Article

Meeting Up Together: Economic Embeddedness of Social Capital in America

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Abstract: Where do people meet? And how does their region's wealth effect where they meet? Investigating these patterns across the United States, we explore community organization and association venues based on data provided from Meetup.com. Examining how individuals associate for business, social, and cultural reasons, we discover that a region's median income significantly affects the type of venue for the meeting. However, certain types of associations centered on a select group of topics mitigate that effect. We discover that in the United States, personal social capital that is built and maintained “in person” is deeply embedded in commercial activities. As a result, access to various types of community is often limited to economically advantaged geographies.

Keywords: dataset; online social network; social capital; embeddedness

1. Introduction

Community, or the phenomenon of collective association, has acted as the keystone of most social science research. Classical sociological scholars (Marx, Weber, Durkheim) were particularly interested in how individuals collectively gather together, the consequences of those gatherings, and the externalities of those gatherings in communities. Quite a large portion of such work investigates how modernity would affect solidarity and community bonds, the weakening of Gemeinschaft, and the prominence of instrumental rationality against other forms. While they often contradicted each other in their philosophical assumptions, there was a shared implicit belief that modernity was causing a breakdown of community. This concern with the breakdown of community has remained ever since the early 20th century, with countless studies and theories explaining its disappearance.

Community, however, is embedded in the localities and the physicality of presence, and the communication structures in which relationships are established. The locations where individuals are permitted to assemble and the barriers to that kind of congregation play a sizable role in the outcomes of that congregation. For instance, one cannot expect insightful work from a book club hosted at a construction site. Similarly, finding access to spaces that require financial cost reasonable to all members is contingent on several socio-economic conditions that may or may not be present in the community. Accordingly, social capital development is contingent on the spaces for relationship building and the network processes that underlie its development.

This study examined the relationship between certain types of civil associations and groups and their selected venues of choice. In this vein, our explorations examined the interplay between various classifications of social groups such as book clubs, religious groups, and family support groups. We also explored the nature of the events at certain venue types such as arts and entertainment, outdoors, and personal residences. For all of those categories, the study focused on the socio-economic embeddedness of the group within a particular zip-code to determine the overall wealth of the specific community.

One of the cornerstones of public life is the act of meeting together with others. Whether for business, recreation, or socializing, the act of gathering with others in public and private venues has and will continue to be a keystone of American living. The location of the gathering is bound to change over time, and keeping track of where people meet is...
just as crucial to understanding American life as the values and beliefs that individuals and groups hold. This study provides a snapshot of that gathering across the country, looking at venues and group characteristics from the continental United States. We examine millions of events across a single year in hundreds of thousands of venues to provide a slice of the current civic life of American individuals. In it, we show how urban density, proximity, and a region’s wealth affect the choices of venues that individuals make to gather. We locate how group gatherings are embedded within economic and density factors that contribute to selection.

It is important to note that the examination performed investigated a period before the COVID-19 pandemic, where in-person social patterns were essentially unchanged. Had this investigation examined events during the pandemic years, the behavioral pattern would undoubtedly be vastly different from the findings demonstrated in this paper. Accordingly, readers should consider that such behavioral findings are the product of the culmination of decades of uninterrupted physical meetings and congregations. Future work could investigate how the pandemic changed the current patterns of association into virtual venues or the closure of opportunity of association for significant numbers of civic associations.

In this research, we examined the relationship between certain types of groups and the choices of venues for those groups. While some of the options are self-explanatory due to the nature of the group, others are often muddled by the local economics of venue availability and result in a broader array of possibilities. Accordingly, we proposed that (H1) urbanity, the closeness to a metropolitan area, has a significant effect on the community meeting place, and (H2) a region’s median income affects the choice of venue. We were interested in this approach to studying the location of the community through this vector. It allows for locating social capital in time and space outside of the ambiguity of the digital realm.

2. Background

Community organization, or non-economic collective organization, plays a significant role in the well-being of a given community. From the social ties built and maintained through non-occupational association to the multi-faceted social capital held through in-person attendance at civil associations, meeting up in person has several positive effects on local communities. Foremost of these are the (1) building of social capital and (2) supporting local venues that allow for organization. Both of these facets serve to reinforce each other when in full force.

2.1. Social Capital

The concept of social capital is derived from the general formulation of accumulation, a force in which a capacity is aggregated through various containers. The deployment of that capacity is, in effect, the utilization factor in the enactment. Early in the 20th century, that documentation of accumulation was formatted by sociologists (Becker 2009) and economists (Schultz 1961). It was later expanded upon by sociologists working off the Weberian and Marxist lines of thinking to formulate a line of social theory that incorporated the elements of accumulation as a means to power outside of the economic realm. Bourdieu (2011) and Coleman (1988) brought the term to its public presence, incorporating it into larger volumes on social theory (Coleman 1994). Bourdieu (2011, p. 248) summarizes the concept as follows: “Social capital is the aggregate of the actual or potential resources which are linked to possession of a durable network of more or less institutionalized relationships of mutual acquaintance and recognition—or in other words, to membership in a group”. In addition to the existing network (nodes and edges), Bourdieu (2011, pp. 249–50) adds that such a network or accumulation entails “transforming contingent relations, such as those of neighborhood, the workplace, or even kinship, into relationships that are at once necessary and elective, implying durable obligations subjectively felt (feelings of gratitude, respect, friendship, etc.)”. The element of contingent relations and the physicality of contingency
is important for our purposes when it comes to the building up of social capital and the relationships that such accumulation entails.

Contingent relationships, in many ways, can be thought of as the barrier to the accumulation of social capital. Some individuals are born to a network of relationships; others have to make those relationships happen outside of the circumstances in which they were brought up. Contingency in building potential social capital is embedded within the physical place, but more recently in the virtual place, in which the spaces where people inhabit can be digital. Because of the impermanence of digital spaces and collapse of distance (Harvey 2020) through the use of digital forms, access to a broader network of individuals is capable. Those individuals, on the other hand, do not have the strength that comes from physical contingency. Instead, they have a strength that comes from network power (Castells 2013) and the bridging power to a more extensive network area (Granovetter 1973). Digital technologies that leverage both the strong ties built through physical contingency and those aggregated through digital ephemerality can be even more effective in creating social bonds. Recent work has highlighted how physical space still plays a significant role in tie formation, despite the digital connection (Lengyel et al. 2015). Such geographic distance, to some degree, has an impact on the strength of the tie, especially when it comes to the connections that are geographically proximate (Goldenberg and Levy 2009).

2.2. Hybrid Communities

Communities that intertwine physical spaces with online spaces are often referred to as hybrid communities (Fox 2004), where the boundaries are porous and hard to define (Koch 2004). These spaces typically involve a digital platform (website, mobile application, or messaging system) that unites individuals with shared interests, physical location, or other contingency to interact. That platform incorporates physical in-person presence as part of the offerings to its users, either in the form of organization of events or in the collection of pre-existing physical events that unique attendees who might not otherwise have the chance to connect due to the particularities of the gathering (Zhao 2006).

There are several positive benefits to the membership in hybrid communities, that range from the transformation and building of social identities related to their physical residence (Gaved and Mulholland 2005), to enabling connections to other individuals residing in their locale (Hampton 2007). There is evidence that hybrid communities promote stronger community bonds (Hara 2008) as well as increase civic and political activity (Weinberg and Williams 2006). The sharing of contingent space in the physical world offers opportunities to connect with individuals in these hybrid spaces with greater ease through shared physical experiences.

For these communities to thrive, there must be sufficient incentives to participate in its members’ offline and online gatherings. Individuals must engage either online or in person, but they also must engage other individuals in the transitions between these spaces. They can do so by inviting individuals online to in-person events, continuing a conversation or engagement from in-person to an online forum, or a host of other actions that manage the transition layer between these two modalities. While some online communities can supplement an existing physical community, as individuals who experienced social distancing during the COVID-19 pandemic can confirm, a lot of communities are not supplements to a physical experience but an enhancement of the experiences.

2.3. Meetup

Meetup.com is one of the largest platforms that cater specifically to the hybridizing of physical and digital communities. While some larger online platforms such as Facebook offer similar features that enable hybrid spaces, Meetup is unique in its specialization of hybrid communities. The online web application’s core features allow users to create groups, schedule in-person meetings and invite individuals from those groups to those meetings. Users of the platform have a digital message board to post messages before and after the meeting and a social network to connect to other individuals within those groups. The platform was launched in 2002, nearly 20 years ago, and has remained a viable
business even throughout the pandemic, despite the challenges to its business model. As of 2 years ago, it had 49 million members (Newcomb 2019).

It’s network has been shown to support political organization (Weinberg and Williams 2006), social capital (Sander 2005), group definition (Lai 2014) as well as psychological well-being (Vaughn 2015). Previous work has demonstrated that these effects are capable through their utilization; however, they do not provide a large-scale analysis of the embeddedness of these effects within a particular community or locality. The capacity for social organization is likely contingent on the regional space that surrounds the hybrid community. The geographical contingencies necessary for the development of social relationships and, ultimately, social capital, are bound by the particularities of geography.

3. Methods

To explore these gaps, this research project examined how particular types of spaces had an effect on the choices of place for certain types of meetings. The research explored the overall distribution of venues across the United States to understand how individuals using these hybrid spaces selected and promoted particular venue types over others. Similarly, it explored how certain groups selected certain types of venues over others, as well as the most common venues for certain group types. Diving deeper into the analysis, the research examined how income played into the venues that were selected, seeking to understand how certain venue types may be exclusive to certain neighborhoods with higher median incomes. Lastly, the research examined how urbanity or the community density played a role in the type of venue that is selected for certain group gatherings. These research areas brought to light a number of findings that demonstrate the particularities of social capital embeddedness for hybrid communities.

It is important to note that the investigation undertaken was exploratory in nature, not seeking to identify causality in the mechanisms in which environment affected behavior. It can be argued that territorial conditions influence social practices, but equally, the reverse argument can hold true. Additionally, demographic information about the constitution of a meetup group is unavailable. Without such information highlighting the similarity of groups, it is impossible to determine a causal nexus through which to draw conclusions.

Data Collection

Event data were collected from all Meetup.com groups in the continental US to obtain the necessary data for the analysis. An API account was created, and data collection scripts were built to periodically request information from Meetup.com’s servers according to their terms of service. Event data were collected by requesting all the events within a zip-code from the continental United States using a geo-boundary. To limit the amount of data needed for processing, we chose a 1-year window of time. As previously documented, the window of events was chosen to be prior to the COVID-19 pandemic, as the 2020–2021 time frame vastly disrupted behavioral patterns when it comes to in-person gatherings. While Meetup does offer online-only events, we limited the event period from 1 April 2019 to 1 April 2020 and to events that had an in-person rather than an online meeting. This exclusion ensured that we selected communities that were exclusively hybrid rather than simply online-only interest groups. As Meetup.com does not classify event venues as belonging to a particular category, a separate classification project was undertaken to categorize each event venue. We utilized the Foursquare Places API (Places API n.d.) for each of those venues to classify the location as belonging to a specific type of location (park, lodging, book store, etc.). The Foursquare venue categories are classified into tree format, with sub-categories belonging to parent categories. Each of the venues’ sub-categories and parent categories were classified. Next, the study added an ordinal level of urbanity based on the US Department of Agriculture’s classification (USDA 2013). That ordinal level of classification defined by the US Department of Agriculture, named ‘Rural-Urban Continuum Codes’, has been in place since 1974, and breaks down various regions of the country by their population levels and the adjacency to a larger urban metro. Lastly, for each of the event zip-codes, we sought to obtain median income data to provide a sense of
the region’s wealth in which the event would take place. To do so, we cross-tabulated those events with median income data provided by the 2010 US census (USC 2010). Ultimately, the data were stripped of behavioral identifiers and personally identifiable information and made available for analysis. This resulted in 1,142,219 events distributed throughout the United States.

4. Findings

In general, the findings for the study can be broken down into three major classifications: (1) There is a significant variation in the classification of venues when viewed at the aggregate level. (2) There is a variation in the probability of a venue category when examining the income of a given zip-code. (3) There is a significant variation in venue probability of an event based on the urbanity of a given zip-code.

4.1. Distribution

Looking at the overall distribution of the venues, we see that hybrid communities have a particular interest in food, outdoors and recreation, and professional spaces, as shown in Figure 1. While a large number of the venues could not be classified according to location APIs, the distribution of venue type follows a relatively normal curve. For example, personal residence and colleges are lower in frequency than other categories. This can be explained by the private nature of both personal residences and college campuses. Individuals in hybrid communities appear to favor more public places, perhaps for safety reasons or for their access to group activities.

The lower level of events in the ‘Event’ category of venues is explained by the variety of potential venues for that type of event. For example, a political gathering could take place at a hotel, and even though the classification of the meeting is an ‘event’, the location would be classified as a hotel, which would fall under the ‘Travel & Transport’ category according to Foursquare’s API. Additionally, the lower level of events in the ‘Residence’ category does indicate preference against the use of private residence on the aggregate level for all types of meetup events. The predominance of the outdoors and recreation spaces may indicate the preference for ‘public’ rather than private space; however, it may not be the case that the outdoor space is without economic cost. Perhaps the park or outdoor space has a parking fee when in a rural or suburban zip-code. These implications are explored when the distribution is broken down with income as a predictor variable.
4.2. Income

The analysis used a multinomial logistic regression to determine the effect of income on the probability of a given venue category. The outcome of that modeling is shown in Table 1 and Figure 2. With Arts and Entertainment as the reference category, we see that in wealthier areas, events become more likely to take place outdoors and recreation spaces, food, and professional venues. Events become less likely to occur at nightlife and arts and entertainment venues as the wealth of a region increases. Several interesting conclusions can be drawn from these findings. First, for wealthier areas, a higher probability for outdoor activities is discovered. The effect of income on outdoor and recreation venues is greater than any other category. Similarly, the impact of zip-code median income on the use of entertainment and nightlife venues is significant as well, but in the opposite direction. This could be due to the dearth of availability of outdoor spaces for lower-income zip-codes, or it could be due to the greater prevalence of arts and nightlife spaces.

Figure 2. Multinomial Predicted Probabilities as a Function of Income.

Importantly for this analysis, whether because of venue availability or group preference for a venue, a significant variation in venue exists for the zip-code when income is factored in. This does lead to a number of conclusions about the possibility of social capital development and relationship building within the distribution of venues for certain zip-codes. For instance, Arts & Entertainment, as a category, is by and large a private space, constituting venues such as museums, movie theaters, and bowling alleys. On the opposite spectrum, outdoor venues are largely public spaces.
Table 1. Multinomial model with income as predictor.

<table>
<thead>
<tr>
<th>Venue Category</th>
<th>Coefficient (SE)</th>
</tr>
</thead>
<tbody>
<tr>
<td>College &amp; University</td>
<td>$2.99 \times 10^{-6}$</td>
</tr>
<tr>
<td>Event</td>
<td>$2.09 \times 10^{-5}$</td>
</tr>
<tr>
<td>Food</td>
<td>$8.99 \times 10^{-6}$</td>
</tr>
<tr>
<td>Nightlife Spot</td>
<td>$1.85 \times 10^{-7}$</td>
</tr>
<tr>
<td>Outdoors &amp; Recreation</td>
<td>$1.23 \times 10^{-5}$</td>
</tr>
<tr>
<td>Professional &amp; Other Places</td>
<td>$9.09 \times 10^{-6}$</td>
</tr>
<tr>
<td>Residence</td>
<td>$7.85 \times 10^{-6}$</td>
</tr>
<tr>
<td>Shop &amp; Service</td>
<td>$7.22 \times 10^{-6}$</td>
</tr>
<tr>
<td>Travel &amp; Transport</td>
<td>$6.51 \times 10^{-6}$</td>
</tr>
<tr>
<td>Religious &amp; Spiritual</td>
<td>$8.41 \times 10^{-6}$</td>
</tr>
</tbody>
</table>

$N = 1,142,219$ events. Standard errors (SEs) are robust. All coefficients are statistically significant. $p < 0.05$. McFadden’s pseudo $R^2 = 0.002306286$.

4.3. Urbanity

Regarding the probability of a venue being chosen in regards to its urbanity, we can draw four significant conclusions. From Table 2 and Figure 3, we can see that there is a shift in venues that events utilize when they are taking place in more rural versus urban zip-codes. Several shifts in probability are quite significant, whereas others are more subtle.

Table 2. Multinomial model with urbanity as predictor.

<table>
<thead>
<tr>
<th>Venue Category</th>
<th>Coefficient (SE)</th>
</tr>
</thead>
<tbody>
<tr>
<td>College &amp; University</td>
<td>0.1007 (0.0111)</td>
</tr>
<tr>
<td>Event</td>
<td>−0.4441 (0.1649)</td>
</tr>
<tr>
<td>Food</td>
<td>−0.0125 (0.0077)</td>
</tr>
<tr>
<td>Nightlife Spot</td>
<td>−0.1234 (0.0093)</td>
</tr>
<tr>
<td>Outdoors &amp; Recreation</td>
<td>0.0551 (0.0074)</td>
</tr>
<tr>
<td>Professional &amp; Other Places</td>
<td>−0.0862 (0.0079)</td>
</tr>
<tr>
<td>Residence</td>
<td>−0.2289 (0.0190)</td>
</tr>
<tr>
<td>Shop &amp; Service</td>
<td>0.0851 (0.0080)</td>
</tr>
<tr>
<td>Travel &amp; Transport</td>
<td>−0.1025 (0.0095)</td>
</tr>
<tr>
<td>Religious &amp; Spiritual</td>
<td>0.0517 (0.0092)</td>
</tr>
</tbody>
</table>

$N = 1,142,219$ events. Standard errors (SEs) are robust. All coefficients are statistically significant. $p < 0.05$. McFadden’s pseudo $R^2 = 0.0005332245$.

Firstly, we can see that there is a significant positive shift in probability for both Outdoors & Recreation as well as Shop & Service as the level of urbanity increases. While the latter can be explained by the increasing prevalence of shops and commercial venues in more urban zip-codes, the former is unique for its counter-prevalence. For example, as the level of urbanity increases, the amount of outdoor space decreases. This could suggest that the desirability of outdoor space increases as the availability decreases.

For instance, the probability of an event taking place outdoors or in a recreational venue increases as the urbanity of a zip-code becomes higher. Less surprisingly, the likelihood of an event taking place in a shop or service venue increases as the urbanity of a zip-code becomes higher. This finding can easily be explained by a greater prevalence of stores in more urban areas.
5. Discussion

As is clear from the results, the distribution of venue location for events is affected by various economic and geographical considerations. The ability for a given group to develop forms of social capital is contingent on the availability of space within the local community. We find support that bonding capital, particularly the capital that is described by Vaughn (2015), is affected by geographic and economic variation in significant ways. Additionally, the local and virtual poles (Koch 2004) in which communities orient themselves are impacted by the localities of the group, as the physical orientation may be structuring the potentiality of the virtual.

Unsurprisingly, in the United States, a community association is embedded within commercial and economic institutions, often to a large degree. As evidenced by the results above, non-commercial spaces such as Outdoors & Recreation are more likely to be utilized by high-income locations. In lower-income areas, the likelihood of using non-commercial spaces is much lower, with meetings more likely to be taking place in locations such as Nightlife and Arts & Entertainment venues. While digital communication has collapsed the sense of distance (Harvey 2020), for individuals interacting in hybrid communities, it has done so unequally, with the collapse of physical distance inhibited by the economic and geographic realities of the particularities of individual residence. While urbanism, in some definitions, is about architecting interactions between individuals and groups (Bettencourt and West 2010), it is important to quantify those dimensions to understand the forces that may be affecting that architecture.

6. Limitations

While this study presents a significant cross-section of the venues and the economic embeddedness of a community, it has limitations that may inhibit the findings from being broadly applicable. One of the first, more glaring limitations is the result of the COVID-19 pandemic on the social patterns of an in-person meeting. As this study utilizes data from before the pandemic, it does not account for changing social practices resulting from the pandemic. One should expect that many of the geographic contingencies for community development and, in turn, social capital, may no longer act as significant barriers. For instance, many of the practices that predominantly happened offline moved to face-to-face
video chat to protect participants from contagion. While asynchronous interactions on meetup.com, such as text messaging and social networking, may still be happening, much of the in-person interaction has been replaced by a form of synchronous virtuality.

An additional limitation to this study is the sample population demographic. The population examined in this study is presumed to have sufficient capital to afford internet access and access to the meetup.com platform. This demographic may not be representative of the total population at large in the United States. Similarly, individuals who self-select into using the meetup.com platform have a propensity for digital communication and a presumed form of digital literacy. This population may not be demographically representative in terms of age or ethnicity.

The similarity of difference between demographics of various meetup groups is also not present in this analysis, as data were not available. Future research can examine how groups of similar demographic characteristics can be affected by the environmental circumstances in addition to economic factors that underlie a particular region. The category of the venue is also biased by the geographic diversity of the region. In circumstances in which the predominant building structure is a personal residence, it can be difficult to find a venue that is suitable. The lack of suitability may also be masking non-residential spaces for association.

Despite these limitations, the study here is important for its selection of the potential ways in which community can be economically and geographically embedded. It points to how such embeddedness can impact the forms of association and the venues that can be available for such associations. Future research can compare the differentiation of the population in this study with the general population and the changing patterns of behavior as a result of the COVID-19 pandemic.

7. Conclusions

Social interaction, organized into the forms of collective organization, is contingent on the spaces in which such interactions are permitted to occur. This study explored the hybrid modalities of collective association and the social capital that is formed through interaction in both the online and physical space in hybrid communities of meetup.com. Accordingly, it proposed that (H1) urbanity, the closeness to a metropolitan area, has a significant effect on the place of a community meeting, and (H2) a region’s median income affects the choice of venue. Evidence was found to support both hypotheses.

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