & Salazar, 2006; Mair & Marti, 2006; Nicholls, 2008), social returns (Emerson, 2003), social return on investment (SROI) (Hall, Millo, & Barman, 2015), and social accounting (Nicholls, 2009), which, although similar, represent distinct constructs. Moreover, social impact has been studied in domains such as education, healthcare, environmental sustainability, and poverty, which can be difficult to compare (Izzo, 2013).

Amid the largely synonymous terms used in the literature, we use the term social impact for the sake of consistency. Given the debate over how to define this thorny construct (Dacin, Dacin and Matear, 2010), we conceptualize social impact broadly so as to be as inclusive as possible in our sampling. Drawing on the recent definition put forth by Stephan et al. (2016), we define social impact as beneficial outcomes resulting from prosocial behavior that are enjoyed by the intended targets of that behavior and/or by the broader community of individuals, organizations, and/or environments. This definition is broad enough to encompass most current approaches to studying social impact (e.g., Austin, Stevenson, & Wei-Skillern, 2006; Choi & Majumdar, 2014), while recognizing that social

impact encompasses many different phenomena (e.g., Stephan et al., 2016) and target populations (e.g., Datta & Gailey, 2012) in both current and future generations (e.g., Agle et al., 2008).

We admit that our focus on social impact differs from much of the nascent social entrepreneurship literature that has focused on understanding the characteristics of individual social entrepreneurs, focusing on their noble intentions (Miller, Grimes, McMullen, & Vogus, 2012; Peredo & Mclean, 2006), their goals, identity, and values (Stevens, Moray, & Bruneel, 2015) or the missions of their associated organizations (Dacin et al., 2011). These studies often assume that organizations that claim to address social problems (e.g. reducing poverty, reducing illiteracy) are more likely to achieve these missions or are more compassionate and well-intentioned (Miller et al., 2012) than traditional market-focused organizations. Yet, because our primary interest in this paper is to examine the measurement of the outcomes resulting from prosocial behavior, which we view as the defining element of social entrepreneurship (Kania & Kramer, 2011; Nicholls, 2009), we leave the discussion of social intentions and motivations to others.

METHODOLOGY

Because social impact can manifest in so many ways, we begin by acknowledging that there are many fields from which management and entrepreneurship scholars can learn. Thus, we performed an electronic search using the ABI/Inform database to identify papers in the two decades (1996-2016) that have studied social impact. We targeted papers published in FT50 journals given that they are the highest-quality journals across the various business disciplines: accounting, economics, entrepreneurship, ethics, finance, information systems, management, marketing, and operations. Because the terminology used to address the topic of social impact varies both within and across fields, we included a wide variety of keywords in our search that have been used to conceptualize the construct: “social value,” “social impact,” “social return,” “environmental performance,” “impact measurement,” “triple bottom,” “social performance,” “non-financial performance,” “environmental impact,” and “social accounting.” Following standard practice in literature surveys (e.g., David & Han, 2004; Newbert, 2007), we required that the keywords appear in the abstract in order to further increase the likelihood that our search identified those papers in which social impact was a central focus.

We purposely excluded the term “social responsibility” and its variants (e.g. “socially responsible investment,” “socially responsible”) in our search for two reasons. First, this literature (along with corporate social performance (CSP)) has been previously reviewed by Bakker, Groenewegen, & Hond (2005) and we, therefore, do not seek to replicate their work.¹ Second, due to the widespread and somewhat inconsistent use of social responsibility in the literature, much of the work in this area is tangential to social impact. Indeed, among the voluminous papers on corporate social responsibility, only a minority seek to actually theorize about and/or measure social impact. Thus, rather than search on such a broad term that would drastically expand the initial sample well-beyond the boundaries of our review, thereby complicating the culling process, we opted to focus our search squarely on the construct of interest from the beginning. It is important to note that such an approach does not necessarily exclude all papers dealing with social responsibility from the sample (in fact, the resulting sample includes many papers in which social responsibility is an important construct – e.g., Dillenburg et al., 2003); it simply requires that any papers on this topic identified from the search be acutely focused on the *impact* of any socially responsible initiatives, which we initially screened by ensuring that they included at least one of the above search terms. As a result, some papers on related topics, such as socially responsible investment (Cumming & Johan, 2007) and

¹ While Bakker, Groenewegen, & Hond (2005) also review the literature on corporate social performance (CSP), CSP is generally conceptualized in terms of outcomes. Given that such outcomes are conceptually similar to impact, we have included it as a search term.

social entrepreneurship (Moss, Neubaum, & Meyskens, 2015), were not included in the initial sample.

The above procedure yielded an initial sample of 273 papers. In order to further ensure the relevance of our sample, we read the full text of each paper and excluded papers that did not either define or measure some form of social impact. For example, we eliminated papers that met our search criteria but either were focused on related topics, such as “social value orientation” (Fiedler, Glöckner, Nicklisch, & Dickert, 2013), made only passing reference to our search terms (as was the case for several papers dealing with “corporate social responsibility” (Bermiss, Zajac, & King, 2013), or did not explicitly conceptualize the search term(s) as some form of social impact. After these exclusions, our final sample consists of 71 papers, a number which compares favorably with other recent literature reviews (Bae, Qian, Miao, & Fiet, 2014; Perry, Chandler, & Markova, 2012; Slotte-Kock & Coviello, 2010) with samples of 73, 26 and 18 papers, respectively (see the Appendix for full details).

RESULTS

Summary Statistics

A summary of the main characteristics of our sample appears in Table 1. As this table shows, the papers appear in 21 of the FT50 journals spanning accounting, economics, entrepreneurship, ethics, information systems, management, marketing, and operations. This distribution indicates that there is a widespread interest in social impact, which highlights the importance of conducting a broad-based review. At the same time, we note that 52 of the 71 papers in our sample appear in journals within the umbrella of the management field (management, ethics, and entrepreneurship) and that most of these (30) were published in *Journal of Business Ethics (JBE)*. The large proportion of papers published in *JBE* is not surprising given that the study of corporate social performance is a topic that is central to the journal’s mission. The temporal distribution of papers also shows a marked increase in interest in social impact, with almost half (32 of 71) published in the last five years and more than three-quarters (55 of 71) published in the last ten years. Such sample statistics further indicate the need for this literature review.

--- Insert Table 1 about here ---

In Table 1 we also summarize how researchers conceptualize social impact. Given the breadth of our search terms, it is not surprising that so many labels are used for this construct. While the breadth in terminology does pose a challenge to researchers seeking to build on related work, we note two interesting patterns. First, most (26 of 32) papers from the ethics discipline conceptualize social impact in terms of “corporate social performance” or “social performance” and most (12 of 14) papers from the operations discipline focus on “environmental impact,” “environmental performance,” or “environmental efficiency,” suggesting that research in these disciplines has reached a greater degree of consensus than in others. . Second, roughly one-quarter (10 of 39) of papers studying performance-related activities and outcomes relied on Kinder, Lydenberg, Domini (KLD) (now Morgan Stanley Capital International, or MSCI) data, and that roughly half (9 of 17) of the papers examining environmentally-related activities and outcomes employ a modeling approach, indicating that within these research streams there seems to be some consensus regarding approaches to measurement and/or analysis.

Coupled with the breadth of terminology used in this research is a range of definitions used to define social impact. The most common definitional approach characterizes social impact in terms of externalities. Externalities are outcomes created from economic activity that exceed the objective functions of those engaged in the activity (Santos, 2012). For example, Schuler and Cording (2006: 540), define social performance at the organizational-level somewhat generally as “voluntary (i.e., not directly mandated by government regulation) business action that has social or third-party effects,” whereas Salazar, Husted & Biehl (2011) argue more specifically that social performance be

assessed at the project-level in terms of progress toward human development goals (Sen, 1999). Also common in defining social impact is the adoption of Wood's (1991: 693, emphasis added) conceptualization of social performance as "a business organization's configuration of *principles* of social responsibility, *processes* of social responsiveness, and policies, programs, and observable *outcomes* as they relate to the firm's societal relationships," or what we label as "principles, processes, outcomes." Other approaches are less specific, defining social impact with examples rather than providing clear conceptual definitions. Surprisingly, while 10 papers in our sample include social impact as a focal construct and subsequently measure it empirically (thus meeting our inclusion criteria), they do not provide an explicit or implied definition of the term.

Finally, Table 1 also provides details about measurement. The overwhelming majority of empirical papers (33 of 45) use quantitative methods, most (30 of 45) of which rely on secondary data. Four-fifths (36 of 45) of empirical papers gather data in industrialized countries, compared to roughly one-fifth (8 of 45) relying on data from developing or emerging economies and one paper (Bartling, Weber, & Yao, 2015) using data collected in both contexts. Among the non-empirical papers in our sample, most (13 of 26, primarily from operations) employ a modeling approach, while only a few (4 of 26, all from management) attempt to build theory.

Typology

As we reviewed our sample, the heterogeneity of approaches to studying social impact became apparent. Through an iterative process of comparing relevant measures as well as the language used to explain the different conceptions of social impact, we identified two dimensions by which to structure our review – the stage in the social impact process (*activity* vs. *outcome*) and the generalizability of the application (*multi-sector* vs. *single-sector*) (see Table 2). We find that while all social impact scholars are ultimately interested in the effects of an organization's prosocial efforts, they do not all model these outcomes explicitly into their research. Specifically, some scholars theorize about and/or measure the effect of an organization's prosocial behavior on its intended targets and/or the broader community of individuals, organizations, and/or environments. For example, Tobias et al. (2013) measure the social impact of entrepreneurship in terms of poverty reduction and conflict reduction. We classify such papers as following an *outcome* approach. Other scholars, however, approach their research with the assumption that a prosocial activity will inevitably lead to the intended benefits and, therefore, restrict their theorizing and measurement to the prosocial behavior itself. For example, (Peng & Yang, 2014) measure social impact as the act of a firm's investment in pollution control equipment, assuming it will result in a reduction in pollution and other positive social benefits. Following Salazar, Husted & Biehl (2012) we classify such papers as following an *activity* approach. As can be seen in Table 2, slightly less than half (32 of 71) of the papers in our sample adopt an *outcome* approach, whereas the majority of papers in our sample (39 of 71) employ an *activity* approach.

Interestingly, of the 10 papers that do not define social impact, most (7 of 10) follow an *activity* approach. We suspect this trend is due to a decision by researchers to substitute the assumed impact of a prosocial activity for a conceptual definition of the construct. Among those papers that provided definitions, most (11 of 32) of those using an *activity* approach were based in Wood's (1991) "principles, processes, and outcomes" conceptualization—primarily a CSR/CSP-based approach to social impact measurement—whereas most authors (11 of 39) following an *outcome* approach defined social impact in terms of externalities—primarily an economic approach to social impact measurement.

We also find that the papers in our sample differ in the assumption of whether social impact is comparable across sectors. Specifically, some authors conceptualize and/or measure social impact as a broad construct that can be generalized across many different sectors. For example, (Schreck, 2011) examines the effect of corporate social performance on the financial performance of 294 publicly

traded corporations from 24 different countries across the automobile, banking and financials, chemicals, food and beverages, household products, insurance, machinery, metals and mining, oil and gas, pharmaceuticals and biotech, telecommunications, and transport and logistics industries. We classify such papers as taking a *multi-sector* approach. In contrast, other authors conceptualize social impact as a middle range construct that is generalizable only to a specific sector. For example, Utting (2009) focuses her analysis on the social impact of fair trade on workers in the coffee producing regions of Jinotega and Matagalpa, northern Nicaragua. We classify such papers as taking a *single sector* approach. In other words, a *multi-sector* approach involves measurement of activities and/or outcomes that are sufficiently generic that they can be encountered in multiple sectors. A *single sector* approach focuses on measurement of activities or outcomes that are sector-specific. As shown in Table 2, the large majority of papers in our sample (54 of 71) adopt a *multi-sector* approach. For example, Kroeger and Weber (2014) propose measuring social value in terms of beneficiaries' perceptions of well-being in different contexts and in relation to different activities. Well-being is measured in terms of life satisfaction (the difference between aspirations and achievement) across several domains of experience. Improvements in life satisfaction are measured relative to social needs and can be compared across a variety of contexts. In contrast, only 17 of the 71 papers in our sample adopt a *single-sector* approach. For example Utting (2009) develops an "impact assessment framework" designed to capture the impact of fair trade on Nicaraguan coffee growers. Though she maintains that the framework is adaptable to multiple contexts, the instrument is designed to measure outcomes associated with specific contexts in isolation.

We note that more than half (10 of 17) of the *single-sector* papers defined social impact in terms of externalities or with examples. While, Wood's "principles, processes, and outcomes" (11 of 54) and externalities (9 of 54) were the most commonly used definitions in papers following a *multi-sector* approach these papers also employed a variety of definitions unique to this approach, including stakeholder impact (6 of 54) and people, profits and planet (2 of 54).

We use the above dimensions to organize the papers in our sample into a typology by which we structure our review below. Given the large number of papers in our sample, we do not describe each in detail; rather, we note the general patterns among all papers in the sample, highlighting those studies that are exemplary in their theoretical clarity or empirical precision in the process. We believe that our attention to both breadth and depth provides a strong foundation for researchers seeking to advance research in this area.

--- Insert Table 2 about here ---

Multi-Sector Activity

We begin by discussing the papers that compare activities across multiple sectors. Ten such papers utilize the KLD (now MSCI) social index dataset, which reports strengths and concerns associated with social responsibility of public firms' activities across several categories, such as community, diversity, employee relations, environment, and products. The simplest treatment of KLD data in our sample involved subtracting concerns from strengths and generating an overall measure of social performance (e.g. Liston-heyas & Ceton, 2009). However, several other approaches were used, including using only positive or negative indicators (Chen, Patten, & Roberts, 2008) or disaggregating dimensions (Van der Laan, Van Ees, & Van Witteloostuijn, 2008).

An additional eight studies adopt quantitative methods using secondary data from Ethical Investment Research Service (EIRIS) (e.g. Brammer & Pavelin, 2006), Thomson Reuters ASSET4, (e. g. Ioannou & Serafeim, 2012), Innovest (Crilly, Ni, & Jiang, 2016), oekom research (Schreck, 2011), *Fortune* Corporate Reputation Index rankings (Stanwick & Stanwick, 1998), and the United Nations Global Compact (UNGC) and Global Reporting Initiative (GRI) (Soleimani, Schneper, & Newburry, 2014). While all but one of these studies operationalize social impact based on ratings (generally derived from environmental, societal, governance and/or related issues), each uses the

ratings differently, including those utilizing the same databases (e.g. Brammer & Pavelin, 2006; Cuesta-Gonzalez, Munoz-Torrez, & Fernandez-Izquierdo, 2006).

The multi-sector activity approach also includes four descriptive case studies exhibiting new ways of measuring social impact and two studies providing conceptual processes, such as an “extended” product life cycle analysis tool (Gauthier, 2005), to guide consideration of social and environmental impacts on both internal and external stakeholders. In contrast to quantitative papers analyzing large corporations using secondary data, most case studies focused on organizational exemplars, such as a fair trade charity for Tibetans with a for-profit subsidiary (Corner & Ho, 2010) or award-winning small companies in the UK (Jenkins, 2006). Finally, Bartling and colleagues’ (2015) experiment is unique in modeling social impact in the negative, giving examples such as environmental damage, animal cruelty, and labor coercion, in order to test whether consumers will pay for a reduction in negative externalities.

Multi-Sector Outcome

Papers in this cell conceptualize social impact as an outcome that can be measured and compared across multiple contexts. Eight papers address social impact from a conceptual or theoretical perspective. Some of these papers connect social impact to existing practices or theories, including stakeholder and economic utility theories (Marom, 2006), the resource-based theory distinct measurement implications, such as the need to measure stakeholders separately (Marom, 2006), using hedonic pricing to determine the value of social actions (McWilliams & Siegel, 2011), aggregating economic development and community-level relational capabilities (Renouard, 2011), and using “direct” measures of social impact (e.g. employment equity, workplace safety, and health) rather than indirect measures (e.g. commitments, espoused values, and attitudes) (di Norcia, 1996). Kroeger and Weber (2014) also provide a comprehensive theoretical framework for comparing social value creation across industries through the use of relative, subjective measures of well-being solicited from respondents. In their theory, social value creation occurs “as an intervention reduces its treatment group’s relative social need” (2014: 524), which implies that social impact measurement involves more than just summing total social utility across all affected parties.

Eleven multi-sector outcome papers developed analytical models, most often predicting the environmental impacts of specific firm activities, such as production (e. g. Agrawal & Ülkü, 2012), product re-use (Galbreth, Boyacı, & Verter, 2013), remanufacturing or recycling (Atasu & Souza, 2013), distribution (Agrawal, Ferguson, Toktay, & Thomas, 2012), or product distribution traffic routing (Van Woensel, Creten, & Vandaele, 2001). One theoretical model, proposed by Husted & Salazar (2006) (outside of a manufacturing context) outlines conditions under which a firm’s “social output” maximizes shareholder value. These authors define impact in terms of externalities resulting from increases in income due to the provision of scholarships (e.g. generation of “social goods”) and decreases in certain illnesses due to a reduction in pollution levels (e.g., elimination of social “bads”).

Four multi-sector outcome papers employ a case study method. Jamali & Mirshak (2007) describe various socially-focused activities that eight companies across multiple sectors in Lebanon, O’Dwyer (2005) shows how measuring social impact can meet with resistance, Romijn and Caniels (2011) highlight the unintended social and environmental costs borne by vulnerable populations, and Kaplan and Grossman (2010) illustrate two sophisticated social impact measurement systems based on the discounted present value of a program participant’s lifetime income stream and quality-adjusted life years, and analysis of general competencies (employee performance, student retention) and direct impacts (school quality and overall student achievement metrics).

Five papers in this cell employed quantitative analysis, operationalizing social impact with financial measures (Jo, Kim, & Park, 2015), non-financial measures (Berrone, Cruz, Gomez-Mejia, & Larrazza-Kintana, 2010; Pagell & Gobeli, 2009), and a combination of the two (Agle & Kelley, 2001; Tobias, Mair, & Barbosa-Leiker, 2013). Several of these papers also use measures of environmental

impact. For example, Jo et al. (2015) use the Trucost environmental impact database, which calculates a dollar cost to society of a firm's environmental emissions, whereas Berrone et al. (2010) and Pagell & Gobeli (2009) use the Toxic Release Inventory dataset, which scales aggregate emissions data based on the human toxicity potential of each substance. Other papers advocate for gathering multiple dimensions to avoid spurious or misleading relationships (Agle & Kelley, 2001). Tobias et al (2013), in a study of Rwanda's coffee sector, exemplify this approach, using a combination of economic indicators, subjective well-being (see Kroeger & Weber, 2014), and societal conflict reduction assessments (see Renouard, 2011) to measure the social value generated via entrepreneurial participation. This approach uncovers meaningful interrelationships between economic and other measures of social value.

Single-Sector Activity

Single-sector activity studies explore factors assumed to contribute to social impact within a single industry and/or among a population of organizations pursuing similar prosocial initiatives. This approach, used in the fewest number of papers, focuses on specific contexts, often due to the lack of agreement regarding how social impact should be measured, thereby making comparisons of social impact across contexts exceedingly difficult (Salazar et al., 2011). As a result of the uniqueness of the activity studied, these papers measure social impact in narrow terms, including the sum of public goods provided by hospitals (Bai, 2013), the direction of information flows in online health platforms (Goh, Gao, & Agarwal, 2016), the meeting of community's credit needs by banks (Simpson & Kohers, 2002), investment in pollution control equipment by Taiwanese industrial firms (Peng & Yang, 2014), and classifying the mission of, dichotomizing the services offered by, and calculating the number of borrowers and average loan sizes of microfinance institutions (Casselmann, Sama, & Stefanidis, 2015).

Single-Sector Outcome

The single-sector outcome approach to social impact focuses on considering one or more types of social outcomes in a specific context, driven by the assumption that the outcomes in each sector are unique and, therefore, difficult or impossible to compare with those in other sectors. For example, Brickson (2007) argues that social value is created in different ways, based on a firm's relationships with internal and external stakeholders. She explains that value can be created for consumers and employees by meeting human needs (personal esteem, belongingness, and love) and fostering human virtues (bravery, caring, and justice). While this paper is somewhat agnostic with respect to the assumed generalizability of social impact, because her theory conceptualizes social value as dependent on the stakeholder, we classify its approach as single sector, since the types of stakeholders studied (and the social value created for them) are most similar in a specific context.

Three single-sector-outcome papers relied on a case study methodology. Two of these explore interesting contexts, but offer little insight with regard to measurement. Di Domenico, Haugh, & Tracey (2010) study eight social enterprises focused on different types of social value, and Kneiding & Tracey (2009) examine 20 community Development Financial Institutions, though neither actually measure the social outcomes of these organizations. In contrast, Utting (2009) leverages the details of a single-sector to measure impact at multiple levels. Relying on data collected primarily via interviews, surveys, and observations, she measures the impact of fair trade in the Nicaraguan coffee industry beyond micro-level outcomes (i.e., changes to growers' livelihoods and socio-economic status) to include meso-level (i.e., effects on coffee producers), and macro-level (i.e., impact on the natural environment, policies, and institutions) outcomes.

Two papers model social impact as an overall increase in social welfare. One of the benefits of modeling is that it requires that assumptions and definitions be clearly stated in order to obtain solutions, which can yield important insights. Specifically, Dobson and Gerstner (2010), show that just as social value can be created, it can also be destroyed, as when supersizing in the fast food

industry leads to increases in obesity (social value destruction). In order to consider local and far-reaching interactions between organizational actions, Murali, Lim and Petruzzi (2015) model the global societal and environmental impact of water trading between two municipalities. They identify the conditions that affect both the quantity of water available to both municipalities (a societal impact) as well as the sum of the aquifer levels (an environmental impact related to land subsidence, loss of flora and fauna habitat and erosion).

Several single-sector outcome studies utilize quantitative data that are particularly rich or precise and only available in particular contexts. For example, Pitsakis, Souitaris and Nicolaou (2015) measure a unique type of social impact as spinouts from universities. Drawing on both quantitative and qualitative study of similar socially-oriented work integration social enterprises (WISEs) in France, Battilana and colleagues achieve even greater specificity measuring social performance as “the percentage of beneficiaries completing their term at the WISE in a given year who found a regular job with a contract lasting more than six months” (2015: 1664). Similarly, Randoy, Strom & Mersland (2015), define social performance as filling a social mission, which in the context of microfinance institutions (MFIs) constitutes providing financial services to the poor. Finally, Salazar, Husted and Biehl (2011) provide an exemplary illustration of project-level measurement design and execution by investigating a microfinance program for do-it-yourself house construction in Mexico.

DISCUSSION

This review has been conducted in order to identify the manner in which social impact has been conceptualized and measured in the broader business literature. While we believe that research in management in general and entrepreneurship in particular can yield important insights into how we might theorize about and operationalize social impact, we also acknowledge that it is limited, as with all fields, by the perspectives and questions typically employed by those conducting it. By surveying the top journals from each of the major business disciplines, we gain a much broader view of these trends than would otherwise be the case. Based on our in-depth analysis of this comprehensive literature, we believe the following themes can help social entrepreneurship scholars think more critically about social impact and, if applied in their research, may help improve the collective understanding of this important construct going forward. Our suggestions regarding how scholars might attend to the major issues within each theme are summarized in Table 3.

--- Insert Table 3 about here ---

Suitability of Approach

We identified four different approaches for conceptualizing and measuring social impact. As shown in Table 2, the overwhelming majority of papers in our sample (54 of 71) adopt a *multi-sector* approach, suggesting that scholars tend to view social impact as a generalizable construct that can be measured, or commensurated (Espeland & Stevens, 1998), across contexts rather than as a mid-range theoretical construct that can (or at least should) only be compared between organizations operating in very similar contexts. While we are sympathetic to this latter view, we note that 43% (23 of 54) of the *multi-sector* papers we reviewed rely on ratings data that have been developed by private organizations (i.e., KLD/MSCI, EIRIS, ASSET4, etc.) to enable investors to identify companies pursuing (or avoiding) socially responsible (or irresponsible) initiatives. In other words, these data have been developed in order to capture precisely the type of cross-sector comparisons with which multi-sector researchers are interested.

While a potentially promising development, we believe that, as Brammer and Pavelin (2006) admit in their own study, data availability may be driving what is studied and, as such, the findings from rankings-based data may actually lack generalizability. For example, roughly 19% of multi-sector studies in our sample use KLD data, which means that a plurality of what we know (or think we know) about social impact is based on analysis of a very specific set of large, publicly-traded, US-

based firms. Indeed, as noted above, the overwhelming majority of papers in our sample conceptualized and/or measured social impact in an industrialized country context. (Only the single sector outcome approach is balanced between contexts with three papers each from industrialized and non-industrialized countries.) As a result of this tendency, the generalizability of social impact research to the millions of small firms, particularly those operating in developing countries around the world (which are of great interest to entrepreneurship scholars), is not clear. Given the lack of publicly-available data on these firms, we encourage scholars to partner with organizations (e.g., trade associations, government agencies, business incubators, etc.) serving the small business community at home and abroad in order to collect data on these underrepresented populations (Dutt et al., 2016).

As a related concern, we note that when data do not appropriately measure social impact, any results obtained from them may have little validity. Researchers lament that no database exists that directly observes the provision of social impact across multiple sectors and locations (Soleimani et al., 2014). Unfortunately, private data providers often gather the types of variables that are applicable in many different industries because this type of data is more readily available (often in the publicly available disclosures) and the number of people interested (and willing to pay for data access) is larger. As a result of this trend, we are concerned that by allowing data to drive sample decisions, similar to how rankings influence perceptions of quality (Bermiss et al., 2013; Espeland & Sauder, 2007), researchers may be skewing the manner in which we as a scholarly community think about social impact in unintended and potentially dysfunctional ways.

By expressing this concern, we do not intend to suggest that a *multi-sector* approach will fail to provide useful insights, but rather that changes are needed in order to improve the external validity of findings from research adopting this approach. Specifically, we believe that data from a diverse set of organizations must be collected that is specific to the most important social impact research questions. Progress on this front can be made by engaging in the collective establishment of panel data (a point we discuss in more length below) as well as at the individual-level by engaging in primary data collection. While such a practice has its well-known associated resource costs, its benefits are that researchers can tailor their research questions, conceptualizations, and measures of social impact in ways driven by the larger community of academics and practitioners as opposed to ratings agencies.

We also believe that there is an opportunity for more *single-sector* research for a few reasons. To begin, research taking a single-sector approach is suited for developing middle range theories (Weick, 1989) that can be more precisely measured, which are more closely matched to the interests of an organization's specific stakeholders. Salazar and colleagues (2011) use multiple dimensions to assess the social impact resulting from a microfinance program for the DIY construction in Mexico. Given that these dimensions are, broadly speaking, indirect measures of human welfare (e. g. health and community ties), they could potentially be compared to outcomes in other sectors as proposed by Kroeger and Weber (2014). However, in order to quantify social impact at a fine-grained level, Salazar and colleagues (2011) intentionally contextualize their measures with a construction-related activity in mind (e.g. time and cost savings), thereby rendering such comparisons impossible. Given the real tradeoff between the comparability and specificity of data, we see important avenues for both multi- and single-sector research.

The single-sector approach also allows for a more precise consideration of the assumptions underlying the processes that result in social impact, which is particularly important in modeling studies as these assumptions drive the results. For example, Dobson and Gerstner's (2010) assumptions regarding the factors that influence social value creation and destruction in the fast food industry are distinct from those that might influence social impact in other industries. Thus, a single-sector approach can allow researchers to model the complexities and idiosyncrasies that characterize

the reality faced by organizations in a particular context without the slippage that would result from including firms from other sectors into the model.

Given that prosocial initiatives are assumed to bring about socially-beneficial consequences, we are concerned with papers following both *activity* and *outcome* approaches that fail to recognize this relationship in their conceptualization and measurement of social impact. Specifically, we are concerned that researchers avoid the implicit assumptions linking activities and outcomes. Thus, we recommend that researchers adopting an *activity* approach specify the types of outcomes that are associated with these activities, the nature of the implied causal link, and their justification for not measuring those outcomes more directly. For example, Goh et al, (2016) investigates the creation of social value in online health communities by examining the pattern of communications between rural and urban participants. As the measure of social value, the authors identify urban users as net information providers (an *activity*) and argue that a greater flow of information to rural areas has the potential to improve rural health *outcomes*. These outcomes are not measured directly, but are left for future research. Similarly, we recommend that researchers adopting an *outcome* approach specify the activities that are proposed to cause the outcomes, and explicitly consider other factors that could cause these outcomes so as to gain clarity on the causal mechanisms.

Improved Measurement

As indicated in this review, social impact is a theoretically rich construct. Not only can impact have positive and negative consequences (as noted above), but there are virtually limitless ways in which those consequences can be brought about and in which those impacts are felt by any number of individuals, groups, entities, etc. Thus, reducing social impact to a single-dimensional, binary variable (i.e., the firm/product/activity has a positive impact on society or not) do not really tell us much that is real or actionable. To arrive at more meaningful insights in our research, we encourage scholars to take the richness and complexity of the construct into account by considering the dimensionality of the construct in the following ways.

To begin, we noted above that many papers in our sample, particularly in single-sector studies, measure social impact as a summation of multiple types of impact (i.e., social, environmental, political, etc.), while others focus on one specific social problem. One benefit of such an approach is that it enables researchers to use multiple dimensions to better measure a specific type of impact. For example, Randoy and colleagues (2015) measure the poverty-focused social impact of microfinance institutions with four measures. Similarly, Casselman et al. (2015) measure even broadly in the context of MFIs operating in BoP Markets. They adopt Wood's (1991) conceptualization of social performance as principles, processes and outcomes by measuring social impact through coding MFI mission statements as "commercial," "profit oriented/socially responsible," "socially oriented/financially responsible," or social innovators" (intent), whether the MFI provided microsavings and/or microinsurance services (process), and the number of active borrowers and the average loan size (outcome). We advocate for similar multi-dimensional measurement.

Regardless of the dimensions used, scholars should also factor their intended use of their construct into their measurement model. We identify two uses: categorization of the source of impact and quantification of the impact. Measurement for categorization purposes seeks to assess organizations and products in comparison to other organizations and products. The relative social impact of the organizations and products are assessed by means of standards that delineate what is deemed to be "good" or "bad." For categorization purposes, different types of social impact can be added together to form a composite metric that defines the "goodness" or "badness" of the organization or product. Aggregation for categorization is often filtered through external perceptions, similar to that of reputation (Bermiss et al., 2013). Relying on such measures, scholars can classify organizations or products as "responsible," "fair," "social," "green," etc.

The assumption underlying categorizations is that “good” organizations and products will have greater social impact than “bad” ones. A categorization approach undergirds many of the papers in our sample that utilize organizational-level corporate social performance ratings, as well as product-level measures, such as fair trade certification (Castaldo, Perrini, Misani, & Tencati, 2008) and the degree to which products meet standards of responsibility (Moore, 2004) and are useful in that they allow comparison of organizations in different locations, industries and vastly sizes. Although such measures align well with social entrepreneurship research that seeks to identify characteristics that separate social entrepreneurs from other more typical entrepreneurs (Moss et al., 2011), their use comes at the expense of more direct measures of social impact (Lowell, Trelstad, & Meehan, 2005).

Social impact measures for quantification purposes seek to measure the magnitude of social impact that is created in a particular context. Measurement for quantification purposes builds on the concept of additionality, which is employed in several different contexts, ranging from research and development (Aerts & Schmidt, 2008) to prison performance (Cabral, Lazzarini, & Azevedo, 2009) and carbon offsets (Greiner & Michaelowa, 2003). Researchers seeking to quantify the magnitude of social impact from a specific action need to take greater care to measure only those outcomes that are additional, or would not have occurred without an activity. This requires specifying a clear counterfactual, do-nothing alternative, to which social outcomes are compared, as well as clearly specifying measurement in terms of changes (e.g., improvements in conditions of interest) after a given activity. Salazar et al. (2011) provides an illustrative example of the quantitative measurement of social impact created by a specific project by measuring the time and cost of do-it-yourself construction projects as well as the welfare of participating families (measured by family savings, size of dwelling, health, community ties and credit history development) before and after the project . By comparing those measures with those of a control group using propensity score analysis, the authors are able to quantify the actual amount of social impact participating families enjoyed because of the project compared to a do-nothing alternative. Unlike measures that allow comparison of organizations of vastly different scales, quantification focused measures are dependent on scale, such that one project may yield thousands of times more units of impact than another.

The cutting edge of measurement for quantification of specific types of social impact (e.g. poverty alleviation, increase in healthcare access, etc.) is being accomplished by applied economists using randomized control trials (RCT) (Duflo, Glennerster, & Kremer, 2007). Unfortunately, while we are familiar with these studies, we could not develop adequate search terms to effectively select these studies because they do not use meta-theoretical concepts like social impact, but rather focus on impacts such as student achievement (Duflo, Dupas, & Kremer, 2011), or changes in profitability of microfinance borrowers due to a programmatic activity (Field, Jayachandran, & Pande, 2010). Moreover, the papers in our sample rarely acknowledge this approach. The RCT methodology is explicit in identifying counterfactuals and measuring changes, which involves substantial costs, with data gathering before and after an activity for both a treatment and control group. We believe that it is a fruitful path for future research that seeks to quantify social impact, rather than categorize organizations. We also urge readers to turn to the examples of other researchers that have reduced implementation costs while staying true to the underlying theoretical approach, through techniques such as propensity score matching (Salazar et al., 2011).

As the measurement decisions noted above affect whether and to what degree data on different dimensions might be combined to produce a holistic measure of social impact, we advise scholars to think carefully about aggregation for three reasons. First, not all dimensions are valid; thus, aggregating robust, relevant dimensions with less robust, invalid ones confounds our results. As one example, Stanwick and Stanwick (1998) use an aggregated reputation index composed of eight attributes, only one of which is directly related to a socially-beneficial outcome. By adopting this

aggregated measure, the value of the social dimension gets lost amid the noise of the other non-social ones. We advise researchers to exercise care when selecting the dimensions they use to measure social impact, particularly when adopting secondary measures in which multiple dimensions are already aggregated.

Second, if we agree that social impact is comprised of multiple distinct dimensions and if we could agree on what those dimensions were, researchers need to consider whether to model with formative or reflective measurement. Researchers can learn from other streams of research, such as research on a similarly rich and multi-dimensional construct, entrepreneurship orientation (EO). Covin and Wales argue that “researchers are free to choose whichever measurement approach best serves their research purposes, recognizing that [aggregated] versus [disaggregated] EO measurement models are consistent with fundamentally different conceptualizations of the EO construct” (2012: 677). Applied to the present context, the advice for social impact scholars is that aggregation is a matter of choice, but that choice must be consistent with how the construct is defined and subsequently infused into the theoretical model. Moreover, this decision will also have implications for where and how a study relates to the extant literature, with each new paper speaking directly to only those that conceptualize social impact in similar theoretical and empirical ways.

Third, it makes little theoretical sense to combine measures of activities and outcomes in the same composite measure of social impact given that they are distinct and causally related constructs. Nevertheless, several databases used in our sample of social impact papers (most notably, the oft-used KLD) do just that, providing measures of impact that mix together indicators measuring a firm’s actions (e.g., activities) and the results of those actions (e.g., outcomes). Because measures of this kind combine items that tap into fundamentally different stages of the process by which social impact is generated, the validity of the resulting aggregate variables is limited (Kerlinger & Lee, 2000). In light of this concern, we call on scholars to better differentiate between activities and outcomes in their operationalization of social impact and related constructs.

It is interesting that despite the fact that studies in our sample are measuring very similar constructs, no two studies have done so in exactly the same way, even among those that use the same analogous terms for social impact (i.e., social performance, CSR, etc.), draw upon the same definitions, and/or use the same databases. This is especially clear among the multi-sector activity papers. For example, among the ten studies that utilized KLD data, none utilized the exact same aggregation approach. Although the remaining nine quantitative studies not using KLD data conceptualize social impact as corporate social performance, all measure it differently, even among those that use the same databases. For example, both Brammer and Pavelin (2006) and Cuesta-Gonzalez et al. (2006) use EIRIS data; however, whereas the former operationalize CSP as an index of several scales that are normalized and summed, the latter filter the firms based on 16 different criteria in order to arrive at a ranking and a qualitative assessment for each. Similarly, among the two studies using ASSET4 data, Ioannou and Serafeim (2012) operationalize social performance as the equally weighted average of the social and environmental performance scores, whereas Shaukat et al. (2016) use these two scores to compute measures for distinct social performance and environmental performance constructs.

The lack of established measures in the social impact literature is troubling, as it prevents the accumulation of knowledge of similar phenomena. Indeed, Wu and Pagell (2011) point out that having standards in measurement practices can help in dealing with the uncertainty and evolving decision parameters that make having an impact difficult. In this way, the development of shared standards for measurement might not just help researchers, but also practitioners. However, there seem to be tradeoffs between the scope of application of standards and the validity of comparison. Thus, it may be difficult for researchers and practitioners to develop direct social impact measurement standards that are universally applicable. Thus, rather than come to complete agreement

on measures, it may be more feasible to form smaller coalitions in which standards of measurement can be developed.

Clarity of Definition

Of course, before scholars can make progress on measurement, they must improve the precision with which their terms are defined. As noted above, a sizable proportion (10 of 71) of the papers in our sample included no definition of social impact. Bacharach (1989: 502) argues that “[t]he *raison d’être* of a variable is to provide an operational referent for a phenomenon described on a more abstract level (e.g., a construct).” In other words, a variable must effectively tap the domain of the construct it is intended to measure if it is to be considered valid. To identify such a variable, the construct’s operational definition should be used as guidance as it provides explicit instruction regarding how the construct should be measured (Kerlinger & Lee, 2000). Because precision with construct definitions will improve both research findings and the practical insights that can be derived from research (Bruyat & Julien, 2001), we call on all scholars to ensure that the variables they choose to measure social impact are consistent with their definition of that construct.

In choosing a definition, scholars would be wise to acknowledge that while most definitions conceptualize social impact as engendering “positive” social change (e. g. Santos, 2012; Stephan, Patterson, Kelly, & Mair, 2016), others define social impact in terms of the reduction of negative impacts (Bartling et al., 2015). Given the complexity of this construct, we call on scholars to acknowledge the positive *and* negative outcomes of various socially-minded activities and consider both in their measurement models. Papers framed in social performance terms may serve as a guide given that they are typically more explicit in measuring impact as a combinative function of positive and negative effects. For example, Crilly et al. (2016: 1318) contend that social impact results from initiatives that both “do-good” (i.e., the increase of positive externalities) and “do-no-harm” (i.e., the decrease of negative externalities), a view that is consistent with our own definition of social impact. KLD and related databases, if only crudely, measure firms’ positive *and* negative impacts on society that provides at least a basic conceptual guide in addressing the need to capture *both* positive and negative social impact. Similarly, papers utilizing a modeling methodology often focus on negative impacts (Dobson & Gerstner, 2010). To be clear, this is not a specific call to use social impact ratings/investment databases to arrive at these variables, but rather a more general call to consider the various ways in which organizations can and do impact society and how that society is better off when benefits increase *and* harms decrease.

As a final point, we advise scholars to make the temporal nature of the impact they are studying and the level of analysis at which they are studying it explicit in their conceptualization of social impact. If these boundaries are drawn too narrowly, researchers may fail to fully observe the outcomes resulting from activities. This is particularly an issue if the outcomes countervail those that are measured (e.g. unmeasured outcomes are negative while measured outcomes are positive). If the boundaries are drawn too expansively, researchers may capture spurious causal factors. Entrepreneurship scholars, who routinely conduct research at multiple levels (individual, firm, industry, regional, national) and time scales ranging from seconds to generations, are well-poised to contribute to bringing more rigor to defining these boundaries (Baron & Ensley, 2006; Davidsson & Wiklund, 2001; Rauch, Frese, & Utsch, 2005).

The intervals over which different types of organizational phenomena are manifest are an important component of theory as well as empirical measurement (Zaheer, Albert, & Zaheer, 1999). We encourage researchers to more explicitly identify the time intervals in which activities lead to outcomes. This is particularly important if the interval in which outcomes are manifest exceed the interval in which researchers can observe outcomes and is a legitimate reason for adopting an activity approach. For example, the fact that the environmental impact of product design or manufacturing choices extend over the product’s complete lifetime is one logical motivation for the use of modeling

in research (Atasu & Souza, 2013). However, research in the activity approach often makes no mention of time scales since the connection between outcomes is not explicitly measured and often (as noted above) not explicitly theorized.

Researchers often fail to address time scales in outcome research as well, which is problematic given that the time period in which outcomes are measured matters significantly. First, the time lag between an activity and outcomes may differ between activities (Herbig, Milewicz, & Golden, 1994). Consider, for example, carbon offsets, which measure change (i.e., how much carbon emissions are reduced with the introduction of an activity). Measurement is required before, during, and after the activity. While emission reductions can be measured immediately following an activity, the impact of other activities, particularly those related to human development, might only be measurable over a person's lifetime (Kaplan & Grossman, 2010). Thus, we encourage researchers interested in measuring social outcomes to specify the time interval in which the outcomes will be manifest, as well as logic for the interval in which measurement will occur.

Researchers may also wish to consider the levels of analysis in which outcomes should theoretically be measured (Rousseau, 1985). Some (if not most) activities may not just have direct effects on the users targeted by the activities, but also secondary effects at other levels of analysis as well. These may include benefits for non-users, changes within industries, etc., which invariably take more time to transpire. Interestingly, while most of the studies in our review make claims of multi-level effects, few actually measure them. Based on their findings that indicate the existence of a net surplus of social support (i.e., information flow) from urban to rural patients, Goh et al. (2016: 260) conclude that the social value created in such platforms not only benefits users, but also the public health system more broadly. However, they do not measure these multi-level effects. Similarly, Simpson and Kohers (2002) study banks due to the legal mandate that they meet the needs of low-income customers. Though this law was passed under the assumption that the practices it required would improve the social and economic health of local communities, Simpson and Kohers (2002) do not measure these second-order outcomes.

In fact, only two studies in our sample measure multi-level social impact. Tobias and colleagues (2013) study the effects of legal changes in Rwanda that opened coffee growing to smaller-scale farmers. While they measure changes in income, they also measure second-order multi-level effects such as changes in outgroup prejudice and social trust that result from these changes in income. Similarly, in her case study of the Nicaraguan fair trade coffee industry, Utting (2009) investigates the way in which fair trade ameliorates globalization's harmful effects on poor countries. She collects data on an exhaustive list of stakeholders, measuring historical changes in the previous 20-years, using a variety of (mostly primary and/or qualitative) data collection methods and finds evidence that the impacts of fair trade include improved livelihoods, organizational capacity building, and higher level policy and institutional impacts.

The long-term, qualitative approach method adopted by Tobias and colleagues (2013) and Utting (2009) represents exemplary illustration of how the full impact of an activity might be measured, but poses significant challenges as well given that it may take considerable time for the secondary multi-level effects of a given activity to be realized and considerable resources to then measure them. Thus, while we laud the richness of such an approach and encourage scholars to adopt it, we also recognize benefits of a quantitative approach. While no exemplars abound from our sample, we propose that scholars apply methods designed to test multi-stage and higher-order impacts that are established in related research streams. As one example, Kirchhoff et al. (2007) find evidence to suggest that federal investment in university R&D (i.e., an activity) not only results in the creation of new high-tech firms (i.e., a primary outcome), but also contributes indirectly to the creation of service firms that seek to support them (i.e., a secondary outcome). While not specifically framed in the context of social impact, the authors do argue that instead of hypothesizing simple

cause-and-effect relationships in studies of economic development, “researchers may wish to propose and test more dynamic relationships that may ultimately better inform us as to the manner in which new firms are formed as well as the extent to which they contribute to society” (Kirchhoff et al., 2007: 557). In so doing, they collect historical data from a variety of secondary sources and analyze it with two-stage least squares regression analysis, which they note is specifically designed to test for secondary and reciprocal relationships. While this is but one related example, it does demonstrate how quantitatively-oriented scholars interested in social impact might follow examples like this, which use methodologies that account for multiple stages of impact, to measure and analyze the short-term and long-term effects of activities designed to benefit society writ large.

We also note that a number of papers in our sample, particularly those published in the economics and operations fields, define and measure social impact at the product/project level (i.e., Bartling, Weber, & Yao, 2015). For example, lifecycle analysis (LCA) papers argue that the social impact of a product continues after manufacturing to its use and disposal, such that impact is often not fully internalized by firms (Gauthier, 2005). Moreover, these impacts tend to extend throughout the supply chain (Wu & Pagell, 2011). These studies indicate that social impacts of a firm’s products are often long-lived and wide-reaching. The insights from these studies not only reinforce the need to consider time in our analyses, but also demand that we extend the scope of what we ought to be measured over time. Thus, we call on scholars to consider the interrelated network of partners throughout the value chain when conceptualizing and measuring impact so that we can gain a fuller appreciation for the comprehensive nature of how firms are impacting society.

Generation of Social Impact Data

As argued above, new data sources are needed in order for social impact research to make rapid advances. We believe that one promising example that can aid in multi-sector research is B-Corp organizational certification, based on the proprietary B Impact Assessment developed by the non-profit, B-Lab. The initial B Impact Assessment sought to synthesize best practices from the work of the Social Venture Network, the Natural Capital Institute, and the small company version of the Global Reporting Initiative standards (“B Labs - Our History,” 2013). The impact assessment includes a checklist specifying actions and outcomes that are designated as socially responsible or socially impactful across five categories: environment, community, workers, customers and governance. The scores within each of these components are summed to provide an overall B-score. Over time, the impact assessment has been further developed, allowing differential weighting of components based on organization size, industry and geography. The resulting B-score allows categorical assessments of social impact in two primary ways. First, it delineates between “certified” firms (i.e., those that have a positive impact on society) and “non-certified” firms (i.e., those that do not). Second, it permits ordinal comparisons within the population of certified firms—those with higher scores theoretically have a greater impact than those with lower scores. As a final point, while B-Corp certification reports provide data on much smaller firms than most other secondary sources focused on social impact, firms have to choose to use the measures; thus, the net effect on generalizability is equivocal.

Given the strengths and weaknesses of the B-Lab data, coupled with the fact that it has not been developed with academic interests in mind, we also call on scholars to develop large-scale databases that are tailored to questions of interest to those in the field and ideally bridge *single-* and *multi-sector* approaches. Following Kroeger and Weber’s (2014) argument that social impact can be conceptualized (and measured) as changes in human well-being, and coupled with the recognition that social impact often has lagged effects (Utting, 2009), we suggest that scholars conduct longitudinal surveys of respondents in locations served by different activities. By utilizing standardized measures of human well-being, researchers may be able to solve the “apples to oranges” problem of comparing different types of impacts that are not measured in equivalent units

(i.e., lives saved vs. access to education) (Dees, 1998). While collecting such data is no easy task for a lone researcher, entrepreneurship scholars have experience in working as a community to address similar data issues. In 1996, individuals from 22 universities (e.g., the Entrepreneurship Research Consortium) committed the financial and other resources necessary to collect data on the conditions surrounding the startup process of new firms in the United States. The result, the Panel Study of Entrepreneurship Database (PSED) I, along with its follow-up, the PSED II, has led to many dozens of empirical studies (Davidsson & Gordon, 2012) and has greatly furthered our understanding of the startup process (Reynolds & White, 1997). A similar approach could fuel research on social impact. While the Global Entrepreneurship Monitor (GEM), a similarly funded panel study, has taken a modest step in this direction, the social data it provides is limited to vague interpretations of firms' intentions; as such, the activities and outcomes of firms' social motives are not measurable.

Thus, we add to previous calls for the establishment of a large-scale social impact database (see Desouza & Smith, 2014) and call on scholars to engage in serious conversations about how to replicate the PSED/GEM method in this space. Organizations from the private sector, such as impact investing organizations, have already begun work on creating measures suited for specific types of social problems (Milligan & Schöning, 2011). For example, although only one paper in this review conceptualizes social impact in terms of a firm's SROI (Hall et al., 2015), this concept is gaining traction among practitioners given that this outcome is believed to be seen as important to investors (Lingane & Olsen, 2004). Researchers may look to partner with practitioner-led social impact data collection efforts under the banner of SROI. As our research and the attendance at leading social entrepreneurship conferences suggests, social impact is a topic that is of interest across the various business disciplines, suggesting that widespread interest in and, more importantly, support for such a database exists. We believe that entrepreneurship scholars, who have experience overcoming a dearth of adequate data, are well-positioned to help lead these efforts.

CONCLUSION

We have undertaken this review in an effort to provide scholars with a clear view of the state of research on social impact. Despite the voluminous body of research on this topic across multiple disciplines, its fragmented nature has, up to this point, obfuscated a clear understanding of trends and best practices regarding its conceptualization and measurement. In response, we have cast a wide net by targeting the top journals in business in order to capture the variety of ways in which social impact has been treated in theoretical and empirical work. Although great care was taken to ensure that the choices made adhered closely to theory and precedent and that a relevant and representative sample of papers on social impact was collected, we recognize that, as with all sample selection criteria, ours may have resulted in the exclusion of some papers that other researchers might consider to be relevant, such as those dealing with related constructs such as socially responsible investment (Cumming & Johan, 2007), corporate social responsibility (Bermiss et al., 2013), and social entrepreneurship (Moss et al., 2015). Although our approach may have resulted in the exclusion of some potentially related papers, we took great care in developing our methodology in order to arrive at a sample of the most relevant papers. This was a particularly thorny task given the widespread and inconsistent use of these and related constructs in the literature (Lyon & Fernandez, 2012). Thus, while we believe we have succeeded in drawing clear boundaries around what constitutes research on social impact, we admit that our sample is not exhaustive of all work on the topic. For this reason, we see an opportunity for scholars to extend our findings into these and similar areas by considering alternative sample selection criteria. Given our acute focus on social impact, we believe we have gleaned some important insights from our sample regarding where the field has been as well as how it might be advanced going forward. Of course, we do not intend for our suggestions to be interpreted as exhaustive or absolute. Rather, we offer them only in an attempt to stimulate thought and discussion on the past, present, and future state of social impact research. We believe that

entrepreneurship scholars are well-positioned to help lead these efforts and, therefore, encourage them to think carefully about this important construct and gather the type of data that will help to move social impact research in new and meaningful directions.

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Table 1. Summary statistics

| Paper | | Construct (some papers use multiple constructs) | | Measurement | |
|---------------------|----------|--|----------|---------------------------|----------|
| <i>Field</i> | <i>N</i> | <i>Term</i> | <i>N</i> | <i>Type</i> | <i>N</i> |
| Ethics | 30 | Corporate social performance | 19 | Quantitative | 33 |
| Management | 18 | Social performance | 19 | Modeling | 13 |
| Operations | 14 | Social impact | 12 | Qualitative | 12 |
| Entrepreneurship | 4 | Environmental impact | 11 | Descriptive | 3 |
| Marketing | 2 | Social value | 10 | Conceptual | 6 |
| Accounting | 1 | Environmental performance | 5 | Theoretical | 4 |
| Economics | 1 | Environmental efficiency | 1 | | |
| Information systems | 1 | | | <i>Data</i> | <i>N</i> |
| | | <i>Definition</i> | <i>N</i> | Primary | 15 |
| <i>Year</i> | <i>N</i> | Externalities | 15 | Secondary | 30 |
| 1996 | 1 | Principles, processes, outcomes | 13 | | |
| 1997 | 0 | Defined with example(s) | 10 | <i>Geographic context</i> | <i>N</i> |
| 1998 | 1 | No definition provided | 10 | Industrialized | 36 |
| 1999 | 1 | Miscellaneous | 8 | Developing | 8 |
| 2000 | 0 | Stakeholder impact | 6 | Both | 1 |
| 2001 | 1 | Product life-cycle | 3 | n/a | 26 |
| 2002 | 1 | People, profits, and planet | 2 | | |
| 2003 | 2 | Resource use | 2 | | |
| 2004 | 0 | Solve problems | 2 | | |
| 2005 | 3 | | | | |
| 2006 | 6 | | | | |
| 2007 | 2 | | | | |
| 2008 | 3 | | | | |
| 2009 | 5 | | | | |
| 2010 | 7 | | | | |
| 2011 | 6 | | | | |
| 2012 | 6 | | | | |
| 2013 | 8 | | | | |
| 2014 | 5 | | | | |
| 2015 | 8 | | | | |
| 2016 | 5 | | | | |

Table 2. Typology of social impact papers

| | Activity | Outcome |
|----------------------|--|---|
| Multi- sector | Bartling et al. (2015) Boulouta (2013) Brammer & Pavelin (2006) Chen & Delmas (2011) Chen et al. (2008) Corner & Ho (2010) Crilly et al. (2016) Cuesta-Gonzalez, Munoz-Torrez, & Fernandez-Izquierdo (2006) Dillenburg, Greene, & Erekson (2003) Gauthier (2005) Igalens & Gond (2005) Ioannou & Serafeim (2012) Jamali (2008) Jenkins (2006) Kang (2013) Kleine & von Hauff (2009) Liston-heyas & Ceton (2009) Manner (2010) McGuire, Dow, & Argheyd (2003) Oikonomou, Brooks, & Pavelin (2014) Schreck (2011) Shaukat et al. (2016) Soleimani et al. (2014) Stanwick & Stanwick (1998) Van der Laan et al. (2008) Wagner (2010) Wu & Pagell (2011) | Agle & Kelley (2001) Agrawal et al. (2012) Agrawal & Ülkü (2012) Atasu & Souza (2013) Berrone et al. (2010) Chen & Delmas (2012) di Norcia (1996) Galbreth et al. (2013) Hall, Millo, & Barman (2015) Husted & Salazar (2006) Jamali & Mirshak (2007) Jo, Kim, & Park (2015) Kaplan & Grossman (2010) Kroeger & Weber (2014) Marom (2006) McWilliams & Siegel (2011) O'Dwyer (2005) Ovchinnikov, Blass, & Raz (2014) Pagell & Gobeli (2009) Quariguasi-Frota-Neto & Bloemhof (2012) Raz, Druehl, & Blass (2013) Renouard (2011) Romijn & Caniëls (2011) Schuler & Cording (2006) Stephan et al. (2016) Stuart, Ammons, & Turbini (1999) Tobias et al. (2013) Van Woensel et al. (2001) |
| Single-sector | Bai (2013) Casselmann et al. (2015) Goh et al. (2016) Peng & Yang (2014) Simpson & Kohers (2002) | Battilana et al. (2015) Brickson (2007) Di Domenico et al. (2010) Dobson & Gerstner (2010) Kneiding & Tracey (2009) Murali et al. (2015) Pitsakis et al. (2015) Randøy et al. (2015) Salazar et al. (2011) Utting (2009) Zahra & Wright (2016) |

Table 3. Social impact measurement checklist

| Optimal use of social impact measures | | Suboptimal use of social impact measures | |
|--|--------------------------|--|--------------------------|
| Suitability of Approach | | | |
| Researcher clearly defines theoretical construct, allowing assessment of fit between construct and operationalization | <input type="checkbox"/> | Researcher does not define theoretical construct, or define only by example | <input type="checkbox"/> |
| Measures are used because they are helpful operationalizations of the construct of interest | <input type="checkbox"/> | Measures are used because they are ubiquitous and readily available | <input type="checkbox"/> |
| Improved Measurement | | | |
| Researcher focuses on either activities or outcomes within a particular metric, which matches theoretical construct | <input type="checkbox"/> | Researcher combines both activities and outcomes into single metric | <input type="checkbox"/> |
| Researcher aggregates only those social-impact measures that are theoretically relevant representations of the underlying construct | <input type="checkbox"/> | Researcher aggregates social-impact measures of varying applicability into single construct, increasing measurement noise | <input type="checkbox"/> |
| (If using a widely available dataset) Researcher provides strong justification for measurement construction, and where possible/justified, constructs measures similarly to prior papers | <input type="checkbox"/> | (If using a widely available dataset) Researcher performs ad hoc measurement construction, poorly justifying methodological decisions, or providing no rationale for departure from prior approaches | <input type="checkbox"/> |
| Researcher designs measure to quantify the (positive) social impact of an organizational activity | <input type="checkbox"/> | Researcher merely categorizes a particular activity as “socially beneficial”, sometimes without clear evidence of such benefit/impact | <input type="checkbox"/> |
| (If activity-based measure or categorization approach) Researcher specifies the type of outcomes predicted and the implied causal link between activities (categories) and outcomes | <input type="checkbox"/> | (If activity-based measure or categorization approach) Researcher measures activities or assigns categories without discussing true outcomes of interest or implied causal relationships | <input type="checkbox"/> |
| Clarity of Definition | | | |
| Researcher explicitly considers the appropriate time scale of measurement/observation, including the predicted lag between activity and outcomes | <input type="checkbox"/> | Researcher fails to consider the appropriate time scale of measurement/observation, including the predicted lag between activity and outcomes | <input type="checkbox"/> |
| Researcher explicitly considers the appropriate levels of observation and measurement | <input type="checkbox"/> | Researcher ignores secondary social effects of organizational activities | <input type="checkbox"/> |

Appendix. Detailed description of sample

| <u>Paper</u> | <u>Construct</u> | | | <u>Measurement</u> | | <u>Operationalization/Conceptualization</u> ⁶ |
|-------------------------------------|------------------|---------------------------|--|--------------------------------|--------------------------|--|
| | <u>Citation</u> | <u>Field</u> ¹ | <u>Term</u> ² | <u>Definition</u> ³ | <u>Type</u> ⁴ | |
| Agle & Kelley, 2001 | Ethics | CSP | Principles, processes, outcomes | Quant | P | Principles, processes, and outcomes measured by employee surveys and corporate giving |
| Agrawal et al, 2012 | Ops | EI | Product life-cycle | Model | | Environmental impact (production, use, disposal) of leasing vs. selling |
| Agrawal & Ulku, 2013 | Ops | EI | Product life-cycle | Model | | Environmental impacts (from production, use and disposal) as well as financial profitability due to product modularity. |
| Atasu & Souza, 2013 | Ops | EI | Product life-cycle | Model | | Examples include energy consumption, non-renewable materials usage, carbon emissions, toxicity, etc. |
| Bai, 2013 | Ethics | SP | Externalities | Quant | S | Sum of a hospital's uncompensated care cost, net education expense, and net research expense, divided by revenues |
| Bartling, Weber & Yao, 2015 | Econ | SP | | Quant | P | Negative social impact = presence of negative effects of product on other players in buying experiment |
| Battilana et al, 2015 | Mgmt | SP | Misc (social outcomes) | Quant | S | Percentage of beneficiaries who found a permanent regular job of ~128 work integration social enterprises |
| Berrone et al, 2010 | Mgmt | EP | Misc (environmental investment) | Quant | S | Emissions weighted by human toxicity potential |
| Boulouta, 2013 | Ethics | CSP | Principles, processes, outcomes | Quant | S | KLD strengths & KLD concerns |
| Brammer & Pavelin, 2006 | Mgmt | CSP | Solve problems | Quant | S | Normalized sum of community, environmental, employee performance, using EIRIS data. |
| Brickson, 2007 | Mgmt | SV | Misc (environmental well-being) | Theory | | Stakeholder-based social value - meeting human needs, fostering human virtues |
| Casselman, Sama, & Stefanidis, 2015 | Ethics | SP | Principles, processes, outcomes | Quant | S | Social orientation of mission statements (intent), provision (yes/no) of microsavings/microinsurance services (process), number of active borrowers and average loan size (outcome) |
| Chen & Delmas, 2011 | Ops | CSP | Stakeholder impact | Quant | S | KLD composite efficiency index (concerns=inputs, strengths=outputs) |
| Chen & Delmas, 2012 | Ops | EE | Externalities | Model | | General environmental outputs (greenhouse gas or toxic emissions) |
| Chen et al, 2008 | Ethics | CSP | Misc (identification, process, and programs) | Quant | S | KLD concerns, both summed and disaggregated |
| Corner & Ho, 2010 | Entrep | SV | Solve problems | Qual | P | Example of creating jobs for poor in India |
| Crilly et al. 2016 | Mgmt | SP | Externalities | Quant | S | Aggregate ratings of a firm's human rights, incidents of forced labor, customer partnerships, and community relationships (social-political) and environmental management, reporting, certification, and materials usage (environmental) using Innovest data |

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|----------------------------------|--------|--------|---------------------------------|--------|---|---|
| Cuesta-Gonzalez et al., 2006 | Ethics | SP | Defined with example(s) | Quant | S | Rankings of banks based on 16 criteria related to governance, stakeholders, human rights and operations in poor countries (internal dimension), degree of transparency and commitment to internal dimensions (external dimension) |
| di Norcia, 1996 | Ethics | EP, SP | Misc (responsiveness) | Concep | | Underlying direct and indirect measures, suggests categorizing firms into one of four social performance categories |
| DiDomenico, Haugh & Tracey, 2010 | Entrep | SV | Defined with example(s) | Qual | P | Different types of social value (work integration, community cohesion) listed from case study of 8 social enterprises, |
| Dillenburg et al, 2003 | Ethics | SI | | Descr | | Total Social Impact ratings with 80 benchmarks across 10 categories explained |
| Dobson & Gerstner, 2010 | Mktg | SV | Resource use | Model | | Willingness to pay minus total resources used in modeling of obesity-related negative social value of fast-food supersizing |
| Galbreth et al, 2013 | Ops | EI | | Model | | Total virgin material usage |
| Gauthier, 2005 | Ethics | SP | Defined with example(s) | Descr | P | Extended LCA methodology (product level) proposed with example of a sustainable computer peripheral |
| Goh, Gao, & Agarwal, 2016 | IS | SV | Externalities | Quant | S | Direction of online information flows in online health discussion board |
| Hall et al, 2015 | Mgmt | SV | Externalities | Qual | P | Examples of SROI measurement implementation in UK and US |
| Husted & Salazar, 2006 | Mgmt | SP | Externalities | Model | | Benefits and costs in relation to varying levels of social outputs under different motivational conditions |
| Igalens & Gond, 2005 | Ethics | SP | Principles, processes, outcomes | Qual | S | Benefits of ARESE data, with multiple indicators used for comparison, explained |
| Ioannou & Serafeim, 2012 | Mgmt | CSP | Principles, processes, outcomes | Quant | S | Equally weighted average of the social and environmental performance scores using ASSET4 data |
| Jamali & Mirshak, 2007 | Ethics | SI | Principles, processes, outcomes | Qual | P | Case study of 8 Lebanese firms from different industries |
| Jamali, 2008 | Ethics | SI | Principles, processes, outcomes | Qual | P | Ethical performance score (60 best practices) through survey |
| Jenkins, 2006 | Ethics | SP | Defined with example(s) | Qual | P | Practices and outcomes identified from interviews of 24 award-winning UK small companies, |
| Jo et al, 2015 | Ethics | EI | Externalities | Quant | S | Emissions weighted by human toxicity potential |
| Kang, 2013 | Mgmt | CSP | Stakeholder impact | Quant | S | KLD aggregated strengths and concerns |
| Kaplan & Grossman, 2010 | Mgmt | SI | | Concep | | Lifetime income stream, quality-adjusted life years and competencies (employee performance, student retention) and direct impacts (school quality and overall student achievement) |
| Kleine & von Hauff, 2009 | Ethics | SI | | Descr | | Integrated Sustainability Triangle |

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| Kneiding & Tracey, 2009 | Ethics | SP | Defined with example(s) | Qual | P | Interviews with 20 community development financial institutions |
| Kroeger & Weber, 2014 | Mgmt | SV | Misc (need reduction) | Theory | | Respondents' subjective judgment of well-being, accounting for differences between aspirations and achievement. |
| Liston-heyas & Ceton, 2009 | Ethics | CSP | | Quant | S | KLD aggregated strengths and concerns, transformed to ranking |
| Manner, 2010 | Ethics | CSP | Principles, processes, outcomes | Quant | S | KLD strengths & KLD concerns |
| Marom, 2006 | Ethics | CSP | Misc (social products) | Concep | | Conceptual model of production of social products for different stakeholders |
| McGuire et al, 2003 | Ethics | CSP | Stakeholder impact | Quant | S | KLD strengths & KLD concerns |
| McWilliams & Siegel, 2011 | Mgmt | SV | Externalities | Theory | | A social good (externality) that can lead to sustained competitive advantage if greater than private cost of generating it |
| Murali, Lim & Petrucci, 2015 | Ops | SI | Defined with example(s) | Model | | Total quantity of water available and sum of aquifer levels in model of water trading between municipalities |
| O'Dwyer, 2005 | Acct | SP | Stakeholder impact | Qual | P | Paper focuses more on the process of developing metrics than on the actual metrics |
| Oikonomou et al, 2014 | Mgmt | CSP | Principles, processes, outcomes | Quant | S | 3 categories across five KLD dimensions (all positive, all negative, or mixed) |
| Ovchinnikov et al, 2014 | Ops | EI | Defined with example(s) | Model | | Energy consumption (per unit and per dollar of revenue) |
| Pagell & Gobeli, 2009 | Ops | EP, SP | People, profits, and planet | Quant | S | OSHA violations (scaled by inspection frequency and number of employees) and TRI emissions (scaled by number of employees). |
| Peng & Yang, 2014 | Ethics | SP | | Quant | S | Investment (yes/no) in pollution control equipment |
| Pitsakis, Souitaris, Nicolaou, 2015 | Mgmt | SI | Externalities | Quant | S | Spinoffs (peripheral to core research activities) from 113 US Universities |
| Quariguasi-Frota-Neto & Bloemhof, 2012 | Ops | EI | Resource use | Model | | Cumulative energy consumption of remanufacturing vs virgin manufacturing of personal computers and mobile phones |
| Randoy, Strom & Mersland, 2015 | Entrep | SP | Misc (achieve social mission) | Quant | S | Loan size, growth in loans/clients, loans to rural clients among 295 microfinance institutions: |
| Raz et al, 2013 | Ops | EI | Defined with example(s) | Model | | Energy consumption and materials usage (manufacturing and use) |
| Renouard, 2011 | Ethics | CSP | Stakeholder impact | Concep | | Examples include individual relational capability, collective empowerment, and inter- and intra-community relational quality. |
| Romijn & Caniels, 2011 | Mktg | SI | People, profits, and planet | Qual | P | Examples include cultural disruption, ecosystem destruction, community displacement, and energy usage |
| Salazar, Husted & Biehl, 2012 | Ethics | SI, SP | Externalities | Quant | P | Reductions in time/cost of construction, increases in welfare (savings, dwelling size, health, community ties and credit development) from DIY house microfinance loans |
| Schreck, 2011 | Ethics | CSP | Principles, processes, | Quant | S | Ratings of firm's performance to employees, corporate governance, |

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| | | | outcomes | | | environmental management, product and customer responsibility, and society and community |
| Schuler & Cording, 2006 | Mgmt | SP | Externalities | Theory | | Utilitarian view that CSP stems from outcomes, regardless of intentionality |
| Shaukat, Qiu, & Trojanowski, 2016 | Ethics | CSP, EP | | Quant | S | Firm's capacity to generate trust and loyalty with its workforce, customers and society (social); Company's impact on living and non-living natural systems (environmental) |
| Simpson & Kohers, 2002 | Ethics | SP | Externalities | Quant | S | Bank compliance with Community Reinvestment Act |
| Soleimani et al. 2014 | Mgmt | CSP | Stakeholder impact | Quant | S | Participation (yes/no) in the UN Global Compact or GRI initiatives |
| Stanwick & Stanwick, 1998 | Ethics | EP, SP | Principles, processes, outcomes | Quant | S | Fortune Corporate Reputation Index ranking (sp) and firm's pollution emissions (ep) |
| Stephan et al, 2016 | Mgmt | CSP | Externalities | Concep | | Beneficial outcomes experienced by those not instigating change |
| Stuart et al, 1999 | Ops | EI | Defined with example(s) | Model | | Energy, materials, packaging, and waste |
| Tobias et al, 2013 | Entrep | SV | | Quant | P | Poverty reduction as economic value and conflict resolution in Rwandan coffee sector |
| Utting, 2009 | Ethics | SI | Externalities | Qual | P | Changes in Nicaragua coffee growers' livelihoods and socio-economic status, organizations, natural environment, macro-level policies, and future prospects for fair trade initiatives |
| Van der Laan et al, 2008 | Ethics | CSP | Principles, processes, outcomes | Quant | S | KLD strengths & KLD concerns, also disaggregated across 7 dimensions |
| Van Woensel et al, 2012 | Ops | EI | Externalities | Model | | Vehicle emissions |
| Wagner, 2010 | Ethics | CSP | Principles, processes, outcomes | Quant | S | KLD aggregated strengths and concerns, binary social innovation measure from KLD |
| Wu & Pagell, 2011 | Ops | EI, SI | | Qual | P | Examples explained from case study of 8 firms with leading sustainable supply chain practices - identified narratively |
| Zahra & Wright, 2016 | Mgmt | SI, SV | Defined with example(s) | Concep | | Examples calling for future research on social value |

¹ Acct=Accounting, Econ=Economics, Entrep=Entrepreneurship, Ethics=Ethics, IS=Information systems, Mgmt=Management, Mktg=Marketing, Ops=Operations

² CSP=corporate social performance, EE=environmental efficiency, EI=environmental impact, EP=environmental performance, SI=social impact, SP=social performance, SV=social value

³ Concept=conceptual, Desc=descriptive, Model=modeling, Quant=quantitative, Qual=qualitative, Theory=theoretical

⁴ Blank cells=no definition provided

⁵ P=primary, S=secondary; (qualitative, and quantitative papers only)

⁶ Operationalization provided for descriptive, qualitative, and quantitative papers only, Conceptualization provided for conceptual, modeling, and theoretical papers only