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## **Homeowner Associations and sharing economy innovations: Empowering taxpayers while fostering citizen participation**

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**Abstract:** This paper examines organizations that deliver ‘club goods’, which demonstrate aspects of both private and public goods. One such organization is the homeowner association (HOA), which has been termed ‘private government’. The HOA has a paradigm that may balance strengths of the private sector with those of the public sector. Yet if the dominant paradigm of the HOA were to be redefined, there may be a potential source of innovation proving beneficial to society, a research focus termed social innovation. Further, technology and lessons from the sharing economy may be pertinent to this redefinition of HOAs. The sharing economy, and the dissemination of club goods, by blurring the distinction between provider and consumer, may be an understudied way to promote innovation in society. A statistical analysis of HOAs in the United States was undertaken, and using SPSS, simple linear regression demonstrated that HOA amenities and elementary schools significantly affect neighborhood desirability, measured by home sales prices. Finally, based on the theoretical and empirical contributions of this study, a brief proposal on how to revamp HOAs is described.

**Keywords:** Social innovation, sharing economy, homeowner associations, club goods.

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### **Introduction**

Innovation is critical for organizations, and not only those of the private sector. Innovation can be defined as ‘the successful exploitation of new ideas’ (DTI, 1994; Francis & Bessant, 2005). Human societies have formed organizations to devise better processes, create new artifacts, and devise alternative models of organizing (Diamond, 1997; Francis & Bessant, 2005). According to Francis & Bessant (2005), innovation may target product improvement, process improvement, redefinition of the positioning of a product or organization, or redefinition of the dominant paradigm of an organization. An important, and perhaps understudied topic, relates to an organization’s dominant paradigm, particularly redefining public versus private goods.

Therefore, this paper examines organizations that deliver ‘club goods’, goods which demonstrate aspects of both private and public goods (Buchanan, 1965). One such organization is the homeowner association (HOA), which has been termed ‘private government’ (McKenzie, 1994). As such, the HOA currently has a paradigm that may balance strengths of the private sector and strengths of the public sector. Yet if the dominant paradigm of the HOA were to be redefined, and its importance amplified, there may be a potential source of innovation proving beneficial to society. Further, technology and lessons from the sharing economy may be pertinent to this redefinition of HOAs. Among other things, many organizations of the sharing economy have begun to blur the distinction between provider and consumer (Von Hippel, 2001).

As such, the sharing economy, and the dissemination of club goods, by blurring the distinction between provider and consumer, may be an understudied way to promote innovation in society.

The focus of this paper could be described as social innovation. The term ‘social innovation’ is used to describe a broad range of organizational and inter-organizational activity with the purpose of creating and implementing new solutions to address deep-rooted problems of society, where the benefits of these solutions are diffused beyond the innovators themselves (Dacin, Dacin, & Tracey, 2011; Tracey & Stott, 2017). As such, social purpose organizations are interesting and important, as they operate in the public, private and social sectors, as well as the intersections between them. But perhaps most importantly, the social problems themselves highlight the failure of conventional solutions and established paradigms, revealing private sector market failure, public sector failure, as well as the flaws inherent in this siloed thinking (Nicholls and Murdoch, 2012; Tracey & Stott, 2017). That is, currently much innovation research is overwhelmingly focused on one organizational form: the for-profit firm. For the reasons above, more research on a different type of innovation, social innovation, is warranted (Tracey & Stott, 2017).

In this spirit, the current study undertakes a study of HOAs in the United States and then develops a proposal on how they can be more innovative, if the dominant paradigm of the HOA were to be redefined. First, several economics theories, the sharing economy, and issues surrounding HOAs, are briefly described. Then a statistical analysis of a sample of current HOAs in the state of California (USA) is undertaken. Then a proposal on how to revamp HOAs is developed. Finally, a discussion concludes the paper.

## Theoretical Development

### *Public Goods, Private Goods and Club Goods*

According to Samuelson (1954), a public good is defined as a good that demonstrates *non-rivalry of consumption* and *non-excludability*. Non-rivalry of consumption indicates that if one person consumes (utilizes or enjoys) a good or resource, the total value of that good is not reduced for others. For example, roads are generally considered to be public goods, as driving on a road usually does not reduce its value (except in the case of congestion). Non-excludability indicates that you cannot prevent others from enjoying the goods. Once a good is created it is freely available to all, because it is difficult or impossible to charge 'voluntary' user fees to consume the product. National security and street lights are two examples. Once a society invests in making or keeping its nation safe, or installs street lights, it is difficult to prevent others from benefitting from these goods.

Of course, a good may also be rivalrous but not excludable - termed common-pool resources; or it could be excludable but not rivalrous - termed club goods (Buchanan, 1965). Public goods with benefits restricted to a specific group may be considered club goods, which could include private parks, satellite or cable. These goods are sometimes provided by co-operatives or associations. These are goods that are excludable, but are shared by more people than usually share private goods and by fewer people than usually share public goods. Each new member (or co-owner) helps reduce the cost of the club goods, so there will be an optimal size of the goods provision that maximizes the benefit for its members. So the focus of the management of club goods is to address the question of determining the size with the most desirable cost and consumption sharing arrangement (Buchanan, 1965). Therefore, determining which goods are most desired by the members, and increasing the capacity utilization of such goods, is essential.

These associations may also blur the distinction between owner (supplier) and consumer of such goods, if members are owners of the association, and benefit from the provision of said goods.

So a critical premise of this study is; goods and resources that we typically believe are private goods may actually be more efficiently provided and managed as club goods. However, goods and resources that we often consider to be public goods may also be better managed as club goods. Indeed, homeowner associations (HOAs) are known to effectively manage club goods, even for goods traditionally considered to be private or even public goods.

### ***Homeowner Association Formation***

Common-interest development (CID) is among the fastest growing form of housing in the United States and the world today, a category that includes planned unit developments of single-family homes, cooperative apartments, condominiums, as well as vacation timeshares. A key ownership benefit of a CID is having rights to an undivided interest in common areas and amenities which typically may be too expensive to be privately owned (McKenzie, 1994; Living in a California Common Interest Development, 1999). According to Hyatt (1985) and McKenzie (1994), a homeowner association (HOA) is a private association formed by a real estate developer for the purpose of marketing, selling, and managing homes and lots. Most HOAs are incorporated, and are subject to state statutes that govern non-profit corporations and homeowner associations (see also, Hyatt, 2000; McKenzie, 2005). The *Community Associations Institute* trade association estimated that HOAs governed 26 million housing units and 68 million residents in the United States in 2015. California and Florida are the states with the highest number of HOAs (National and State Statistical Review, 2015).

### ***Homeowner Association and City Services***

Some cities have welcomed HOAs in the belief that they may reduce operating costs for the local government, providing a more efficient way to disseminate some city services. Since the homeowners sometimes pay for roads, parks, and other services within the development, the local city government may believe that it would be able to reduce operating costs, resulting in an improvement in the overall city budget (Bannister, 2004). However, according to Cheung (2009), a study of California HOAs suggested that this assumption was only partly true, as the overall effect of HOAs on the city's tax revenue and operating costs was mixed. While HOAs did offset the costs of city government spending to some degree, they may also have reduced overall tax revenue because their members, insulated from some of the broader issues of the larger community (city wide "public goods"), tended to vote down taxes that the city needed to fund such services. This led to reduced government revenue as well as expenditures, and disproportionately affected those citizens who did not reside in HOAs. Indeed, Cheung (2009) noted how critics of HOAs claim they may erode support for broader public institutions, enabling them to be isolated from the effects of many societal problems while ignoring their root causes.

### ***Agency Theory***

However, the management of city services, by city government for its citizens, may reflect the agency problem (Eisenhardt, 1989). When suppliers and consumers are separate, that is, they exist as mutually exclusive groups, there exists an *agency problem*. This problem arises when two parties (principals and agents) have divergent interests, and the agent (providers) has greater information, and where it is difficult for the principal (consumers) to directly observe the actions of the agent. This is a particularly keen problem in the case of outsourcing, which establishes a distinction between provider and consumer. In this case, the agent may not always

act in the principal's best interest. The free market, and the provision of private goods, which encourages specialization of labor, increases the agency problem. However, government, with the provision of public goods, also increases the agency problem. In the context of city government, the principal is the citizen and taxpayer. The agent is the politician or city bureaucrats. Currently this problem is addressed through various layers of bureaucracy. Perhaps a main focus for addressing the agency problem should be: Should the principal focus more and more on policing the agents, or try to align the disparate interests and become co-creators of value? That is, innovation in how we organize suppliers and consumers, in order to reduce the goal incongruence and information asymmetry associated with the agency problem, may be fruitful. Indeed, the sharing economy in general, and HOAs specifically, help to reduce the agency problem by bringing suppliers and consumers together into a smaller association that aligns their interests.

### ***Club Goods, Open Innovation, and the Sharing Economy***

It is noteworthy that Buchanan (1965) established the premise for the sharing economy before it actually existed, when he advanced the theory behind club goods. Indeed many private goods may be underutilized, and managing them as club goods may be an efficient way to address this excess capacity issue. According to Hamari, et al. (2016), the sharing economy, or collaborative consumption, is defined as the 'peer-to-peer-based activity of obtaining, giving, or sharing access to goods and services, coordinated through community-based services'. This collaboration lowers the cost of economic coordination within communities (Hamari, et al., 2016). Similarly, Mohlmann (2015) argues that collaborative consumption, or the sharing economy, takes place in organized networks, where participants conduct sharing activities in the



form of renting, lending, trading, bartering, and swapping of goods, services, transportation solutions, space, or money.

This distributed ownership and responsibility of resources, common to collaborative consumption, could also be described as collaborative production. For example, according to Von Hippel (2001), in the open-source software movement, manufacturing companies need to be very concerned about what their customers might produce without them. This illustrates the phenomenon of user innovation and development communities; that is, aggregations of individuals who share a common need and exert a collective effort to fulfill it partly or fully independently of any commercial supplier (Von Hippel, 2001). In short, this phenomenon blurs the distinction between producer and consumer. In fact, given this phenomenon, producers and consumers may be well-suited to work together to produce value, termed co-creation.

Value is co-created (Callaway & Dobrzykowski, 2009) during networked interactions among consumers, suppliers, and employees of the focal organization. Recognizing this value co-creation, organizations are less focused solely on internal efficiency (such as the budget), and instead are increasing efforts to leverage external resources, particularly the customer (or local citizenry), in order to create value. Redefining (improving) the use of a service (such as city services) is essential, as local citizens (customers) can and should gauge the performance of said service over time, and help contribute to it, and share this information with the providers. So, rather than have an adversarial relationship between provider and customer (provider just trying to “sell” services; customer trying to dodge responsibility in usage problems, or on co-production, etc.); a mutual symbiotic relationship may be established between providers and citizens. Researchers are finally starting to recognize how government agencies and independent not-for-profit organizations may pursue open innovation, as the business model premise that

underlies the definition of open innovation could be extended to public and not-for-profit organizations, as well as social purpose organizations, because of their need to create and capture value to maintain their existence (Chesbrough, 2010; Chesbrough and Bogers, 2014; Tracey & Stott, 2017; West & Bogers, 2017).

That is, co-creation of value between provider and customer helps to reduce the goal incongruence and information asymmetry associated with the agency problem. So, the sharing economy and the dissemination of club goods, by blurring the distinction between provider and consumer, can promote innovation.

### ***Management of HOAs***

So, club goods and the sharing economy offer insights into how HOAs can be very efficient in the management of goods and resources. Many goods that we traditionally think of as private goods may be better suited as club goods, meaning HOAs can increase capacity utilization of these goods, by seeking that optimal size of the goods provision that maximizes the benefit for its members (Buchanan, 1965). For example, HOAs currently are known to manage pools, health clubs, private parks, private security, telecommunication services, etc. As such, associations can offer more club good resources, by increasing HOA fees, as more private goods become club goods. HOAs may also protect that investment by having more restrictions on local residents. Therefore, a greater provision of HOA amenities (meaning club goods within the HOA) will be positively associated with HOA fees charged. Thus,

*H1: HOA amenities are significantly associated with HOA fees.*

A key imperative for HOAs is to create a desirable place to live, one that is highly sought after by potential residents. So the question is, what variable might reflect the desirability of a

home in a particular area? The desirability of the home, of course, is reflected in its sales price. Therefore, a key metric of the success of HOAs would be home price appreciation. Ultimately, the price of the home will reflect private goods (amenities of the house itself such as square footage), club goods (amenities of the association), and city-wide public goods (such as school quality and neighborhood safety). However, the common belief in real estate is that the key determinant of home prices is location. Indeed, in their empirical study, Kiel and Zabel (2008) found that home buyers care most about their very local surroundings, including the general upkeep of their street as well as their neighbors' characteristics, along with the broader area affecting school quality and crime rates. The desirability of the location may be influenced by amenities offered within the HOA. By offering more amenities, HOAs can increase the desirability of living in the association, which will in turn increase capacity utilization of their goods, and therefore increase home prices. If HOAs offering greater club good amenities charge higher fees, and if those goods are desirable to people seeking to purchase homes, then HOA fees are expected to be significantly associated with real estate values (home sales prices).

*H2: HOA fees are significantly associated with real estate values.*

However, a key factor affecting home prices actually are not private goods being offered as club goods; but rather relate to public goods (at the level of the metropolitan city). One such critical factor is the quality of the local schools. For example, an empirical study by Clark and Herrin (2000) (also focused on California) found that the school district does significantly influence home sales prices (see also Kiel and Zabel, 2008). Of course, currently HOAs typically have little or no control over these city-level public goods. Therefore, it is likely that the ability of HOA management to influence home prices is somewhat limited; a public good such as the

quality of the schools will also have a very strong influence on home sales prices. Therefore, the quality of the local schools (the educational quality in the neighborhood) will directly affect home sales prices (real estate values).

*H3: Educational quality is significantly associated with real estate values.*

## **Methodology**

### ***Data Collection***

Data observations were obtained from the 2011 American Housing Survey (AHS), which comes from The Department of Housing and Urban Development (HUD). Data was also obtained from zillow.com, redfin.com, and realtor.com websites. All are public data. The focus was on HOAs in California, because of the importance of HOAs in that state, where HOAs are highly regulated with uniform laws. In the state of California, homeowner associations are legally defined as non-profit mutual benefit corporations. As a sample, this study specifically targeted the zip codes (a total of eight different zip codes) of San Luis Obispo County. (42% of San Luis Obispo county residents live in a HOA; the most current report shows 664 HOAs in the county, and a county population of 281,401 residents.) There were 111 observations in this region that reported paying a fee related to some form of an association. Zillow provided HOA fee listings, Redfin provided HOA amenities or a link to the HOA website where amenities were described, Realtor and Redfin provided average school scores, and also home sales prices. The data is cross-sectional. Obtaining data from these various sources eliminates the problem of common method bias (Podsakoff et al., 2003).

The observation fields include HOA fees, HOA amenities (including pool, common area, management, park, garbage, security, and other), types of HOA (including home, manufactured

homes - MH, condo, resort, development), home sales prices, and a school quality rating for the elementary school, junior high and high school for that locale. HOA amenities was calculated by simply adding up each of the listed amenities providing a numerical score. There was missing data for some observations but it did not affect the statistical validity.

### ***Results and Analysis***

Ultimately, the hypotheses were tested using simple linear regression in SPSS. Linear regression was used to identify the strength of the effect that each independent variable individually has on the dependent variable. For example, the regression equation tested for Hypothesis 1 is expressed as:

$$\text{HOA Fees} = \beta_0 + \beta_1 \text{HOA Amenities} + \varepsilon$$

where HOA Fees are the reported fees for the HOA, and HOA Amenities are the listed amenities for the HOA. Next, the regression equation tested for Hypothesis 2 is expressed as:

$$\text{REValue} = \beta_0 + \beta_1 \text{HOA Fees} + \varepsilon$$

where HOA Fees are the reported fees for the HOA, and Real Estate Values are the reported sales prices of the homes in the association. Next, the regression equation tested for Hypothesis 3 is expressed as:

$$\text{REValue} = \beta_0 + \beta_1 \text{Educational Quality} + \varepsilon$$

where Real Estate Values are the reported sales prices of sold homes in the association, and Educational Quality reflects a school quality rating for the elementary school, junior high and high school for that locale.

Hypothesis 1 argued that HOA amenities are associated with HOA fees. This hypothesis was supported. Refer to Table 1 which shows the regression results for Hypothesis 1. Even with

a small sample, results were significant ( $p < .001$ ) with a strong r-squared. Also refer to Table 2 which shows a matrix between HOA amenities and the type of HOA. Certain amenities are more common to certain types of HOAs (for example, pools, parks and fees with condos; pools with developments).

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Insert Table 1 Here

Insert Table 2 Here

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Hypothesis 2 argued that HOA fees (and therefore, amenities) are significantly associated with real estate values. This hypothesis was also supported. Refer to Table 3 which shows the significant results ( $p < .001$ ).

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Insert Table 3 Here

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Finally, Hypothesis 3 argued that the quality of the school (a public good) was associated with greater real estate values. As Table 4 reveals, this hypothesis was partially supported. Results were positively significant ( $p < .001$ ) as expected, in the case of elementary schools, but not for middle schools or high schools. Given the greater amount of school consolidation and busing commonly associated with middle and high schools (zoned in a greater number of disparate neighborhoods), it is not surprising to fail to find a positive relationship to real estate values.

However, this study actually found a negative relationship, a finding that was surprising indeed.

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Insert Table 4 Here

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### **A proposal for community associations**

Importantly, a key purpose of this paper is to present a proposal for community associations (CAs), pertinent to social innovation (Dacin, Dacin, & Tracey, 2011; Tracey & Stott, 2017). While HOAs can efficiently deliver many club goods that may have been considered to be private goods by some, they may be equally suited to deliver some city services that many consider to be public goods at the level of the metropolitan city. Therefore, the proposal is for HOAs to directly deliver more city services, in this case primary school education. As such, HOAs could be designed around the district of each individual elementary school, in effect forming a community association (CA). These neighborhoods would then be responsible for operating the local elementary school by maximizing local citizen participation (a true neighborhood school that blurs the distinction between the public school and home schooling). These CAs would increase in importance, perhaps requiring some degree of federally standardized regulation. Furthermore, these CAs would be responsibility centers, meaning that they would locally manage their own revenue and costs. They would also be required to secure their own funding on the open market (explained below). They would not receive fees from local residents. This performance-based system would replace the current wealth-based system that perpetually maintains a gap between rich and poor neighborhoods.

### ***Taxpayer-investment accounts as claims on neighborhoods***

This system would require the creation of taxpayer-investment (TI) accounts, which would be a hybrid form of taxes paid through salary withholding and individual private

investments. In particular, this system solves the funding gap for some neighborhoods, by turning them into responsibility centers, and creating a buying opportunity to invest in these disadvantaged districts (undervalued assets). In other words, taxpayers would “invest” directly into CAs that directly manage the neighborhood elementary schools. Investing in underserved and under-funded districts can bring the greatest returns if they are established as investments in the first place, as a given dollar amount would represent a much greater percentage stake in a given neighborhood’s total funding. This wage withholding could be administered similarly to a national retirement system, perhaps across all income levels either proportionally or regressively (higher incomes paying more into the federal pension and less into private accounts).

This funding system would include a system similar to crowd-funding (another sharing economy innovation); except with three separate funding vehicles. One vehicle is a general index fund investing in all CAs according to their current funding levels (of the local elementary school); another constitutes actively managed funds that seek to invest funds in neighborhoods based upon improving performance (the definition and measurement of which is explained below), and a pure crowd-funding system where taxpayers select their own CA TI accounts (though with certain regulations, such as limitations for investing locally). Individual taxpayer-investors could balance, and re-balance between these three vehicles.

### ***Return on neighborhood investments***

The “return” from these CA school-investments would go into the TI accounts (private retirement accounts). So what would drive the return of these investments? This question relates directly to the key performance metric of this entire system, that is, the very purpose of public schools. The purpose of the school system is to graduate productive (and not destructive) members of society. In this spirit, schools (and therefore investors) are rewarded according to



graduation rates, and for the productivity of those graduates. First, secondary schools would receive a return or bonus for placing graduating students into work, college, military, etc. (with higher fees for quality of placement, speed of placement, etc.), as well as perhaps federal or state matching funds and bonuses for other social achievements. (Note that the placement fee must be low enough so as not to discourage placement in the first place.) Second, the CA neighborhood primary schools receive a return for “graduating” 6<sup>th</sup> graders into the next school level. The importance of this early placement indicates that the CA (primary school teachers and administrators, parents, students, and other community volunteers) have a real motivation to invest in elementary school education, while because high schools receive greater placement fees for better students, they would seek out the most motivated elementary school students with the most involved parents to enter their schools.

### ***Citizen participation***

Establishing such a regime would create an additional imperative for CAs besides attracting residents based on quality of living, but adding the creation of value in a cost efficient manner as well, as the CA is actually a responsibility center (RC). So the TI withholding monies go to the individual CAs while the placement fees go to the individual tax-investors, based upon the percent claim on the CA the individuals have. Once the CA RC receives the withholding funding, how would they deploy these resources? Besides paying the usual educational expenses, they could pay local community citizens to be co-creators of value, perhaps as tutors, mentors, chaperones, guides, counselors, etc. Having a very small and local CA RC brings the suppliers and consumers of education into the same team, reducing the agency problem, and encouraging citizen participation. In short, the bonuses paid for the national placement network award school CAs for performance outcomes, while the CAs pay local citizen participants for effort

(contributions to their own local education). In this sense the entire local community (of the CA) constitutes the RC, while the school principal and tenured teachers are the managers of it.

### ***Expanding city services***

The CA RCs also might not only manage the neighborhood elementary school, but neighborhood policing and local medical care as well. So first, while the larger metropolitan city is responsible for managing the hospitals and other secondary care medical centers, the CA RC might manage the local neighborhood medical care (whereby primary care physicians are focused on preventing chronic illness and trips to the hospital, and managing decisions related to expensive specialist care). Further, local physicians could direct individuals on general health and wellness programs, to encourage individuals to take ownership of improving their own health outlook. The local physicians likely are themselves residents of the CA. That is, the first line of defense in the provision of healthcare occurs in the interaction between the individual and the club (the CA RC), while the second line of defense occurs at the interaction between the club and the metro city public arena. Having the club negotiate with the public hospital networks would increase the leverage of the local community.

Second, while the metro city is responsible for managing large police departments, the CA RCs could manage neighborhood policing (designed to prevent crime; blurring the distinction between the community police and neighborhood watch programs). In this case, there could be some neighborhood police officers who coordinate neighborhood watch and crime prevention programs. These local officers, who themselves would be residents of the CA, could direct the local populace on how to watch for potential crime, prevent crime, and manage any social justice programs. These officers would also be responsible for knowing and interacting with local residents. Again, the first line of defense in the provision of security occurs in the

interaction between the individual and the club (the CA RC), while the second line of defense occurs at the interaction between the club and the metro city arena. Having the club negotiate with the public police department increases the leverage of the local community.

The local CA RC (rather than the individual) then would actually purchase catastrophic health insurance for its residents, and would also purchase insurance against major crime problems (requiring the city police). That is, the CA RC would pay for hospital care and the need of larger police actions, both ‘as needed’ and general insurance premiums. The CA RC would direct, incentivize, and monitor individuals to practice good health and good neighborhood security. The CA RC receives funding and accordingly attempts to reduce major health and crime problems, those requiring hospitalization or major police action. These clubs also have two major elements of accountability: one is the competition to secure funding by ‘delivering the goods’ (improving health and security in a cost efficient manner), the second is the competition to secure residents, by creating a neighborhood where it is desirable to live (similar to the Tiebout model) (Tiebout, 1956).

## **Conclusions**

While there have been many econometric studies showing various determinants of housing prices, there has been a dearth of studies addressing the effect of HOAs on residents’ quality of living. To my knowledge, no study has specifically looked at the effect of HOA amenities on objective quality of living metrics. The current study has demonstrated that HOA amenities are positively correlated with HOA fees. Moreover, albeit in a rather small sample, this study did shed some light on which specific amenities are common to particular types of associations. The current study also finds that HOA fees significantly affect home prices.

Further, school quality does positively affect home sales prices, specifically in the case of elementary schools. As such, this study is consistent with the findings of Clark and Herrin (2000) and Kiel and Zabel (2008). Interestingly some of the significant relationships did not have the expected signs. Clearly more research is needed to understand the nature of HOAs, the services that they offer their residents, the impact on residents' quality of living, as well as the interaction of these effects with other city-level public goods.

There were some weaknesses in this study. First, there was a very limited geographic sample, and a small sample size. More studies are needed across more zip codes, in various states across the US, as well as globally. Second, while home prices being more affected by neighborhood factors (club and public goods) is backed by literature (Kiel and Zabel, 2008), future studies must also include home-specific factors (square footage, number of bedrooms, etc.). While the current study made the assumption that home size and such factors are rather uniform within a local HOA (but not between HOAs), as such factors are often regulated by HOAs, this is often not the case. Future studies should control for private goods such as home size. Further, other city-level public goods must also be included, such as the safety of the neighborhood and police services. Finally, future studies should use time-series data, rather than cross sectional data, in order to establish causation over time.

Finally, a key purpose of this study was to present the community association (CA) proposal. This proposal related not only to innovation within HOAs, but innovation in their role and function in the greater public system, representing a change in their dominant paradigm (Francis & Bessent, 2005). Indeed, innovation across organizational borders has become a pressing managerial challenge for both private and public organizations. Continuous innovation across organizational boundaries require that we understand the dynamics of interorganizational

networks, and that we develop skills in managing networks and facilitating network processes (Seemann et al., 2013). This proposal, by focusing on a new dominant paradigm for CAs, reveals potential innovation for both public and private goods, by redefining the role of each. The statistical analysis shows that associations indeed do have an influence on home desirability (measured in home values). Perhaps these same CAs also have the potential to have a positive role in the distribution of city public goods. More studies of the potential innovation of interorganizational networks in general, and of CAs specifically, are warranted.

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**Table 1: Results of linear regression analysis for hypothesis 1**

Independent variable	Dependent Variable
	HOA Fees
HOA Amenities	22.13* (0.008)
Constant	43.025
R Square	0.3822
Adjusted R Square	0.34
F	9.279958**

N= 17

\*p &lt; 0.05

\*\*p &lt; 0.001

**Table 2: Amenities variance-covariance matrix**

	<i>Common</i>							
	<i>Fees</i>	<i>Other</i>	<i>Area</i>	<i>Pool</i>	<i>Management</i>	<i>Park</i>	<i>Garbage</i>	<i>Security</i>
Home	-0.4175	-0.03875	-0.06024	-0.30128	0.025503	-0.14044	0.09972	0.019127
MH	-0.00958	-0.09494	-0.13194	-0.08353	-0.12142	0.060999	-0.09844	-0.16935
Condo	0.488662	0.124249	0.006025	0.206266	-0.02654	0.256765	0.119334	-0.10401
Resort	0.10831	-0.1811	-0.0504	-0.02164	0.014899	-0.09481	-0.0612	-0.0149
Development	-0.10047	0.147247	0.088354	0.166667	-0.01211	-0.03651	-0.10607	0.070133

**Table 3: Results of linear regression analysis for hypothesis 2**

Independent variable	Dependent Variable
	REValue
HOA Fees	-645.87* (0.0847)
Constant	752961.08
R Square	0.027
Adjusted R Square	0.018
F	3.027**

N= 111

\*p &lt; 0.05

\*\*p &lt; 0.001



**Table 4: Results of linear regression analysis for hypothesis 3**

Elementary school

Independent variable	Dependent Variable
	REValue
EduQual ES	104273.5039* (0.038)
Constant	-127007.2881
R Square	0.0645
Adjusted R Square	0.0501
F	4.482086**

Middle school

Independent variable	Dependent Variable
	REValue
EduQual MS	-246188.42* (0.0699)
Constant	2238601.075
R Square	0.0496
Adjusted R Square	0.035
F	3.393984**

High school

Independent variable	Dependent Variable
	REValue
EduQual HS	-162030.198* (0.005)
Constant	1721914.179
R Square	0.113893
Adjusted R Square	0.10026
F	8.354544**

N= 67

\*p < 0.05

\*\*p < 0.001

## Biography of Researcher

Stephen K. Callaway is an Associate Professor in the College of Business and Innovation at the University of Toledo, USA, where he teaches courses in innovation and strategic management. He received his PhD from Temple University, USA, in 2003. His prior publications have addressed topics such as e-commerce, online education and alternative energy. His current research interests include innovation and technology management, in particular the sharing economy and innovation in the public sector. The current study is part of a stream of research related to innovation in the provision of public goods, with implications for education, healthcare, transportation, community development, and other topics.

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## Public Interest Statement

Currently most innovation research focuses on one organizational form: the for-profit firm. However, more research is warranted on social innovation. Social innovation is important as it entails the public, private and social sectors, as well as the intersections between them. Moreover, social problems themselves highlight the failure of conventional solutions and paradigms, revealing private sector market failure, public sector failure, as well as the flaws inherent in this siloed thinking. Indeed homeowner associations (HOAs) can balance the strengths of managing private, public and social goods. Therefore, this study undertakes a study of HOAs, demonstrating the impact of HOA fees and elementary school quality on resident quality of living. This study then develops a proposal on how HOAs could be transformed, reflecting key perspectives of the sharing economy and value co-creation, in order to encourage citizen participation in the provision of critical public goods.

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