The Italian Association of Chemical Engineering Online at www.cetjournal.it

A publication of

VOL. 107, 2023

Guest Editors: Petar S. Varbanov, Bohong Wang, Petro Kapustenko Copyright © 2023, AIDIC Servizi S.r.l. ISBN 979-12-81206-07-6; ISSN 2283-9216

DOI: 10.3303/CET23107028

A Sustainable Model of Corporate Embeddedness: Navigating through a Fuzzy Concept

Zsuzsanna Pálffy*, Lívia Ablonczy-Mihályka, Petra Kecskés

Department of International Studies and Communication, Széchenyi István University, Egyetem tér 1., 9026 Győr, Hungary palffy.zsuzsanna@sze.hu

Corporate embeddedness and sustainable corporate behaviour are closely linked. Consequently, recent literature has introduced the term sustainability embeddedness. However, the concept is still at an early stage, and both its conceptualisation and practical implications remain incomplete. From the literature review, it can be determined that the term sustainability embeddedness can be classified as one of the so-called fuzzy concepts because its use in different literatures is associated with different meanings. The main goal of the study is to review the previous interpretations and to contribute to the literature on the concept with a specific explanation, placing it in the set of previous definitions. A further aim of the research is to identify the best sustainable practices of corporate embeddedness using the quintuple helix model. The goal is to demonstrate how sustainability practices can enhance mutually beneficial relationships between companies and other actors within the local space. The study serves as a literature basis for later research, in which, as a continuation of the collection of practices, small and medium-sized family businesses in Győr, Hungary, will be examined. Along the theoretical model of the study, practical implications can be identified as they may serve as an incentive practice for regional small businesses, which helps to deepen their degree of embeddedness, thus exploiting additional local benefits for the local space.

1. Introduction

Polanyi (1944) and Granovetter (1985) had an indisputable recognition of the concept of embeddedness that 'economic events are necessarily contextual, that is embedded in spatial structures of social relations' (Martin, 1994). Through organizational and business studies (Zukin and DiMaggio, 1990) and the intellectual tradition of economic geography and regional science incorporating an explicit spatial dimension, the terms embedding (as a process) and embeddedness (as an achieved state) have been reinterpreted, and from the 1990s to the present day it means the integration of economic actors and companies into a given space and its different aspects and dimensions (Plaza and Haarich, 2013).

However, the concept of corporate embeddedness goes far beyond the issue of resettlement, reinvestment and the establishment of contact networks, but it also covers non-purely economic aspects of economic actions. Embedded companies are moving towards an engagement with local space, incorporating social, cultural, and environmental considerations as integral elements of their operations (Lengauer and Tödtling, 2010). This predicts that corporate social responsibility (CSR) and sustainability must necessarily be included in the concept of embeddedness.

Although the term sustainability is still mostly associated with environmental aspects, its economic and social aspects are equally important. Being that corporate embeddedness and sustainable corporate behaviour are inseparable concepts, the subtype of sustainability embeddedness has also appeared in the literature (Sharafizad et al., 2022). Due to the novelty of the concept, the conceptualization is incomplete, as are the practical implications.

The research explores the relationship between corporate local embeddedness and sustainability for the purpose of composing a literature background for later empirical research. The primary goal of the study is to provide a conceptual framework of the sustainable aspects of the local embedding of companies, and by contributing its own definition to help navigate in the series of 'fuzzy concepts'. Markusen (1999) drew attention

to the fact that several phenomena in the literature are 'fuzzy concepts', i.e., they have two or more alternative meanings, and therefore cannot be reliably conceptualised or applied. In literature framed by fuzzy concepts, researchers may think they are dealing with the same phenomena, but in reality, they are targeting quite different ones. Regarding the sustainability aspects of embeddedness, which have only recently appeared in the literature, it seems that authors referring to each other use different interpretations under the same term (sustainability embeddedness). Since embeddedness (embeddedness/embedding/commitment/engagement) and sustainability (sustain / sustainable / sustainability) are 'fuzzy concepts' themselves, it is necessary to clarify them separately as well as together. For this reason, the study summarizes the most relevant and necessary literature on the topic with regard to embeddedness, sustainability, and sustainability embeddedness. The research creates an independent, own definition of the sustainable aspects of embeddedness, thus contributing to and enriching the wide range of interpretation possibilities.

The additional aim of the research is to identify sustainable good practices of corporate local embedding along the quintuple helix model of embeddedness with the aim of pointing out how sustainability practices strengthen mutually beneficial relationships between businesses and actors in the local space.

The study first explores the literature on the local embeddedness of companies and the question of sustainability, and then the possibility of interpreting the connection between the two phenomena is presented. The paper contributes to the literature and practice by expanding the interpretation of embeddedness to its sustainable aspects using the quintuple helix model.

2. Corporate local embeddedness

The relationship between the local space and the institutions can be described as the coexistence of mutually dependent parties. The degree of local integration, i.e., embeddedness of companies varies. At one end of the scale, there are settlements founded by enterprises or institutions (company towns) (e.g., Pullman, Washington) (Carlson, 2003), and at the other end, which is more common, the relationship and local embeddedness of new enterprises and institutions established in an existing settlement. The study of these interactions between the local environment and institutions has long been one of the main subjects of regional science.

In the literature, several authors have attempted to process the literature on the subject of embedding, ordering the different meanings, and reviewing the evolution of the concept over time (Hess, 2004), which is not the purpose of the study, it only provides an overview of the theory necessary for interpretation. Due to the multi-and interdisciplinarity of the concept, there is no uniformly agreed definition of corporate local embeddedness. While Polanyi (1944) considered the economy to be embedded in the structures of society, and Granovetter (1985) to see economic behaviour, individuals and companies embedded in networks of social relations, later theories interpreted the phenomenon in a more specialized way, and nowadays the reinterpretation of the term can be experienced.

The first decisive contribution of research was the categorization by organizational and business sciences. One of the best-known theories is associated with the names of Zukin and DiMaggio (1990), who divided the integration of economic institutions into different mechanisms, thus distinguishing cognitive, cultural, structural and political embeddedness. Halien and Törnroos (1998) added even more categories that distinguish social, political, market, technological, temporal and territorial embeddedness. Over time, typologies took increasingly complex forms, resulting in less clear categories. Thus, embedding can be summarized as a part of a historical process that concerns all kinds of stakeholders, market and network relationships, and broader social contexts of companies, which can be observed on both temporal and spatial scales (Oinas, 1997). Based on Beckert (2003, 769) 'embeddedness refers to the social, cultural, political, and cognitive structuration of decisions in economic contexts. It points to the indissoluble connection of the actor with his or her social surroundings'.

The territorial aspect of embedding is the intellectual tradition of economic geography, in which the embedding of actors in social relations at different spatial scales can be called spatial embeddedness (Oinas, 1997). Józsa (2016) defines the receiving local space (e.g., settlement, city) based on the quintuple helix model. According to this, companies can be embedded in elements of (self)government, economy, science, society and the natural environment. The author highlights that not all the dimensions have the same strength, for example, the natural environment is still relatively less determinate, compared to economic embeddedness (Józsa, 2016). All this indicates that this study research is also necessary from a practical point of view so that companies can contribute to their integration and connection to the local space with sustainable practices.

3. Sustainability in corporate operations

The extension of corporate practices in sustainable quality and their local focus has long been a demand and expectation towards companies. Globalisation, growing inequalities, sustainable development, environmental interventions and governmental objectives brought to the fore terms such as corporate social responsibility

(CSR), which appeared in the early 1970s, and corporate sustainability (CS), which became an increasingly important area only in the late 1990s, early 2000s (Ramírez-Pasillas et al., 2023). In addition to the two main concepts, the notions of corporate citizenship, business ethics or responsible business also appeared (Das et al., 2020). In the literature, CSR and CS concepts are not always sharply separated (as their meanings have overlapping contents), even though they have different focuses in terms of their original purpose and direction. While the two concepts can also be interpreted as a transformation over time, according to which the use of the term CSR (which mainly dealt with the philanthropic and ethical behaviour of organizations and their community contribution) has been replaced by the term CS, it is more expedient to distinguish their meanings (Das et al., 2019). The relationship between the two concepts can be interpreted as CSR being a subfield of CS, as the latter 'has a broader perspective and aims at including all earlier concepts of socio-economic considerations, ethics and governance as an integral part of overall business strategy' (Das et al., 2020). CS is based on three fundamental dimensions of sustainable development: environmental protection, economic development and social equity (Das et al., 2020). However, Abdelhalim and Eldin (2019) highlight in their research that most CSR practices to this day still involve philanthropic activities and are not attributed to sustainability goals and strategy, despite the fact that the United Nations Sustainable Development Goals (SDGs) are particularly emphasized in promoting sustainability, in which companies play an increasing role. SDGs support companies in implementing all aspects of sustainability into their strategies to meet social, economic and environmental challenges (UNCTAD, 2014).

Despite the support for sustainable practices, the lack of commitment and strategic reflection can be explained by several factors, including economic and financial, as well as size constraints. The lack of potential customers and partners as well as the limited social capital also hinder the practices (Konczosné, 2014). Small and medium-sized companies primarily face challenges when it comes to implementing sustainability practices, particularly during the initial stage of understanding and perception. This indicates a deficiency in awareness and acknowledgement of their potential to make a tangible difference in society and the environment. Small and medium-sized enterprises (SMEs) also face disadvantages due to restricted financial resources and market influence, along with insufficient policy support and guidance (Das et al., 2019).

However, the adoption of sustainable practices by companies is supported by the sustainability objectives of the United Nations, but regulatory pressure, public scrutiny, and stakeholder demands are driving a move in this direction (Das et al., 2019). Not only expectations but also the direct or indirect positive effects of sustainability practices are the main drivers of the implementation. These positive benefits include increased employee satisfaction, development of corporate vision, more effective sustainable practices, increased innovation capacity (Almansoori and Nobanee, 2019), cost savings, positive corporate reputation and increased competitiveness (Ramírez-Pasillas et al., 2023). Das et al. (2019) also cited the values and ethics of owners and managers and their concern for the local community as motivating factors. The latter points towards local engagement, i.e., it can be assumed that sustainability practices are also more extensive at deeper levels of corporate embedding, which already foresees a close link between embeddedness and sustainability.

4. Towards the conceptualization of sustainable embedding

Through embedding, companies are connected to all the actors of both society and the market, which influences their behaviour and sustainability outcomes (Payán-Sánchez et al., 2018). The close relationship between the local embeddedness of companies and sustainability is unquestionable due to the similarity of the two phenomena. The unique aspect of corporate embeddedness lies in its emphasis on untraded interdependencies, which encompass the intangible advantages derived from collaboration and spatial concentration of companies. Similarly, sustainability aspects are not primarily driven by corporate economic interests, although well-chosen practices can indeed enhance efficiency and value for companies (Oinas, 1997). Both embeddedness and the sustainability practices of companies emphasize jointly created synergistic benefits for partners, that cannot be generated independently (Day et al., 2013). The philosophy of embedding, where the impacts of corporate activities are projected onto all actors in the space and go beyond the economic perspective, is clearly linked to the social and environmental aspects of sustainability (horizontal scope). The two phenomena are also similar in that companies are constantly moving on a deepening (vertical) scale, from a complete lack of commitment to the category of corporate citizenship, as Landrum (2017) proposes to distinguish between a weak and strong sustainability spectrum. Good corporate citizens, with strong sustainability, are fully embedded in a local space, consider themselves as part of the region, participate in major decisions affecting the region, and support many activities that are not (primarily) economic. Their longterm orientation includes staying in the region; therefore, they are even more interested in developing the region, creating wealth, improving the quality of life, and increasing economic and innovation potential (Konczosné, 2014). From a sustainability perspective, good citizens proactively develop their activities with a high level of

consideration of sustainable policies, while in the case of poor sustainability, the companies' activities mostly do not go beyond financial and business considerations (Ramírez-Pasillas et al., 2023).

Valente (2015) drew attention to the fact that organizations should make sustainable practices beyond economic and business goals in their operations. According to the author, sustainability embeddedness in the first mention refers to the dynamic process by which business sustainability becomes a requirement of corporate strategy (Valente, 2015). Following Valente (2015), Ramírez-Pasillas et al. (2023) describe the sustainability approach applied by the company's sustainable embeddedness, i.e., it indicates the level of awareness, understanding and application of sustainability.

The theory of Sharafizad et al. (2022) comes closer to the way of interpretation and conceptualization of this study. In their work, the authors combine the concepts of sustainability embeddedness and local embeddedness, highlighting how companies are involved in creating the three pillars of sustainability at a local level. However, sustainability embeddedness is still referred to as the process by which a company implements sustainability practices, i.e., integrating sustainability in its own context, strategy and policy, and integrating it into values, practices and decision-making. In the work of Sharafizad et al. (2022), the spatial dimension appears only by focusing on the realization of practices in local space and their impact on it.

According to the interpretation of this study, the relationship between sustainability and embeddedness is approached more from the literature on corporate local embeddedness. The spatial logic of embedding is supported, among others, by the existence of regional culture and institutional thickness, as well as the significant role of spatial proximity in cooperation and the creation of trust. Territorial embedding takes into account the degree to which an economic operator is bound to a given territory or place (Hess, 2004), thus corporate embedding and sustainable corporate operation presuppose that companies can actively shape their environment and have an interest in developing their region. Based on this, instead of considering the embedding of sustainability in corporate strategy, the focus is much more on the process of companies' local embedding and how a company can embed in a local space by applying sustainable practices.

Therefore, instead of the term sustainability, sustainable embedding is applied, deviating from the previous directions of the literature. By investing in social sustainability, for example, in employee health, safety and training, the company integrates into the local space through sustainable embeddedness. Any sunken costs that are limited in transferability and reimbursability reinforce the local embeddedness of companies (Sat, 2005).

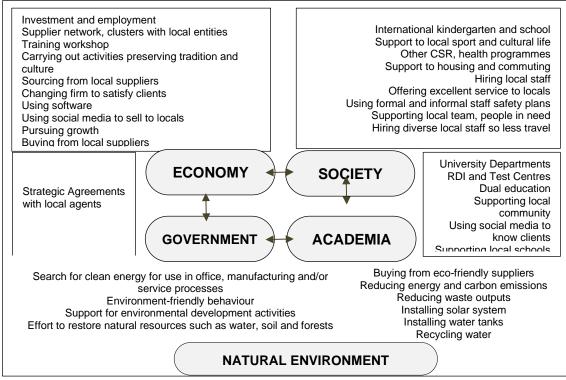


Figure 1: Sustainable methods of companies' local embedding based on the quintuple-helix model adapted from innovation literature. Self-edited based on Józsa (2016), Sharafizad et al. (2022) and Kantabutra (2019)

The study contributes to the literature with its own definition, according to which the sustainable embedding of enterprises at the local level is the ability to be embedded in the local environment and local space in such a

way that it consciously and responsibly uses its local resources, taking into account local characteristics, without depleting them or prolonging the renewal process their ability and without compromising the access of future generations of local society to these resources. The focus of the definition is on the local level, in which, during embedding (emphasising the process-oriented definition), the company can carry out its operational activities taking into account the needs of the place, using environmental, cultural, built environmental, intellectual and human resources in a broad sense responsibly, contributing to long-term survival and development.

The study, therefore, looks for sustainable practices that deepen the local embeddedness of companies. Sharafizad et al. (2022) distinguished three main types in their categorisation. A distinction was made between locally embedded sustainability values, which encompass the values of stakeholders in the region in economic, social and environmental sustainability dimensions. The concept of spatially-driven sustainability focuses on local, spatial features, while the locally adapted sustainability concept focuses on sustainability tailored to local needs (although this is related to the other two specific types). Adapting Józsa's (2016) model, we distinguish economy, society, government, academia and natural environment categories along the quintuple helix model, where the latter is a comprehensive dimension encompassing the four other categories. It is important to note that the placement of certain factors in the quintuple helix is arbitrary since the effect of the practices is not clear in most cases. For example, employing local workers means an economic decision, a social benefit, a partnership for the educational sphere, or even a political decision can be envisaged as an objective, as well as preserving the environment by reducing commuting. Thus, Figure 1, which contains possible sustainable embedding practices (non-exhaustive), is merely a guide towards possible practices. However, it illustrates that the quintuple helix is capable of capturing all factors due to its complexity.

5. Conclusions

The interconnection between corporate embeddedness and sustainable corporate behaviour is a significant topic in recent literature, leading to the emergence of the term 'sustainability embeddedness'. However, this concept is still in its early stages with incomplete conceptualisation. An analysis of the existing literature reveals that sustainability embeddedness falls within the category of 'fuzzy concepts', as it carries different meanings across various works. This study aims to critically examine previous interpretations and contribute to the existing embeddedness literature by providing a specific explanation. Furthermore, the research identifies the most effective sustainable practices related to corporate embeddedness through the application of the quintuple helix model based on the literature. The primary objective is to demonstrate how these sustainability practices can foster mutually beneficial relationships between companies and other stakeholders within the local context. The findings of this study will serve as a theoretical background for further research, which will involve conducting interviews with small and medium-sized family businesses in Győr, Hungary.

After reviewing the literature on sustainability embeddedness, the study provides a new interpretation called 'sustainable embedding'. While previous literature describes the embedding of sustainability in corporate strategy based on the literature on sustainability, the study explored the sustainable practices of local integration of companies based on the literature on embedding. The concept of embeddedness in itself represents a shift in the literature of business and regional science, as it goes beyond profit-making and considers the broader impact of corporate activities on society and the natural environment. As a result, the introduction of the sustainability concept contributes as another valuable addition to the literature on embeddedness, further advancing its development. The study's interpretation extends beyond the existing literature on corporate embeddedness examined in regional science. According to the contemporary meaning of the traditional embeddedness concept, as a company becomes more deeply embedded into various dimensions of the local context, both parties gain additional resources. However, these beneficial synergistic effects remain unspecified in terms of their impact. The interpretation of the study describes practices along the quintuple helix model that increase the sustainability of the local economy, society, politics, education and environment, which also facilitates the company's development.

Due to the importance of the local view of embedding, the location-specific sustainable practices will be separated from general practices in further research, assuming that the former contributes even more to the local embedding of the company. The study strives to highlight that companies adapting to various local cultural, social, economic, political and environmental factors contribute to deepening their attachment to the place by applying specific sustainability practices. The trusting nature of corporate embedding plays an important role in this, which supports the application of practices through transparency and meaningful cooperation.

References

Abdelhalim K., Eldin A. G., 2019, Can CSR Help Achieve Sustainable Development? Applying a New Assessment Model to CSR Cases from Egypt. International Journal of Sociology and Social Policy, 39(9/10), 773–795.

- Almansoori A. M., Nobanee D., 2019, How Sustainability Contributes to Shared Value Creation and Firms' Value, SSRN Electronic Journal, DOI: 10.2139/ssrn.3472411.
- Beckert J., 2003, Economic Sociology and Embeddedness: How Shall We Conceptualize Economic Action? Journal of Economic Issues, 37(3), 769–787.
- Carlson L., 2003, Company Towns of the Pacific Northwest, University of Washington Press, Seattle, United States.
- Das M., Rangarajan K., Dutta G., 2019, Corporate Sustainability in Small and Medium-Sized Enterprises: a Literature Analysis and Road Ahead. Journal of Indian Business Research, 12(2), 271–300.
- Das M., Rangarajan K., Dutta G., 2020, Corporate Sustainability in SMEs: an Asian Perspective. Journal of Asia Business Studies, 14(1), 109–138.
- Day M., Fawcett S.E., Fawcett A.M., Magnan G.M., 2013, Trust and Relational Embeddedness: Exploring a Paradox of Trust Pattern Development in Key Supplier Relationships. Industrial Marketing Management, 42(2), 152–165.
- Granovetter M., 1985, Economic Action and Social Structure: The Problem of Embeddedness. American Journal of Sociology, 91(3), 481–510.
- Halien A., Törnroos J.-Å., 1998, The Role of Embeddedness in the Evolution of Business Networks. Scandinavian Journal of Management, 14(3), 187–205.
- Hess M., 2004, 'Spatial' Relationships? Towards a Reconceptualization of Embeddedness. Progress in Human Geography, 28(2), 165–186.
- Józsa V., 2016, Corporate Embeddedness from a New Perspective. Contemporary Research on Organization and Administration, 4(1), 15–29.
- Kantabutra S., 2019, Achieving Corporate Sustainability: Toward a Practical Theory. Sustainability, 11, 4155.
- Konczosné Szombathelyi M., 2014, Examining the Interaction of Regional and Corporate Culture. Tér és Társadalom, 28(1), 84–98. (in Hungarian)
- Landrum N.E., 2017, Stages of Corporate Sustainability: Integrating the Strong Sustainability Worldview. Organization and Environment, 31(4), 287–313.
- Lengauer L., Tödtling F., 2010, Regional Embeddedness and Corporate Regional Engagement: Evidence from Three Industries in the Austrian Region of Styria, Conference paper for the 8th European Urban & Regional Studies Conference, 15-17 September, Vienna, Austria.
- Markusen A., 1999, Fuzzy Concepts, Scanty Evidence and Policy Distance: the Case for Rigour and Policy Relevance in Critical Regional Studies. Regional Studies, 33, 869–884.
- Martin R., 1994, Economic Theory and Human Geography. In: Gregory D., Martin R., Smith G. (Eds), Human Geography, Palgrave, London, 21–53.
- Oinas P., 1997, On the Socio-Spatial Embeddedness of Business Firms. Erdkunde, 51, 23-31.
- Payán-Sánchez B., Plaza-Úbeda J. A., Pérez-Valls M., Carmona-Moreno E., 2018, Social Embeddedness for Sustainability in the Aviation Sector. Corporate Social Responsibility and Environmental Management, 25, 4, 537–553.
- Plaza B., Haarich S.N., 2013, The Guggenheim Museum Bilbao: Between Regional Embeddedness and Global Networking. European Planning Studies, 23, 8, 1456–1475.
- Polanyi K., 1944, The Great Transformation The Political and Economic Origins of our Time, Farrar & Rinehart, New York, United States.
- Ramírez-Pasillas M., Saari U.A., Lundberg H., 2023, Business Groups Owned by Family and Sustainability Embeddedness: Understanding the Family Sustainability Spectrum, In: Rautiainen M., Parada M. J., Pihkala T., Akhter N., Discua C. A., Mukherjee, K. (Eds), The Palgrave Handbook of Managing Family Business Groups, Palgrave Macmillan, Cham, Switzerland.
- Sat N.A., 2005, Local Embeddedness of Transnational Corporations: Turkish Case, A Thesis Submitted to The Graduate School of Natural and Applied Sciences of Middle East Technical University, Ankara, Turkey.
- Sharafizad J., Redmond J., Parker C., 2022, The Influence of Local Embeddedness on the Economic, Social, and Environmental Sustainability Practices of Regional Small Firms. Entrepreneurship & Regional Development, 34(1-2), 57–81.
- UNCTAD, 2014, World Investment Report 2014, https://unctad.org/system/files/official-document/wir2014ch4_en.pdf Downloaded: 08/07/2023>, accessed 11.07.2023.
- Valente M., 2012, Business Sustainability Embeddedness as a Strategic Imperative. Business & Society, 54(1), 126–142.
- Zukin S., Dimaggio P., 1990, Structures of Capital: The Social Organization of the Economy, Cambridge University Press, Cambridge, United Kingdom.