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The Different Paths from which Place leadership Can Manifest: A Meta-analysis Using Qualitative Comparative Analysis (QCA)

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Abstract

In order to unpack the context that enable place leaders to enact transformative policies in their local economies, this paper conducts a meta-analysis using qualitative comparative analysis (QCA). This paper finds that there are three solution paths, which makes manifestations of place leadership possible. Path 1 combines networks, assets, and leadership skills. Path 2 combines agenda, assets, autonomy, and networks. Path 3 combines agenda, autonomy, network, and leadership skills. Having three paths suggests that different regions can share similar conditions that can enable place leadership but that, importantly; there is no one single condition or 'recipe' for doing so.

Keywords: place leadership, context, QCA

Short running title: Different paths from which place leadership can manifest

JEL codes: R58, D02

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1. Introduction

Place leadership research deals with explaining “how networks of actors formulate decisions, pursue shared activities, and organize and direct change in places” (Sotarauta & Beer, 2021, pp. 458-459). These changes are often needed in the face of economic adversities such as post-industrialization, plant closures, and decline of industrial skills and competencies (Bailey, Bellandi, Caloffi, & De Propris, 2010; Collinge & Gibney, 2010). However, not all places undergo these changes and not all place leaders successfully manage these transformations (Bellandi, Plecher, & Santini, 2021). Actions of place leaders are contingent on the context in which they find themselves. Context here refers to “the circumstances shaping a region, a city or a small rural community” which “determine the capacity for leadership to emerge and shape the ways in which it is expressed” (Beer, 2014, p. 5).

Differences in context can help explain the uneven developmental trajectories of places. As such, there is consensus that “more research is needed to establish in what kind of local and regional contexts” enable the manifestations of place leadership, “including conditions that suppress or hinder the surfacing of place leadership” (Sotarauta & Beer, 2021, p. 11). Moreover, “it is still unclear how this mode of collective leadership can be reproduced in widely varying institutional systems across different territories, and especially in those regions where inclusive practices of collaborative governance is not already established” (Vallance, Tewdwr-Jones, & Kempton, 2019, p. 1723). This lack of clarity is due in part to the lack of consolidation of the body of empirical evidence from the place leadership literature, which are mostly from single and comparative case studies (Rossiter & Smith, 2017). The prevalent use of the case study method in this literature has raised concerns regarding the potential hindering of the accumulation of knowledge in place leadership research (Beer & Irving, 2021). This has led to calls for methodological innovation in the field (Beer et al., 2019) including the use of novel methods such as qualitative comparative analysis (QCA) (Beer & Irving, 2021).

QCA was introduced in 1987 by Charles Ragin as a method that formalizes the logic of case-oriented qualitative research using Boolean algebra (Rihoux & Ragin, 2009). It is used for cross-case analysis in order to identify patterns across different cases and combinations of conditions (Verweij & Trell, 2019). These combinations of conditions are referred to as 'configurations' or solution paths (Pagliarin, Hersperger, & Rihoux, 2020). Furthermore, QCA enables the comparison and synthesis of insights from complex empirical qualitative material and enables analytical causal inferences (Rutten, 2020). The body of qualitative empirical evidence from case studies from the place leadership literature is, in fact, generous in detail, deep in insights, and thick with description. Thus, it is well suited to QCA, as this literature with this method offers an immense opportunity to produce synthetic findings in accumulating knowledge on place leadership (Beer & Irving, 2021).

This paper then seeks to contribute a synthesis of the findings from the extant place leadership literature that show the contexts that enable the manifestation of place leadership. A meta-analysis using QCA is conducted on metadata drawn from case studies from the place leadership literature. In doing so, this paper answers calls for methodological innovation and helps accumulate knowledge regarding which contexts leads to place leadership. This paper interrogates the research question '**Which conditions enable the manifestation of place leadership**'. **Section 2** reviews the literature on what it commonly suggests as the conditions for manifesting place leadership **Section 3** lays out the methodology on the selection of the cases, analytical strategy, operationalization of outcome and conditions, as well detailing the QCA process, including a note on causal inference. **Section 4** discusses the results of the solution paths as well as their theoretical implications. **Section 5** concludes the paper with a discussion of the contributions of this paper and thoughts on policy recommendations.

2. "The soil in which place leadership can emerge"

This section examines “the soil in which place leadership can emerge” (Sotarauta & Beer, 2021, p. 11). It discusses place leadership as well as common suggestions from the literature regarding the conditions that constitute context fertile for place leadership to manifest. The outcome and these conditions will be further used in the QCA analysis in the following section.

Place leadership is defined as the “mobilization and coordination of diverse groups of actors to achieve a collective effort aimed at enhancing the development of a specific place” (Sotarauta, 2021). It “captures actions that aim at transforming particular places by pooling competencies, powers and resources to benefit both agents’ individual objectives and a region more broadly” (Grillitsch & Sotarauta, 2020, p. 5). Place leadership can manifest in different ways where actors can take on varied roles and positions to operate within the community (Beer & Clower, 2014). Potential place leaders include actors from local or regional governance bodies that represent the public and private sector as well as members of civic society (Vallance et al., 2019). Not all place leadership is positive, however. Some place leaders are resistant to change and opposes new development paths to protect the status quo (Bellandi et al., 2021). This is characterized by a “strongly entrenched set of leaders intentionally strengthening lock-in conditions and hampers fruitful rerouting” (Bellandi et al., 2021, p. 1328). Thus, this type of place leadership can lead to different outcomes that can hinder transformation of places.

“If we acknowledge that place presents in some way a unique context for leadership, the first task is to identify the critical features and dynamics of this context (Collinge & Gibney, 2010, p. 380). There is no single type of context that automatically generates transformative place leadership and it can emerge from different types of context (Beer & Clower, 2014). While the contexts for place leadership may differ, “there are similarities between different places and spatial scales, too” (Sotarauta & Beer, 2021, p. 5). These similarities suggests that it is possible to find patterns of context that are comparable. Broadhurst et al (2021), for example, identify “common conditions as elements of an

effective system" for local economic partnerships, a specific form of place leadership; which are "shared vision, effective network of partners, leadership from strong entrepreneurs, supportive policies and governance arrangements; access to capital and funding and talent, and culture of collaborations" (Broadhurst, Ferreira, & Berkeley, 2021, pp. 557-558). This work has inspired this paper to also identify common conditions for place leadership to manifest, found from this author's own review of the general place leadership literature.

Unpacking context

The identification of conditions in this paper was done through the process of conducting an extensive review of the place leadership literature and synthesizing the most common conditions discussed by authors. These conditions that enable place leadership to manifest are **leadership skills, networks, autonomy, assets, and agendas**. A common misreading of the place leadership research is that it focuses on hero-worshipping charismatic individuals but this is largely not the case in economic geography (Beer, Sotarauta, & Ayles, 2021). Scholars in this field, however, do suggest that the abilities and skills of a leader can be one of the factors in understanding place leadership. **Leadership skills** of place leaders are said to be an important condition for place leadership to emerge (Beer et al., 2021), in particular, with place leaders having the ability to construct shared visions on how to transform their localities (Anderton, 2017; Broadhurst et al., 2021) and the ability to connect to and between different actors. Leaders are said to need communication skills, tenacity, flexibility in assuming different roles, know how to mobilize people, understand how to coalesce different interests, know how to manage group dynamics, and engage with a plural set of stakeholders across different boundaries (LG Horlings, Roep, & Wellbrock, 2018). These skills are needed because leaders should have the ability to influence how groups interpret opportunities to act and the skills to manage development strategies (LG Horlings et al., 2018) in order to enact successful transformations.

Table 1. Conceptual review of outcome and conditions

Outcome	Authors	Manifest	Non-manifest	Definition
Place leadership	Sotarauta et al (2021), Bellandi et al (2021), Grillitsch & Sotarauta (2020), Beer & Clower (2014), Vallance et al (2019),	Actions aimed at developing and transforming places by convincing other actors to collectivize and mobilize resources and coordinates collective action towards developing places.	Policies are resistant to change, blocks emerging development paths, exacerbates lock-in conditions, hinders adjustments to changing conditions to keep status quo, obstructive of positive initiatives	The outcome is the extent to which meaningful policies have been put in place and resources have been committed in the short-term, and with long term plans to commit more.
Conditions	Strong	Weak		Expectations
Leadership skills	Beer et al (2021), Anderton (2017), Broadhurst et al (2021), LG Horlings et al (2018)	Actors with tenacity, can construct shared visions, connecting and communicating with people, transboundary engagements, influencing others, understand how to coalesce interests.	Lacks effective communication and connections with a plural set of actors. Lack of tenacity and cannot successfully construct a shared vision for places.	Strong leadership skills are necessary for manifesting place leadership
Networks	Anderton (2017), Bailey et al (2010), Fairbrother (2017), Jame et al (2016), Bailey et al (2014), LG Horlings et al (2017), Fairbrother et al 2018, Benner (2019)	Platforms where actors can collaborate, it should be accessible to a plural set of actors with purposeful roles. Facilitates the sharing of tacit knowledge like common norms and conventions.	Platforms hinder effective collaboration and are inaccessible to actors that are marginalized. When tacit knowledge is not shared, networks can be stunted and fragmented.	Strong networks are necessary for manifesting place leadership; weak networks lead to different outcomes
Autonomy	Broadhurst (2021), Gherges et al (2020), Blazek et al (2013), Vallance et al (2019), Pike et al (2018), Beer and Clower (2014), Bentley et al (2017), Anderton (2017), Bowden & Liddle (2018)	Local actors have control over resources, can shape, decide, and implement policies custom fit to the local context, room to pursue initiatives by local actors. Austerity policies are overcome so as not to undermine local capacities.	Lack of control over local resources. National governments are proactive despite independence on paper through a dependence for funding or through technical and bureaucratic guidance and authority. Austerity policies undermining local capacity. Dependent of funding on external sources. Underdevelopment sub-regional governance bodies.	Autonomy is necessary for manifesting place leadership. Lack of autonomy hinders manifesting place leadership.
Assets	Anderton (2017), Budd et al (2017), Hu & Hassink (2017), Bailey et al (2010), MacKinnon et al (2019), Bentley et al 2017, Smith et al (2017)	Assets in the region can be facilities, human capital, infrastructure, natural resource endowments, universities and research institutions, manufacturing plants.	When the assets of a place are declining, or near depletion or are in severe lock-in, then these assets are no longer considered advantageous or beneficial for further development of a place.	Presence of assets help manifest place leadership.
Agenda	Nicholds et al (2017), Fairbrother et al (2017), Horlings et al (2018), Sotarauta & Suvinen (2019), Pape et al (2016), Kroehn et al (2010)	Actors have agendas and interests when engaging in place leadership activities which explain behavior over policy contestations. These agendas are often resource, community and personal related.	When vested interests are localized and dominate collective interests, this makes it difficult to have a coherent agenda for a place and this can lead to outcomes not necessarily beneficial to places. Many layers are in operating and promoting their own self-interests.	A unified agenda that represents a broad set of interests help manifest place leadership.

Place leaders deploy their skills as they collaborate within **networks** of actors embedded in places (Anderton, 2017). Networks are platforms that enable social interactions and engagement with stakeholders that can lead to collective action (Bailey et al., 2010). As platforms of collaboration, networks need to be open, inclusive, and encourage participation from different stakeholders (Fairbrother, 2017; James, Thompson-Fawcett, & Hansen, 2016) particularly when geared towards formulating a policy meant to represent the interests of a community. If these networks will enable the emergence of place leadership, then they need to be comprised of a broad coalition (Bailey, Bentley, de Ruyter, & Hall, 2014) and be trans-territorial in that collaboration, which means involving the private and public sector, government, across different individuals, organizations and firms (Lummina Horlings, Collinge, & Gibney, 2017). However, networks should also be accessible to actors

traditionally underrepresented in economic policy, such as unions, for example, and as “purposeful regional agents rather than as marginalized actors” (Fairbrother, Walker, & Phillips, 2018, p. 1502).

These networks are coordinated via institutions or structures that, when characterized by sharing of tacit and formal knowledge, can effectively lead the development of places (Bailey et al., 2010; Benner, 2019). Networks of actors can share “a set of locally embedded common norms and conventions, an attitude to trust-based reciprocal exchanges, and diffuse attitudes towards cooperative actions among local business and institutional stakeholders.” (Bailey et al., 2010, pp. 458-459). According to Fairbrother (2017), the “obverse is a fragmented and stunted network” would lead to different plans and limited changes in places (p. 402); thus, can hinder manifestations of transformative place leadership.

Network relationships between public and private actors can become unstable over time as changes in governance are enacted (Anderton, 2017). These changes come at the behest of government restructuring that reassigned governance responsibilities and authority to and from the national and subnational governments. In turn, this determines the degree of **autonomy** local place leaders have in formulating strategies and enacting policies for transformation. National governments can be active at the local level despite nominal regional independence (Broadhurst et al., 2021) and this can weaken the capacity for the emergence of place leadership (Bentley, Pugalis, & Shutt, 2017). For example, national governments sometimes provide a technical expert role that exert steering and influence (Bowden & Liddle, 2018). The literature on place leadership suggests that autonomy in policymaking and control over resources is important in being able to pursue plans customized to the local context (Gherges, Brooks, & Vorley, 2020). Blažek, Žížalová, Rumpel, Skokan, and Chládek (2013) argued that “the lack of a proactive approach at the national level creates a lot of room for the activities of regional actors, which then have to search for their own mode of coping with development.”(p. 290). Public

austerity induced changes in government structures and devolution of more power to subnational structures are creating spaces for local leaders to emerge (Vallance et al., 2019) but are also regressing previous gains in economic development (Pike, Coombes, O'Brien, & Tomaney, 2018). Moreover, austerity can undermine the capacity of local leaders to act despite increased autonomy because of significant decreases in resources and increased dependence for funding on external sources (Beer & Clower, 2014). Dependence on external funding can stall the developmental progress of new economic trajectories (Anderton, 2017).

Undermining local leadership is particularly problematic since, relative to central authorities, local leaders are better positioned to understand which place-specific resources and **assets**, local communities prefer and have the capacity to advance. Assets in the region can be tangible things like R&D facilities such as incubators, local research universities, hospitals, manufacturing plants, and natural resources like gas or mines (Anderton, 2017; Budd et al., 2017; Hu & Hassink, 2017). Assets can also refer to the presence of industrial clusters, which can be embedded in the civic life of the community who work and live in the place where the cluster is located (Bailey et al., 2010). Developmental strategies often involve valorizing local resources and assets in the region that are valuable for new industry development (MacKinnon, Dawley, Pike, & Cumbers, 2019). Using these endogenous assets imbibe development strategies with better links to the needs and resources of a particular locality (Bentley et al., 2017). However, path dependency, which refers to how economic development of a place can be constrained by its socio-economic history, may sometimes lead places to overly rely on local resources even at the risk of resource depletion or inevitable decline and lock-in (Hu & Hassink, 2017; Smith, Rossiter, & McDonald-Junor, 2017).

Valorization of one asset over another can lead to policy contestations where different stakeholder have different **agendas** that hinder cooperation. This is why analyzing place leadership needs to

consider people's agendas and interest because it can help explain the behavior of actors including policy contestations (Nicholds, Gibney, Mabey, & Hart, 2017). "Actors may take place leadership roles in proper conditions in which they work to navigate in the midst of competing interests and ambitions" (Sotarauta & Suvinen, 2019, p. 1749). Activities associated with place leadership comprise resource related but also community and personal agendas (Nicholds et al., 2017). This can trigger competing agendas and or be dominated by a narrow set of interests of actors involved in the network of governance, representing the economic and political elite (Pape, Fairbrother, & Snell, 2016). "The prospect for regional governance are defined by power interests" (Fairbrother, 2017, p. 415) and are often found in existing arrangements where vested interests are localized (Kroehn, Maude, & Beer, 2010). This is particularly true if there are "many organizations and layers of government are in operation and each promoting their sectoral interests" (Fairbrother, 2017, p. 415). Vested interests can be overcome by building new arrangements and ways of collaborating (LG Horlings et al., 2018).

Taking these different conditions together, what the literature on place leadership suggest is that there is diversity in contexts and degrees in which these conditions are present that actors face and that these studies offer empirical findings on the successes and failure of places to transform, or something in between. What seems to be common amongst the empirical findings from these case studies is that most of these places have experienced some form of economic hardship that has led to some degree of economic and government policy intervention. These interventions are subject to conflicting interests of different actors. Varying degrees of policy contestations and competition over resources between different actors have ensued lead to differentiated outcomes, as demonstrated in the place leadership literature. This suggests that context is not deterministic but contingent and place leadership an outcome of this contingent process. In sum, these conditions are **leadership skills, networks, autonomy, assets, and agendas**.

3. Methodology

This section describes case selection, how the metadata was collected, how the outcome of interest and conditions are operationalized, the steps of the QCA process, and finally a note on causal inference for interpreting the results of this paper.

a. Case selection

Fifty-six cases have been identified using the following criteria: subnational level (e.g. regions, cities, or neighborhoods), socio-economic oriented policies initiatives (e.g. creation of a new industry, implementing a smart city policy, development of a regional innovation system; see Table 3 for a full list), by a group or groups of actors, such as universities, local governing bodies, entrepreneurs, private companies, civic organizations, and professional organizations. Using this criteria allowed a diverse selection of cases but it was necessary to check that each potential case material had information on these criteria points to ensure comparability.

b. Metadata collection

A literature review on place leadership literature was conducted following the article search protocols of Beer et al. (2021) from their own extensive literature review. The collection of articles in this paper covers peer reviewed articles on place leadership and published in English from 2009-2021. A broad search from Scopus initially yielded four hundred and four articles, which was further whittled down to two hundred fifty-one articles after filtering for case study methods, and journals in the field of economic geography. Checking the abstracts and reading the full articles to make sure it had sufficient information on cases of place leadership outcomes and the contextual conditions led to a further culling of articles that yielded a final twenty-nine articles. See appendix for a full list of the search protocols conducted in Scopus and a full explanation of the metadata selection of articles.

c. Operationalization of outcome and conditions

The outcome of interest is the manifestation of place leadership. Place leadership refers to policies put in place and resources committed in the short and long term. There are five conditions, based on the conceptual framework, considered in this paper: networks, agenda, asset, leadership skills, and autonomy. An important part of the QCA process is condensing the explanatory conditions to a manageable set of conditions (Schneider & Wagemann, 2010).

1. **Networks** – refers to a group or groups of actors that facilitate cooperation and sharing of resources. Networks needs to be transboundary and inclusive of a broad range of actors from different sectors.
2. **Agenda** – refers to a development strategy or goal for which different competing interests have coalesced.
3. **Assets** – refers to physical infrastructure such as ports or sports stadiums, or natural resources like oil and minerals. It can also refer to universities and research institutes or to civic mindedness of the citizens.
4. **Autonomy** – refers to the ability of local leadership to pursue strategies and policies to transform their locality. This includes control over resources and funding.
5. **Leadership skills** – refers to the ability to influence and convince others to support policies with effective communications, the ability to construct shared visions, and the tenacity to pursue policies despite obstacles.

Each outcome and condition were operationalized as sets by giving them a score based on the indicators outlined in **Table 2**. Assessment of cases were also based on these indicators and calibrated initially into fuzzy set membership values using a four value set scale (0, 0.33, 0.67, 1.0). See **Table 3** for the calibrated dataset. Scores were assigned on two separate occasions and results were very similar. Cases were scored without consulting with the authors of the case studies. The advantage of this approach is having one person scoring the case material as presented in the articles leads to consistency in scoring the set of cases. The disadvantage is that since scores are not corroborated with

Table 2. Calibration scale for outcome and conditions

Outcome	Operationalization
Manifestation of place leadership	<p>Fully out: No meaningful action or policy has been put in place OR actions taken to actively resist change and to maintain negative status quo.</p> <p>More out than in: Very little meaningful policy actions has been made and no commitment to any sustained and meaningful policy actions towards the stipulated agenda.</p> <p>More in than out: Meaningful policy actions have been made in the short term with some potential and commitment for extending policy actions.</p> <p>Full in: Meaningful policy actions have been made and resources have been mobilized and committed in the long term.</p>
Conditions	Operationalization
Network	<p>Fully out: Levels of cooperation and coalition building between different actors in the region are very low and relations between actors are difficult. Networks are very exclusive to a powerful narrow set of actors.</p> <p>More out than in: Low levels of cooperation and coalition building between alliances and civic groups. Very little collaboration between actors. Relations between actors are strained but improving. Networks are exclusive to a powerful, narrow set of actors.</p> <p>More in than out: Moderate levels of coalition building between alliances and civic groups. There is some collaboration and cooperation between actors and relations are good. There are efforts to include other actors to make the network more transboundary.</p> <p>Fully in: High levels of collaboration coalition building between alliances and civic groups. Relations between actors are good and collaborates frequently. Networks are inclusive and transboundary.</p>
Autonomy	<p>Fully out: No meaningful governing subnational body exists and completely dependent on the national, federal, international sources for both funding and steering.</p> <p>More out than in: there is some degree of devolution for the region but the national, federal, or international source for steering priorities and agenda. Some local initiatives are attempted but are highly dependent from previous efforts.</p> <p>More in than out: presence of local actors and has independence and ability to act both in terms of funding and steering but not completely. Still somewhat dependent from the national, federal, and international sources for assistance. Pursues local initiatives without much steering.</p> <p>Fully in: presence of powerful and well-endowed local actors that is effectively independent from the national, federal, and international government that it can set its own priorities and direct funding. Pursues local initiatives customized to the area based on local needs and priorities.</p> <p>Fully out: lacks important endowments, like human capital, social capital, cultural capital, infrastructure, universities, natural resources, industry clusters, technological skills and competences, and supporting institutional environment. OR if embedded old industrial lock-in situation</p>
Assets	<p>More out than in: low presence of important endowments, like human capital, social capital, cultural capital, infrastructure, industry clusters, technological skills and competences, and supporting institutional environment.</p> <p>More in than out: presence of important endowments like human capital, social capital, cultural capital, infrastructure, industry clusters, universities, natural resources, technological skills and competences, and supporting institutional environment.</p> <p>Fully in: high presence of important endowments, like human capital, social capital, cultural capital, infrastructure, universities, industry clusters, natural resources, technological skills and competences, and supporting institutional environment.</p>
Agendas	<p>Fully out: agendas of actors, in position, conflict with policy and are unable to reconcile them constructively. A very narrow set of interests are the only ones represented.</p> <p>More out than in: agendas of actors conflict with the policy and whilst efforts are made to reconcile conflicts and coalesce agendas, this is not successful. A narrow set of interests are represented in the policy, with very little input from other actors.</p> <p>More in than out: agendas of actors coalesce to a functional extent to forward their agendas. Agendas are generally aligned. They agree on the problem and that changes need to be made but some level of disagreement on the policy selection. Multi-sectoral interests are represented but dominated by a few.</p> <p>Fully in: agendas of actors are in alignment and interests are coalesced despite differences and effectively forward their agendas towards the purported aim. Multi-sectoral interests are represented equitably.</p>
Leadership Skills	<p>Fully out: actors are unable to recognize opportunities, misunderstand what places needs, ill-informed about the problems and resources on the ground, and unable to develop a coherent plan of action and unable to persuade other actors to mobilize resources.</p> <p>More out than in: actors have abilities to recognize some opportunities, some understanding what places need, not very well-informed about the problems and resources on the ground, and despite attempts, unable develop a clear and coherent plan of action. And unable to persuade other actors to mobilize resources.</p> <p>More in than out: actors have the ability to recognize many of the opportunities, understands what places need to some extent, well-informed about the problems and resources on the ground, and contribute to developing a coherent plan of action. and somewhat able to persuade other actors to mobilize resources.</p> <p>Fully in: actors are skilled in recognizing most of the important opportunities, clearly understands what places need, are well-informed about the problems and resources on the ground, and develops a coherent plan of action and able to persuade other actors to mobilize resources.</p>

the authors, there is a risk of incorrect scoring. However, for the purposes of this meta-analysis where data is expected to be derived from the original articles, consulting the thick descriptions of cases in the articles provided by the authors, suffices. Table 3 also serves as the initial dataset for querying in R using the QCA and SetMethods packages (Medzhorsky, Oana, Quaranta, & Schneider, 2016). Coding commands were followed based on established sources (Duşa, 2018; Pagliarin et al., 2020). See appendix for a full explanation of scores of each case.

d. QCA

Recommended best practices when conducting QCA (Pagliarin et al., 2020; Schneider & Wagemann, 2012; Verweij & Trell, 2019) have been followed in this paper. QCA involves several steps. First, an 'analysis of necessity' is conducted to check whether any of the five conditions is necessary for the outcome. Necessity means that the outcome will occur if and only if the condition is present. The threshold value here to determine this is 1.0. Separately, an 'analysis of sufficiency' is also made. Sufficiency means that the condition will always be present whenever the outcome occurs. A truth table is then generated, where each row represents all the possible combinations of the five conditions selected in relation to the outcome. Following the 2^k rule, with k being the number of conditions set, means that $2^5 = 32$ possible combinations of conditions with the outcome of place leadership. Each row in the truth table needs a determination of whether it contains 'logical remainders' or whether the combination of conditions can be considered as sufficient to manifest place leadership if there are cases it contains.

The truth table is followed by what is referred to as the 'logical minimization process' which refers to finding the different solutions paths i.e. the combinations of conditions where the outcome is present. The intermediate solution is the one that should be reported (Ragin, 2009). The intermediate solution is the path that shows the combinations of conditions that takes away contradictory assumptions. A

standard analysis as well as an enhanced standard analysis is performed identifying simplifying assumptions, both tenable and untenable, and excluding these from the enhanced minimization process (Duşa, 2018).

a. A note on causal inference

In this paper, the causal effects of the combinations of conditions on the outcome of place leadership, should be read and interpreted analytically, rather than empirically (Rutten, 2021). This means that when there is a co-occurrence of outcomes with a set of conditions, this paper does not mean to suggest that these relationships are deterministic, that is, when a certain combination of conditions are present, the outcome automatically follows. Instead, what this paper suggests is that when these combinations of conditions are present, the outcome is possible, just as it has in some cases observed in the metadata. Moreover, it is important to clarify it is not the conditions that cause outcomes. These conditions have causal powers (Rutten, 2021). When human actors engage and interact with their context and exercise the causal power of the conditions within this context, it becomes possible to achieve an outcome (Archer, 2003; Rutten, 2021). Even when human actors exercise the causal power of the conditions, unforeseen constraints may negate their effort such that the outcome does not come about (Rutten, 2021). This means that the relationship of context and place leadership is not deterministic.

Table 3. Cases and set membership value

Cases	Authors	Year	Policy actions	Place					Leadership skills
				Leadership	Network	Asset	Agenda	Autonomy	
Wuxin, China	Zhang et al	2021	Transition to solar energy production and consumption	1.0	1.0	1.0	1.0	0.33	1.0
Mönchengladbach, Germany	Herzog & Hamm	2021	Transforming from an old industrial area	0.67	0.67	0.33	1.0	0.67	1.0
Gelderland Province, Netherlands	van Alderan & Horlings	2020	Development of wind energy	1.0	1.0	1.0	0.33	1.0	1.0
Flevoland Province, Netherlands	van Alderan & Horlings	2020	Development of wind energy	1.0	0.67	1.0	1.0	0.67	0.67
North-Holland Province, Netherlands	van Alderan & Horlings	2020	Development of wind energy	0.0	0.0	0.67	0.0	0.33	0.0
Amsterdam, Netherlands	Sancino & Hudson	2020	Transformation to a smart city	1.0	1.0	1.0	0.67	1.0	0.67
Bristol, UK	Howard	2020, 2013	Transformation to a smart city	0.67	0.67	0.67	0.67	0.33	0.67
Milton Keynes I, UK	Sancino & Hudson	2020	Transformation to a smart city	0.67	0.67	0.33	0.67	0.33	0.67
Chicago, United States of America	Sancino & Hudson	2020	Transformation to a smart city	0.67	0.67	1.0	0.67	0.67	0.67
Curitiba, Brazil	Sancino & Hudson	2020	Transformation to a smart city	1.0	0.67	0.67	0.67	0.33	0.67
Melbourne, Australia	Sancino & Hudson	2020	Transformation to a smart city	1.0	1.0	1.0	1.0	1.0	0.67
North Jutland, Denmark	Norman et al	2020, 2017	Upgrading maritime industry Developing an offshore wind energy industry	1.0	0.67	0.67	0.67	0.67	1.0
Southern Denmark	Sotarauta et al	2020	Transformation to a smart city	1.0	0.67	1.0	1.0	0.67	1.0
Scania, Sweden	Norman et al	2020, 2017	Developing a biogas industry Diversifying forest industry to a bioeconomy	1.0	0.67	1.0	1.0	0.33	1.0
Värmland, Sweden	Sotarauta et al	2020	Development of the clean technology path	1.0	0.67	0.67	0.67	0.33	1.0
Tampere, Finland	Sotarauta & Suvinen	2020, 2019	Development of the biotechnology path in Central Finland	1.0	1.0	0.67	1.0	1.0	1.0
Central Finland	Sotarauta et al,	2020, 2019	Development of a regional innovation system	0.67	0.67	0.67	1.0	1.0	1.0
Lower Austria	Benner	2019	Development of a regional innovation system	1.0	0.67	0.67	0.67	1.0	0.67
Bolzano Alto Adige/South Tyrol, Italy	Benner	2019	Development of a semi-formal university collaborative platform	0.33	0.33	0.67	0.67	0.67	0.33
Newcastle City Futures, England	Vallance et al.	2019	Management of an old textile cluster in decline	1.0	1.0	0.33	1.0	0.33	1.0
Prato II, Italy	Chaminade et al.		Management of an old textile cluster in decline	0.0	0.0	0.33	0.33	0.0	0.0
Borås, Sweden	Chaminade et al.		Pursuit of neoliberal policies towards agglomeration	1.0	1.0	0.67	1.0	0.33	1.0
Province of BC, Canada	Van Staden et al.		Pursuit of regional development through investment shifts	0.33	0.33	0.67	0.67	0.33	0.33
The State of WA, Australia	Van Staden et al.		Pursuit of neoliberal policies towards regional development	0.67	1.0	1.0	1.0	0.67	1.0
North West Tasmania, Australia	Fairbrother et al.	2018	Creation of experimental platforms from local initiatives	0.0	0.33	0.67	0.33	0.33	0.33
Westerkwertier, Netherlands	Horling et al.		Creation of co-production spaces and experimental platform	1.0	1.0	1.0	1.0	0.33	1.0
Leeds City Lab, England	Chatterton et al.		Creation of a bioscience cluster	0.67	1.0	0.33	1.0	0.33	1.0
Agder, Norway	Normann et al.	2017	Management of an old mining region	1.0	1.0	0.33	1.0	1.0	1.0
South Savo, Finland	Normann et al.	2017	Creation of green fields	0.67	0.67	0.33	1.0	0.67	0.67
Trent Basin Development, England	Rossiter and Smith	2017	Creation of sustainable green spaces	0.67	1.0	1.0	1.0	0.67	1.0
Nottingham Biotech Sector, England	Smith et al.		Creation of a bioscience cluster	1.0	1.0	0.67	0.67	1.0	1.0
Zaozhuang, China	Hu & Hassink	2017	Management of an old mining region	1.0	0.67	0.33	0.67	1.0	1.0
Fuxin, China	Hu & Hassink	2017	Management of an old mining region	0.33	0.0	0.33	0.33	0.33	0.33
Liverpool City Region, England	Anderton	2017	Development of knowledge intensive industries	0.67	0.67	0.67	0.67	0.67	0.67
Brescia, Italy	Budd et al.	2017	Management of a sports system	0.67	1.0	0.67	0.67	1.0	0.33
Graz, Austria	Budd et al.	2017	Management of a sports system	1.0	1.0	1.0	1.0	0.33	1.0
Maribor, Slovenia	Budd et al.	2017	Management of a sports system	0.0	0.33	0.0	0.33	0.67	0.0
Milton Keynes II, England	Budd et al.	2017	Management of a sports system	0.67	1.0	1.0	1.0	0.33	0.67
Reykjavik, Iceland	Budd et al.	2017	Management of a sports system	1.0	1.0	0.67	1.0	1.0	1.0
Birmingham, England	Horlings et al	2017	Support for innovation in manufacturing	0.67	0.33	0.33	0.33	0.33	0.33
Eindhoven, Netherlands	Horlings et al	2017	Support for innovation in manufacturing	1.0	1.0	0.67	1.0	1.0	1.0
Gippsland, Australia	Fairbrother	2017	Creation of sustainable forms of energy	0.33	0.33	0.67	0.33	0.33	0.33
Twente, Netherlands	Benneworth et al	2017	University engaging in RIS	0.67	1.0	0.67	0.0	0.33	0.67
Tromsø, Norway	Benneworth et al	2017	University engaging in RIS	0.67	1.0	1.0	0.67	0.67	1.0
Oulu, Finland	Benneworth et al	2017	University engaging in RIS	0.67	1.0	1.0	0.33	0.33	0.67
Invercargill, New Zealand	James et al.	2016	Transformation of a small city	1.0	1.0	1.0	1.0	1.0	1.0
Munich, Germany	Evans & Karecha	2014	Fostering economic resilience	1.0	1.0	1.0	1.0	1.0	1.0
Prague, Czech Republic	Blazek et al	2013	Developing an RIS	0.33	0.33	1.0	0.0	1.0	0.0
South Moravia, Czech Republic	Blazek et al	2013	Developing an RIS	1.0	1.0	0.33	1.0	0.67	1.0
Moravia-Silesia, Czech Republic	Blazek et al	2013	Developing an RIS	1.0	1.0	0.33	1.0	0.67	0.67
De Hooge in Groningen, Netherlands	Mullins & Van Bortel	2010	Regeneration of a neighborhood	0.67	0.67	0.0	0.67	1.0	0.67
Lozells in Birmingham, England	Mullins & Van Bortel	2010	Regeneration of a neighborhood	0.33	0.67	0.0	0.67	0.0	0.67
Prato I, Italy	Bailey et al	2010	Management of an old textile cluster	0.33	0.33	0.33	0.33	1.0	0.33
West Midlands, UK	Bailey et al	2010	Restructuring of an old automobile industry	0.67	0.67	0.33	1.0	0.33	1.0
Wheatbelt, Western, Australia	Kroehn et al.	2010	Development of an oil industry	0.67	0.67	0.67	0.67	0.33	0.67
Eyre Peninsula, Southern Australia	Kroehn et al.	2010	Development of an aquaculture industry	1.0	1.0	1.0	1.0	1.0	1.0

Table 4. Truth Table

Row	Agenda	Asset	Autonomy	Network	Leadskills	PL	No. Of Cases	Consistency	PRI	Cases
32	1	1	1	1	1	1	19	1.000	1.000	Flevoland, Amsterdam, Chicago, Melbourne, North Jutland, Southern Denmark, Tampere, Central Finland, Lower Austria, State of WA, Trent Basin, Nottingham, Liverpool, Reykjavic, Eindhoven, Tromso, Invercargill, Munich, Eyre Peninsula
28	1	1	0	1	1	1	10	1.000	1.000	Wuxin, Bristol, Curitiba, Scania, Värmland, Borås, Westerkwartier, Graz, Milton Keynes II, Wheatbelt
24	1	0	1	1	1	1	7	1.000	1.000	Mönchengladbach, Agder, South Savo, Zaoshuang, South Moravia, Moravia-Silesia, De Hooge
12	0	1	0	1	1	1	2	1.000	1.000	Twente, Oulu
16	0	1	1	1	1	1	1	1.000	1.000	Gelderland
31	1	1	1	1	1	0	1	1.000	1.000	Brescia
20	1	0	0	1	1	0	5	0.800	0.800	Milton Keynes I, Newcastle, Leeds, Lozells, West Midlands
1	0	0	0	0	0	0	3	0.333	0.333	Prato II, Fuxin, Birmingham
9	0	1	0	0	0	0	3	0.000	0.000	North Holland, North West Tasmania, Gippsland
5	0	0	1	0	0	0	2	0.000	0.000	Maribor, Prato I
13	0	1	1	0	0	0	1	0.000	0.000	Prague
25	1	1	0	0	0	0	1	0.000	0.000	Province of BC
29	1	1	1	0	0	0	1	0.000	0.000	Bolzano Alto Adige/South Tyrol
2	0	0	0	0	1	?	0	-	-	
3	0	0	0	1	0	?	0	-	-	
4	0	0	0	1	1	?	0	-	-	
6	0	0	1	0	1	?	0	-	-	
7	0	0	1	1	0	?	0	-	-	
8	0	0	1	1	1	?	0	-	-	
10	0	1	0	0	1	?	0	-	-	
11	0	1	0	1	0	?	0	-	-	
14	0	1	1	0	1	?	0	-	-	
15	0	1	0	1	0	?	0	-	-	
17	1	0	0	0	0	?	0	-	-	
18	1	0	0	0	1	?	0	-	-	
19	1	0	0	1	0	?	0	-	-	
21	1	0	1	0	0	?	0	-	-	
22	1	0	1	0	1	?	0	-	-	
23	1	0	1	1	0	?	0	-	-	
26	1	1	0	0	1	?	0	-	-	
27	1	1	0	1	0	?	0	-	-	
30	1	1	1	0	1	?	0	-	-	

4. Discussion of results

This section discusses the general results from the QCA analysis, followed by a discussion of the findings on three different paths and concludes with some theoretical implications.

Table 5. Results for the Intermediate and Enhanced Intermediate Solution

Solution Paths	Consistency	PRI	Raw	Unique	Uniquely covered cases
			Coverage	Coverage	
PATH 1: ASSET*NETWORK*LEADERSHIP					Twente, Oulu, Gelderland, Wuxin, Bristol, Curitiba, Scania, Värmland, Borås, Westerkwartier, Graz, Milton Keynes II,
SKILLS	1.000	1.000	0.711	0.289	Wheatbelt, Nottingham
PATH 2: AGENDA*ASSET*AUTONOMY*					
NETWORK	1.000	1.000	0.444	0.022	Brescia
PATH 3: AGENDA*AUTONOMY*NETWORK					Mönchengladbach, Agder, South Savo, Zaoshuang, South Moravia, Moravia-
* LEADERSHIP SKILLS	1.000	1.000	0.578	0.156	Silesia, De Hooge

Note: Both the intermediate and enhanced intermediate solution resulted in the same three solutions.

In general, the three paths have a consistency reaching a maximum of 1.0, which means that all three configurations are sufficient for the outcome of agency to emerge, confirmed by the PRI score, which is also 1.0. The high consistencies (1.0) and PRI values (1.0) means that the configurations are valid. The raw coverage is highest in the first path, with the combination of conditions covering 71% of the cases, and the second path at 44% and third path at 58%, respectively. Raw coverage here refers to how much of the manifestation of place leadership, is explained by the combination of conditions of the solution path while the unique coverage assesses the weight of this combination of conditions (Ragin, 2009) and refers to how much of the explanation can be uniquely attributed exclusively to a set of conditions (Duşa, 2018). The unique coverage is low across the three paths, which means that these solutions paths are complementary explanations of place leadership.

Path 1 suggests that place leadership can manifest where actors work together with other actors from different sectors to form robust **networks** in order to valorize existing **assets** in places and utilize **leadership skills** in recognizing opportunities for development whilst convincing others to support policy initiatives with funding. In this path, both the conditions of agenda and autonomy are logically redundant. This is possible because assets are used as focal points for development strategies (Bentley et al., 2017; MacKinnon et al., 2019) in lieu of a coalesced agenda. The case of Borås, for example, where a family owned textile industry applied for national funding to modernize their business also became the main development strategy in the region primarily because it was already at the center of economic, work, and community life (Chaminade, Bellandi, Plecher, & Santini, 2019). Although the place leadership literature puts autonomy of local leaders as an important condition for place leadership (Bowden & Liddle, 2018; Broadhurst et al., 2021), this path shows that there are cases where even without autonomy in funding and from steering, place leadership can manifest. This is because new ways of organizing (LG Horlings et al., 2018) can allow policy alignment between the

levels of governance to take place where local leaders can meaningfully participate in the transformation process. The case of Scania demonstrates this where the creation of a biogas sector in an agriculturally rich region was directed by national government steering and funding but local actors like Skånetrafiken actively implemented this process of transformation (Sotarauta, Suvinen, Jolly, & Hansen, 2020).

Path 2 suggests that where **networks** of actors work together, and with actors from a diverse set of sectors and organizations, coalesce their **agendas** and valorize existing local **assets** that represent a broad set of interests, and have the **autonomy** to implement policies, place leadership can manifest. This is possible because the structural strength of a resource rich network in terms of assets, agenda, and autonomy can make exemplary leadership skills logically redundant. This may also reflect, at least in part, the concerted effort in the literature to move away from hero-worship type accounts of place leadership (Beer et al., 2021) where the role of leadership skills are much more pronounced. Path 2 is exemplified with the case of Brescia where a close-knit network of actors from different sectors and organizations work interdependently including the public and private sector, civic society and community organizations to valorize local assets like large sporting facilities and infrastructure (Budd et al., 2017). This is done whilst making a genuine effort to coalesce and represent a plural set of interests in the management and development of their local sports system. The co-dependency of actors in the network overcame the disadvantage of weak local leadership skills with its hierarchical style and lack of co-production of events with civic society and its prioritization of short-term interests over long-term goals (Budd et al., 2017).

Path 3 suggests that places without assets or are beset with problematic assets in severe decline, outcome of place leadership can still manifest. This is possible where strong **networks** are able to work across different sectors and organizations to mobilize resources for policy initiatives, have the

leadership skills to convince other actors to support policy initiatives, and the **autonomy** to implement policies and forward a unified **agenda** that represent community interests. Some of the cases uniquely covered by this path, as **Table 5** shows, have assets like old industrial areas in severe decline such as Mönchengladbach (Herzog & Hamm, 2021), and Moravia-Silesia (Blažek et al., 2013) or an over reliance on natural resources at risk of depletion like in Zaozhuang (Hu & Hassink, 2017). Place leaders have attempted to implement policies for new development strategies, which can facilitate a break from previously problematic trajectories of development, such as the creation of regional innovation systems, creation of green fields, or completely new industries to the region. Zaozhuang, for example, reinvented itself from a coalmining town on the verge of resource depletion into a tourist town by mobilizing network resources (Hu & Hassink, 2017).

The three paths above show that the common conditions pointed to in the literature need not all be present in one place for the possibility of place leadership to manifest. Moreover, different places can share the same paths in enabling instances of place leadership to manifest. This implies that paths to place leadership are possible to replicate. However, this process is by no means automatic. It bears repeating that the presence of these combinations of conditions only enable the manifestation of place leadership and does not guarantee it. Outcomes depend on whether causal powers are activated by actors engaging with their specific context (Rutten, 2021). Moreover, the results show that there is consensus in the literature that networks are a necessary condition for manifesting place leadership. It was found in every path where place leadership manifested in actual cases observed in the metadata. However, while it is a necessary condition, it is not a sufficient condition to manifest place leadership.

5. Conclusion

This paper set out to answer the question ‘which conditions enable the manifestation of place leadership’. This paper finds there are three solution paths that enable place leadership. Path 1

combines networks, assets, and leadership skills. Path 2 combines agenda, assets, autonomy, and networks. Path 3 combines agenda, autonomy, network, and leadership skills. These findings constitute this paper's main theoretical contribution to the place leadership literature. Having three paths suggests that no one condition can guarantee place leadership to manifest. Instead, combinations of conditions in places can make it possible for human actors to engage with their context and enable launching meaningful policies to transform places. The three solution paths and the cases they cover also imply that while it is possible different places share the same paths, there is no one single recipe for activating place leadership so care must be taken in recommending the replication of success stories without first examining place specificities and the unique context in places.

Policy recommendations should take the solutions paths laid out in this paper into consideration when looking at specific types of regions and recommending how to build up capacities to transform their local economies. Path 1 suggests, for example, that autonomy is not necessary for some regions to manifest place leadership provided there are strong networks with good leadership skills to manage the assets of places. This is surprising considering how, for example, the abolition of regional governing bodies in places like the UK have been devastating for some of their regions (Pike et al., 2018). Future research should look more into how and why new ways of organizing (LG Horlings et al., 2018) can overcome this deficit in autonomy. Another surprising result is that Path 3 suggests, for example, that small regions, that are not resource rich, need not despair and should focus on building up other conditions that can enable place leadership. Furthermore, while all the solution paths show that strong networks are a necessary condition for place leadership to emerge, policy recommendations in building up this condition must emphasize that networks alone cannot guarantee successful place leadership and instead should be developed in combination with other conditions.

This paper also set out to answer calls for methodological innovation in using QCA, not for its own sake, but in the service of accumulating knowledge from the case study rich literature on place leadership. It has done so by conducting a meta-analysis using the QCA process that permitted a systematic comparison of cases and generated a synthesis of the findings from the extant literature as shown in the truth table and in the results from the intermediate and enhanced intermediate solution. This synthesis contributes an accumulation of the insights from a hefty empirical material spanning more than a decade worth of case studies available in the place leadership literature. As such, this paper finds that QCA is a fruitful method to use and future research to take up the method further.

One observation from the metadata, not really captured by the results, was that while networks are said to need to be inclusive of actors from civil society and work with traditionally marginalized actors (Fairbrother et al., 2018), in practice, inclusivity does not seem to be necessary in strengthening networks of actors to engage in policy initiatives. This raises questions on 'place leadership for whom' and whether the equitable distribution of benefits resulting from development is reaching and impacting the lives of different groups of people who need it the most, and which actors are being crowded out from platforms of decision-making. Virtually, all the places in the metadata set struggled to include different citizen voices in the making of their overarching development strategy as well as in implementations. It begs the question then whether local economic transformations are at risk of sidelining the interests of vulnerable groups. More research is needed on whether and how the formation of networks and agendas can lead to socio-economic inequalities and the uneven landscapes of development.

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