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Impact Entrepreneurship: Reimagining Entrepreneurial Purpose and Research for Driving Societal Impact

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Abstract As societies increasingly face societal and ecological grand challenges, entrepreneurs are urged to contribute to socially and ecologically sustainable futures—that is, engage in *impact entrepreneurship*. An impact-oriented approach strives for entrepreneurial ventures to not only generate profit but also drive positive societal change, maintaining and protecting existing beneficial conditions, or reducing ongoing societal and ecological harms. The notion of impact in entrepreneurship therefore emphasizes the critical need to understand and evaluate business activities beyond financial outcomes, considering their broader social, ecological, and economic effects. Understanding and advancing the meaning and implications of impact entrepreneurship is crucial, since it requires rethinking the role of entrepreneurs in society—positioning them as agents of systemic change who align profit with considerations and actions of broader social and ecological purpose. This curated discussion develops two key avenues to advance scholarship on and practice of impact entrepreneurship. First, shifting from profit to impact in entrepreneurship requires rethinking value creation, moving beyond market opportunities to addressing societal and ecological grand challenges. This shift involves embracing complexity, developing new approaches to impact measurement, fostering impact-oriented education, and scaling beyond economic growth in entrepreneurial ecosystems. Second, the role of research and researchers is redefined in this context. Contributing to impact entrepreneurship demands both methodological rigor and active engagement. Researchers must not only evaluate impact but also participate in shaping inclusive, collaborative practices, and translating knowledge into action. Together, the essays in this curated discussion highlight how entrepreneurship research, education, and ecosystems can evolve to support a more equitable, sustainable future through purpose-driven innovation.

Keywords Impact Entrepreneurship · Impact Innovation · Impact Measurement · Entrepreneurship Education · Entrepreneurial Ecosystems · Digitalization · Sustainability

1 Impact Entrepreneurship: An Introduction

A. Vogel, M. Nadegger, B. Wolf

1.1 Reframing Entrepreneurship in the Face of Grand Challenges

Societies face a complex array of social and ecological grand challenges including critical issues such as poverty, educational inequalities, and ecological degradation (George et al. 2016; Gümüşay et al. 2022). These grand challenges and the associated threats to societal and ecological well-being raise critical questions about the role of various actors, like public policy institutions, individual consumption behaviour and accountability of entrepreneurs in addressing and mitigating them.

Addressing grand challenges requires political interventions, engagement from civil society actors such as NGOs and social movements and demands a fundamental rethinking of entrepreneurship, calling to challenge and transform the ‘business as usual’ approach. Specifically, the hegemonic paradigm of entrepreneurship as concerned with mere profit maximization and economic value creation as key pillars for successful entrepreneurship research and practice are being critically examined. Such a critical examination opens the way for new approaches that aim to align entrepreneurship with a consideration of its social, ecological or equity related consequences. A case in point is Ergene et al. (2021), who critique the prevailing managerial epistemologies that privilege “wealth accumulation at the expense of environmental destruction and social equity” (p. 1325). Still, the conception of profit-maximization, as captured in the ‘Friedman Doctrine’, considers the sole responsibility of entrepreneurs to make profits and is still the playbook of most companies (Calhoun 2015), entrepreneurship research (Calás et al. 2018), and teaching (Colombo et al. 2024). A transformation towards a socially just, ecologically sustainable, and economically viable paradigm requires research and practice to explore the potential of entrepreneurial thinking toward broader social, equity and ecological impact and accountability (Ebrahim 2019; Fiedler et al. 2023).

A range of concepts—like social, sustainable, responsible, and indigenous entrepreneurship—aim to address social, ecological, equity or cultural challenges. Yet, these concepts are treated separately despite shared logics, overlapping goals, and intertwined causes and effects—as climate change amplifies inequality and displacement and social injustice undermines ecological resilience (Cohen and Winn 2007; Shrivastava and Kennelly 2013; Vedula et al. 2022). To address this fragmentation and cross-cutting nature, we connect emerging discussions on the concept of impact entrepreneurship (IE) as an integrative concept that refers to entrepreneurial endeavors aimed at creating positive impact, preserving existing beneficial conditions, or mitigating current negative consequences—while remaining economically

viable (Lumpkin et al. 2018; Markman et al. 2019; Saebi et al. 2019; Zankl and Grimes 2024). This approach allows for an aligned analytical frame that facilitates both comparison and differentiation across entrepreneurial activities. In particular it encourages rethinking entrepreneurship not merely as a vehicle for economic value creation, but as a potentially transformative driver for planetary and societal thriving.

With this curated discussion on IE, we discuss various perspectives on the conditions, processes and pathways for a shift to IE in entrepreneurial practices. Our focus is on understanding and integrating what is needed to foster IE in a way that drives social justice, ecological sustainability and economic contribution to society, shaping the future of entrepreneurship through actionable strategies and informed research.

Towards a Shared Understanding of Impact Entrepreneurship We understand impact as the changes—direct or indirect, intended or unintended, positive or negative—resulting from the decisions and actions of individuals and organisations, including social movements, public institutions, informal initiatives or enterprises (Barby et al. 2021; Braig and Edinger-Schons 2020; Clark et al. 2004; Ebrahim and Rangan 2014; Rawhouser et al. 2019). Impact represents a holistic concept spanning themes like, though not limited to, social, ecological, economic, cultural, health, and equity (Lumpkin et al. 2018; Muñoz and Cohen 2018; Saebi et al. 2019; Zankl and Grimes 2024). Entrepreneurship, in turn, refers to the use of business model logic to create, deliver, and capture value—whether through the creation of new ventures or within established organizations. Bringing impact and entrepreneurship together highlights the need to recognize that entrepreneurial activities inherently shape societal and ecological realities. These consequences—whether beneficial or harmful, intended or not—must be made visible and evaluated against clearly defined collectively determined criteria (Richter et al. 2023). As such, integrating the concept of impact with entrepreneurship underscores the importance of considering the broader implications of entrepreneurial activities beyond mere financial gain.

IE refers to the creation and management of ventures that intentionally seek to consider their diverse impacts and actively address grand challenges through economically viable business models. These entrepreneurs pursue different modes of engagement: they may aim to create positive impact, preserve and sustain existing beneficial conditions, or mitigate current negative consequences of societal, ecological or equity-related issues. IE builds on and extends concepts such as social and sustainable entrepreneurship by integrating them into a broader framework. It foregrounds the systemic effects of entrepreneurial activity across distinct fields of impact—such as social equity, ecological sustainability, and ethical governance—and highlights their shared challenges of aligning multiple objectives such as economic viability with social justice, ecological resilience and inclusive governance (Lumpkin et al. 2018; Markman et al. 2019; Saebi et al. 2019; Zankl and Grimes 2024). Considering the overarching term of impact it is apparent that all entrepreneurial activity inevitably generates impact. IE refers specifically to ventures that intentionally aim to address pressing societal, ecological and equity-related grand challenges. This concept emphasizes a normative orientation toward positive contribution and accountability for both intended and unintended effects.

IE can take diverse organizational forms—ranging from small-scale ventures pioneering innovative solutions to large companies implementing and scaling established practices. Its defining characteristic lies in the intentional consideration and pursuit of societal and ecological outcomes through entrepreneurial action, through value creation, preservation or mitigation. New ventures may be responsible for novel ideas, products, or processes that are tested and implemented at small scale, potentially later adopted by larger actors (Cohen 2006; McMullen and Warnick 2016). For instance, innovations in plastic waste reduction—such as reusable packaging systems or circular design approaches—often emerge from startups and are later scaled through industry partnerships or policy diffusion. Conversely, impact entrepreneurs can also be already established companies that embed impact considerations into their operations, scaling already proven solutions or processes (Cohen 2006; Grimes et al. 2018). IE operates within and through market systems, allowing them to scale innovative solutions, attract capital, and shift dominant business paradigms and consumption from within (Mair and Marti 2006; Santos 2012). As such, IE is not only a complementary driver but a critical pillar in transforming both entrepreneurship and the economy—especially in domains where other important actors like social movements, foundations or NGOs have limited systemic influence. Thereby, IE can play a crucial role in advancing societal, ecological, or equity-related outcomes precisely because they are often less constrained by institutional norms, more agile in risk-taking, and closely attuned to the localized manifestations of societal problems (Bacq and Wang 2024). Considering diverse impacts urges entrepreneurs to deal with the complexity of multiple logics in integrating societal and ecological responsibility into their business models “in the pursuit of both economic and noneconomic value creation” (Bacq and Wang 2024, p. 16). To better understand and support this balancing act, we need analytical concepts and practical frameworks that capture the distinctive challenges and contributions of impact entrepreneurship.

Implications of Impact Entrepreneurship for Scholarship and Practice IE is of growing scholarly and practical relevance as it challenges dominant assumptions in entrepreneurship research and teaching and reorients entrepreneurs and investors toward pressing grand challenges. It expands the boundaries of entrepreneurship by integrating logics like social justice, ecological sustainability, and ethical responsibility into core entrepreneurial concepts such as value creation, opportunity recognition, and performance (Santos 2012; Shepherd and Patzelt 2022).

In the scholarly lense, IE cuts across the fragmentation of research streams such as but not limited to social (Calás et al. 2018), sustainable (Muñoz and Cohen 2018) or responsible (Zankl and Grimes 2024) entrepreneurship. Each of these more specialized literature streams focuses on particular aspects of solving grand challenges. Sustainable entrepreneurship predominantly focuses on the ecological (E) dimension, social entrepreneurship emphasizes the social (S) aspects, and responsible entrepreneurship prioritizes governance (G) while pursuing market and economic objectives (Markman et al. 2019). The broader umbrella of IE allows for a more integrated investigation of the shared and interconnected grand challenges and innovations that arise when ventures seek to generate and account for their societal

impact—such as pursuing dual or multiple logics (e.g., impact and profit) (Battilana and Lee 2014; Doherty et al. 2014), facing similar challenges in accessing financing (Bacq and Eddleston 2018) or in measuring non-financial impact (Rawhouser et al. 2019).

Moreover, while social, equity, and ecological goals are often analytically distinguished—e.g., in typologies of entrepreneurial forms—there are substantial overlaps in practice. Many ecological problems (e.g., pollution, climate change, biodiversity loss) have adverse consequences, particularly for marginalized populations, and are rooted in social inequality, e.g. regarding the carbon emission of the richest compared to the poorest. Scholars have emphasized this interdependence and argued that ecological degradation and social inequality are co-constitutive and must be addressed together (Shrivastava and Kennelly 2013). These shared conditions justify a broader analytical category that allows researchers to investigate common mechanisms while also comparing contextual nuances in IE.

Considering the practical relevance of such scholarship, the rise of IE reflects a shift in expectations toward businesses to consider entrepreneurial impact beyond financial gains and to contribute to the societal good, especially in light of climate issues, social inequalities, and growing institutional mistrust. It is a response to widespread calls from civil society, policymakers, and investors for organizations that do not just minimize harm but actively contribute to societal resilience and regeneration. With increasing regulatory demands (e.g., CSRD, SEC proposals), investor interest in ESG, and the global proliferation of impact ventures, understanding how entrepreneurs navigate and measure their societal and ecological impact is not just a moral concern, but a strategic and operational imperative.

In sum, IE as an approach seeks to rethink the role of entrepreneurial activities, to anchor and highlight their impact on society and the environment. While IE alone cannot—and should not—resolve grand challenges, it has the potential to contribute to meaningful change as part of a broader, collective endeavor, and with a sense of humility (Keim et al. 2024).

1.2 Dialogue on Impact Entrepreneurship and Future Research Avenues

This curated discussion examines IE as a promising research field integrating, among others, sustainable, responsible and social entrepreneurship while maintaining economic viability. To advance this dialogue, we bring together diverse perspectives for development and advancement of IE as both a research field and a practical endeavor. Together, they capture a spectrum of the IE landscape—from the origins and mechanisms of creating impact (sources of impact), to the broader systemic context in which such ventures emerge (ecosystems), the role of inclusive and human-centered innovation (inclusive design and technology), the critical need for rigorous assessment (impact measurement), and the cultivation of future changemakers (teaching and education). By addressing these interconnected dimensions, the collection offers a comprehensive entry point for scholars and practitioners seeking to understand and shape the future of IE.

Starting with a critical examination of the conceptual foundations in the first essay, **“Impact in Entrepreneurship: A call for a closer look”**, Spanjol, Gümüşay

and Edinger-Schons explore how IE integrates value creation and capture across economic, social, ecological, and governance dimensions. They introduce an integrated, tripartite approach that clarifies sources of impact and facilitates more effective decision-making, processes, and measurement.

In the second essay, **“Impact Ecosystems: Scaling Socio-Ecological Impact in Entrepreneurial Ecosystems”**, Volkmann, Krebs, and Bafera introduce the open-ended evolutionary system of an ecosystem and illustrate approaches for enabling environments for impact enterprises to scale effectively and sustainably.

With **“Impact Technology: How to design digital technologies for the good of society”** Gebken and Vilchez discuss why entrepreneurs should aspire to create a positive impact through technological innovation, rather than solely focusing on cutting-edge technology itself. This third essay calls for a holistic view of societal impact, the inclusion of stakeholder values, and active involvement in guiding technology toward sustainable and beneficial outcomes.

In the fourth essay, von Schweinitz, Vogel and Stroehle highlight in **“Impact Measurement: Assessing the Impact in Impact Entrepreneurship”** the relevance for assessing IE contributions, ensuring the transparency and credibility of IE activities. This essay presents current measurement efforts and three key challenges, proposing more consistency in methods, higher quality standards for overcoming the Output-Focus and a more collaborative and participatory process to further develop this area.

Rounding up with considerations on preparing individuals for the future with **“Impact Education: Learning to Become Impact Entrepreneurial”**, Gossel, Kruse, Mirtsch, Unger and Wolf emphasize three new learning avenues that need to be established for IE. In this fifth essay the authors propose ways to educate people for solving complex problems, using their inner value-compass for business decisions and to imagine and act towards desirable futures.

Based on the core insights of the five essays, we now synthesize their key insights into two overarching avenues that highlight the key contributions of this curated discussion on IE: 1) Outlining what it takes to shift from profit to impact in entrepreneurship research, education and practice and 2) exploring what research and researchers can actively contribute to enabling this transformation.

Avenue 1: Shifting Beyond Profit as the Primary Currency to Impact If we consider impact as central to business ventures aiming to contribute to societal and ecological well-being, it requires shifting beyond profit as the primary currency in ‘doing’ business. While this shift becomes clear as all essays emphasize the normativity and values inherent in IE, this curated discussion also provides some pathways on how such a shift can work. First, it calls for a new perspective—viewing entrepreneurial activity and innovation not merely as responses to market opportunities, but as efforts to address societal and ecological grand challenges through impact-driven solutions (see Spanjol et al.). Second, integrating values beyond profit leads to increased complexity. Navigating and evaluating such complexity in IE then calls for different approaches to the measurement of impact. As the essay by von Schweinitz et al. shows, different ways of measuring are needed to face inconsistency and move beyond output-oriented performance indicators. Further, navigating

such complexity and integrating values beyond profit becomes a central task in how we educate future entrepreneurs and equip them with the necessary literacy. Gossel et al. provide three aspects of how impact entrepreneurial education can help to guide and support future entrepreneurs in this endeavor. If we then also rethink the broader implications for entrepreneurial ecosystems in such a shift beyond profit, Volkmann et al. introduce an approach to scaling beyond economic growth that helps to scale for impact in ecosystems. Summing up, the essays in this curated discussion problematize the still prevalent and singular focus on profit and market opportunities and illustrate several leverage points on how we can shift beyond profit and towards impact in entrepreneurial research and practice.

Avenue 2: The Role of Research and the Researcher for Impact Entrepreneurship Second, the curated discussion highlights different opportunities for research to contribute to IE. It emphasizes new roles and requirements for management researchers as active facilitators of IE. Several essays lay out how IE requires both more rigor and participation. The essays on impact measurement (von Schweinitz et al.) and ecosystems (Volkmann et al.) sketch how thorough and transparent processes are needed to effectively manage, scale, define and measure impact. These methods are essential for ensuring accountability, as they help monitor progress and maintain transparency in decision-making. However, they need to be accompanied by strong business research that can provide insights on how to deal with the complexity, helps to critically evaluate also unforeseen negative consequences and suggests viable options for adjusting and steering the new pathways towards impact. Further, this curated debate highlights how the involvement of stakeholders is crucial, as it allows for diverse perspectives and fosters collaboration in achieving meaningful results. As the essay on technology (by Gebken and Vilchez) shows, insights from value-oriented and participatory design can provide input here for engaging with technology in a truly collaborative and inclusive way along the entrepreneurial journey. This participatory and collaborative approach then also stretches out to the role of researcher, shifting away from being a distant observer to active participation through convening and co-creating. Spanjol et al. emphasize how such a new posture of management scholars can embrace their skills of understanding complex problems, rigorously test and evaluate solutions, and translate these into actionable knowledge. Summing up, the essays in this curated discussion emphasize how research and researchers can contribute to IE: through rigorous methodologies as well as participatory and engaged scholarship.

Fostering IE needs expanding research, education and entrepreneurial practices to address social, ecological, and economic implications while navigating complexity. To fully harness the transformative potential of cross-sector collaboration and innovation, IE must actively engage with and integrate a diversity of perspectives. Collaboration and conversation across multiple perspectives and thinking along multiple leverage points along the entrepreneurial journey is essential: Grand challenges are crossing geographical, disciplinary, and sectoral boundaries and so IE must extend beyond individual ventures to ecosystems of support, including business schools, incubators, and cross-sector partnerships. With this curated discussion, the essays call for further discussions, conversations, knowledge generation and eventually

collaborations including and going beyond the idea of IE, so that researchers, policymakers, educators, investors and citizens can create enabling environments that provide resources, institutional support, and shared opportunities to drive meaningful and lasting change.

2 Impact in Entrepreneurship: A Call for a Closer Look

J. Spanjol, A. Gümüşay, L. Edinger-Schons

The “impact” label in entrepreneurship has rapidly gained popularity in recent years. Encompassing professional networks (e.g., <https://impactentrepreneur.com>, <https://impactallianz.de/>), globally distributed co-working hubs and communities (e.g., <https://impacthub.net>), dedicated consulting organizations (e.g., <https://www.phineo.org>), investment funds (see <https://thegiin.org>) and research labs (<https://imv-lab.com/>), to name a few, the IE landscape is populated by a variety of actors and activities. They draw from multiple relevant perspectives including sustainable, environmental, social, and responsible entrepreneurship. As pointed out in the introductory essay of this collection, the associated scholarly literatures are just as heterogeneous. Given this diversity of perspectives, the promise of the IE perspective is one of integration of value creation and capture dynamics across economic, social, environmental, and governance dimensions.

Given the potential that IE promises, greater clarity in conceptualization and measurement are needed to move beyond a mere labeling frenzy. Despite its growing popularity, the term “impact entrepreneurship” (IE) lacks a clear and common conceptual foundation. This essay addresses this gap by identifying and unpacking three primary sources of impact in entrepreneurship: problems, solutions, and governance. In this contribution to the curated discussion on IE, we argue that conceptual clarity comes (at least in part) from answering the question: “Where does impact come from in IE?”. We propose three distinct sources of impact (i.e., problem, solution, governance) in entrepreneurship and discuss implications for future IE scholarship and for practice. Together with essays by Volkmann et al., von Schweinitz et al., and Gebken & Vilchez, our framework helps build a more cohesive understanding of IE as a multi-layered phenomenon that spans problem framing to governance structures and impact measurement.

2.1 Three Sources of Impact in Entrepreneurship

IE, as defined in the introductory essay and following Markman et al. (2019) relates to business principles being deployed towards “the development of sustained applications and solutions that collectively address grand challenges to make the world better” and “right environmental, social, and/or economic wrongs” (p. 372). Implicit in this definition is a focus on selecting certain types of *problems* (i.e., grand challenges), addressing them with certain types of *solutions* (i.e., those with transformative potential) and certain ways of *governance* (i.e., value-generating application of business principles). In such a tripartite view, the sources of impact can be traced

more clearly, facilitating impact-related decisions, processes, and measurement, each covered in other contributions to this curated collection.

Impact from Problems Societal grand challenges (George et al. 2016; Gümüşay et al. 2022) give rise to wicked ecological and social problems. Impact entrepreneurs explicitly select to tackle such problems (even if only in parts) through their business models. In this sense, the identification, definition, evaluation and selection of “worthwhile” problems to solve is fundamental to IE. While entrepreneurship literature generally focuses on the fundamental concept of “opportunity” (as being recognized and/or constructed by entrepreneurs; Suddaby et al. 2015; Alvarez and Barney 2007), we argue that the fundamental concept underlying IE is the societal “problem-as-opportunity”. As opposed to an “opportunity” in the market, being acted upon by bringing together a set of resources and actors and with the primary aim of creating a profitable business, looking through a “problem lens” shifts attention from “taking advantage of an opportunity for commercial gain” to “solving a problem for the betterment of society”¹. What shifting to a problem-based view of (impact) entrepreneurship means, then, is that entrepreneurs’ problematizing skills and practices move into the foreground. Critical reflexivity, questioning of the adequacy of standard knowledge and approaches, and interrogating underlying assumptions (Maguire and Hardy 2013), among others, enable a deep understanding of how “problems” are constituted.

By focusing on problematizing practices, entrepreneurs recast and reframe targets of their activities and resources. For example, IE requires a questioning and rethinking of the relationships needed to develop and launch a particular offering, often broadening the scope beyond the core market actors (i.e., customers, suppliers, retailers, etc.) and engaging community, policy, and other collaborators (see essays in this curation by Volkmann et al. on IE ecosystems). Similar to researchers problematizing their phenomena and domains of inquiry (Alvesson and Sandberg 2020), impact entrepreneurs engaging in problematization question the domain scope and associated assumptions, “re-evaluate existing understandings” of a particular problem and find themselves “challenging and reimagining” accepted ways of thinking (p. 1297). Key to effective problematizing in IE is (just as in the research domain) an “unpacking” of entrepreneurial identities and viewpoints “so that some of one’s ordinary held assumptions can be scrutinized and reconsidered” in venturing (Alvesson and Sandberg 2011, p. 252).

Impact from Solutions Solutions to “problematized” domains are a second source of potential impact in entrepreneurship. Inherent in problematizing is the recasting of what a solution’s value can (or should) be, to whom the value will (or should) accrue, and on what assumptions or principles the created value will (or should) rest (de la Cruz and Spanjol 2024). Solution development principles, processes and strategies are the focus of innovation management studies, which encompass a breadth of perspectives, including responsible and public value innovation (Spanjol et al. 2023).

¹ A shift to problems also moves away from what has been more recently argued as having been an unproductive decades long debate on the nature of entrepreneurial opportunities (Foss and Klein 2020).

For example, scholars exploring social, environmental, and sustainable entrepreneurship and innovation (Cillo et al. 2019; Foroudi et al. 2021; Lee et al. 2019; Vedula et al. 2022) have pointed to the importance of value creation and capture dynamics in increasingly open innovation approaches (De Silva and Wright 2019; West and Bogers 2014) that bring together multiple stakeholders in problem definition and solution development. As pointed out by Gebken & Vilchez in their contribution to this curated discussion, impact arising from inclusive solutions (through participatory design, for example) can reflect increased accessibility beyond the “standard” consumer or user, thus creating benefits beyond economic returns. In addition, impact from solutions can arise from specifying designs that reduce environmental costs, aligned with the responsible innovation view that argues for increased benefits and reduced costs for society (Stilgoe et al. 2013), a concept that also has implications for impact from governance.

Impact from Governance Similarly, scholarship has expanded on the topic of governance for responsible entrepreneurship (Zankl and Grimes 2024) and innovation (Voegtlin and Scherer 2017), arguing that it must enhance positive and reduce negative social and environmental impacts. Yet, governance decisions in new and scaling ventures are often emerging and adaptive, characterized by impermanence (Esau et al. 2025). Governance decisions also extend across multiple levels, spanning individual, team, department, and organizational levels. At the organizational level, for example, impact ventures might choose to pursue specific forms (e.g., gGmbH; Sanders 2023) and/or certifications (e.g., Bcorp; Villela et al. 2021). We argue that particularly practices and structures relating to problem-solution processes lie at the nexus of IE. For example, scope and timing of both stakeholder engagement and impact measurement and valuation would shift more readily into focus in IE. The essays of Volkmann et al., von Schweinitz et al., and Gebken & Vilchez in this curated discussion provide such perspectives. Figure 1 below illustrates the three interdependent sources of impact in entrepreneurship outlined in this essay, i.e., problem definition and framing, solution development, and governance design. Impact arises from the dynamic alignment of these elements. A problematizing lens foregrounds how entrepreneurs define and reframe societal challenges, which in turn shapes the design of solutions and the structures that govern their implementation. The model provides a conceptual foundation for understanding, tracing, and evaluating impact across entrepreneurial contexts.

Taken together, the tripartite view of the sources of impact in entrepreneurship offered above allows for integrating the various related, but distinct perspectives on entrepreneurship (and innovation) reaching beyond profit generation and market success (e.g., sales, customer satisfaction). It allows researchers and practitioners to elucidate a particular impact logic and trace impact potential and realization to specific entrepreneurial decisions to be taken. Importantly, it could also enable additional clarity in the measurement of impact. As discussed by von Schweinitz et al., impact measurement and valuation (IMV) is socially constructed and thus highly challenging. Identifying where in the logic model (i.e., IOOI) impact from problems, solutions, and governance (or combinations thereof) arises provides an opportunity to integrate the impact logic into the mainstream organization by specifying the

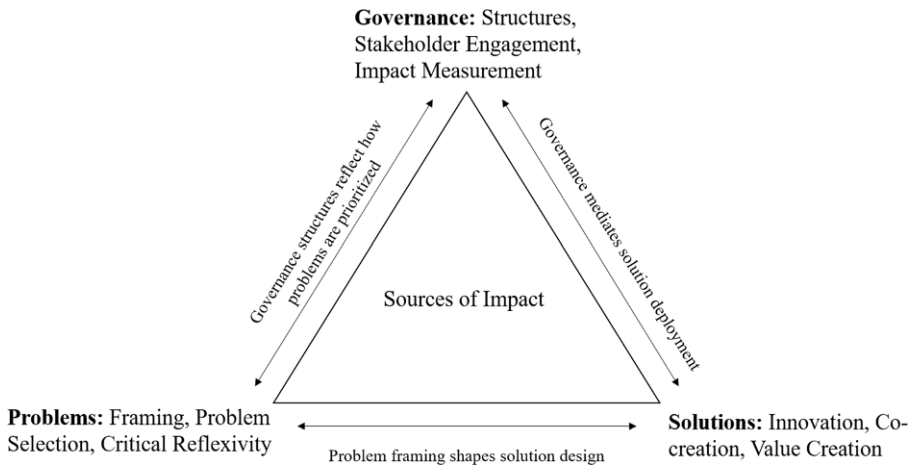


Fig. 1 A Dynamic Model of Impact Sources

concrete impact-relevant decision points. In other words, it might offer a path for overcoming the problem of IMV as an “add on” or “stand alone” activity in organizations, seen as simply demanding additional resources and creating costs—an aspect particularly challenging for young and small ventures.

2.2 Understanding, Tracing, and Assessing Impact: Future Priorities Across Research and Practice

Based on the above reflections, we discuss implications for future research in entrepreneurship and innovation research through an impact lens and advance four avenues that hold particular promise.

1. *Problematizing Dynamics in Impact Entrepreneurship*

Surprisingly little is known about problematizing practices and dynamics in entrepreneurship literature. In high-risk contexts, public and business stakeholders at once normalize and problematize the situation at hand and potential responses (Topal and Gephart 2025). Similarly, when viewed through a problematizing lens, the decisions and actions of impact entrepreneurs are reframed along the problem-solution-governance chain. A problematizing lens shifts the question from “What opportunity is being pursued?” to “Which problem is being addressed, how, and why?”. Similar to research in policy studies (e.g., Bacchi 2016), a problematizing lens facilitates a more fundamental inquiry as well as integrative view of IE, offering a path towards overcoming the fragmentation currently in the literature examining entrepreneurship motivated by non-economic value creation (Vedula et al. 2022).

2. *Linking Impact Entrepreneurship with Impact Innovation*

The problematizing lens offers another fruitful avenue for future research: linking relevant innovation and entrepreneurship literatures. As a first step, we offer the concept of impact innovation (II) to complement IE. We follow the definitional ap-

proach recommended by Varadarajan (2024) and define II as “the implementation of a novel idea for alleviation of a problem relevant to society into a new product, process or practice, or significant improvement of an existing product, process, or practice that creates social and/or ecological value for society and economic value for the innovating venture.” Importantly, the II concept provides a focus on the problem-solution combination, while the IE concept engages the governance aspect more explicitly. Together, the multi-level and multi-dimensional nature of impact emerges more clearly through the II-IE framework. For example, greater clarity might result from explicating the bases for impact measurement and tying them to core organizational decisions (i.e., what problems do we tackle, how do we understand these problems, what do solutions developed and offered imply about what kind of value is created and captured across stakeholders).

3. *Enhancing Impact Measurement in Innovation Processes*

A significant research avenue is the development of frameworks for measuring the full range of impacts generated by innovation (see also von Schweinitz et al. in this curated discussion). Traditional innovation management metrics predominantly focus on financial outcomes, which limits the ability to assess innovations that also create social and environmental value. Future research should aim to design and validate comprehensive measurement systems that integrate economic, social, and environmental dimensions. These systems could include new key performance indicators that reflect long-term societal benefits, tools for balancing different types of impact, and methodologies for assessing the overall contribution of innovations to global sustainability goals. Research in this area can provide businesses with actionable strategies to better evaluate and manage their innovation efforts for broader impact. Importantly, such research should also recognize potential differences in capabilities and structures needed for impact measurement between new and scaling ventures vs established and large organizations.

4. *Reflecting on the Role of Scholars*

Finally, given the velocity of transformations, future inquiries might also consider a move from reactive to proactive scholarship and prospective theorizing (Gümüşay and Reinecke 2022 and 2024). As grand challenges are large-scale, complex and interconnected (Ferraro et al. 2015), we note that II and IE research need to encapsulate this complexity and connectedness, too. In particular, the role of scholars needs to be revisited. While this is a topic of interest to the broader management domain (Hoffman 2016), the nature of IE and II demand identifying and naming our roles more clearly and explicitly than is currently the norm. This includes embracing roles as conveners, translators, and co-creators—working alongside practitioners, policymakers, and communities to shape problems, test solutions, and build governance mechanisms that reflect diverse values and priorities. Such an engaged scholarly posture challenges traditional notions of academic detachment and opens up new possibilities for generating actionable knowledge that is both scientifically rigorous and societally relevant.

In sum, adopting a problematizing lens enables a more nuanced understanding of how impact in entrepreneurship is constituted—through the deliberate framing of problems, the design of inclusive and sustainable solutions, and the implemen-

tation of responsible governance. By addressing the current disconnects between entrepreneurship and innovation research and integrating these domains through the triadic framework of problems, solutions, and governance, we offer a foundation for more coherent theorizing and practical application. The research agenda we propose aims to move beyond surface-level claims of impact, providing scholars, practitioners, and policymakers with the tools to trace, assess, and amplify impact at its source. In doing so, we envision a form of entrepreneurship and innovation that not only generates economic value, but also enriches lives, strengthens communities, and contributes meaningfully to a more sustainable and equitable future.

3 Impact Ecosystems: Scaling Socio-Ecological Impact in Entrepreneurial Ecosystems

C. Volkmann, K. Krebs, J. Bafera

Despite the emergence of numerous impact-oriented new ventures, only a small number have successfully scaled, making the process of scaling one of the most crucial yet least understood aspects of impact entrepreneurship (IE) in both theory and practice (Smith et al. 2016). While there is substantial research on the founding of impact-oriented new ventures, there is a notable gap in understanding how to scale entrepreneurial impact from a local niche to a broader society (Krebs et al. 2023). We argue that entrepreneurial ecosystems (EEs) play a pivotal role in paving scaling paths for impact-oriented new ventures by providing essential resources and a co-creative environment (Cohen 2006; Spigel 2017). In this paper, “scaling social-ecological impact” is defined as the process of expanding both the direct effects of individual organizations and the collective, systemic influence of an EE on broader social and ecological systems (Westley and Antadze 2010; Islam 2020a). In other words, we distinguish between scaling the impact of singular organizations (e.g., enhancing their capacity to address socio-ecological challenges) and scaling the cumulative impact generated by the interactions and collaborations within an EE (Acs et al. 2017; O’Shea et al. 2021), thereby benefiting society and the environment at large. This contribution aims to advance the discourse on scaling socio-ecological impact within EEs, by synthesizing literature across disciplines and offering multiple avenues for future research.

EEs are defined as complex, dynamic, and diverse networks comprising interconnected actors, institutions, and resources that collaborate to foster the success and growth of new ventures (Stam and Van De Ven 2021; Wurth et al. 2022). The dynamic interactions within these ecosystems enable knowledge exchange, resource sharing, and collaborative problem-solving, all of which significantly enhance the capacity for entrepreneurial initiatives (Audretsch et al. 2019). As society faces the imperative challenge of socio-ecological transitions, there is a critical need to support new ventures focused on creating socio-ecological impact (Volkmann et al. 2021). Enabling these new ventures to scale effectively and expand their positive societal influence requires a shift from traditional company-oriented metrics of output, such as the financial success of individual new ventures to a broader focus on community

or ecosystem-level outcomes and impacts, such as improved environmental sustainability or enhanced social equity and inclusion (as discussed by Spanjol et al. in their essay on Impact in Entrepreneurship in this discussion).

Although interest in EE has grown within the scientific community, the concept remains fuzzy and fragmented, and research on its societal dimensions and impacts remains limited (Audretsch et al. 2019). Only a few studies address social impact in the context of EEs (e.g., Audretsch et al. 2019; Gamble and Muñoz 2021; Han and Shah 2020; Roundy and Lyons 2022; Thompson et al. 2018; Wierenga et al. 2021). However, these studies often overlook the ecological impact and the intersectional nature of socio-ecological transition challenges, which can lead to ineffective solutions that further exacerbate environmental harm and social inequalities. Furthermore, the role of EEs in supporting and participating in impact scaling strategies remains underexplored.

With this essay we advocate for a holistic understanding of impact within EE research and practice, arguing for the integration of social and ecological dimensions to address the complexities of contemporary challenges. Scaling impact-oriented new ventures from their niche requires a change of perspective within EEs and individual actors. To enhance the understanding of scaling in this context we explore scaling as a concept, as well as types of impact scaling strategies.

3.1 Impact Scaling Strategies

Scaling impact has been defined and explored by only a few researchers, each offering unique perspectives on how impact can be scaled to address social and environmental challenges. In the context of this discussion, scaling impact is understood as “an ongoing process of increasing the magnitude of both quantitative and qualitative positive changes in society by addressing pressing social problems at individual and/or systemic levels through one or more scaling paths” (Islam 2020a: 2). Our conceptualization of impact scaling therefore encompasses both the measurable increase in positive social and ecological outcomes produced by individual ventures and the emergent, systemic influence that arises when multiple ventures within an EE collectively contribute to societal transformation. A scaling path could include developing innovative products or services to address social needs or providing advisory support to other impact-oriented new ventures (Ebrahim and Rangan 2014; Ometto et al. 2019). This definition clearly distinguishes impact scaling from purely economic growth measures, such as revenue or profit growth, which do not necessarily result in greater societal impact.

Despite this distinction, most academic definitions still equate impact scaling with the purely economic growth measures of organizations (Han and Shah 2020). In contrast to this narrow view, Westley and Antadze (2010), for example, take a broader perspective and discuss different strategies for scaling impact. The authors differentiate between “scaling up” (influencing policies, regulations, and laws) and “scaling out” (reaching larger populations and communities). An established differentiation of impact scaling strategies distinguishes between organizational growth strategy and ecosystem growth strategy (Islam 2022). The former emphasizes scaling individual enterprises while the latter focuses on growing and sustaining supportive

EEs. Both strategies are essential for impact-oriented new ventures, and EEs play a critical role in the successful implementation of each. Viewing EEs as open-ended evolutionary systems, with networks and stakeholder collaboration providing stable spaces for reflexive discourse and learning, provides a valuable lens for exploring impact scaling (Krebs et al. 2023; O’Shea et al. 2021; Stam and Van de Ven 2021). By exploring the role of EEs in relation to these two types of scaling strategies, we demonstrate that EEs support the scaling of social-ecological impact by providing critical resources, collaboration, and context for both:

Impact scaling by organizational growth strategy (OGS) involves addressing socio-ecological challenges on a large scale by expanding organizational size through developing new products, services, activities, and programs, or by expanding geographic reach, to specifically increase social value and/or decrease ecological harm (Islam 2022). EEs, especially those with interregional or international connections, can also facilitate geographic scaling by providing access to diverse markets. OGS typically follows a bidirectional relationship with the EE: the ecosystem provides critical support—such as funding, knowledge exchange, and market access—while the organization’s growth and success, in turn, reinforces and enriches the EE (Spigel and Harrison 2018). Alternative: For example, the expansion of Too Good To Go, a social enterprise combating food waste, illustrates how EEs can support organizational growth while fostering sustainability transitions. By leveraging partnerships with food retailers, local governments, and sustainability-focused incubators, the company has scaled across multiple countries, reducing food waste on a systemic level (Reynolds et al. 2020). This demonstrates how an EE can amplify an organization’s individual impact while also reinforcing sustainability transitions. As entrepreneurs increasingly focus on achieving a net positive impact on society and the environment while growing their businesses, the role of EEs in supporting such impact-oriented new ventures becomes even more crucial (Shepherd and Patzelt 2022). However, navigating the complex trade-offs between economic, environmental, and social impact requires a deep understanding of stakeholders and social-ecological systems. EEs can help entrepreneurs gain this understanding through knowledge exchange and collaboration with research institutions and other actors. Education providers and institutions play a critical role in supporting IEs to gain useful knowledge and competencies for navigating complex impact scaling paths (see essay by Gossel et al. on IE education in this curation). However, socio-ecological impact creation requires different types of knowledge and competencies, such as futures literacy, which are currently not supported by most EEs. Bloom and Chatterji (2009) identify alliance building as a key capability for successful scaling, a process that is further facilitated by the collaborative environments provided by EEs. Knowledge accumulation, communication, relocation, and connection are inherently supported by EEs (Shepherd and Patzelt 2022).

Impact scaling by ecosystem growth strategy (EGS), on the other hand, shifts the focus from individual organizations to the collective, systemic impact generated by interactions between multiple actors within the EE (Bloom and Chatterji 2009; Islam 2020b). Here, impact is not solely the result of individual scaling but emerges from co-creation processes, knowledge diffusion, and policy influence across the entire ecosystem. For instance, the Nordic Circular Hotspot, a multi-stakeholder

initiative, fosters a circular economy by connecting start-ups, governments, and research institutions to implement large-scale sustainable solutions (Lüdeke-Freund et al. 2022). To this end, EEs can serve as co-creation spaces for the design, testing and implementation of impactful technologies, as pointed out by Gebken & Vilchez in their essay to this curated discussion. EGS can have greater impact by tackling systemic problems beyond the scope of an individual organization, yet it has received relatively less scholarly attention (Islam 2022). Research on EGS often suffers from a “success bias” (Islam 2020b). As an overarching strategy, EGS includes various specific approaches, such as advocacy campaigns, knowledge dissemination, training and advisory services, and legitimacy support for impact entrepreneurs (Islam 2022). This strategy shifts the focus from individual entrepreneurs to the collective impact of the ecosystem, advocating for a systems-change approach rather than organization-focused approaches (Han and Shah 2020). EEs can provide concrete support for these strategies for example, through the creation of green tech labs or co-working spaces dedicated to impact-oriented new ventures, and by offering training and advisory services that enable start-ups to scale their operations effectively. These types of co-creative environments can drive impact scaling through deep actor collaboration fostering socio-ecological solutions.

3.2 Future Research Perspectives

We propose further exploration of the role of EEs with regard to OGS and EGS to explore possible advancements in EE development to better support impact-oriented new ventures. This is contingent on appropriate policy support for more impactful EEs, which also requires further exploration. Although we distinguish impact scaling from purely economic growth measures, we recognize that the assumption that “more is better” does not always hold true, particularly when considering deeply localized, community-driven initiatives. In some cases, attempting to scale impact may dilute context-specific solutions or even disrupt local ecosystems rather than strengthen them. Thus, we invite future research to critically investigate the contexts in which scaling impact may not be beneficial, identifying cases where smaller-scale, deeply localized solutions can create more meaningful change than expansive, generalized approaches.

From a co-creation perspective, it is crucial to understand the mechanisms through which impact is co-created and scaled within EEs. This includes examining the processes of co-creation among EE actors and identifying the most effective contexts, actor constellations, and governance structures for generating socio-ecological impact. The pursuit of socio-ecological impact through entrepreneurship currently lacks a robust theoretical foundation to explain how and why co-creation among actors results in different types of impact (De Silva and Wright 2019). Further research could explore the tensions, synergies, and trade-offs between scaling different types of impacts and actors within the co-creation process, as well as the contextual factors that influence these dynamics. Exploring the various scaling paths and strategies taken by entrepreneurs within EEs and their implications for socio-ecological impact is vital. Future research should consider a range of research designs to capture the complex dynamics of co-creation and impact scaling within entrepreneurial ecosys-

tems. Inter- and transdisciplinary approaches are needed to address the complexity of impact creation within EEs and can provide a holistic understanding of how different levels of actors and systems interact and co-evolve in the pursuit of socio-ecological impact. Addressing these issues will be crucial for ensuring that the growth of EEs contributes positively to social and ecological systems.

When an EE lacks necessary support structures, impact-oriented ventures may struggle to survive—similar to species in unsupportive environmental conditions (Moore 1993). However, EEs can be actively co-designed to foster socio-ecological impact. Impact-oriented new venture challenge existing economic paradigms, while impact-oriented EEs provide the enabling conditions for transformative change (Spigel and Harrison 2018; Shepherd and Patzelt 2022). Hence, we call for collaborative approaches and collective action to scale the concept of IE in research and practice alike. Ultimately, individual actors change systems and systems change individuals—impact entrepreneurs challenge the dominant system and traditional EEs and impact-oriented EEs can inspire entrepreneurs to scale their socio-ecological impact.

4 Impact Technology: How to Design Digital Technologies for the Good of Society

L. Gebken, P. Vilchez

Digital technologies hold the potential to enhance social, ecological, and economic well-being. Recognizing this potential, impact-driven entrepreneurs are increasingly designing digital technologies to foster positive societal change (George et al. 2021). This perspective aligns with viewing entrepreneurship through the lens of design, as discussed by Dimov et al. (2023). The terms for these technologies differ from technology for impact, digital social innovation to twin transformation, but they do cover a similar idea: creating a positive impact for the future and addressing current societal challenges through technology (Qureshi et al. 2021; Rodrigo et al. 2019). There are numerous positive examples of such technologies, like mobile applications that make it easier for blind and deaf-blind individuals to participate in public transport (Azenkot et al. 2011).

The design of technologies often gives rise to substantial expectations regarding their potential to address societal challenges. However, if entrepreneurs fail to critically examine these expectations, they risk developing technologies that may inadvertently cause more harm than good (Sætra 2023; Chen et al. 2020). A particularly prevalent critique is the tendency to view technologies as standalone solutions to complex societal issues, despite their impact being limited to mere aspects of these problems (Morozov 2014; Sætra 2023). Another critique is that the added value of the technology might not correspond with the desired expectations of the affected people and might lead to more negative consequences (Kempfert et al. 2022). These critiques caution against focusing on solutions over problems, as classified by Spanjol et al. in this curated piece.

To take such criticism seriously, a reflective design process is essential for entrepreneurs. However, researchers can play a crucial role in supporting entrepreneurs in the reflective design process and in addressing the pressing societal challenges we face. Current research approaches offer precisely this kind of reflective and proactive design and research process for technologies. These approaches enable entrepreneurs and researchers, working collaboratively, to make reflective normative decisions with the aim of shaping a positive societal impact by centering values and stakeholders. Therefore, in this discussion essay, we will explore the significance of a proactive, design-oriented approach to research and entrepreneurship that prioritizes creating impact to address global challenges, rather than solely focusing on designing cutting-edge technologies (Morozov 2014). We build on two different prominent research approaches to design technologies with positive societal impact: 1) value sensitive design and 2) participatory design.

4.1 Value Sensitive Design

One possible way to prioritize the impact of a technology is by focusing on the needs and values of stakeholders. By ‘values,’ we refer to principles that hold significance for humans in terms of ethics and morality, encompassing concepts such as human welfare and the freedom from bias (Friedman and Hendry 2019). We see such values as the foundation for ethical consideration in technologies aimed at creating positive societal impact. However, while what is considered an important value might vary across different contexts, frameworks such as the Sustainable Development Goals have guided recent global efforts.

A research field that focuses on the integration of values within technology is value sensitive design (VSD). VSD seeks to address ethical issues arising in the design process by navigating the competing needs of diverse stakeholders. The main idea of VSD is that values—identified through negotiation among stakeholders via empirical investigations—can be incorporated into technology through both conceptual and technical explorations (Friedman et al. 2017). In this process, entrepreneurs and researchers proactively tackle ethical issues by making value-based decisions about technical design features to prevent the unintended inscription of values into the technology (Friedman and Hendry 2019).

One example of such an ethical issue can be drawn from the design of a digital donation system for humans experiencing homelessness. This case revealed several value tensions coming from different stakeholders, one of them was: while the beneficiary of the donations expressed the desire for privacy and autonomy concerning the use of the donations, a subset of donors sought to control what is bought from their donated money (Gebken et al. 2021). In this instance, the entrepreneurs and researchers faced a critical decision-making process while using VSD. The entrepreneurs and researchers prioritized the privacy of individuals experiencing homelessness, valuing their autonomy and dignity over the potential for increased donor oversight, even if this entails the risk of a reduced willingness to donate (Gebken et al. 2021). This example also shows how the prejudices of the donors, or financiers, could be incorporated into the technology, and without reflection of the

team, it could lead to negative effects such as further discrimination or stigmatization of marginalized people.

Even though the application of VSD can help bring impact into the core of technologies, it also has limitations (Hendry et al. 2021; Martin et al. 2023). Among them, it is notable that the majority of research on VSD has been carried out within Western societies. Furthermore, there is a lack of research investigating the broader perspective across cultural contexts (Martin et al. 2023).

4.2 Participatory Design

Thinking of integrating the perspectives and needs of different stakeholders, participatory design offers a broad range of methods. Participatory approaches aim at working directly with stakeholders in the design of social systems (Muller and Kuhn 1993), enabling stakeholders to take part in shaping their own futures and engaging them in the complex processes and networks driving modern social and technological changes (Smith and Iversen 2018). Among these stakeholders, it is particularly important to amplify the voices of marginalized groups (Aldridge 2019), whose interests may not be represented within the entrepreneurial or research team but are central to the intended impact.

For example, the development of a maternal and child healthcare app in rural Ethiopia highlighted the importance of participatory methods to communicate and share insights among users, programmers, and stakeholders (Bekele et al. 2019). Adapting ethnographic field visits, interviews, and focus groups to design research through the incorporation of a “user study team”, the deployed version of the app incorporated images and audio to accommodate diverse users in their local realities; for example, by replacing images of children in beds or using faucets with more culturally relevant alternatives. Additionally, the app addressed the distinct needs of mothers, healthcare workers, and health officers. Through this participatory approach, the design process better reflected the complexities of the intended beneficiaries while also enhancing the credibility and trustworthiness of the app within the user community.

The integration of culturally distinct perspectives in impact-driven projects can shape both the direction of innovation and the outcomes of technology design (see von Schweinitz et al. in this curated piece). For instance, Indigenous people have shown innovative ways of using digital technologies to share and preserve their distinct languages, cultures, and history, as well as to engage in social and environmental activism (Dreher et al. 2016; Shiri et al. 2021). One such initiative, the Native Lands Advocacy Project in the United States, democratizes digital tools like geographic information systems and data visualization software to aggregate and present data to tribal users. This data has helped independent initiatives, for example with the formulation of indicators for a healthy food system from a holistic Indigenous approach or the continuing legal efforts to grant rights to rivers and forests in various regions around the globe (Chesnais 2022). These efforts align with Indigenous perspectives that emphasize regenerative relationships with nature over extractive practices and prioritize community well-being over individual—or technological—gain. Scholars in management and organizational studies have increasingly

called for the inclusion of Indigenous voices in addressing climate and social crises (e.g., Banerjee and Arjaliès 2021; Salmon et al. 2023). Although Indigenous knowledge and other non-mainstream perspectives remain largely marginalized, they have the potential to expand the boundaries of how technologies are designed and used, prompting a rethinking of how systemic change might look and what role digital technologies should play.

4.3 Conclusion

In this essay, we brought together important considerations in the use of technologies for creating societal impact. Viewing entrepreneurship through the lens of design (Dimov et al. 2023), these concepts expand to the creation of all types of impact efforts, whether digital or not. First, we advocate for a perspective that accounts for the broad societal impacts of technology, recognizing its wide-ranging effects through the proactive integration of values. Second, we highlight the importance of fostering participatory approaches to expand stakeholder involvement and integrate diverse perspectives. By involving stakeholders, entrepreneurs can better ensure that technologies meet real-world needs. Furthermore, incorporating culturally distinct perspectives can diversify the range of potential solutions, enabling more comprehensive approaches to addressing social challenges. As discussed throughout this paper, digital technologies can create a meaningful impact when they reflect the values and voices of diverse stakeholders. However, a critical question remains for both impact entrepreneurs and researchers: When are digital technologies the most appropriate approach to pursue?

5 Impact Measurement: Assessing the Impact in Impact Entrepreneurship

F. von Schweinitz, A. Vogel, J. Stroehle

5.1 Why Should Impact Entrepreneurs Engage in Impact Measurement and Valuation?

As a driver of societal change and a new understanding of doing business, impact entrepreneurship (IE) relies on impact—not profit—as its primary “currency”. To ensure transparency and credibility of entrepreneurial activities, it is crucial to meaningfully measure how they impact society and the environment while accounting for underlying complexities, e.g., inevitable “trade-offs” that emerge in decisions around conflicting social and environmental objectives. In this regard, impact measurement and valuation (IMV) practices are central to impact entrepreneurs, as a knowledge base to understand how they contribute to meaningful change, and in order to grasp their impacts’ scale and scope (Stroehle et al. 2025). This enables impact entrepreneurs to make evidence-based impact decisions, steer towards meaningful change, and enhance their strategic alignment, fostering the credibility of efforts for

positive change and the ability to react to and adjust negative impacts. Such behavior potentially fosters stakeholders' trust and legitimacy perceptions (Hoos 2022; Luke et al. 2013), especially in light of the current regulatory landscape around the EU Green Deal and EU Taxonomy. Moreover, responding to the growing investor pressure to demonstrate progress on their impact promise (Hazenberg et al. 2015; Islam 2022), impact entrepreneurs engaging in IMV can present comprehensive impact metrics to secure funding. Acknowledging the complexity, time, and costs that impact entrepreneurs face when measuring impact, we posit that scholars can shape the IMV field and improve conditions for them, e.g., by providing applicable scientific measurement tools and guidance on which approaches are suitable for a certain context.

5.2 What Does Impact Measurement and Valuation Entail?

In line with established definitions (e.g., Ebrahim and Rangan 2014), our understanding of impact entails all intended and unintended, positive and negative consequences of an organization's behavior on its stakeholders. By that definition, impact is a holistic concept. In contrast, IMV emerges from social processes, selective considerations, and collective agreement on considered stakeholders as well as employed objectives, indicators, and methods. In practice, IMV can therefore only represent agreed upon impacts.

IMV efforts are key for two reasons: first, they grasp the extent of organizational activities' and their social, environmental, and macroeconomic consequences, allowing for steering and adjusting to ensure meaningful change for people and the planet. Second, they internalize these externalities in terms of costs, if meaningful and morally acceptable. This can be done by valuing impacts in monetary terms relying on enterprise cost-based accounting or societal valuation approaches (Barby et al. 2021). We adopt the definition of IMV as "an approach [...] built on the idea that [economic, ecologic, and social] value creation [are] mutually dependent [rather than mutually exclusive]. It is a set of tools and methodologies that enable companies to identify, measure, monetarize, and manage their societal and environmental impacts" (Braig and Edinger-Schons 2020, p. 191).

Organizational efforts increasingly quantify non-financial performance, often using the inputs-outputs-outcomes-impacts (IOOI) logic (see Fig. 2). Such logic models' application for IMV typically involves two primary stages, i.e., assessing outputs and outcomes (Ebrahim and Rangan 2014; Vörösmarty et al. 2018). For example, if an impact enterprise conducts a reforestation project, the number of trees planted are an output. Outcomes include the enhanced variety of plant and animal species in the reforested area as well as the amount of CO₂ captured by the growing trees, with the potential impacts of ecosystem restoration and climate change mitigation.

Less process-focused measurement methods (e.g., scorecards integrating social and ecological aspects, approaches relying on aggregation (SROI)) readily exist but we promote a process logic for IMV in order to fully grasp the impact and causality at play between the IOOI stages (Ebrahim and Rangan 2014). In the following, we explore the relevance of these dynamics.

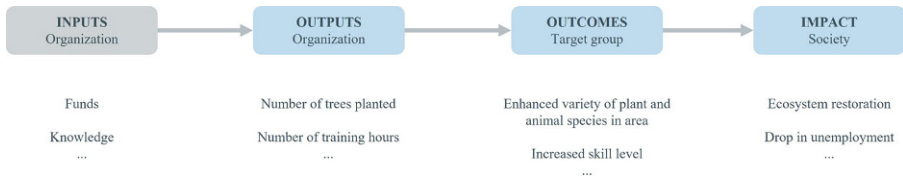


Fig. 2 Exemplary logic model. Own illustration, adopted from Ebrahim and Rangan (2014)

5.3 How to Engage in Impact Measurement and Valuation?

While growing measurement efforts are a positive development, we identify particular challenges within the realm of IMV. First, there is a significant variance in the meaning of impact and measurement, and consequently *inconsistencies in measurement methods* (Chatterji et al. 2016). Secondly, current methods *strongly emphasize on output-focused metrics* but make outcome and impact claims. While claiming to have an impact, organizations often fail to measure it and simply employ estimates that are then aggregated or valued; this raises concerns about the validity of methods used (Berg et al. 2022; Chatterji et al. 2016). Lastly, we observe *lacking participation in IMV operationalization*. We discuss each of these in more depth.

Facing Inconsistency in Impact Measurement and Valuation Looking at the IMV field, we see substantive confusion about what impact and impact measurement actually mean, and lacking common ground (Chatterji et al. 2016) on what solid measurement should entail (e.g., quantitative, qualitative, or mixed assessment, aggregation to a score or single number, monetary valuation). Scholars have pointed to weaknesses of current measurement efforts, such as limited data consistency (Berg et al. 2022; Chatterji et al. 2016) caused by a broad range of methods and variance (Rawhouser et al. 2019; Schlütter et al. 2023). Moreover, challenges include correctly capturing additionality and causality of impact through quantitative and aggregated data. For instance, did an entrepreneurial activity really cause the impact observed on societal level (causality of impact)? Would this impact have also happened without the entrepreneurial activity (additionality of impact)?

Thus, the very core of IE—the impact—may then not be clear to stakeholders or misalign with their expectations, so that impact entrepreneurs risk reputational damage, perceptions of greenwashing, and loss of moral legitimacy (Braig and Edinger-Schons 2020; Scheidler et al. 2019; Suchman 1995). While external audits would provide a third-party perspective to stakeholders when replacing impact entrepreneurs’ self-assessments, they still involve similar conceptual and methodological challenges. Corresponding concerns have been discussed for sustainability assurance and ESG ratings (Carmichael et al. 2022; Berg et al. 2022).

At the same time, we recognize the time and cost that impact entrepreneurs need to dedicate to conducting IMV consonant with scientific standards. Especially for early stage ventures, extensive IMV activities may not be feasible. Nevertheless, a clearly defined impact logic and rigid selection of potential indicators paired with transparency about underlying assumptions, already go a long way and improve the field’s status quo. Moreover, to support impact entrepreneurs’ current measurement

efforts, we emphasize scholars' role: we strongly argue that the variance across and within methods call for advancing consistency. Researchers should engage in analyses of factors influencing the context of methodological choices and explore suitable methods by accompanying impact entrepreneurs through case studies and experiments, and explore implications for IMV (e.g., Ebrahim and Rangan 2014). In the following section, we elaborate on ways for researchers to do so.

Overcoming the Output Focus in Impact Measurement and Valuation The inconsistency and confusion around IMV give rise to a second challenge: many organizations measure outputs of organizational activities, e.g., count employees' training hours, but report them as outcomes or impact. In fact, they neglect to actually measure *outcomes*. While outputs are countable and refer to the activity level (e.g., number of training hours), outcomes capture the actual effects on the activities' target groups (e.g., the increased skill level of the trainings' participants, and resulting improvements in their quality of life). Outcomes are relevant to correctly capture causal linkages between outputs, outcomes, and impacts, in order to avoid invalid impact claims. Claiming to measure impact while omitting outcomes is problematic because it inhibits to comprehend how societal or environmental changes came about. Thus, measuring the actual outcomes, such as changes in behavior, competencies or attitude of the employees, correctly contextualizes how impact unfolds (Vörösmarty et al. 2018; Ebrahim and Rangan 2014).

If practitioners and larger industry initiatives omit the outcome level by multiplying their output metrics (e.g., number of hours of employee training) with a “valuation coefficient” (which attaches a monetary value to this training), they threaten the validity of their IMV. They are not measuring outcome or impact—a holistic impact measurement is not possible without considering at least the outcome level (Braig and Edinger-Schons 2020).

Therefore, we strongly encourage scholars to contribute to outcome measurement in IMV. While we recognize that IMV is timely and costly for impact entrepreneurs to navigate, scholars can play a crucial role in supporting the IE community to remedy several IMV issues. They can facilitate scientifically-founded IMV for impact entrepreneurs, e.g. by capacity building, by engaging in co-creation of IMV tools, or by providing collections of suitable scales to measure outcomes in different types of ventures, thus lowering their search costs. A promising pathway is clustering outcome measurements, and assessing method suitability based on characteristics of impact enterprises, informed by case studies on IE initiatives. Scholars have already undertaken such categorizations for social enterprises (e.g., Ebrahim and Rangan 2014). In the context of IMV, researchers could empirically test and refine current methods while striving for methodological standardization. This approach would involve an evaluation of various methods, each aiming to streamline practices and establish a common “playing field” for coexistence despite methodological divergences. This has already been applied for contexts such as sustainability standard setting (Reinecke et al. 2012). In the long run, suitable outcome measurement methods would gain legitimacy, as to partly standardize outcome measurement, balancing specificity and generalizability of IMV.

Fostering Participatory IMV Operationalization As the results of IMV can be understood as a social product, representing the social order, power structures, and social meaning (Espeland and Stevens 1998; Iversen 2005), the context of its development as well as the individual and collective values involved matter. Recognizing the degree of subjectivity and social construction involved in IMV allows for improving the process by looking more closely at who is involved, who benefits from it, which stakeholders are not represented, and which values and objectives are being promoted (Christensen and Ebrahim 2006; Iversen 2005), as examined by Gebken & Vilchez.

Impact entrepreneurs' legitimacy can benefit from increased participation of affected stakeholders. Thus, they should design their IMV in a meaningful way and implement credible stakeholder engagement (Castelló et al. 2016) through a participatory IMV process to ensure the representation and inclusion of both intentionally and unintentionally affected stakeholders (Fiandrino et al. 2022), leveraging the potential of impact sources as pointed out in the essay by Spanjol et al. IE research can help by engaging in scientific approaches fostering participation. Recognizing the importance of amplifying the voices of marginalized or less powerful stakeholders (Derry, 2012) and striving for social justice in both research and managerial practices (Ergene et al. 2021) are crucial in this context. This is not only essential for identifying and mitigating unintended negative impacts that may go unnoticed by impact entrepreneurs (Kujala et al. 2022) but also for acknowledging the diverse value concepts that exist across different global contexts (Banerjee, 2000).

5.4 Conclusion

These challenges call for scholarly engagement in IMV (see Fig. 3): a pathway for improvement of practices lies in testing and refining methods based on empirical and experimental evidence. By identifying practices that 1) constitute valid and holistic IMV, or 2) hinder methodological progress, research can contribute to advancing method consistency to enhance measurement credibility. We advocate for a shift towards outcome measurement to adequately capture causality in impact entrepreneurial endeavors (emphasizing once more the urge for scholarly engagement in improving feasibility of outcome measurement in practice, through resource provision and capacity building in the IE field), and for participatory IMV processes accounting for the plurality of global value concepts to ensure legitimacy and relevance of IMV across diverse contexts.

6 Impact Entrepreneurship Education: Learning to Become Impact Entrepreneurial

B. M. Gossel, D. J. Kruse, M. Mirtsch, V. L. Unger, B. Wolf

Since entrepreneurs are made, not born, learning scenarios to become impact entrepreneurial are crucial. The hereby introduced impact entrepreneurship (IE) education perspective embraces both, a wide and a narrow lens on entrepreneurial learning

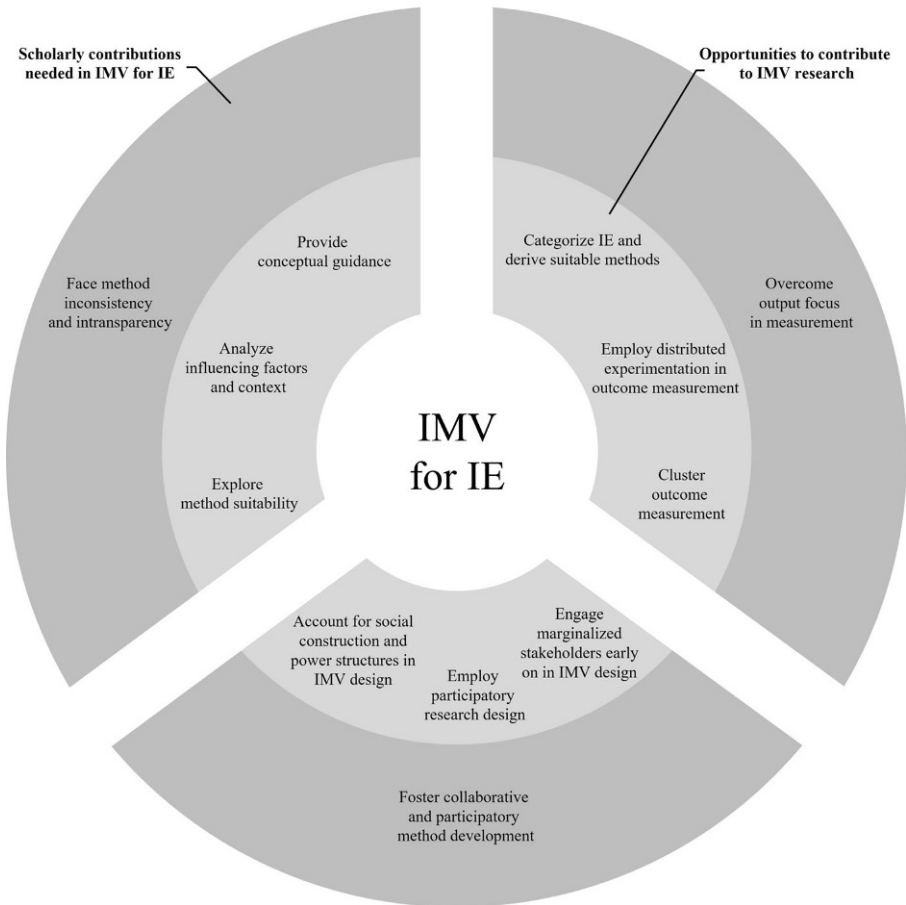


Fig. 3 Scholarly Contribution to Overcoming IMV Challenges

(Lackéus 2015). However, reflecting about IE as a new normal requires a rethinking of entrepreneurial learning scenarios. From other domains of entrepreneurship education research, we know that existing competing logics in entrepreneurial learning settings (i.e., positivistic research logic, commercial logic, social-welfare logic, public-sector logic) require different educational approaches (i.e., Pache and Chowdhury 2012). Creating impact requires new competencies, gained through education for sustainable development (Brundiers et al. 2021). While entrepreneurship education in its original sense aims at orientation, decisions and actions exclusively in an economic logic, IE education aims to bridge this logic with social, environmental, and ethical principles, as the introduction of defining IE demands. The integration of sustainability, as necessitated by IE, is not a simple add-on, but requires laying deep lines of sight through various contents, assumptions and methods of entrepreneurship education. For IE, we argue that the implementation of at least three avenues

of novelty is required for education: complexity, normativity, and imagination of desirable futures.

6.1 First Avenue: Complexity

*Creating entrepreneurial ideas with impact involves higher levels of **complexity** due to the need to integrate dimensions beyond simple economic logics:* The ‘added complexity’ of IE education stems from the need to integrate social impact assessment, ethical considerations, and interdisciplinarity (Tracey and Phillips 2007). Complexity is directly linked to sustainability competencies such as integrated problem-solving or systems thinking (Brundiers et al. 2021), but opens up further dynamics in the context of IE. Such integration requires an entrepreneurial innovation process that “is substantively more complex and recursive” compared to traditional entrepreneurship (Corner and Ho 2010, p. 654). This process begins by acknowledging the inherent complexity of problems such as wealth inequality, climate change, or biodiversity loss—the grand challenges of our times—which are the focal points for impact entrepreneurs (Dorado and Ventresca 2013). In observing these problems, the potential of impact sources as pointed out in the essay by Spanjol et al. becomes visible. These complex problems are characterized by numerous interdependent variables, knowledge domains, decision choices, and feedback loops (Leiblein and Macher 2009). The distinct feature of complex problems—in contrast to complicated problems—is that the nature and structure of these interdependencies are often not well understood (Fernandes and Simon 1999; de Bruin et al. 2015), and unfortunately, human tendencies to oversimplify have been widely noted (Grotzer and Tutwiler 2014). Hence, IE education must equip students to navigate these complexities inherent in social problems through an understanding of non-linear relationships and the interconnectedness of variables as part of problems and systems (Grewatsch et al. 2023; Jickling and Sterling 2017; Meadows 2008).

To this end, an emphasis on problem understanding is essential to effectively manage problem complexity. Overall, this requires a more scientific approach to entrepreneurial decision-making (Lopez-Vega et al. 2016; Camuffo et al. 2020). Students must engage in formulating the problem at hand comprehensively by identifying and verifying the root causes of interconnected symptoms, involving external transdisciplinary and intersectoral stakeholders with diverse knowledge sets to broaden the group’s bounded rationality (Baer et al. 2013; Lopez-Vega et al. 2016). To date, there is still much to explore with regard to recognizing the inherent complexity of IE and adapting its actions effectively (Zellweger and Zenger 2023). However, by building on existing competency frameworks, and integrating approaches from complexity theory, students can be equipped to navigate these challenging endeavors. As a set of theoretical frameworks used for modeling, analyzing, and interpreting the dynamics and behavior of systems, complexity theory offers powerful tools to reflect on the social problems they attempt to address and on how to better assess information and design solutions that are innovative, scalable, and sustainable in terms of sensitive to the complex interdependencies within the (social) systems in which they operate (Bianchi et al. 2022; Porter and Córdoba 2009). For instance, visualizing the complexity of the social problem, such as through a complexity map,

serves as a boundary object that captures and displays collective knowledge across different domains (Caccamo et al. 2023). This visualization is helpful in guiding the search for the intended solution as a map and point of reference to ensure actual impact (Kruse et al. 2019; Felin and Zenger 2009).

6.2 Second Avenue: Normativity

IE requires normativity which means a well-developed and reflected inner compass that enables learners to endure this complexity and still develop decision-making heuristics: We argue that for learning to become impact entrepreneurial, competencies in sustainability and entrepreneurship are required equally. Frameworks for entrepreneurial competencies as the EntreComp (Bagicalupo et al. 2016) and the GreenComp framework (Bianchi et al. 2022) integrate ethical and sustainable thinking as one competence amongst others, embracing the ability to assess the consequences and impact of ideas, opportunities and actions. A deeper elaboration of normative competence provides competence frameworks for impact, as proposed by Brundiens et al. (2021). Based on Wiek et al. (2011), who define normative/values-focused thinking competency as “ability to collectively map, specify, apply, reconcile, and negotiate sustainability values, principles, goals, and targets” (p. 209), Brundiens et al. (2021) expand this to include critical reflective thinking about one’s own values, as well as contextual, cultural and historical reinforcement of those values. This may include in IE education a required deeper reflection on own social status and privileges. Reflective capacity plays a crucial role in this context by encouraging learners to critically examine the underlying assumptions and values that inform their decision-making processes (Kearins and Springett 2003). By engaging in reflective practice, students can become more aware of how their personal and societal values influence their understanding of complex systems and their role within them. Whereas knowledge is often regarded as value-free in prevailing educational designs (Sipos et al. 2008), producing knowledge as well as understanding complex problems and making decisions lies partly in normative assumptions and perceptions of the world that are shaped by our values (Bianchi et al. 2022; Carolan 2006; Grunwald 2004). A normative competency is fundamental to other competencies (Brundiens et al. 2021), shapes impact management and assessment in current situations and how the future is envisioned (Gibson 2006; Wiek et al. 2011). Therefore, we argue that for IE education, a stronger focus on normative competency is required that is in adjustment with competencies for sustainability.

6.3 Third Avenue: Imagination of Desirable Futures

Imagined solutions that pursue economic goals with impact require a deep elaboration of the question of what desirable futures can be and what role one’s own self-efficacy can and must play: Entrepreneurs act upon the future, which, in effectual logic (in contrast to causal logic) is accepted as inherently uncertain, non-predictable, and imagined (Sarasvathy 2002; Bridge 2021). IE aims to further expand this basic entrepreneurial assumption from projected to a more complex imagination of desirable futures. Therefore, IE education should focus on the skills and competencies

needed for the identification and selection of the problem, for example, by discussing wicked problems (Grewatsch et al. 2023), involving those affected by them, and remaining open to rethinking the nature of the problem (Miller 2018). Recent competence frameworks for both, entrepreneurship and sustainability (Bianchi et al. 2022; Brundiens et al. 2021), already highlight the envisioning of sustainable futures as key competence for sustainability. This involves imagining alternative scenarios and identifying actions needed to achieve a preferred future with “Futures Literacy” as an essential competency (Miller 2018). Including anticipatory assumptions to explore imaginary futures (i.e., by using the Causal Layered Analysis methods (Inayatullah 1998)), developing alternative scenarios for the future (i.e., by using art and design for inspiration (Selin 2015) or awareness-based methods such as sensing and presencing (Scharmer 2007)), and finally reflecting and consolidating these scenarios (i.e., through thought experiments and to make use of metaphors (Gümüşay and Reinecke 2024)), are currently explored in praxis.

Practical examples such as using systems mapping to address complexity (Dentoni and Roglic Forthcoming), applying reflective classroom discussions on ethical dilemmas to foster normative thinking (Kearins and Springett 2003), and conducting “Futures Literacy” workshops to stimulate the imagination of desirable futures (Miller 2018) illustrate the diversity of pedagogical approaches and support a pluralistic understanding of IE education.

6.4 Conclusion

To conclude on the three proposed avenues, future entrepreneurship education research should, first, investigate heuristics specifically tailored to managing complexity in the entrepreneurial innovation process (Kruse et al. 2025), as these simplified rule- and experience-based decision strategies (Furnari et al. 2021; Hunt et al. 2023) may better equip students to navigate the intuitive and dynamic nature of grand challenges (Grewatsch et al. 2023; Gavetti and Rivkin 2007). Second, future research in entrepreneurship education should critically explore the normative dimension of framing and solving problems within IE, examining the potential risks of taking good intentions for granted, as unexamined (undisclosed) normative assumptions may lead to unintended consequences and undermine the well-being of beneficiaries, especially when complexity is in play (Santos 2012; Kimmitt and Muñoz 2018). Third, education for IE has the mission to explore how such thinking of imagining desirable futures can be enforced in learning settings. As a suggestion, the next steps involve establishing measurable learning objectives, developing innovative pedagogical approaches, scaling these educational strategies, and providing targeted training for educators to effectively develop the next generation of impact entrepreneurs. This may also include to elaborate on questions of impact measurement for educational settings, as introduced by von Schweinitz et al. Finally, we emphasize the relevance of action orientation—a principle inherent in the concept of competence and reflected in the competence frameworks already addressed. All three avenues should be aligned with this orientation in order to bring impact entrepreneurial education into action.

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