Replication Data (RD) for Temporary Use Stabilization: Fuzzy-Set Qualitative Comparative Analysis (fsQCA), Calibration and Raw Matrix

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RD 1.0 Fuzzy-Set Qualitative Comparative Analysis (fsQCA)

In consideration of the attention that has been brought to the transparency for how research have determined set membership thresholds or degrees of membership, treated excluded versus absent outcome as well as choices contributing to calibration , the following table takes inspiration from visualizations from Pagliarin et al. (2019), in addition to procedures from Basurto and Speer (2012) as well as Gerrits and Verweij (2013; 2018) in an attempt to make explicit how the analytical step from qualitative data to set membership codes was made. This step, also referred to as the calibration, transforms the qualitative data from primary and secondary sources (such as interviews, relevant policy and popular literature; refer to specific references listed in section RD 1.1 of the replication materials by Chang and Gerrits (2021)), into analytically matched thresholds and fuzzy-set scores . These initially populate a raw data matrix (RD 2.0), which undergoes further iterations of calibration through which the matching of coded and qualitative analyses becomes more precisely matched to set membership scores. This also draws on theoretically grounded and inductive insights, as well as empirically gathered observations and thus abductive insights from the cases studied.

The table below provides a sample temporary use case, for which consent was provided to share details of their analyses and interviews. The table details *Plantage 9 e.V.* temporary use initiative, the period during which the case study was interviewed and considered, as well as the initiative's rental and contractual situation reflecting that period. Also outlined are the factors, outcome conditions and indicators considered in the process of calibration. These informed an initial set membership score that marked scores derived from the first round of coded analysis. A final set membership score denotes confirmed values following inter(coder) procedures (Robin A. Chang & Gerrits 2021), consultation with other references, as well as cross-case considerations such as other obvious anchor point instances.

RD 1.1 Sample Calibration

Details below are provided with the consent of the Interviewees.

CASEID	TU 36
Project Name	Plantage 9 e.V.
Summary of Project	Plantage 9 e.V. (previously *Bricolage Plantage*) is a collective of roughly 30 users within a single building that has an area of 1,600 square meters based in Bremen (DE). The building was built in the 1950s for a textile factory, and was later taken over by a company producing fires safety equipment. The collective is composed of a diverse mix of entrepreneurs, artists and students and was established in 2010 after the Bremen temporary use intermediary, ZZZ, rented 50% of the building for an experimental year of temporary use. The rental value was assessed at 1€ per square meter initially. ZZZ had 3-years worth of financing to manage the building and its users before transitioning the management to the Economic Development Agency of Bremen in 2011. Along with this transition, the temporary users created their own registered society to oversee and negotiate the rental details for the entire building on behalf of all the users. In parallel, the rental value has normalised and is now assessed at about 5€ to 6€ per square meter. After several contract renegotiations, the initiative now has an unlimited rental contract and aims to develop the initiate as a site-specific "Künstlerhaus", also understood as a cultural and artistic residency or centre.
Period of TU Considered	2015 - 2019
# of Renewals	3 contracts, 2 renewals, last contract has no expiration date but a clause requiring 3 months notice for termination

Factor & Outcome Condition	**Set Membership Description**	**Indicators**	**Importance and affect on set membership calibration**	**Initial Set Membership Score (Derived from Coded Analysis)**	**Final Set Membership Score**	**Annotated Description**
Risk Perceptiveness	Cases demonstrate awareness for their	Active efforts to find new locations or new partnerships for temporary uses.	high and positive	0.33	0.33	As of 2018, the users of the space at Plantage 9 are no longer actively searching to find new locations or promote awareness about their initiative's transition from temporary to permanent use. This is a contrasting situation compared to 2009 when the initiative was established through the temporary use intermediary of Bremen and all users new they had to find a new location after the experiment ended.

	weaknesses and pre-emptive positioning in relation to upcoming challenges.	Availability of established client base, external funding or parallel sources of employment	high and negative			Most users are or have become established as businesses during their time at Plantage 9 e.V. One interviewee, Valeska Scholz, is an independent graphic illustrator who moved onto the site in 2010. The other interviewee, Ole Mollenhauer, joined Plantage 9 e.V between 2011 and 2012 as it was still being managed by ZZZ. He also was already established as an independent web developer.
		Sense of urgency expressed in relation to need for next location.	high and positive			There is little sense of urgency since the users of Plantage 9 e.V. now have a contract with an indefinite term. Even though there is a clause within the contract that permits the contract grantors (Economic Development Agency of Bremen) a period of 3-months to terminate the contract and request the users leave the premise, the interviewees are confident that this would not be done as it would not be politically acceptable. Even more so, considering the extent of public awareness that has been raised regarding the initiative and its aims to establish itself as a "Künstlerhaus". This could be translated as a cultural or artistic residency. The only instance in which this could be invoked is if the city follows through with the aims delineated by the official land use plan to build a cul-de-sac. According to their contract grantors, these plans, however, might not be realised because of a difference in height that would undermine the construction of the road. At the same time, the parcel is located in a mixed-use area that could potentially be subjected to rezoning or redevelopment for housing. The parcel serves as a buffer between inner-city industrial lands and the proposed housing area. The final decision for developing the area also depends on the fate of the incremental planning and how the space serves as a transitional area between contrasting uses. Moreover, the contract terms have also be adjust over the previous years to gradually update the rent so the base rent will increase one final time in 2020. At this point, the users will be paying the equivalent of market-rent after incremental increases of roughly 30%.
Entrepreneurial Management	Cases have established management practices for their enterprises.	The extent of experimentation.	high and negative	0.67	0.67	The mix of uses at the beginning was extremely diverse. These ranged from artists, to conventional entrepreneurs to bike retailers, vegan culinary start-up, tactical climbing & rappelling specialists, graphic and media designers, as well as photographer, therapists, event managers and students. Most of the users had never been members of a temporary use initiative before. The temporary users also had no experience with self-organizing and self-governing, which they learnt as the initiative evolved. Even the governing board was restructured as a result of the first iteration of self-organizing and self-governing experiments.
		The centrality of aims to professionalize.	high and positive			There is an expressed aim to transition into a "Künstlerhaus". This presents a specific and cleaner profile than a temporary use. It is also an artistically and culturally more nuanced way of presenting themselves than an incubator or co-working space. This was explicit in the description of how they communicate about themselves to the Economic Development Agency. In this light, consideration of how to professionalize themselves is evident in their communication and marketing of their initiative in its current state. Prior to this, the collective of temporary uses formed a legal entity after the temporary use agency (ZZZ) supported the temporary use for a period of just over a year. This process of formation and organization also took about a year and was an outcome out of shared interests from the users to become more independent. This registered society is governed by a board of five representatives from all the users at Plantage 9 e.V. Professionalization here is relevant not only for the presentation and marketing of the initiative but also for the structure and organization of the initiative.
		Pervasiveness of growth mindset and plans for branching use or concept.	high and positive			There is no explicit expression for a need to grow or branch out into different spaces. The representatives of the initiative reveal there is more fluctuation in the number of longer-term members, however. So, despite being spatially stabilized and operationally established, there are internal fluctuations which might speak against the integrity of the stability.
Interactive Attachment	Cases that are socially interactive in a manner that fosters a sense of belonging and identification with the site.	Presence and regularity of opportunities for local and recreational interaction and engagement.	high and positive	1.00	1.00	At the beginning, there was a concentrated effort to engage users and also network and interact with neighbours in the area. This resulted from the desire for independence and sense of community that paralleled the formation of the society. The efforts were directed at organizing open-house events to raise awareness about the initiative and also garner support for their long-term presence and prove their legitimacy to the public administration. This still continues through the governance structure and organization of the board, which delegates invites but also delegates responsibilities to members of the society. For this structure, there is a rotating schedule of roles and the members meet monthly. More socially, the share meals together in the kitchen. This micro social exchanges are valued by some of the users. They also organize a couple of social events outside of the meetings for operational and governing purposes. Examples of these meetings include coming together for drinks or setting up new projects for fun. **This is an anchor point instance.**

		Presence and intensity of local and professional interaction and engagement.	low and positive			Little discussion of interaction that is oriented towards collaborations between the different enterprises of the users. However, these do exist. The majority of the interaction is about stabilizing and sustaining Plantage 9 e.V as the broad initiative that enables them to locate their work at a single site for the long-term.
		Expressions of belonging or identification with the milieu, its members or the area.	low and positive			Valeska and Ole identify with the community of users based within Plantage 9 e.V. There is a prioritization of this collective and their membership within it. This, however, does not extend beyond the initiative. While there have been open-house events, the purpose was to leverage public support and not necessarily because their initially identified with the area. Interestingly, they do not identify themselves as "temporary users" - at least not anymore. According to the temporary use managers, the initiative was originally called "Bricolage Plantage" and later renamed by the users themselves as "Plantage 9". This process helped them form and solidify their own identity.
Adaptive Capacity	Cases are ready or exhibit on-the-go ability for change and learning.	Active pursuit of new challenges and opportunities.	high and positive	1.00	1.00	Valeska definitely demonstrates a strong degree of adaptive capacity as a pioneer of the initiative, who left, and then came back. Together with Ole, she and others took on the challenge of learning about how they could work collaboratively to stabilize Plantage 9 e.V. This process was not without challenges that demanded re-orientation in how they structure the group, organized their own initiative budgets and events. As well, there is clear sense of critical honesty about how the process was not always smooth, but that they were and are still need to exploring new ways of working together. **This is an anchor point instance.**
		New skills or knowledge acquired.	low and positive			With regards to self-organization and self-governance, the users at Plantage 9 e.V. exhibit new skills and knowledge that they acquire. These are relevant for their individual contributions as well as collective contributions. For the former, Valeska and Ole both demonstrate individual commitment to how they have learned about their own learning processes in relation to the establishment of the initiative. For the latter, they both share surprise at the extent of conflict as well as cooperation in managing such a heterogeneous group. There is also evidence of new learning about planning and political processes insomuch as it relates to the development of their site. Lastly, in the face of changing points of contact for (ZZZ to the Economic Development Agency of Bremen), they have also gone from one rental dynamic to the extreme opposite. This also demands a new social skill-set.
		Sustained impact from new skills and knowledge acquired.	high and positive			In learning a range of competencies and skills, ranging from identifying/setting individual boundaries, to structuring and governing Plantage 9 e.V., there is clear evidence that the users are integrating their new insights into their self-organization and self-governance. This helps improve the trajectory the overall initiative's establishment, which is a prerequisite enabling their own work. Valeska shared how her break from the initiative allowed her to come back with a new perspective on how to resist taking on too much work. In realizing this, she starting to delegate more after her return and share responsibilities with others. The others were also receptive to this. The board also experimented with the management and budgeting of utilities (heating and electricity). This was a particular challenge since certain users had spaces or use profiles, which initially were not appropriately represented in the final invoices. In 2015, they installed counters on each of the units to more precisely track usages and estimate costs. They have also incorporated a solidarity fund to help support users who might not be able to afford the utility experiences. This recent model is a result of many different models of cost splitting and record-keeping. At one point, they realized that they were dissatisfied with the constant and manual record-keeping. The aim of this was to de-centralize the task and more fairly take into account the individual uses. This proved difficult too, which was why counters were eventually installed for the heaters. This has yet to be done for electricity which as to be divided by a per area ratio. **This is an anchor point instance.**
		Reliance on social network or the milieu resources for new skills and knowledge.	low and positive			From the new skills learned as well as the sustained impact of the skills and knowledge acquired, a clear sense of mutual reliance is evident within Plantage 9 e.V. This is particularly relevant in how they develop the competencies to cope as a group but also negotiate with different actors to facilitate their long-term and normalised rental rates and status.
Functional Compatibility	Cases are co-located with consideration for functional	Extent of conflict as a result of neighbouring uses.	low and negative	0.67	0.67	There seems to be little conflict between uses on site. The only conflicts that have been discussed are second order issues that result from utility costs and the lack of a fair and transparent costing system.
		Expressions of ambivalence for the characteristics and qualities of the space.	low and negative			For the temporary use agency, the size of the building was important as it provided and economy of scale for the number of users. As well, the heterogeneity of the space was an advantage - it could serve a range of uses from storage to working and office spaces. This responded well to their list of diverse users at the time.

	consistency and synergy.	The presence of interview processes for users and uses.	low and positive			The initial set of temporary users were filtered by the temporary use agency ZZZ. There was some consideration of the range of uses, but no strict concept to recruit or curate a programme for the space.
		Users and users were recruited by intermediaries or the municipality.	high and positive			ZZZ as the contracted intermediary of the municipality was responsible for finding users to fill the space. **This is an anchor point instance.**
Municipal Support	Cases are supported actively by municipalities.	Positive reception of the temporary use and its user(s) by the public administration and its representatives.	low and positive	0.67	0.67	There is definitely a positive reception to temporary use and Plantage 9 e.V. in general. ZZZ is funded by the public administration has also admitted that awareness for temporary use is growing in Bremen. It is no longer only public properties that are now available, but private owners are also coming forward to provide space for temporary use. The Economic Development Agency, which is the current point of contact for Plantage 9 e.V. is still open to leasing the property to the initiative, even if its profit-oriented philosophies are not quite met by the non-profit mandates of Plantage 9 e.V.
		Reactivity of the public administration to concerns and inquiries from the temporary users.	low and positive			Initially, through the ZZZ, the public administration was extremely supportive of Plantage 9 e.V.. They even provided €100,000 worth of building upgrades, which the current rental increases is amortizing.
		Presence of a publicly funded intermediary or a point of contact for temporary use.	high and positive			ZZZ is a contracted temporary use intermediary that has been in existence since 2009. They are not only point of contacts for temporary use projects in Bremen, but also consultants for other projects within and out of the region.
		Integration of temporary use as a priority and part of public funding and bureaucracy processes.	high and positive			According to Bremen public administrative representatives and the ZZZ, there is a steering composed of various departments that convene regularly to address temporary use issues in Bremen. These cover topics such as supply of buildings, collaborative solutions to ease bureaucracy amongst many others. As an advisory group, they meet twice a year and include representatives with a mix of representatives. Some have decision-making powers, while others are more channels for communication. Planning and economic development departments are strongly represented.
Spatial Affordance	Cases relate and engage with their physical space	Satisfaction with access to site.	low and positive	0.67	0.67	The temporary users are satisfied with the access to the site. At the beginning, this was attributed to the low cost of rent. This has since become a lesser priority since the rent values are normalizing and the emphasis seems to be on the collective.
		Flexibility in permissions for material changes and improvements to site.	low and negative			During the initial phase of the temporary use, the collective along with the temporary use agency had to bring much of the building up to code. This was also a requirement from the Economic Development Agency. This included improving the building with enough emergency exits (in relation to the increase in number of studios) so that it satisfied fire safety regulations.
		Access to and availability of other ancillary uses or advantages.	high and positive			A common dimension from both users and the intermediary is the heterogeneity of the spaces. These allow for a range of uses including office, studio and storage space. A common kitchen area is also in the building.
		Intellectual and inspirational feedback between the site as well as the temporary use and its user(s).	high and positive			Valeska mentions that in addition to the monthly meetings, they do have some trans-disciplinary projects that bring the initiative together. While the inspiration does not seem to contribute to the specific uses, there does seem to be a collective-centric learning process that has been transformative.
Spatial Stabilization (Outcome Condition)	Cases exemplify stabilization that is committed to one location and appears temporally and spatially synchronised.	The users have has previously relocated with the same use.	high and negative	1.00	1.00	Valeska has was based out of Plantage 9 e.V. before moving away and coming back. Ole amongst others already had their own established enterprises that they brought to Plantage 9 e.V. **This is an anchor point instance.**
		The users have the need to look for a new site.	low and negative			Not necessary as they have a permanent rental contract.
		The users are explicitly hope to stay at their current site.	high and positive			Users hope to stay on the site and communicate that they have the opportunity to stay.
		The users are the owners of the site.	n/a			Not applicable.

		The users have an unlimited contract to stay at the site.	high and positive			Yes. After a number of renewals, the initiative now has an unlimited contract. **This is an anchor point instance.**
Spatially-detached Stabilization (Outcome Condition)	Cases exemplify stabilization that makes use of several locations and appears temporally and spatially syncopated.	The users have previously relocated with the same use.	high and positive	0.00	0.00	Valeska has was based out of Plantage 9 e.V. before moving away and coming back. Ole amongst others already had their own established enterprises that they brought to Plantage 9 e.V. **This is an anchor point instance.**
		The users have no need to look for a new site.	low and negative			Yes. After a number of renewals, the initiative now has an unlimited contract. **This is an anchor point instance.**
		The use demands relocation to further expand the use.	n/a			Not applicable. Outcome is absent. **In cross-comparisons with ZZZ, for instance, this instance is absent.**
		The use demands relocation to further develop or evolve the use.	n/a			Not applicable. Outcome is absent. **In cross-comparisons with ZZZ, for instance, this instance is absent.**

RD 1.2 References

Basurto, X. & Speer, J. (2012) Structuring the Calibration of Qualitative Data as Sets for Qualitative Comparative Analysis (QCA). *Field Methods* **24** (2), 155–174.

Gerrits, L. & Verweij, S. (2018) *The Evaluation of Complex Infrastructure Projects: A Guide to Qualitative Comparative Analysis*. Edward Elgar.

Pagliarin, S., Hersperger, A. M. & Rihoux, B. (2019) Implementation pathways of large-scale urban development projects (lsUDPs) in Western Europe: a qualitative comparative analysis (QCA). *European Planning Studies* **49** (3), 1–22.

Robin A. Chang & Gerrits, L. (2021) *Replication Data for: Temporary Use Stabilization - Background and Descriptive Data for Temporary Use Case Studies, Interviewing, Transcription, and (Inter)Coding Procedures,* V1. Harvard Dataverse, Boston.

Verweij, S. & Gerrits, L. (2013) Understanding and researching complexity with Qualitative Comparative Analysis: Evaluating transportation infrastructure projects. *Evaluation* **19** (1), 40–55.

RD 2.0 Raw Matrix

Case ID	RP	EM	IA	AC	FC	MS	SA	SS	SDS
TU33	1	0,67	0,67	1	1	1	1	1	1,00
TU34	1	1	0,67	1	0,33	1	0,67	1	0,00
TU35	1	0,67	0,67	1	1	1	1	1	0,00
TU36	0,33	0,67	1	1	0,67	0,67	0,67	1	0,00
TU37	1	0,67	0,67	1	1	1	1	1	0,00
TU38	1	0,67	0,67	1	1	1	1	1	0,67
TU39	1	0,67	0,33	1	0,67	0,33	1	0,67	0,33
TU40	0,33	0,33	1	1	1	0,67	0,67	0,33	0,33
TU01	1	1	1	1	0,67	0,33	0,33	1	1,00
TU02	1	1	0,67	1	1	0,33	0,67	0,67	0,33
TU03	0,33	0	0,67	1	0,67	0	0,67	0,67	0,33
TU04	0,67	0,67	0,67	0,67	0,33	0	1	0,67	0,67
TU05	0,67	0,33	0,67	0,67	0,67	0	0,33	0,67	0,67
TU06	1	1	1	1	1	0,67	1	1	0,67
TU07	0,33	0,67	1	0,67	0,67	0	0,67	0,67	0,67
TU08	0,33	0,67	0,67	1	0,67	0,33	0,67	0,67	0,33
TU09	1	1	1	1	0,67	0	0,67	0,67	0,00
TU10	0,33	0,67	0,67	0,67	1	0,33	0,67	0,67	0,00
TU11	0,33	0,33	1	0,67	1	0,33	1	0,67	0,00
TU12	1	1	1	1	1	1	1	1	0,00
TU13	0,33	0,67	0,67	1	0,67	0	1	0,67	0,67
TU14	1	0,67	0,67	0	0,33	0	0	0	0,33
TU15	1	0,33	0,67	1	1	1	1	0,33	1,00
TU16	0,33	0,67	0,67	0,67	0,67	0,33	0,67	0,67	0,33
TU17	0,33	0,33	0,33	0	0,67	0	1	0	0,67
TU18	0,33	0,67	0,67	0,67	0	0	0	0,67	0,00
TU19	1	0,67	0,33	0	0,67	0	1	1	0,00
TU20	0	0	1	1	0,33	0,33	0,67	0	0,00
TU21	1	1	0,67	1	1	0,67	1	1	1,00
TU22	1	0,67	0,33	1	0,33	0,33	1	1	0,33
TU23	1	0,67	1	1	1	0,33	1	1	0,33
TU24	0,33	0,67	0,67	1	0,33	0	0,67	1	0,33
TU25	1	1	0	0,67	0,67	0	0,67	1	0,00
TU26	0,33	0,67	0,33	1	1	0	0,67	0	0,67
TU27	0,33	0,67	0,67	1	1	0,33	0,67	1	0,33
TU28	0,33	1	0,67	0,67	0,67	0,33	0,67	1	0,00
TU29	0,67	0,67	1	1	0,67	0	0	1	0,00
TU31	0,67	0,67	0,33	1	1	0	0,33	1	0,00
TU32	0	0	0	0	0,33	0,33	0	0	0,00
TU30	0,33	1	0,67	0	1	0,67	0,67	1	0,00