ConBRepro
XII CONGRESSO BRASILEIRO DE ENGENHARIA DE PRODUÇÃO
ESG nas Engenharias
30 a 02 de dezembro 2022
EVENTO ON-LINE

How to strengthen the relationship between sustainable business models and smart cities?

Guilherme Francisco do Prado
PPGEP – UTFPR Ponta Grossa
Luciano Mathias Döll
PPGEP – UTFPR Ponta Grossa
Leopoldo Suarez Filho
PPGEP – UTFPR Ponta Grossa
Cassiano Moro Piekarski
PPGEP – UTFPR Ponta Grossa

Abstract: The events that have swept the planet in 2020 urged society to reconsider what kinds of business models can adapt well enough to survive crises. Businesses are meeting increasing demands to alleviate social and environmental issues. Therefore, the reality of the organization needs to become a balancing act between short-term economic objectives and long-term sustainability objectives, especially when acting in the context of smart cities. A brief review of the literature revealed that there are no scientific studies aiming to demonstrate how the relationship between smart cities and sustainable business models is enacted. To this end, the aim of this research is to analyze the relationship between Sustainable Business Models and Smart Cities both in the literature, and in existing real-world cases. Our findings lead us to believe that there is no clear relationship between the number of certified companies and the fact that the company's headquarters city is considered a smart city. There is, much more, a relationship that involves legal aspects and the expressive number of B corps in some countries.

Keywords: Smart cities, sustainable business models, b-corps.

Como fortalecer o relacionamento entre models de negócio sustentáveis e Smart Cities?

Resumo: Os eventos que varreram o planeta em 2020 fizeram com que a sociedade reconsiderasse quais tipos de modelos de negócio podem melhor se adaptar e sobreviver à crises. Negócios estão encontrando demandas cada vez maiores para aliviar questões ambientais e sociais em suas áreas de atuação. Portanto, a realidade de uma organização precisa agir equilibrando objetivos econômicos de curto prazo com objetivos sustentáveis à longo prazo, especialmente quando se atua no contexto de *smart cities*. Uma breve revisão da literatura revelou que não há estudos científicos buscando demonstrar como o relacionamento entre *smart cities* e modelos de negócio sustentáveis de produz. Para esse fim, o objetivo desta pesquisa é de analisar o relacionamento entre modelos de negócio sustentáveis e *smart cities,* na literatura e em casos reais. Nossos achados indicam não haver um relacionamento claro entre o número de organizações certificadas, e o fato de que a matriz da empresa se localiza em uma *smart city*. Há, no entanto, um

relacionamento envolvendo aspectos legais e a quantidade expressivas de b-corps em alguns países.

Palavras-chave: Smart cities, modelos de negócio sustentáveis, b-corps.

1. Introduction

The events that have swept the planet in 2020 have urged society to reconsider what kinds of business models can adapt well enough to survive crises. Former business models which have relied heavily on mass consumption can no longer thrive in a global market where revenue is no longer steadily produced. In an ever-changing market, organizations must adapt to the need of a regional or country-wide health-related lockdown, as well as the resulting political turmoil. Thus, the need for flexible, innovative, social, and sustainable business models, has never been more pressing than now (HOSSAIN, 2020).

Businesses are meeting increasing demands to alleviate social and environmental issues (SANTOS ET AL., 2015). Therefore, the reality of the organization needs to become a balancing act between short-term economic objectives and long-term sustainability objectives (JOLINK AND NIESTEN, 2015). The idea of creating ‘‘a new industry of corporations with a ‘double bottom line’ of profit and socially responsible practices,’’ would unlock billions of dollars in potential investments for companies that pursue a positive impact on society and the environment (KULIKOWSKI, 2012).

To illustrate, Horne et al. (2020) highlighted how social entrepreneurship contributes to activities of the national context in Germany by fulfilling specific SDGs. The impact on society and the environment can be things like ‘‘bringing a local river back to life, providing affordable housing, facilitating animal adoptions, or promoting adult literacy’’ (RASKIN, 2011). Furthermore, proponents argue that the new structure will allow companies to keep jobs that benefit the local community, even if shareholders would gain financially by outsourcing the jobs (D’AMBROSIO, 2012).

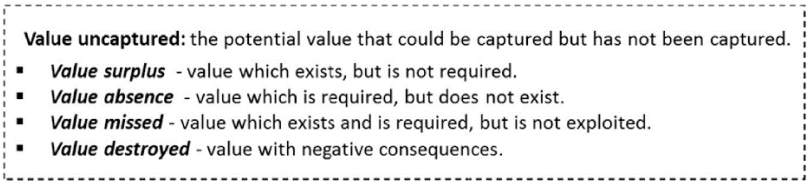
Furthermore, the rise of organizations as an opposition for purely commercial business models have proven that organizations can contribute to society by providing pathways for the sustainable development goals (SDG). While about sustainable development, recent contributions from sustainable start-ups and the sustainable entrepreneurship have accelerated the transformation of society, while moving for-profit organizations towards the fulfillment of the SDGs.

Sustainable business models can serve as a vehicle to coordinate technological and social innovations with system level sustainability (BOCKEN ET AL., 2014). A new business model creates ‘‘enterprises that combine a social mission with a business engine and refuse to compromise on either front’’ (SABETI, 2011). Sabeti (2011) explains the reasoning behind the movement to create a ‘fourth sector’ of society based on this business model. The fourth sector, with its double bottom line, creates new business models that can bridge the divide between corporate social responsibility and profit. However, the field of sustainable business model innovation is still under-researched, although interest is growing (NIDUMOLU ET AL., 2009; SCHALTEGGER ET AL., 2012; WELLS, 2013).

Most of the existing research on business model innovation only focuses on value proposition, value capture, creation, and delivery (AMIT AND ZOTT, 2012; RICHARDSON, 2008). Some new concepts, such as value destroyed, have emerged from recent research into business model tools, such as the Value Mapping Tool (BOCKEN ET AL., 2013; RANA ET AL., 2013) and Sustainable Value Analysis Tool (YANG ET AL., 2014). The authors' previous research, such as (RANA ET AL., 2013), shows that companies were able to identify new business opportunities by mapping value proposition, value destroyed, and value missed among multiple stakeholders.

The concepts of value destroyed, and value missed were further developed, and two new concepts - value surplus and value absence - were proposed to study the value system across product life cycles (YANG ET AL., 2014). Firstly, the value is not only for customers and the firms, but for all stakeholders, such as end users, suppliers, shareholders, government, and partners. Secondly, the value covers not only monetary value, but also wider value for the environment and for society. For example, improved energy efficiency, zero carbon emissions and cleaner production are regarded as value created and delivered for the environment (YANG ET AL., 2017). Figure 1 depicts the kinds of value uncaptured.

Figure 1 – Value uncaptured



Source: Yang et al., (2017).

Hybrid Organizations (HOs) or Sustainability-oriented hybrid organizations (SOHOs) are non-traditional firms, since they are organizations pursuing a social mission while capturing value for both owners and society (SANTOS ET AL., 2015). HOs are, in essence, innovative firms (PADGETT AND POWELL, 2012), and evidence supports the fact that they are increasingly regarded as a source of social value creation and social innovation (CANDI ET AL., 2019; RAO-NICHOLSON ET AL., 2017). Regarding the role of businesses in society, novel business models, HOs are emerging as a type of firm focused on the mitigation of social and environmental issues (SANTOS ET AL., 2015). HOs have also been labeled as social purpose organizations (SPOs) (MOROZ AND GAMBLE, 2020) or social enterprises (SEs) (OLOFSSON ET AL., 2018).

These results suggest that SOHOs represent a promising organizational form for promoting sustainability transformations due to their potential for generating positive ecological and social outcomes through their entire value chain. They move away from traditional management practices (ETZION ET AL., 2017). SOHOs focus on delivering socio-ecological outcomes which do not compromise the needs of future generations, and which has the potential to contribute to sustainability transformations (HESTAD ET AL, 2020).

Among HOs, Benefit Corporations (BCs) or Certified Benefit Corporations (B Corps) are for profit legal forms focused on creating well-being and characterized by a mission that embeds social and environmental purposes (STUBBS, 2017). B Corps are firms legally and voluntarily committed to social and/or environmental purposes through business activities. B Corps consist of a certification developed by B Lab, a nonprofit organization founded in the United States in 2006, seeking to use business as a force for good (B LAB, 2020). B Lab launched a partnership with Sistema B to support over 50 Certified Empresas B in Argentina, Brazil, Chile, and Colombia. (WILBURN, WILBURN, 2014).

B Corps entail characteristics of corporations while ought to generate sustainable solutions in social, economic, and environmental issues as part of their mission (HARJOTO ET AL., 2019). Three former corporate executives, Jay Coen Gilbert, Bart Houlahan and Andrew Kassoy created B Lab, a non-profit organization, to develop structures that could be used to build the fourth sector (WILBURN, WILBURN, 2014). Qualifying for the B Corp Certification requires a minimum of 80 points in a procedure called Benefit Impact Assessment (BIA), which assesses five impact areas: eWorkers, Governance, Community, Environment, and Customers (B LAB, 2020).

With this in mind, a brief review of the literature revealed that there are no scientific studies aiming to demonstrate how the relationship between smart cities and sustainable business models is enacted.

To this end, the aim of this research is to analyze the relationship between Sustainable Business Models and Smart Cities both in the literature, and in existing real-world cases.

The present paper is organized as follows: The introduction was presented in the first section, followed by the material and methods section. The analysis and research results are then presented, followed by the conclusions of this paper.

2. Material and Methods

This section will provide an overview of the material and methods which are going to be employed in this paper. To achieve our objective, we have decided to tackle the issue on two different stages: (i) The overview of the literature and (ii) the analysis of the established criteria. In the first stage, a review of the literature is going to be conducted mainly on the Scopus, Web of Science and Science Direct databases to provide an overview of the literature on the subject of sustainable business models and smart cities. The keyword combination, databases and expected results are better described in Table 1:

Table 1 – Keyword combination

Keyword Combination	Databases	Expected results
“Sustainable development” AND “Smart Cities”.	Scopus, Web of Science, Science Direct.	To determine what are the most common terms and keywords when it comes to sustainable development; To show how these topics relate to one another.
“Sustainable business models” AND “Smart Cities”	Scopus, Web of Science, Science Direct.	To determine how the area of smart cities overlap with sustainable business models; To provide an overview of sustainable business models in the literature.

Source: Research results

In the second stage there will be an analysis of data. There are rankings that classify smart cities. One of them is the Smart Connected Cities Ranking. In this ranking, one of the paths taken is entrepreneurship. As already mentioned, this article focuses on the study of business model innovation (BMI), with special emphasis on companies with a sustainable focus, or Sustainable Business innovation. (BOUNCKEN AND FREDRICH, 2016). The methodology of the article provides for a study of the correlation between companies with a sustainable focus and smart cities.

A smart city is classified according to six criteria: smart people, smart environment, smart mobility, smart economy, smart living and smart governance. How do benefit corporations contribute to each of these criteria? In addition, does a city classified as smart favor the development of a benefit Corporation? Furthermore, what environmental characteristics favor the emergence of benefit corporations? In relation to the sustainable development objectives (SDGs), the article proposes to make an analysis of how benefit corporations are impacting each one of the objectives (TABARES, 2021). Are there goals that are being benefited the most? Hybrid organizations, after all, contribute to the SDGs and how? What are the common characteristics of companies with a sustainable business model? Are there more frequent or less frequent impacts?

In view of the expressive number of variables, comparison criteria and characteristics of companies with a sustainable business model and considering the existing indexing and classification bases such as certification B, the methodology of this article will involve the use of a semi-automated analysis tool of data so that the results are more reliable. A

Bibliometrix package of R and RStudio software will be used. This package allows the treatment of large amounts of data (big data), facilitating the analysis of the variables to be observed. (ARIA, CUCCURULLO, 2017).

3. Results discussion

Hestad (et al., 2019) explored the missions and practices of nine SOHOs in the Metropolitan Area of Barcelona, which has a growing number of SOHOs whose actions have been found to help promote sustainability transformations at local scales. Barcelona and its wider metropolitan area are an interesting context in which to study SOHOs due to the innovative nature of the city (CASTELLS AND HLEBIK, 2017) and its large number of hybrid organizations (AJUNTAMENT DE BARCELONA, 2017).

The city is considered an emerging hub of social entrepreneurship with a large number of incubators and startups in different sectors, especially IT, Smart City development, and increasingly sustainability (BAKICI ET AL., 2013). SOHOs in Barcelona are mostly cooperative legal entities, which can be both for or non-profits, or for-profit enterprises due to the lack of official hybrid legal forms in Spain. Examples of hybrid legal forms include Benefit-Corporations (or B-Corps) in the US or Community Interests Corporations in the UK.

Periodically some smart cities ranking is published globally. Each of the rankings uses its own criteria for ranking, sometimes creating a great distinction between the results. In this paper, we list three indexes/rankings for study and comparison: ICF Rankings Sustain 2020, IESE Cities in Motion Index 2020 and Smart City Governments 2021. The first one is specific in relation to sustainability. The second one is a more generic ranking. And the last is a ranking that assess smart government.

ICF Ranking Sustain 2020 (Intelligent Community Forum) ranks cities on their ability to create environmentally sustainable communities. The list uses data observed between 2015 and 2019 and considers that sustainability is a success fact because it offers several benefits for the economic, social and cultural life of communities. In this index, the first ten cities are published as show in the Table 2.

Table 2: First ten cities at ICF Ranking Sustain 2020

Position	City Name
1	Taoyuan, Taiwan
2	Montreal, Canadá
3	Espoo, Finland
4	Hamilton, Canadá
5	Westerville, USA
6	Hudson, USA
7	Toronto, Canada
8	Fredericton, Canadá
9	Issy-les-Moulineaux, France
10	Curitiba, Brasil

Source: ICF Ranking Sustain, 2020

The second index is the IESE 2020 Moving Cities Index. It is a research platform launched jointly by the Center for Globalization and Strategy and the Strategy Department of the IESE Business School. The platform's mission is to promote the Cities in Motion model with an innovative approach to city governance and a new urban model for the 21st century based on four main factors: sustainable ecosystem, innovative activities, justice among citizens and connected territory. The classification of cities has 101 indicators, grouped into 9 main dimensions: human capital, social cohesion, economy, governance, environment, mobility

and transport, urban planning, international projection, and technology. In this index, the first 10 cities are published according to the table 3.

Table 3: First ten cities at IESE 2020 Moving Cities Index

Position	City Name
1	London, United Kingdom
2	New York, USA
3	Paris, France
4	Tokyo, Japan
5	Reykjavík, Iceland
6	Copenhagen, Denmark
7	Berlin, German
8	Amsterdam, Netherlands
9	Singapore, Singapore
10	Hong Kong, China

Source: IESE, 2020

Finally, the third index, Top 50 Smart City Governments is a study published by the Eden Strategy Institute that clashes a little with the other indexes as it changes the focus where smart cities are ranked according to the effectiveness of the technological results introduced for an analysis of the point of view of municipal governments. This index places an explicit focus on government as a key driver for smart city development, using ten indicators to assess city governments systematically and holistically around the world, with the aim of celebrating those who have succeeded in running their cities to the success. The 10 indicators analyzed are: vision (clear strategy), leadership, expenses, financial incentives, support programs, policies, ecosystems, people-centeredness, talent preparation, history. In this index, the first 10 cities are published as shown in the table 4.

Table 4: First ten cities at Smart City Governments 2021

Position	City Name
1	Singapore
2	Seoul
3	London
4	Barcelona
5	Helsinki
6	New York City
7	Montreal
8	Shanghai
9	Vienna
10	Amsterdam

Source: Smart City Governments, 2021

In accordance with the objective of this work, a survey was carried out on the number of companies with B-Corp certification in each of the smart cities mentioned in the indexes. Table 4 depicts these quantities by ranking and by city. This survey was made possible by directly consulting the company's directory, available on the Certified B Corporation website. Now, there are 3.979 B-corps, in 150 industries, distributed by 74 countries (CERTIFIED B CORPORATION, 2021).

Table 4: Number of B-Corps per smart city

Ranking	Smart Cities	B-Corps
ICF Rankings Sustain 2020	Taoyuan, Taiwan	1

	Montreal, Quebec, Canadá	1
	Espoo, Finland	0
	Hamilton, Ontario, Canadá	3
	Westerville, Ohio, USA	0
	Hudson, Ohion, USA	0
	Toronto, Ontario, Canada	64
	Fredericton, New Brunswick, Canadá	2
	Issy-les-Moulineaux, France	2
	Curitiba, Paraná, Brasil	3
IESE Cities in Motion Index 2020	London, United Kingdom	214
	New York, USA	72
	Paris, France	65
	Tokyo, Japan	0
	Reykjavík, Iceland	0
	Copenhagen, Denmark	17
	Berlin, German	19
	Amsterdam, Netherlands	48
	Singapore, Singapore	13
	Hong Kong, China	0
Smart City Governments 2021	Singapore	13
	Seoul	0
	London	214
	Barcelona	25
	Helsinki	1
	New York City	5
	Montreal	24
	Shanghai	10
	Vienna	2
	Amsterdam	48

Source: Certified B Corporation, 2021

The firsts analysis based on the data collected is about the perceived contrast. While some cities do not have B-Corps, others have a significant amount, such a London. One of the reasons for this is the existence or not of specific legislation for B-Corps in the smart city. Many countries are adapting their legislation, at the national or regional level, to allow companies to legally obtain the certificate. In addition to the B certificate, in the United Kingdom, there is a Community Interest Society that also plays a similar role.

4. Conclusions

The aim of our study was to discover a relationship between the number of companies certified with the B Corp certificate in smart cities. In principle, one would expect to find a greater number of B-Corps in cities considered smart. As noted in the results section, some cities that appear in the top rankings of smart cities do not have any B Corp companies, such as Tokyo, Hong Kong, Seoul, among others.

On the other hand, some smart cities have a significant number of certified companies, generating a contrast that draws attention. London currently has 214 socially responsible companies. New York features 72 companies. In Toronto, there are 64 certified companies. The question that arises, therefore, is why there are these points outside the curve. This forces us to discuss a little about the motivations of a company to obtain certification or to decertify, taking geographic location as a parameter.

The first important aspect that needs to be considered is that a company can be socially responsible and not necessarily have a B Corp certificate. In 2001, the European Commission in its Green Paper on “Promoting a European framework for Social Corporate Responsibility” provides a definition of CSR that is widely shared. “CRS represents the company's socially responsible practices primarily involve employees and relate to issues such as investing in human capital, health and safety and managing change, while environmentally responsible practices relate mainly to the management of natural resources used in the production…” (EUROPA.EU, 2001).

If the for-benefit model is universally recognized, all this innovation might constitute a new sector (CZINKOTA ET AL, 2020). Combining social and financial purpose is not new; we can think at hospitals, universities, or arts organizations. But the fB model does much more than that. It redefines fiduciary duty, governance, ownership, and stakeholder relationships in fundamentals ways.

The expectation of finding more certified companies in smart cities would, by hypothesis, be explained by the easier access to technology and innovative business models, and also the integration of smart technologies (PANTANO ET AL., 2018). Tracey and Stott (2017) suggest that new value propositions for social innovation are profoundly shaped through the potential of digital and other technologies. SPO business models may also involve social innovations oriented towards solving grand challenges, citing the power of transformative business models (YUNUS ET AL., 2010).

The phenomenon of SPOs employing BMIs includes new legal forms, voluntary third-party certifications, ecolabels and audits. Studies on certification have also suggested that while some firms use it as an external signaling tool, others may employ it as an internal (and hidden) validation tool (GEHMAN, GRIMES, 2017). Observations like that prompt several questions relevant to this form of BMI, such as: Why do SPOs certify as a B Corp? What causes SPOs to either recertify or decertify? What might explain the high rates of B Corp decertification?

The process and motivations behind B Corp certification are little explored, especially when considering how and why they create and capture value over time. The study of Moroz and Gamble, 2021 analyzed 47 B Corps and examined SPO journey variations through the certification process. Being a socially responsible company means not only fulfilling legal expectations, but rather going voluntarily beyond compliance and investing “more proactively” into human capital, the environment and the relations with stakeholders.

In addition to certification, it makes sense to study the reasons why a company does not renew its certification. Some firms based outside the US (in Canada and Mexico) cited low levels of support and few other B Corps within their geographic areas, as well as little direct support from B Lab, further limiting the potential value generated from certification. Another reason cited is the legal complications of becoming a certified ‘benefit’ corporation (as a function of obtaining B Corp certification in that state) ran the risk of incurring more costs (MOROZ, GAMBLE, 2021).

The Stability Law 2016 in Italy, in this respect, introduces the fBComp in the following way: a company that creates positive effects (or reduces negative ones) vis-à-vis individuals, communities, territories and the environment, cultural and social heritage, entities and associations as well as other stakeholders (CZINKOTA ET. AL, 2020). In such a dynamic business scenario, the fBComp constantly looks for social and economic players with which to co-create and maintain sustainable relations aiming to reach a state of consonance for both, producing or co-producing and contributing to civil society evolution (GOLINELLI, 2005; VENTURI, RAGO, 2016).

Other criteria that also deserve to be mentioned are the relation of size, age and definition of the company's purpose with regard to adherence to certification. According to the First Italian fBComp Report, more than 50% of firms are new. Over a quarter are old companies which have decided to revise their statutes including the clauses of the new law (CZINKOTA ET. AL, 2020).

Also regarding the first fbComp Report, the most interesting information is related to the way companies have defined their social purpose. Thanks to the statutes analysis we have identified the following fBComp categories: generic fBComp (122 companies) and specific fBComp (22 companies). The second category (specific fBComp) shows those companies that clearly claim the social purpose (CZINKOTA ET AL, 2020).

Because the law usually forces a nascent for-profit or a non-profit to organize as a for-benefit, the enterprise defines itself accordingly. This can lead to confusion, mistrust, and low credibility among stakeholders, especially, when the for-benefit organizations attempt to distinguish themselves through branding or product messaging, invoking terms such as “social enterprise”, “sustainable business”, “fair trade,” and “green” (CZINKOTA ET AL, 2020).

Our findings lead us to believe that there is no clear relationship between the number of certified companies and the fact that the company's headquarters city is considered a smart city. There is, much more, a relationship that involves legal aspects and the expressive number of B corps in some countries. Furthermore, decertification does not necessarily limit or reduce commitment to their missions. Social purpose organizations deliver, communicate, and acknowledge a unique value proposition. What is unique about the B Corp category of SPOs is their efforts to balance economic and non-economic efforts through a third-party social and environmental audit.

Acknowledgements

We would like to thank *Coordenação de Aperfeiçoamento de Pessoal de Nível Superior e Brasil* (CAPES) and *Conselho Nacional de Desenvolvimento Científico e Tecnológico* (CNPq) for the support during this research.

References

AJUNTAMENT DE BARCELONA. **The Impetus Plan for the Social and Solidarity Economy 2016-2019**. 2017.

AMIT, R., ZOTT, C., Creating value through business model innovation. **MIT Sloan Manag. Rev**. 53, 41e49. 2012.

B LAB. (2013a). **Community**. Retrieved from http://www.bcorporation.net/community.

B LAB. (2013b). **Declaration of Interdependence**. Retrieved from http://www.bcorporation.net/what-are-b-corps/the-b-corpdeclaration

B LAB. (2013d). **King Arthur Flour Company 2012B impact report**. Retrieved January 2013, from http://www.bcorporation.net/community/king-arthur-flour-company/impact-report/2012-01-03-000000

BAKICI, T., ALMIRALL, E., WAREHAM, J., A Smart city initiative: the case of Barcelona. **J. Knowl. Econ.** 4, 135e148. 2013

BALTAZAR-HERRERA, M.E. Creating competitive advantage by institutionalizing corporate social innovation. **J. Bus. Res.** 68. 2015.

BERGMANN T, UTIKAL H. How to Support Start-Ups in Developing a Sustainable Business Model: The Case of an European Social Impact Accelerator. **Sustainability**. 13(6):3337. 2021.

BOCKEN, N.M., SHORT, S.W., RANA, P. A literature and practice review to develop sustainable business model archetypes. **J. Clean. Prod**. 65, 42e56. 2014.

BOCKEN, N.M.P., SHORT, S.W., RANA, P., EVANS, S. A value mapping tool for sustainable business modelling. **Corp. Gov**. 13 (5), 482e497. 2013.

CANDI, M., MELIA, M., COLURCIO, M., Two birds with one stone: the quest for addressing both business goals and social needs with innovation. **J. Bus. Ethics** 160, 1019e1033. https://doi.org/10.1007/s10551-018-3853-y. 2019.

CASTELLS, M., HLEBIK, S. Alternative Economic Practices in Barcelona: Surviving the Crisis, Reinventing Life. **Another Economy Is Possible**: Culture And Economy In a Time Of Crisis, p. 160. 2017.

CERTIFIED B CORPORATION. https://bcorporation.net/. Accessed in June, 2021.

M CZINKOTA, H KAUFMANN, G BASILE, M FERRI, For-Benefit Company (fBComp): An innovative social-business model. The Italian case, **Journal of Business Research**, Volume 119, 2020.

D'AMBROSIO, D. Benefit corporations spring up around Vermont, despite vagueness in certification process. **Burlington Free Press**. Available at http://www.burlingtonfreepress.com/article/20120308/BUSINESS08/120307024/Benefit-corporations-spring-up-around-Vermont-despitevagueness-certification-process. 2012.

D. HESTAD, J. TÀBARA, T F. THORNTON, Transcending unsustainable dichotomies in management: Lessons from Sustainability-Oriented Hybrid Organisations in Barcelona, **Journal of Cleaner Production**, Volume 244, 118766, ISSN 0959-6526, https://doi.org/10.1016/j.jclepro.2019.118766. 2020.

DI MAGGIO, P., POWELL, W. W. The iron cage revisited: Collective rationality and institutional isomorphism in organizational fields. **American Sociological Review**, 48(2), 147–160. 1983.

GEHMAN, J., GRIMES, M. Hidden badge of honor: How contextual distinctiveness affects category promotion among certified B corporations. **Academy of Management Journal**, 60(6), 2294–2320. 2017.

GOLINELLI, M. G. Recenti sviluppi nelle relazioni tra economia e finanza del governo dell'impresa: spunti di riflessione. **Sinergie**, 67, 19–20. 2015.

HARJOTO, M., LAKSMANA, I., YANG, Y. WEN. Why do companies obtain the B corporation certification? **Soc. Responsib. J.** 15, 621e639. 2019.

HESTAD, D., TABARA, J.D., THORNTON, T.F. The Role of Sustainability-Oriented Hybrid Organisations in the Development of Transformative Capacities: the Case of Barcelona (In review). 2019.

HILLER, J.S. The Benefit Corporation and Corporate Social Responsibility. **J Bus Ethics** 118, 287–301. 2013.

HORNE, J., RECKER, M., MICHELFELDER, I., JAY, J., KRATZER, J. Exploring entrepreneurship related to the sustainable development goals - mapping new venture activities with semi-automated content analysis. **J. Clean. Prod.** 242, 118052 https://doi.org/10.1016/j.jclepro.2019.118052. 2020.

HOSSAIN, M. Sharing economy: A comprehensive literature review. **International Journal of Hospitality Management**, vol. 87, p. 102470. 2020.

ICF Ranking Sustain 2020. https://www.intelligentcommunity.org/icf_rankings_by_sustainability. Accessed in June, 2021.

IESE 2020 Moving Cities Index. IESE https://blog.iese.edu/cities-challenges-and-management/2020/10/27/iese-cities-in-motion-index-2020/ Accessed in June, 2021.

JOHNSON, M.P., SCHALTEGGER, S. Entrepreneurship for sustainable development: a review and multilevel causal mechanism framework. **Enterpren. Theor. Pract**. 104225871988536 https://doi.org/10.1177/1042258719885368. 2019.

JOLINK, A., NIESTEN, E. Sustainable development and business models of entrepreneurs in the organic food industry. **Bus. Strateg. Environ**. 24, 386e401. 2015.

KANTER, R. From spare change to real change: the social sector as beta site for business innovation. **Harv. Bus. Rev.** 77, 122e132. 1999.

K WILBURN, R WILBURN. **The double bottom line**: Profit and social benefit, Business. 2014.

HORIZONS, Volume 57, Issue 1, 2014, Pages 11-20, ISSN 0007-6813, https://doi.org/10.1016/j.bushor.2013.10.001.

KULIKOWSKI, L. What it means to be a B Corp. **The Street**. 2012.

LÜDEKE-FREUND, F. Towards a conceptual framework of business models for sustainability. **Environ. Manag**. 49 (0), 1e28. 2010.

LEYDESDORFF, L. LUHMANN. Habermas and the theory of communication. **Systems Research and Behavioral Science**, 17(3), 273–288. 2000.

MAGRETTA, J., Why business models matter. **Harv. Bus. Rev**. 80 (5), 86e92. 2002.

M ARIA, C CUCCURULLO. bibliometrix: An R-tool for comprehensive science mapping analysis, **Journal of Informetrics**, Volume 11, Issue 4. 2017.

MOROZ, P.W., GAMBLE, E.N.B., model innovation as a window into adaptive tensions: F. paths on the B.C. journey, 2020. Business model innovation as a window into adaptive tensions: Five paths on the B Corp journey. **J. Bus. Res**. https://doi.org/10.1016/j.jbusres.2020.01.046. 2020.

MUÑOZ, P., CACCIOTTI, G., COHEN, B. The double-edged sword of purpose-driven behavior in sustainable venturing. **Journal of Business Venturing**, 33(2), 149–178. 2018.

NESS, B., URBEL-PIIRSALU, E., ANDERBERG, S., OLSSON, L. Categorising tools for sustainability assessment. **Ecol. Econ**. 60. https://doi.org/10.1016/j.ecolecon.2006.07.023. 2007.

NIDUMOLU, R., PRAHALAD, C.K., RANGASWAMI, M.R. Why sustainability is now the key driver of innovation. **Harv. Bus. Rev**. 87 (9). 2009.

OLOFSSON, S., HOVESKOG, M., HALILA, F., Journey and impact of business model innovation: the case of a social enterprise in the Scandinavian electricity retail market. **J. Clean. Prod**. 175, 70e81. https://doi.org/10.1016/j.jclepro.2017.11.081. 2018.

OSTERWALDER, A., PIGNEUR, Y. **Business Model Generation**: a Handbook for Visionaries, Game Changers, and Challengers, vol. 5. 2010.

PADGETT, J.F., POWELL, W.W. **The Emergence of Organizations and Markets**. Princeton University Press, Princeton, NJ. 2012.

PANTANO, E., PRIPORAS, C. V., DENNIS, C. (2018). A new approach to retailing for successful competition in the new smart scenario. **International Journal of Retail & Distribution Management**, 46(3), 264–282. 2018.

PATAGONIA. History of CR and Patagonia. Retrieved from http://www.patagonia.com/us/patagonia.go?assetid=67580. 2012.

PETER W. MOROZ, EDWARD N. GAMBLE. Business model innovation as a window into adaptive tensions: Five paths on the B Corp journey, **Journal of Business Research**, Volume 125, 2021, Pages 672-683, ISSN 0148-2963, https://doi.org/10.1016/j.jbusres.2020.01.046. 2020.

PICKEN, J.C. From startup to scalable enterprise: laying the foundation. **Bus. Horiz**. 60, 587e595. https://doi.org/10.1016/j.bushor.2017.05.002. 2017.

PORTER, M. E., KRAMER, M. R. Creating shared value. **Harvard Business Review**, 89(1/2), 62—77. 2011.

RANA, P., SHORT, S., EVANS, S., D2.4 First stage prototype tools and methods, capable of being fully used by industrial partners, Sustainable value creation in manufacturing networks (SustainValue) project. In: **7th Research Framework Programme of the European Union**. 2013.

RAO-NICHOLSON, R., VORLEY, T., KHAN, Z. Social innovation in emerging economies: a national systems of innovation based approach. **Technol. Forecast. Soc. Change** 121. 2017.

RASKIN, J. The rise of benefit corporations. **The Nation**. 2011.

RECKER, M., MICHELFELDER, I. Sustainable entrepreneurship: how to measure future sustainability impact for early-stage new ventures. In: **Innovation Management, Entrepreneurship and Sustainability.** Proceedings of the 5th International Conference. Prague, Czech Republic, p. 821. 2017.

B. BOUNCKEN, V. FREDRICH. Business model innovation in alliances: Successful configurations, **Journal of Business Research**, 2016.

RICHARDSON, J. The business model: an integrative framework for strategy execution. **Strateg. Change** 17, 133e144. 2008.

SABETI, H. The for-benefit enterprise. **Harvard Business Review**, 89(11), 99—104. 2011.

SANTOS, F., PACHE, A.-C.C., BIRKHOLZ, C. Making hybrids work: aligning business models and organizational design for social enterprises. **Calif. Manag. Rev.** 57, 36e58. https://doi.org/10.1525/cmr.2015.57.3.36. 2015.

SCHALTEGGER, S., LÜDEKE-FREUND, F., HANSEN, E. Business cases for sustainability and the role of business model innovation. Int. **J. Innov. Sustain**. Dev. 6 (2), 95e119. 2012.

SCHNEIDER, C., VEUGELERS, R. On young highly innovative companies: why they matter and how (not) to policy support them. **Ind. Corp. Change** 19, 969e1007. https://doi.org/10.1093/icc/dtp052. 2010.

SINGH, R.K., MURTY, H.R., GUPTA, S.K., DIKSHIT, A.K. An overview of sustainability assessment methodologies. **Ecol. Indicat.** 2012.

SKALA, A. **Digital Startups in Transition Economies:** Challenges for Management, Entrepreneurship and Education. Palgrave Macmillan, Cham, Switzerland. 2019.

SMART CITY GOVERNMENTS 2021. https://www.smartcitygovt.com/ Accessed in June, 2021.

STUBBS, W. Characterising B Corps as a sustainable business model: an exploratory study of B Corps in Australia. **J. Clean. Prod**. 2017.

TABARES, S. Do hybrid organizations contribute to Sustainable Development Goals? Evidence from B Corps in Colombia, **Journal of Cleaner Production**. 2021.

TEECE, D.J., Business models, business strategy and innovation. **Long. Range Plan.** 43 (2e3), 172e194. 2010.

TRACEY, P., STOTT, N. Social innovation: A window on alternative ways of organizing and innovating. **Innovation,** 19(1), 51–60. 2017.

UNDERBERG, M. Benefit corporations vs. ‘‘regular’’ corporations: A harmful dichotomy. **The Harvard Law School Forum on Corporate Governance and Financial Regulation**. 2012.

VENTURI, P., RAGO, S. Benefit corporation e impresa sociale: convergenza e distinzione, **impresa sociale**. 8. 2016.

WELLS, P. Sustainable business models and the automotive industry: a commentary. **IIMB Manag. Rev.** 25 (4), 228e239. 2013.

YANG, M., VLADIMIROVA, D., RANA, P., EVANS, S. Sustainable value analysis tool for value creation. **Asian J. Manag. Sci. Appl.** 1 (4), 312e332. 2014.

YUNUS, M., MOINGEON, B., LEHMANN-ORTEGA, L. Building social business models: Lessons from the Grameen experience. **Long Range Planning**, 43(2), 308–325. 2010.

ZOTT, C., AMIT, R., MASSA, L. The business model: recent developments and future research. **J. Manag.** 37 (4), 1019e1042. 2011.