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Sustainable entrepreneurship: definitions, themes and research gaps

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SUSTAINABLE ENTREPRENEURSHIP: DEFINITIONS, THEMES, AND RESEARCH GAPS

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ABSTRACT

In a time when the global economy continues to stutter, climate change mitigation and social justice simultaneously increase in urgency and complexity. Sustainable development ranks high on the political agenda, but the barriers appear still too intricate to address the solutions solidly. The existing literature strongly supports the relationship between sustainable development and sustainable entrepreneurship, acknowledging enterprises as one of the greatest engines for societal and economic progress, and hence, for radical change. This paper reviews the latest research developments and identifies important research gaps that still need to be addressed in the field of sustainable entrepreneurship. We first explore the existing notions of entrepreneurship and sustainable development with the aim to agree upon a definition that will serve as basis for next discussions and research. Subsequently, an overview of the main themes addressed by the literature referring to sustainable entrepreneurship is given. New venture creations, entrepreneurial drivers, performance and institutions are among the main themes we explore. We then provide an overview of the main methods adopted by scholars in the field. Finally, we address research gaps that, if filled, will surely bring the discipline forward and potentially incentivize more organizations and individuals to engage in sustainable entrepreneurship practices.

Keywords: sustainable entrepreneurship, literature review,

INTRODUCTION

Today we, as a society, are facing enormous economic, environmental and societal threats.

“Billions of our citizens continue to live in poverty and are denied a life of dignity. There are rising inequalities within and among countries. There are enormous disparities of opportunity, wealth and power. Gender inequality remains a key challenge. Unemployment, particularly youth unemployment, is a major concern. Global health threats, more frequent and intense natural disasters, spiralling conflict, violent extremism, terrorism and related humanitarian crises and forced displacement of people threaten to reverse much of the development progress made in recent decades. Natural resource depletion and adverse impacts of environmental degradation, including desertification, drought, land degradation, freshwater scarcity and loss of biodiversity, add to and exacerbate the list of challenges which humanity faces. Climate change is one of the greatest challenges of our time and its adverse impacts undermine the ability of all countries to achieve sustainable development. Increases in global temperature, sea level rise, ocean acidification and other climate change impacts are seriously affecting coastal areas and low-lying coastal countries, including many least developed countries and small island developing States. The survival of many societies, and of the biological support systems of the planet, is at risk.”

United Nations (2015, p. 8-9)

These impellent calls signal entrepreneurs to act accordingly. Entrepreneurship is recognized as a fundamental engine for economic and non-economic development, triggering job creation and improved products and services (e.g. Schumpeter, 1934; Shane and Venkataraman, 2000; Audretsch and Thurik, 2004 Koe et al., 2014). Entrepreneurs' primary objective is to satisfy an unfulfilled need or to improve the way this need is currently being satisfied. This promising and fundamental goal does not necessarily imply that positive social

or environmental values are being created as a result. On the contrary, entrepreneurial activity is strongly (and traditionally) related to environmental damage (Dean and McMullen, 2007; York and Venkataraman, 2010; Pacheco et al., 2010), with an often associated or not, negative social impact. Economic and technological progress at any price, without considering societal development and environmental impact, is unsustainable and no longer feasible. As a direct consequence, we are assisting the transition to a sustainable economy. On the one hand, new and existing ventures are increasingly aware of the need to adopt sustainable practices, both within their organization and as a result of their interaction with the societal and physical environments (Elkington, 2006). On the other hand, the number of organizations effectively influencing sustainable development is still insufficient, and needs to rise urgently. This inspires researchers in the field of sustainable entrepreneurship to thoroughly investigate the positive financial and non-financial repercussions that the implementation of sustainable strategies may have.

“Without sustainable organizations there is no sustainable development, thus, no future.”

Weidinger (2014, p. 289)

Sustainable entrepreneurship has been widely acknowledged as the answer to the environmental (Dean and McMullen, 2007; Cohen and Winn, 2007; York and Venkataraman, 2010) and social challenges (Zahra et al., 2009) that we as society face in this century. This literature review touches upon the definitions, the main themes and methods that at present constitute the field of sustainable entrepreneurship.

METHODOLOGY

In order to consult up-to-date contribution, the word ‘sustainable entrepreneurship’ was used as algorithm researched on WorldCat Discovery Service and on the following journals: *Journal of Business Venturing*, *Journal of International Business Studies*, *Small Business Economies*, *Entrepreneurship Theory and Practice* and *International Business*

Review. WorldCat Discovery Service offers access to 1.9 billion library sources representing the collection of thousands libraries worldwide. It therefore is the most important source of information for a thorough literature review aimed here.

The articles, theses and books searched through WorldCat include contributions from the year 2011 through May 2016. Also, the most cited articles in the literature reviews included in our literature search have been consulted in this review including therefore older contributions. In total 132 articles, papers, books and theses have been selected for this review. Figure 1 reports the top 15 most cited articles in the field of research.. This list exclude renowned contributions that have been consulted and cited multiple times in the article reviewed (e.g. Elkington, 1997).

In the following sections we present our findings adopting a narrative overview literature approach (Rumrill and Fitzgerald, 2001; Green et al., 2006) aiming at describing the latest developments of the sustainable entrepreneurship field in comprehensive manner.

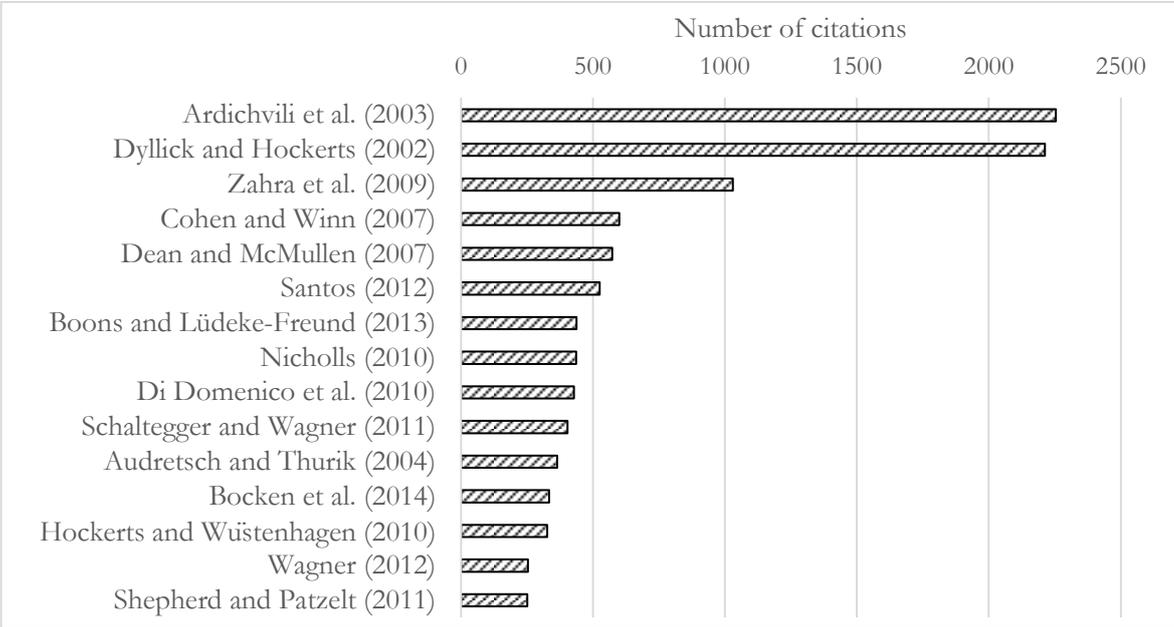


FIGURE 1: TOP 15 MOST CITED PAPERS IN THE FIELD OF SUSTAINABLE ENTREPRENEURSHIP

DEFINING SUSTAINABLE ENTREPRENEURSHIP

Defining entrepreneurship

Defining the mainstream concept of entrepreneurship is an important first but challenging step (Shane and Venkataraman, 2000). Many scholars agree upon the lack of a universally accepted definition (e.g., Carsrud and Brännback, 2007; Gartner, 1988; Veciana, 2007). Some of the early definitions are dated back to the 18th century and are attributed to economists such as Adam Smith and John Stuart Mill. The word ‘entrepreneurship’ became popular in business since 1980s (Majid and Koe, 2012). Deriving from the French word *entreprendre* meaning *to undertake* or *to do something*, the term entrepreneurship itself has been redefined a dozen times in the last decades.

Although the majority of the definitions refer more to *what entrepreneurs do*, rather than *who they are*, broader definitions have also been proposed. Stokes et al. (2010) argue that the definitions present in literature are related to three main domains: process, behaviour and outcomes. Schumpeter’s definition (1934), one of the earliest and most cited of all, refers to entrepreneurship as *innovative process of creative destruction*, comprehensively addressing the three domains indicated by Stokes et al. (2010). Following the same criterion, Majid and Koe (2012) define entrepreneurship as “A process of identifying, evaluating and pursuing opportunities through creativity, innovativeness and transformations to produce new products, processes and values that are beneficial” (p. 295).

Several scholars approach the concept of entrepreneurship from a behavioural angle, focusing on what characterizes an entrepreneur as individual. Ardichvili et al. (2003) describe entrepreneurs as creative individuals, specifically in the way they recognize, create and develop opportunities. They refer to opportunities (a common denominator in several entrepreneurship definitions) to be ‘developed’ rather than ‘identified’ since opportunities “are made, not found” (p. 106). Ardichvili et al. (2003), focusing on serial entrepreneurs, use Dubin’s theory (1978) for opportunity identification. They name personality traits, social networks, and prior knowledge as antecedents of entrepreneurial alertness to business

opportunities. Opportunity recognition, creation and development represent a fundamental branch of the entrepreneurship and strategic management definitions and ditto research disciplines (Harms et al., 2009).

The behavioural angle of entrepreneurship can also be related to others who see entrepreneurship as a process. Venkataraman (2002) defines entrepreneurship as the process of addressing uncertainty, innovation and resource allocation for the creation of personal wealth and social benefit. Weidinger (2014) also refers to entrepreneurship as an open research process that comes up with unique solutions.

Common grounds of entrepreneurial traits are risk taking, opportunity spotting and innovation in the process of creating unique solutions (often disruptive¹) striving for longevity. This is independent from the context which might be, for instance, the context of large and established organizations (the so called intrapreneurship or corporate entrepreneurship), the context of new venture creations, the context of for-profit or not-for-profit organizations.

A number of authors refer to entrepreneurship as the creation of new business, that is, namely start-ups (e.g., Gartner, 1988; Ardichvili et al., 2003; Gibbs, 2009). Start-ups represent an important cluster of the entrepreneurship literature mainly for their widely recognized potential to innovate, contraposing them to large organizations. The lack of constraints which typically characterize large and established organizations – such as traditional administrative systems, procedures, shareholder demands – makes start-ups promising for disruptive innovation and substantial societal change. This aspect is also recognized by the European Union, which is supporting the financing of new enterprises addressing urgent societal issues such as climate change and societal progress (Bocken, 2015). In addition, there is tangible evidence that we are currently moving from a managed economy towards an entrepreneurial economy (Audretsch and Thurik, 2004; Uhlaner et al.,

¹ The term “disruptive innovation” was first used by Christensen (1995) to describe an innovation that creates a new market and value network and eventually disrupts an existing market and value network, displacing established market leading firms, products and alliances.

2010; Schaltegger and Wagner, 2011). However, the survival rate of start-ups is low. Katre and Salipante (2012) affirm that most earned-income ventures expire within the first 5 years, with a failure pick between the 18th and the 24th month (circa 40% of small businesses fail in the first 5 years). This puts entrepreneurship research in the spotlight, incentivizing several scholars to explore patterns for entrepreneurial success.

Despite the relevance of new ventures, the study of entrepreneurship should not only be limited to new enterprises. As argued by Shane and Venkataraman (2000), entrepreneurship does not require (but can include) the creation of new organizations. The broad potentials of the entrepreneurship discipline are defined also, and foremost, by what characterizes entrepreneurs. Such approach allows to apply the theories of entrepreneurship to existing (transforming) enterprises or to not-for-profit organizations (e.g., social entrepreneurship) including other important branches of the entrepreneurship field.

Moreover, as Hockerts and Wüstenhagen (2010) argue, large organizations are more suitable to address a wide range of issues. Start-ups instead, normally focus on one particular issue in which they excel. Established firms excel in process innovation while start-ups excel in product (often disruptive) innovation. Established firms are likely to follow start-ups, once there is evidence (thanks to the new ventures' efforts) that a certain innovation is attractive. Established firms have the means to bring the innovation forward, thanks to their social network, expertise and capital. Together, established organizations and start-ups can initiate and accomplish sustainable development, working in symbiosis in a co-creation process, depending on each other for mutual success (Hockerts and Wüstenhagen, 2010).

Since both, established firms and new ventures play important and different roles in societal development, we do not intend to exclude start-ups from the entrepreneurship research, but merely not restricting the definition of entrepreneurship to the practice of creating new organizations. From now on, we will refer to entrepreneurship as: the process that strives for innovation and/or value creation and capture through opportunity spotting

and development, implying a more-or-less high degree of risk taking, due to its intrinsic uncertainty.

Defining sustainable development

Sustainable development is often defined referring to the Brundtland Report (1987) as “the development that meets the needs of the present without compromising the ability of future generations to meet their own needs”. The Brundtland UN report focuses on social justice and human development within the framework of social equity and the equitable distribution and utilization of resources. However, despite recognizing the breakthrough benefit of this definition, many argue about its lack of practicality. This is because the concept of intergenerational equity (Lans et al., 2014) is not of easy formalization. Societal needs clearly change from one generation to another and their prediction is not a straightforward forecast. In 1997 Elkington introduced the concept of the Triple Bottom Line (TBL), or 3P (People, Planet and Profit) with the book *Cannibals with Forks: The Triple Bottom Line of Twenty-First Century Business*. This definition attempts to provide a more practical direction suggesting to balance the three dimensions of sustainability: the economical, the human and the environmental systems. Also, this definition did not survive without critics. Following the hierarchical order proposed by Stephen Haines’ (1998)² seven levels of living systems theory, we can identify the three systems addressed by the TBL approach as not belonging to the same level. In other words, there would not be an economy without society, which would not exist without environment. The planet supports the people who give sense to profit. Following this hierarchical order, many scholars and practitioners support the prominent importance of the planet, (Markman, et al., 2016) enhancing the priority of the environmental component within the sustainability definition. This probably explains why the term sustainability and environment are often used interchangeably (e.g., Pacheco et al., 2010). The enhanced importance of the environment within the concept of sustainable

² Stephen G. Haines' seven levels of living systems, published in 1998, are in hierarchical relationships with each other, systems within systems. They begin with Earth as the largest living system and extend all the way down to cells, the smallest living system.

development can be attributed to the way (and the time) sustainable development became a fundamental issue in our current policy, looking back at its practical implications in the history of the last century³. Social and ecological sustainability are often differentiated and this can be reflected also in the way many scholars define sustainable entrepreneurship, as discussed in the following section. The most recent development of ecological sustainability is based on the realization that on a finite Earth the depreciation of “natural capital” (Lovins et al., 1999) cannot go on endlessly. Hence, this is the root cause for the shift from a ‘throughput’ to a ‘circular’ manufacturing economy (Gibbs and Deutz, 2007). Sustainable development aims to protect the so called *non-substitutional capital* and its meaning is often context dependent. In the next section, we introduced the different dimensions the reviewed articles refer to, when addressing the field of sustainable entrepreneurship.

Social, environmental and CSR as sustainable entrepreneurship

Despite the critics behind using the TBL (Elkington, 1997) to define sustainable development, the framework is widely used to explain how sustainable entrepreneurs operate. Balancing economic health (profit), social equity (people) and environmental resilience (planet) through entrepreneurial behaviour is what identifies a sustainable entrepreneur (Hockerts and Wüstenhagen, 2010). Research on sustainable entrepreneurship has combined two different entrepreneurship branches: social and environmental entrepreneurship. Dean and McMullen (2007) offer a comparison between the broader concept of sustainable entrepreneurship to environmental entrepreneurship comparing it to social entrepreneurship. They explain that the latter tends to address mission-driven, rather than profit-driven entrepreneurs while sustainable entrepreneurship addresses environmental problems without neglecting profit. Organizations that respond to social and environmental problems by applying market mechanisms are referred to as hybrid

³ For instance due to multiple environmental disasters and the publication of the book *The limits to growth: a report to the Club of Rome* in 1972, the very first book (a bestseller) addressing the dramatic scenarios related to unsustainable human action in a systemic way.

organizations (Ebrahim et al., 2014) Although sustainable entrepreneurship integrates environmental and social entrepreneurship in one practice, many authors still refer to sustainable entrepreneurship when addressing one of the two (Hockerts and Wüstenhagen, 2010; Fellnhofer et al., 2014). Recently, the sustainable entrepreneurship literature went through a shift in interest from environmental aspect to prominent focus on the social one (Fellnhofer et al., 2014). This can be mirrored to the actual business practice – as also stated by Bocken (2015) who, to show this shift, reports some of the interviews to venture capitalists: “everything with a ‘social’ element is getting more important (...) this is where the money is now” (p. 653). In the literature focusing on new organizations, the focus is also rising on start-up ventures motivated by social innovation. The concept of social entrepreneurship has emerged in the late 1990s and it has only recently reached the academic literature (Hockerts and Wüstenhagen, 2010). As affirmed by Fellnhofer et al. (2014) the concept of social entrepreneurship is getting increasingly more attention by the scientific community within the sustainable entrepreneurship field.

Corporate social responsibility (CSR) is often confused with, or intended as, sustainable entrepreneurship. Today the concept of CSR is related to societal expectations for a business to behave ethically (York and Venketaraman, 2010). “Corporate sustainability can be defined as meeting the needs of a firm’s direct and indirect stakeholders (such as shareholders, employees, clients, pressure groups, communities), without compromising its ability to meet the needs of future stakeholders as well” (Dyllick and Hockerts, 2002, p. 131). There is substantial evidence that organizations ought to invest in CSR to become more competitive. CSR can take many forms and can be, to a greater or lesser extent, integrated in the business model of a company and/or it could refer to the activity it generates (to clients, employees, shareholder, communities, environment and society). This implies, for instance, complying with the relevant national and international legislation as well as legislation on Human Rights. In the existing literature there is a tendency to relate CSR or *corporate sustainability* to large firms and sustainable entrepreneurship to small and medium enterprises. Hockerts and Wüstenhagen (2010) relate sustainable entrepreneurship to both

small and large firms, identifying the key differences in the way the two approach sustainable entrepreneurship. According to our view, there are a few differences between sustainable entrepreneurship and CSR. Not only CSR applies normally to business oriented organizations, while sustainable entrepreneurship can target different types of organizations, individuals and companies. But when addressing only for-profit organizations, sustainable entrepreneurship is a concept embedded in the core business or goal of a sustainable entrepreneur, while CSR is accompanying the core business. In other words, CSR makes sure that a company does not harm to the society or environment where it operates. Sustainable development, however, does not constitute the main goal of the organization in contrast to what sustainable entrepreneurship does – CSR aims at “doing less bad rather than more good” in York and Venkataraman (2010, p.451).

Below, the concepts as intended by the authors of the reviewed papers within the notion of sustainable entrepreneurship – TBL, CSR, social entrepreneurship, environmental entrepreneurship and mainstream entrepreneurship – is reported in percentage.

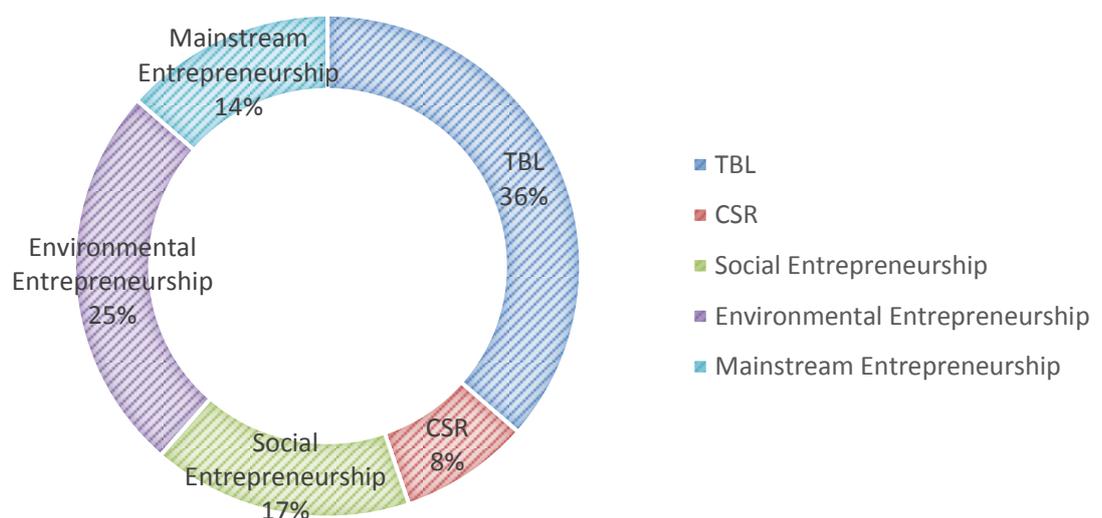


FIGURE 2: DISTRIBUTION OF CONCEPTS ADDRESSED BY THE REVIEWED PAPERS.

Sustainable entrepreneurship

Sustainable entrepreneurship refers to the discovery, creation, and exploitation of entrepreneurial opportunities that contribute to sustainability by generating social and environmental gains for others in society (Hockerts and Wüstenhagen, 2010; Pacheco et al., 2010; Shepherd and Patzelt, 2011).

The concept of opportunity creation is central in the literature defining sustainable entrepreneurship and entrepreneurship in general (Harms et al., 2009). Cohen and Winn (2007) relate opportunity identification (for sustainable entrepreneurship) to market imperfections namely to the following: (1) firms are not perfectly efficient; (2) externalities exist, (3) pricing mechanisms work imperfectly, and (4) information is not perfectly distributed. They argue that entrepreneurs who spot such market imperfection have greater potentials to be successful.

Common ground between *entrepreneurship* and *sustainability* is the concept of longevity, assuring long lasting goods, values or services: preserving current resources for future generations (sustainability) and developing unique solutions for the long run (entrepreneurship). However, we wish to replace, for the sustainable entrepreneurship field, the concept of longevity with the one of impact. As mentioned before, we cannot possibly predict the needs of future generations since, as shown by history, they are increasingly changing. Traditionally, mainstream entrepreneurship aims for longevity, i.e., creating long lasting products or services. In our perception, sustainable entrepreneurship real aim is not to produce long lasting products or services but rather, to create a certain positive impact. In rapidly changing times, being adaptive is key; designing a product or service for longevity might be unrealistic and even environmentally damaging as shown by the traditional entrepreneurship theory and practice.

Sustainable entrepreneurship lays “in between for-profit and not-for-profit, in between cash and cause. The main goal of the business activity of the sustainable entrepreneurs should be ‘looking for prosperity’”. (İyigün, 2015, p. 1230)

Both sustainability and entrepreneurship require innovation, which, applied to both fields, imply a creative new combination of existing resources (Nicholls-Nixon et al., 2000). Pacheco et al. (2010) define sustainable entrepreneurship as the “discovery, creation, evaluation, and exploitation of opportunities to create future goods and services consistent with the sustainable development goals” (p.471). In our view, sustainable entrepreneurship strives to create value that is beneficial for society through opportunity creation, and development in an uncertain environment. This implies risk-taking abilities, innovative attitude and alertness together with determined ethical concerns.

CENTRAL THEMES

This section addresses central themes that we identified as particularly recurring in the literature, specifically: new venture creation, entrepreneurial drivers, performance and institutions.

Success of start-ups as sustainable entrepreneurs

Similar to mainstream entrepreneurship, start-ups are an important cluster of the sustainable entrepreneurship literature. *What makes sustainable start-ups successful?* is one of the questions addressed, from different point of views, by several scholars. According to Gartner (1985), for example, new venture creation is an outcome of the nexus of individuals, environment, and process. In fact, some of the main topics addressed in the SE literature are business model innovation (e.g. Boons and Lüdeke-Freund, 2013; Bocken, 2014; Jolink and Niesten, 2015), team composition, individual (entrepreneur) traits (Ardichvili et al., 2003; in

Gibbs, 2009; Nwaigburu and Eneogwe, 2013. Lans et al., 2014), financing means (Miller et al., 2010; Bocken, 2015), policy interactions (e.g. Pinkse and Groot, 2015; Barrutia, and Echebarria, 2012; Bianchi and Noci, 1998), institutional influence (e.g. Spence et al., 2011; Stephan et al., 2015; Katre and Salipante 2012; Lepoutre et al., 2013).

In the field of social entrepreneurship, studying 33 social ventures, Sharir and Lerner (2006) identified as contribution to success: the entrepreneur's social network; dedication and team contribution; managerial experience; capital at the funding stage; acceptance of the idea in the public discourse (legitimacy); ratio of volunteers to salaried employees; cooperation with public and non-profit sectors (stakeholder network) and market readiness. Weber and Kratzer (2013) identified social network and business models as the main factors for a social entrepreneur's financial and social successes.

In the field of clean-tech, Wüstenhagen and Boehnke (2006) found that business model design is determinant for sustainable energy technologies. In the area of sustainability (TBL), Juravle and Lewis (2009) identified tactics that sustainable entrepreneurs adopted to promote sustainable investment: making the business case for sustainable investment; forming coalition with mainstream investors; industry networking and gaining credible expertise. Bocken (2015) found that the business model design is a key factor for success of sustainable start-ups', while according to his study, lack of suitable venture capitalists is one of the main threat for success.

A group of articles analysed the relationship between an individual's tendency to create new venture and the personal social and environmental concerns (e.g. Patzelt and Shepherd, 2010). Kuckertz and Wagner (2010) assessed the influence of sustainability orientation on entrepreneurial intentions with a survey study. They conclude that sustainable related concerns boost entrepreneurial will, but that they decrease the more individuals acquire business experience. The theory of planned behaviour (Ajzen, 1991), or the profit-first mentality, have also been subject of study to address this aspect (e.g. Lourenço et al., 2013). Are people who care for environmental or social issues more likely to initiate start-ups? A

positive answer to this question opens the doors to the education potential to create substantial impact on sustainable development. The importance of education is supported by other studies which relate a certain set of skills or competences to entrepreneurial success (e.g. Nwaigburu and Eneogwe, 2013; Lans et al., 2014).

Drivers behind a sustainable entrepreneur

This theme answers the question: what moves individuals to engage in sustainable entrepreneurial activities? Why are some entrepreneurs more environmentally or socially concerned (and active) than others? Like for mainstream entrepreneurship, there have been a number of studies attempting to determine the drivers of sustainable entrepreneurship in both individuals and enterprises. Referring to the existing literature, it is possible to classify the main drivers as originated by external and internal factors. Internal motivation (inner beliefs, or concerns about social and/or environmental causes) or desire for self-employment are internal factors. Market failures (triggering opportunity identification), network, social capital, public acceptance are to be considered as external ones.

Koe et al. (2014) identify the correlation that sustainable small and medium sized enterprises (SMEs) have between a propensity for sustainable entrepreneurship and: (1) sustainable attitude; (2) social norms (social pressure to undertake environmentally conscious behaviors); (3) perceived desirability (a person's perception on attractiveness of a behavior); and (4) perceived feasibility (a person's perception on his or her capabilities, also associated to self-efficacy and the desire to be 'self-employed'). Koe et al. (2014) conclude that social norms have a great impact on both, entrepreneurial and sustainable behaviour. All four factors have a positive correlation with a propensity for sustainable entrepreneurship.

While exploring the drawbacks of start-ups in comparison to large establish firms, Hockerts and Wüstenhagen (2010) argue that start-ups are normally focusing on one single environmental or social issue for which they try to excel (and are not fitting the purpose of

addressing multilateral issues). They related this to the obsession for one single issue that is, in fact, what drives sustainable start-up entrepreneurs.

A number of authors address the importance of public acceptance – that should not be confused with peer-pressure, which has also been recognized as an important drive – as a key factor in the entrepreneurship process. O’Neil and Ucharasan (2016) describe the process of legitimacy with a qualitative study of six nascent enterprises. Legitimacy has been recognized as fundamental aspect to engage with stakeholders and therefore to increase success potentials but, as concluded by O’Neil and Ucharasan, it might often imply compromising an entrepreneur’s drivers. Referring to SMEs, Uhlaner et al., (2010), studying 2000 Dutch firms, affirm that owning a family business motivates entrepreneurs to behave more sustainably due to their closer relationships with local communities and the fear to defame their family’s name. Also Bianchi and Noci (1998), with a qualitative study on 46 companies, recognize the importance of legitimacy for environmental friendly businesses and “having a green image”; but referring to SMEs, they affirm that the pressure is much lower in comparison to larger firms. Nicholls (2010) confirms the relevance of legitimacy also within the social entrepreneurship field.

With a qualitative study of 44 firms in four different countries, Spence et al., (2011) also related the institutional context to the ‘sustainable will’. The importance of institutions has been acknowledged by several scholars and is further discussed later in this review.

Another driver which deserves particular attention is the financial factor. This aspect is explored in the following section.

Purpose-driven business or business purpose

The concepts of sustainability and profitability have been put in antithesis for a long time and this can be seen as the root cause behind the sustainable entrepreneurship debate (Parrish, 2010; De Clercq and Voronov, 2011). Although this was particularly true for

environmental protective measures, other aspects not strictly related to profit were often questioned against it. The long standing debate on the business case for CSR is one of the many examples (Dyllick and Hockerts, 2002). *Is there a business case for sustainability or is there a sustainability case for business?* Today, many scholars see sustainable entrepreneurship as a key factor for business success, in comparison to the old-fashion idea that sustainability “costs money” and that it is a capital cost without returns (Bocken, 2015, p. 647). A similar idea is also supported by Weidinger (2014) who views sustainable entrepreneurship not as a “job for the do-gooders or idealists but rather an essential strategic decision” (p. 292).

However, different authors (e.g. O’Neil and Ucharasan, 2016; Bocken, 2015) agree that “doing good” is, together with environment, society and profitability, a relevant entrepreneur’s driver. This does not conflict to Weidinger’s (2014) idea that sustainability does not oppose to profitability any longer, contrasting what traditional theory from environmental and welfare economics largely concludes. Several scholar however, support the assumption that market failure within the economic system triggers environmentally degrading entrepreneurial behaviour (Dorfman, 1993).

When it comes to new ventures, sustainable start-ups’ investors and entrepreneurs believe that sustainable businesses are more likely to succeed (Bocken, 2015). Sustainable entrepreneurship brings innovation and competitive advantage to new and existing ventures (Weidinger et al., 2013). And this holds also for a broader view on successful economic development. What is stated by Weidinger et al. (2013) is that in the European panorama of financial crises, sustainable entrepreneurship has the potential to be a winning strategy to assure economic growth.

Sustainable performance

A number of authors have been studying the factors that influence the sustainable performance of companies. Many support the correlation between company size and

sustainable performance (e.g., Bianchi and Noci, 1998; Uhlaner et al., 2010; Hoogendoorn et al., 2015). For example, Uhlaner et al. (2010), studying a sample of 2000 Dutch SMEs, concludes that the level of sustainability is related to a company's size (large firms are more prone to invest in sustainability), family ownership (that are more socially responsible) and is sector dependent (tangible sectors are likely to perform more sustainable than other sectors). Firms with a negative environmental impact have more opportunities to behave sustainable although they encounter a number of difficulties that are not encountered by nascent ventures.

How can performance of sustainable entrepreneurs be assessed? Schaltegger and Wagner (2011) write: "The degree of environmental or social responsibility orientation in the company is assessed on the basis of environmental and social goals and policies, the organization of environmental and social management in the company and the communication of environmental and social issues. The market impact of the company is measured on the basis of market share, sales growth and reactions of competitors." (p. 222). This vision is also supported by Hörisch (2015) who relates the impact of a sustainable entrepreneur to its market share.

Wut and Ng (2015) assess an organization's sustainable performance by relating CSR to turnover growth and profit growth. They found a positive correlation between CSR and turnover growth and between CSR and profit growth on the long term, while they found no correlation between these concepts on the short term (i.e., less than two years).

At the country level, sustainable performance in the EU is measured with the Human Development Index Ranking and the Sustainable Development Index Ranking. These were used in Kardos' conceptual study (2012) who relates these indices to the innovation of SMEs in the 10 EU's best performing and worst performing countries. Wut and Ng (2015) used a similar index to select their sample in China using the Hang Seng Corporate Sustainability index. This index, however, is not specifically related to the organizational dimension; it

therefore opens the world to a contextual-type of study, like the institutional theory, introduced for the SE discipline in the next section.

Institutions

De Clercq and Voronov (2011) argue that to understand individuals' entrepreneurial behaviour, the question is not whether or how much they value profit versus value creation, but rather acknowledging that sustainability and profitability are institutionally embedded. Institutions are oftentimes divided into tangible, 'soft' and intangible 'hard' institutions. Intangible institutions include laws, rules, regulations and instructions, while tangible institutions include habits, routines, established practices, traditions, ways of conducts, norms and expectations (North, 1990).

Pacheco et al. (2010), referring to the game theory literature, affirm that sustainable entrepreneurs can create a positive impact by altering or creating institutions as they represent the "rules of the game". Describing entrepreneurs' conflicting interests with the "prisoner's dilemma"⁴, Pacheco et al. (2010) argue that the dilemma of individual versus collective benefits exists in many individual and group decisions relative to ecological sustainability. Such conditions may be evolutionary stable and therefore difficult to alter within the boundaries of the game (institutions). To benefit society, entrepreneurs can "promote new rules in a "bottom-up" fashion"(p. 469).

Can institutions constitute barriers or incentives for sustainable entrepreneurship? Addressing the initiation of social start-ups, Lepoutre et al. (2013) performed a cross-country quantitative study and found that European countries have less social entrepreneurial activities than in Latin American, African, and Anglo-Saxon countries. They related this aspect to the differentiation among three types of economies (which is supported by the Varieties of Capitalism literature): (1) the liberal economy, in which economic and social justice are essentially shaped and governed by market mechanisms (of which the United

⁴ In this game, players choose between two particular strategies (usually defection or cooperation) and the payoffs for their decisions are determined collectively by the strategies of all players. A cooperative strategy implies that a player sacrifices individual gains in favor of collective benefits, while defection implies that individual benefits are the priority (Pacheco et al., 2010).

States is an example); (2) the cooperative economy, in which the state is considered the best way to redistribute wealth and to regulate markets (the case of most European economies); and (3) the informal economy, characterized by the failure of both markets and the state and in which “affiliations to social groups determine the local creation and distribution of wealth and justice (such as India and several Asian countries)” (p. 711).

The discussion above highlights the importance of the institutional theory for a deep understanding of sustainable entrepreneurship, a cluster of interest that is increasingly attracting researchers’ attention.

METHODS IN SUSTAINABLE ENTREPRENEURSHIP RESEARCH

Different methods are adopted in the field of sustainable entrepreneurship depending on whether the scholars wish to address the theories or the phenomenon that characterized the sustainable entrepreneurship discipline. Molina-Azorín et al. (2012), for example, define entrepreneurship as a multi-faceted and complex area of research and therefore the application of a narrow methodological approach would show only a small part of this phenomenon. They support the use of mixed methods, arguing that mixed methods have a history in other disciplines and might offer a particular opportunity for entrepreneurship research. In our review, the empirical studies used a variety of quantitative and qualitative research methods. A smaller number of the reviewed articles used mix methods usually combining semi-structured case studies with interviews or surveys (e.g. Andreopoulou et al. (2014); Barrutia and Echebarria (2012); Cohen and Winn (2007); Kuckertz and Wagner, 2010; Nicholls-Nixon et al. (2000); Spence et al. (2011); Wheeler et al. (2005)).

Some of the survey-based studies made use of local (national or regional) databases (e.g. Andreopoulou et al. (2014); Nwaigburu and Eneogwe (2013)) to access data concerning enterprises. Others use internationally collected database (e.g. Hoogendoorn et al. (2015); Lepoutre et al. (2013)). International database useful for entrepreneurship and organizational

studies include GEM (Global Entrepreneurship Monitor), GEDI (Global Entrepreneurship Development Index), WVS (World Value Survey), and GLOBE (Global Leadership and Organizational Behaviour Effectiveness). Specifically, on sustainability there is the ESG (Environmental Social and Governance research data and the Dow Jones Sustainability Index. For social enterprises, the Global Ashoka Fellows database is of common reference (Meyskens et al. (2010)).

LIMITATIONS AND RESEARCH GAPS

This literature review has been developed based on a careful selection of papers. Despite this, our study shares some of the well-known limitations that offer opportunities for future research.

Although our literature selection was carefully done, we might have overlooked potential contributions mainly due to the interdisciplinary nature of sustainable entrepreneurship. The entrepreneurship discipline is in itself a complex and generic field within business studies and the same holds true for sustainability; both are heterogeneous fields and addressed in different sciences. Future research may explore research lines other than the ones we addressed here.

Additionally, we restricted our analyses to the main topics that currently dominate the field of research. These are important discussions and already offer a challenging research agenda. Future research may complement our analysis and include other themes. Disruptive, radical or incremental innovations increasingly finds a relevant place within the sustainable entrepreneurship literature. Social Impact Assessment (SIA) and Environmental Impact Assessment (EIA) are also of importance. Future studies may assess the aforementioned topics of research.

We also recognize a need to deepen theories relevant for understanding the underlying dynamics of successful sustainable entrepreneurship. Gibbs (2009) states that in order to understand the dynamics of sustainable entrepreneurship, transition management

theory could offer building blocks for the most relevant gaps in literature. This fosters one of our views, that is, that systems and game theories are relevant to understand the causes and consequences of (particular dimensions) of sustainable entrepreneurship.

This review of the literature enables the identification of various research gaps in the field of sustainable entrepreneurship. These gaps offer opportunities for relevant future research. Below, we would like to highlight the following research gaps. First, sustainable entrepreneurs have been the exception to the rule in entrepreneurship practice. Studying their drivers was necessary to understand how sustainable entrepreneurship behaviour could be triggered and fostered. However, once sustainability is acknowledged as a successful strategy that can even boost profitability, the drivers of a sustainable entrepreneur will no longer need to be the main research question (although still relevant) to bring the sustainable entrepreneurship discipline forward. Despite achievements, the relationship between sustainability and performance in entrepreneurship is not clear. Future research should focus on showing the (already) existing evidence that sustainable strategic choices can (and do) maximize an organization's performance. How are individuals successfully balancing the economic, social and environmental dimensions in organizations? Showing how sustainability can be used to improve a company's performance is valuable for the sustainable progress. A similar research gap is identified in Wiklund et al. (2011) for mainstream entrepreneurship: "The increased emphasis on opportunities arguably helped entrepreneurship research to focus more on the very early stages of venture development, thereby delivering on the promise of uniquely studying the emergence of new activities and organizations rather than the relative performance of established ones". We highlight the sustainability-performance relationship as a first research agenda item.

A second research question that has been insufficiently addressed is: Which individual factors can be considered to be the main predictors for sustainable entrepreneurship success? Lans et al. (2014), for instance, attempt to analyse the relationship between competences and entrepreneurship. Schaltegger and Wagner (2011) affirm that

many entrepreneurs start because they have personal environmental or social concerns. Would that be a predictor of success versus, for instance, the desire to be self-employed or to create a technological breakthrough? This research item would have attractive outcome for venture capitalist financing nascent enterprises.

Third, and on a different note, this literature review suggests that the debate concerning drivers for sustainability should be best analysed from an institutional prospective. As previously mentioned, De Clercq and Voronov (2011) argue that to understand individual entrepreneurial behaviour, the question is not whether or how much they value profit over value creation, but rather acknowledging that sustainability and profitability are institutionally embedded. The effect of institutions on sustainable enterprise performance is also identified by Cohen and Winn (2007) as a key aspect that warrants more research. The attention for institutions as a predictor for sustainable entrepreneurial success has gained momentum in recent years but it still requires more empirical evidence and research.

Fourth, how sustainable entrepreneurship is related to its geographical cradle is another research agenda item. Fellnhofer et al. (2014) also suggest that a set of case studies on the interaction between start-ups and established organizations that brought a particular innovation would be helpful for understanding how sustainable development takes place. Audretsch and Thurik (2004), referring to start-ups, suggest that in certain locations, entrepreneurship is not promoted enough, reflecting in low start-ups rate, and hence, in a low probability of success (e.g. in Silicon Valley the start-ups density is as high as its promotions by local institutions, including universities). Is entrepreneurship contagious? The importance of institutions in relation to geographical locations calls for more exploration.

Fifth, according to Ardichvili et al. (2003), communities, government, non-for-profit and other non-private sector organizations represent a substantial gap in the entrepreneurship research field. In the last decade, scholars have attempted to address these gaps but these types of organization are increasingly under pressure to display

entrepreneurial behaviours and identify new opportunities for self-financing. We are increasingly witnessing the emergence of hybrid organizations, striving to balance more values within common logic. Di Domenico et al. (2010) identify the topic of social value creation, stakeholder participation and persuasion as being in profound need for further investigation. We believe that these aspects are crucial also for sustainable entrepreneurship research because these can, firstly, facilitate public acceptance – a key aspect identified in the literature for successful sustainable entrepreneurship – secondly, increase the chances of spotting/creating entrepreneurship opportunities, and thirdly, magnify the impact of sustainable enterprises.

Sixth, when it comes to methods, a number of authors claim that a small minority of published work uses quantitative researches methods, relating this fact to the infancy of the sustainable entrepreneurship field of research (e.g., Gibbs, 2009; Fellnhofer et al., 2014). Within this review, we do recognize a trend that is moving towards the use of more quantitative methods but this is indeed recent.

Seventh, as also concluded by Wut and Ng (2015), the question “what is an effective way to assess sustainable performance?” remains largely open. They suggest that other financial indicators such as return on equity, return on assets, cost of capital or market-to-book ratios could be related to sustainability indices. Hence other questions arise: How can non-financial parameters be included in the assessment of sustainable performance? Are sustainability indexes a comprehensive way to fully capture the value of sustainable organizations? What’s the impact of sustainability indexes on the market? To fill this gap, the SE discipline could be related to SIA and EIA methodologies, striving to provide practical tools for new and existing organizations.

Eight, as concluded several times in this review, sustainable start-ups are given considerable credits for sustainable development. However, Hörisch (2015) argues that, even though highly environmentally-driven entrepreneurs like the so called *bioneers*, perform sustainably, their impact is proportional to their market-share. Hence the question is:

assuming that entrepreneurs have a high impact on sustainable development, does this hypothesis hold true when new ventures' growth (only) reaches the size of SMEs? Is it needed for entrepreneurial innovations to evolve into large firms, to be considered influential for sustainable societal development? In other words, under which assumptions can the role entrepreneurs play in the transition to a sustainable society be supported? System thinking and complexity theory could be the foundation to explore these question across different sectors.

CONCLUSIONS

We explored the definitions of sustainable entrepreneurship together with the main themes addressed by latest research developments in the field. Sustainable entrepreneurship strives to create value that is beneficial for society through opportunity creation, development and impact creation, in an uncertain environment. This implies risk-taking abilities, innovative attitude and alertness together with determined ethical concerns. It is a solution for the economic, environmental and societal challenges.

Reviewing the existing literature, we explored the prominent role played by both, start-ups and established for-profit firms as well as the not-for-profit sector in innovation and the creation of sustainable added value for our society. The latter represents today's challenge for a new hybrid-type of organizations: effectively balancing societal gains, environmental protection and economic benefits. This is the key driver for sustainable entrepreneurship research. We in particular highlight the importance of institutional theory and of sustainable performance assessment in the study and understanding of successful sustainable entrepreneurship.

With the limitations acknowledged, we believe that this paper provides an in-depth overview of state-of-the-art research in the emerging field sustainable entrepreneurship identifying a research agenda for scholars and practitioners.

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