

Inclusionary Zoning

Market-financed affordable housing - Could Vienna benefit from this American approach?

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Cities around the world face multiple challenges, such as population growth, rising demand of affordable living space and dwindling public budgets. The incorporation of private developers in financing schemes for public infrastructure, including housing, is one of cities' current approaches to preserve their financial scope. This paper examines the American instrument "Inclusionary Zoning" (IZ), which aims to provide affordable housing units with little public spending by requiring private developers to include a certain percentage of housing units below the market price-rate in their projects as a condition for development approval. Based on four case studies of cities across the U.S., the policy designs of IZ ordinances are analysed to reveal the strengths and limits of the instrument. The effectivity of Inclusionary Zoning ordinances strongly depends on the details of the policy's specifications, in which combination they are implemented in practice, as well as locally tolerated means of evasion. In a second step, the potentials and applicability of IZ for the city of Vienna are discussed. Inclusionary Zoning could represent a potentially suitable instrument for the creation of affordable housing, as it offers an explicit legal framework for the whole city rather than punctual solutions. However, an IZ program could only act as an additional tool for Viennese spatial development policies: the regulation as implemented in the U.S. fails to provide housing units for the very poor and produces units at an unpredictable pace, largely determined by the private housing market.

1 Introduction

For many years, we have been witnessing the global trend of growing cities and rising demand for affordable housing units in densely populated urban areas. From social building cooperatives for the cheaper construction of buildings through public subsidies to the more recent use of contractual agreements in development projects: Well known for its commitment to the creation of affordable housing, the city of Vienna has progressively been trying to shift parts of the financial burden and responsibility of providing affordable housing from the public to the private sector.

Inclusionary Zoning in the U.S. was first introduced in the 1970s as a response to increasing housing costs and displacement of lower-income residents following the Great Inflation of the 1970s. By requiring developers to include affordable housing units in market-priced objects within certain zones, the benefits of spatial development can be "shared" with the public. Nowadays, IZ is implemented in more than 500 communities across the country, and know to be effective in creating affordable units with little public spending (LIoLP 2015: 3). Yet, despite the presence of IZ in the U.S. and parts of Australia, this planning strategy remains rather unknown in Europe. This paper aims to contribute to filling this gap by discussing prominent U.S.

IZ policies and putting them in context to Vienna's efforts in the provision of affordable housing. The paper follows two main research questions:

- » **(1)** What are the strengths and limits of Inclusionary Zoning policies in the U.S.?
- » **(2)** Could Vienna benefit from this market-based approach for the creation of affordable housing units?

Section 1 gives a short overview of Vienna's current affordable housing policies and challenges, followed by a description of the concept of IZ and the different design considerations of the policies. Subsequent to the general outline, four different cities across the US are examined: Boston (MA), San Francisco (CA), Boulder (CO) and Washington DC. The paper will, based on the case studies and the empirical data, focus on the analysis of the strengths and limits of the IZ approach. Finally, it concludes with a discussion of the potential and applicability of the approach for the further provision of affordable housing units in Vienna.

2 Council Housing and Subsidized Housing in Vienna

As many other European cities, Vienna experienced enormous growth towards the end of the 19th century, leading to overpopulation and approximately 300,000 people in search of living space (wienerwohnen.at). To secure the growth of the city and house the "working class", primarily consisting of migrants and industrial workers, the socialist party of Vienna aimed to stimulate the municipality's building activities. The implementation of the Viennese Housing Construction Tax in 1923 allowed for the city to generate the necessary financial resources for acquiring construction land and at the same time curtailing land speculation (wien.gv.at 2018). Between 1919 and 1934, the city constructed 65,000 council housing units, distributed rather evenly across the city's territory but segregated from other housing units within the districts. The predominant architectural design was a building block with an enclosed public space, characterized by high density and functionality, often including various types of public infrastructure on the premises. Following the decline of investments after a global economic crisis and political disagreements in the 30s and 40s, Vienna resumed investing in council housing in the 50s, constructing higher density buildings in row structure in reaction to a scarcity of construction land (wien.gv.at 2018).

Facing a high population growth at the end of the 21st century, the city shifted its focus from constructing large buildings for affordable units to including council housing units in city development projects and the filling of vacant

lots. Since the early 2000s, the city has largely retreated from building council housing and subsidizes limited-profit and for-profit providers for the construction of affordable housing. There remains a high demand for inexpensive housing, experts estimate a lack of 7,000 units each year in new construction (derstandard.at 2018). Today, 220,000 units belong to the city and it has subsidized another 200,000, of which most belong to limited-profit building cooperatives (deutschlandfunk.de 2014). There are different funding programs for both limited-profit and commercial developers and the city's overall investments in affordable housing are a major public cost factor.

Recently, Vienna has encouraged the implementation of contractual agreements between the municipality and the developers of city development projects. The volume of affordable housing units that can be determined through such agreements is insignificant in comparison to the council housing program, yet there seems to be a reorientation towards more private solutions. However, the current legal framework for contractual agreements in Austria is insufficient, the negotiations are characterised by complications, intransparencies and high transaction costs for the involved parties. Christof Schremmer, spatial planner and expert of the ÖIR, argues that contractual agreements may have a constraining effect on affordable housing, as social building cooperatives are not able to generate the additional value necessary for economic profitability. He therefore demands affordable housing projects and cooperatives to be exempted from contractual agreements, as they put additional financial pressure on economically already restricted projects (standard.at 2017). Embedded in the current framework, contractual agreements in Vienna cannot yet unfold their full potential in terms of sustainable development or social inclusion. Considering the city's growth rates, Vienna is in need of more effective strategies to both provide affordable housing units and reduce the financial burden on the municipality. For this purpose, zoning strategies could serve as an efficient tool, as they would be applied to large areas of the city's territory and affect all private developers.

With Austria's current political developments, it is unclear how the provision of affordable housing will be organised in the future. However, in November 2018, the city of Vienna has decided to revise the municipal building code. One of the significant renewals is the introduction of the new spatial classification type "social housing" for public plots of land reallocated to building land. This classification type, apart from rent control mechanisms for all units on the plot, as of January 2019 sets that "the predominant share" of the building area has to be developed as affordable housing units. (orf.at 2018)

3 Inclusionary Zoning

In the US, a zoning-based tool for the provision of affordable housing units has been in practice for many years. Inclusionary Zoning (IZ) can be defined as a proactive approach that *“promotes the production of affordable housing by requiring or incentivizing developers of market-rate housing projects to incorporate a certain percentage of affordable units for low- and moderate-income households, as a condition for development approval”* (Mekawy 2014: 1931). The main goal of IZ policies is to produce affordable homes and ensure their long-term affordability. As the below-market units should be included in the same building as the market-priced units, the program aims to promote integration and enable lower-income households access to “good” neighborhoods, which for instance is important regarding schooling districts or health care (Tach 2013: 14). Through IZ ordinances, the affordable housing stock can be increased without direct public subsidies, the burden of financing new units is imposed on developers and the private sector (Grounded Solutions Network 2017: 39).

The first IZ policies were implemented in the 1970s as a reaction to exclusionary zoning laws, promoting segregation and leading to racially and socioeconomically disintegrated communities. During the Reagan-era in the 1980s, federal funding of affordable housing was cut and IZ programs became more widespread as local tools used by states and municipalities to manage growth and provide affordable housing (Calavita and Mallach 2009: 16f). The first policies were applied to suburban areas, but with rising demand for and cost of housing in densely populated areas, the concept has since gained importance for urban areas (LloLP of Land Policy 2015: 19).

Nowadays IZ policies are in effect in various cities (and sometimes on state-level) across the U.S., with a concentration on the East- and West coast, as can be seen in Figure 1 (Grounded Solutions Network 2017).

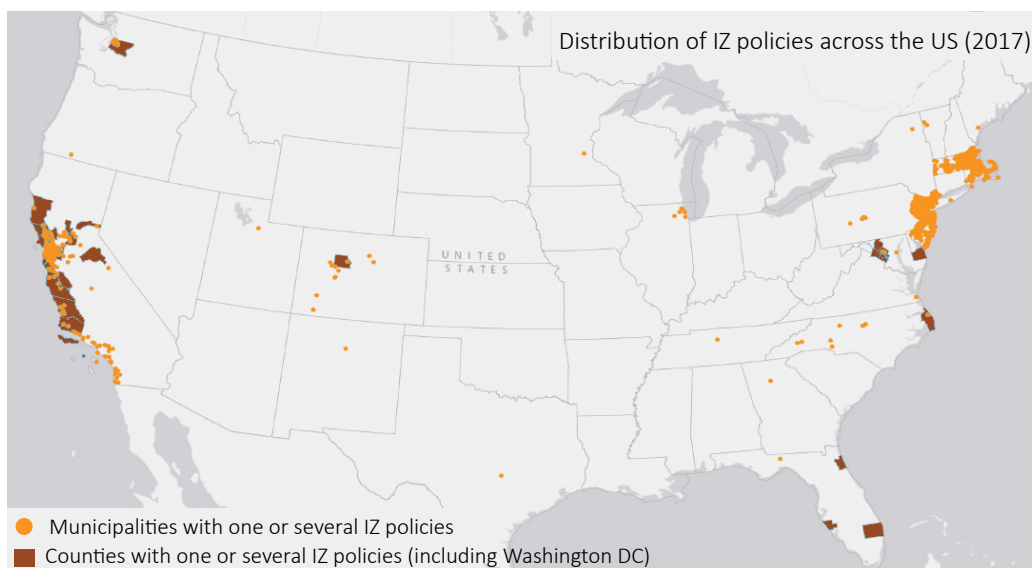
4 Policy Design Considerations

Although IZ programs have the same overall purpose of generating affordable housing units, significant differences exist in the policy designs of different cities. Variations in policy design determine the effectivity of IZ programs and lead to varying cost effects for the four involved parties: the developers, the landowners, the households and the jurisdiction. The chapter gives an overview of key considerations in which IZ policies can differ and concludes with a table (Figure 2) summarizing these aspects.

There are voluntary and mandatory schemes. In a 2014 survey, researchers of the LloLP of Land Policy examined 512 programs and found that 83% of the jurisdictions had adopted mandatory programs. In contrast to mandatory schemes, voluntary programs try to incentivize developers to produce below-market units. (Hickey et al. 2014: 19) Voluntary schemes are less often applied and differ strongly from mandatory ones, thus we will focus only on the latter for this paper.

IZ requirements do not necessarily apply to an entire jurisdiction. Some programs target only certain neighborhoods; other cities set varying requirements for different parts of the municipality (LloLP of Land Policy 2015: 26). Additionally, some programs define specific project types, for which the regulation becomes effective. Most IZ programs contain a threshold, e.g. target only projects of five

Figure 1: Distribution of IZ policies across the US



Source: Grounded Solutions Network 2017

or more units, and differentiate between development categories, such as new construction or condo conversion (Brunick 2003: 2).

The set-asides refer to the percentage of units to be developed as affordable housing units and usually amount to between 10 and 20 percent of the total amount of units (Calavita 2006: 4).

The next two aspects regard the affordability levels, meaning the price setting and how long the rents must remain set below the market value. IZ programs tend to set income targets between 60 and 120 percent of the local median income, which serves low- and moderate-income households but excludes very poor families (LIoLP of Land Policy 2015: 25). The rental control period is set for a certain number of years, varying between 30 and 99 years, or for the whole life cycle of a building (Hickey et al. 2014: 24).

Developers often have the possibility to decide whether they build the affordable units on-site or off-site. While the off-site development can contradict with the goal of inclusion, this option usually comes with higher set-offs, therefore leads to the production of more affordable units (LIoLP of Land Policy 2015: 37). Moreover, there are some policies allowing the developers other opt-outs or alternatives, such as to pay fees or donate land which is then utilized to build affordable units elsewhere (HUD.US 2013: 19; Calavita, 2006:1).

Inclusionary zoning requirements reduce the economic value of a development site. As the development of below-market housing units is tied to the development of housing units in general, it is important to ensure the feasibility of residential construction (Urban Land Institute 2016: 8). Local authorities usually offer a combination of

incentives that reduce the economic impact of mandatory IZ programs but do not cover all of the expenditures (InclusionaryHousing.org). Such incentives either offer developers special permissions or advantages (e.g. expedited processing, or parking space reductions) allow them modifications on development standards, or offset the cost more directly through fee reductions, tax abatements or (construction) subsidies. (LIoLP of Land Policy 2015: 32).

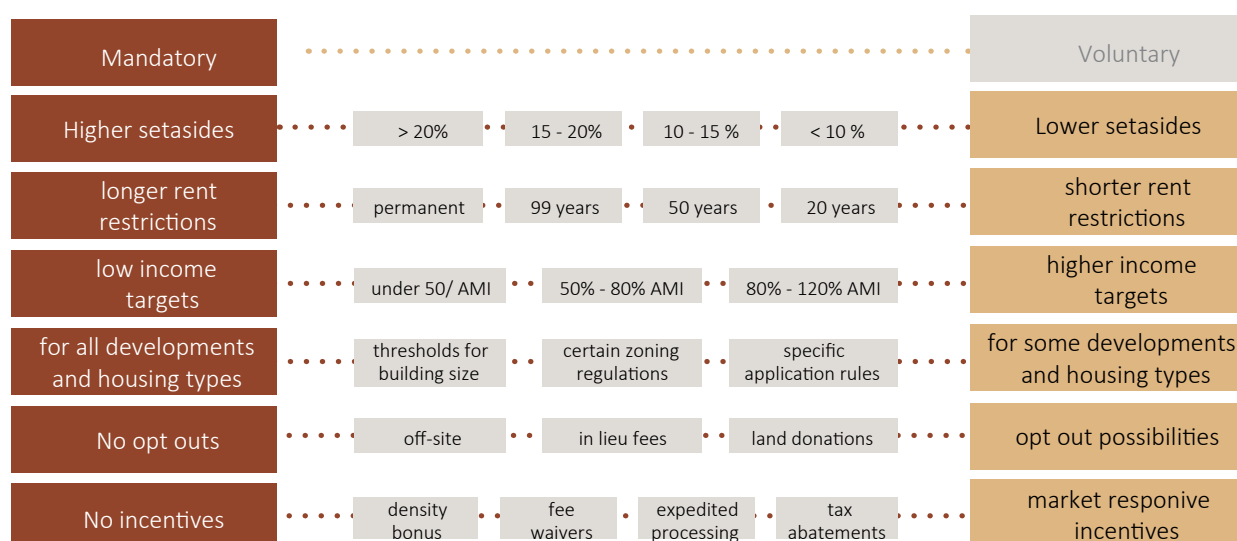
5 Case Studies

The following section presents the IZ ordinances of the four cities Boulder, San Francisco, Boston and Washington DC. Despite their location in different states and varying regulatory frameworks, a comparison allows for the identification of key features, strengths and limits of Inclusionary Zoning.

5.1 San Francisco

In San Francisco, a city of more than 870,887 inhabitants (U.S. Census Bureau 2017) in California, land use, growth management and environmental regulations have been set in place for many years. A state-wide law requires all local authorities to create a strategic general development plan stimulating the development of housing units for all income levels (Brunick et al. 2003:13). An inclusionary zoning ordinance for developments on large vacant lots was first adopted in 1992. In 2002, the regulation was expanded to all residential housing projects with more than ten units following rising poverty levels and demand for low-income housing. In the Bay Area, a large share of communities have adopted mandatory policies with varying design features (Vandell 2003, Schuetz et al. 2007: 22).

Figure 2: Design considerations of IZ policies



Source: Urban Land Institute 2016, own depiction

Under the 2002 ordinance, 10% of the created units need to be set aside as affordable. 15% or more of units have to be set aside if the units are provided off-site. The income targets were predominantly low to moderate with target households earning between 80% and 120% of the AMI. (Wellesley Institute 2010a: 3) In 2017, the IZ ordinance was thoroughly revised and sharpened, as the city recognized the need to serve a broader segment of the population. A differentiation was made between small projects (10-24 units) and large projects (more than 25 units). Small projects must set-aside 12% of on-site units, respectively 20% off-site units, as affordable. For large projects the affordability requirement was raised to 18% of units of, and 30% off-site for rental projects, as well as 20% of units on, and 33% off-site for ownership projects. The income targets range between 55-110% of AMI for rental and 80-130% of AMI for ownership units, the exact breakdown is subject to further regulations (spur.org 2017, SFPD 2017).

However, the median household income for San Francisco includes a few extremely wealthy counties and is therefore substantially higher than in other U.S. cities. The control period of affordability is 50 years for both rental and sale units and two thirds of ordinances in Bay Area offer density bonuses. Moreover, developers may profit from incentives such as the fast-tracking of building permits. Some jurisdictions even exempt units under IZ regulations from the limited annual permit cap. Furthermore, developers have the option to construct units off-site under the requirement that the affordable unit set-aside has to be one and a half times higher than on-site. Another option is the payment of in-lieu fees into the "Citywide Affordable Housing Fund", which creates units for very poor households. (Wellesley Institute 2010: 6)

Overall, 1,560 affordable units were produced in San Francisco between 2002 and 2016, which amounts to a share of roughly 3.7% of the total units built in that period (41,860 units) (U.S. Census Bureau 2016, own calculation). However, the city is characterised by an extremely expensive housing market, where affordable units by design primarily go to medium income families.

5.2 Boston

Boston, Massachusetts, is a city with high housing costs and stringent land use regulations. While the city of Boston counted 673,184 inhabitants in 2016, the greater urban area counts more than 4 million people (U.S. Census Bureau 2018). Massachusetts' constitution emphasizes local governance and gives cities and towns zoning powers (Schuetz et al. 2007: 29). There is no county-wide regulation for Inclusionary Zoning, hence policies were successively introduced by the individual jurisdictions constituting Greater Boston.

The Inclusionary Development Policy (IDP) was introduced

as an Executive Order of the Mayor in 2000. As it is not part of the zoning code, it only applies for developments of ten or more units that are either (1) partly funded by, or (2) developed for the City of Boston, respectively in need to receive zoning relief. Although most projects are already covered by these categories, current efforts are made by the city to make the IDP part of the Zoning Code (City of Boston 2017).

Since 2000, the IDP has been revised regularly; the latest essential alteration in 2015 was conducted in an attempt to speed up the affordable housing production. The set-aside was raised and the income target reduced. Moreover, the city was divided into three zones (A to C), to take varying real estate markets and housing prices into account more effectively. The inclusionary obligations are higher for developments within zone A, consisting of downtown and waterfront areas (City of Boston 2015).

To fulfill the IDP requirements, developers can choose between three compliance options: Firstly, they can build units on-site, in this case the number of affordable units must equal 15% of the market-priced units (13% of total units). Secondly, the creation of off-site units is possible. For zone A and B the requirements are higher (18% instead of 15%), and the units must be located within one-half mile of the development. Thirdly, developers can contribute to an Inclusionary Development Fund with in-lieu fees, the value of which depends on the location of the project in the three zones (City of Boston 2015).

The affordability level for rental units is set at 70% or less of the AMI. Half of the ownership units are reserved for households earning less than 80% of the AMI, the other half for households with incomes between 80 and 100%. The restrictions are set to the "*maximum extent permitted by law*", the responsible authority envisages 99 years (Boston Redevelopment Authority 2015: 7). In exchange for complying with IDP, no explicit cost offsets are provided but the developers may propose changes in the zoning conditions, concerning height, setback, coverage or the density (Wellesley Institute 2010: 3)

Between 2000 and 2017, private developers built 1,737 affordable units under the IDP. The results are put into perspective when it is considered that between 2000 and 2015 roughly 27,000 units were added to Boston's housing stock in total (Bostonglobe 2017).

5.3 Washington DC

Washington DC is one of the most prosperous and fastest-growing suburban communities in the United States with a population of 681,170 in 2016 (LloLP 2015:7, U.S. Census Bureau 2017). The framework for spatial policies differs from San Francisco and Boston in several aspects as each "state" of Washington DC (Maryland, District of

Colombia and Virginia) has a different approach to land use planning. Within Greater Washington, land use planning is not fully under the authority of local agencies, the national capital planning commission can review districts planning and proposed zoning regulations must be consistent with federal plans. (Schuetz et al. 2007:24-25).

In 2009, Washington D.C. implemented an IZ policy as successor to the “Affordable Dwelling Unit” program, which only targeted individual projects through negotiations with the developers (LloLP:76). The Inclusionary Zoning Act and Regulations are part of the Zoning Code of the District of Columbia Municipal Regulations (DCMR), with the Department of Housing and Community Development as responsible authority (DMPED 2017: 1).

The policy is mandatory and binding for projects with 10 or more units. There are some exemptions by neighborhoods and zoning codes, e.g. low-density neighborhoods and historical sections, which would be affected negatively by additional density (DC Real Estate 2009). 8-10% of the residential square footage has to be set aside as affordable. The IZ program also has strict design requirements, for instance; the affordable units must have the same proportions as market-rate units and be distributed evenly throughout the building. Permanent affordability is guaranteed and the units must be built on-site (Coalition for Smarter Growth 2015). Only when ‘*economic hardship*’ can be proven by the developer, the “Board of Zoning Adjustment” can permit the construction of affordable units off-site (DCOZ 2016).

The IZ program offers units for moderate and low-income households, earning between 50% and 80% of the AMI (Coalition for Smarter Growth 2015). These households can sign up for a lottery for specific units and must certify, that they will not spend more than 38% of their annual income for rentals or 41% for purchased units on housing costs (DMPED 2017: 23).

To maintain affordability, local non-profit housing authorities under some ordinances may buy a set percentage of the IZ stock. Fines for violations against the requirements go to the “Housing Production Trust Fund” for very low-income households (Schuetz et al. 2007: 25). Additionally, a neighborhood investment program and economic development zones promote affordable housing, and the city strongly subsidises homeownership in general. The results of the IZ ordinance in Washington are of limited significance, as the policy is rather young. However, because of the city’s strong growth rates since 2010 (1,6% in 2016), the IZ ordinance has not exactly met the demand for affordable housing. In 2016, the program was adapted to reach more low-income residents: now most affordable rental units are set-aside for households earning 60% or less of the AMI and most affordable sale units for households earning 80% or less of AMI (DHCD 2018).

Washington’s program made slow progress, in 2010 only two units were built, but between 2010 and 2015 867 affordable units were built, constituting to 6,8% of the total units build during this period (DHCD 2017, Civicdashboards.com, own calculation).

5.4 Boulder

Boulder, Colorado, is a city at the base of the Rocky Mountains with 108,090 residents (2016) and a long history of fighting exclusionary living conditions (City of Boulder 2017b: 1). Home values and housing cost are high and constantly increasing, leading to a growing number of low, moderate and middle-income households unable to afford living in Boulder (City of Boulder 2017a: 1).

Between the 1980s and 2000, the city tried to implement several voluntary affordable housing policies offering development incentives, which proved inefficient to meet the demand for affordable housing. In 2000, Boulder introduced a mandatory IZ program with the goal to make 10% of the housing stock permanently affordable (BPI 2005: 2ff). The Boulder County Land Use Code states: “*It is based upon the city’s power to enact zoning regulations as reasonable limitations upon the right of property owners, determined by considerations of public health, safety and welfare.*” (City of Boulder 2018).

The program requires 20% of units in new developments to be affordable for low-income households and covers all new developments, rent and sale. There is neither a threshold for the size of buildings (except single-lot developments with one owner and a total floor area less than 1,600 square feet) nor a limit of the price control period. Furthermore, the rather strict policy offers no cost offsets, except for a waiver of development excise taxes (BPI 2005: 2ff).

Developers in Boulder may choose between four different options to meet their affordable housing requirement: The first one is the on-site development of affordable units, e.g. in the case of a development of one to four units, one affordable unit must be built. The second option is off-site development, the third one the payment of an in-lieu fee of roughly USD 18,000 per unit into Boulder’s Affordable Housing Trust Fund. Finally, developers can opt for the donation of land of equivalent value to the required units. (City of Boulder 2017a: 1; City of Lafayette 2016: 3; BPI 2005: 4)

While on-site units mostly serve households with 60-80% of the AMI, housing projects financed through in-lieu fees serve very low-income families (0-60% of the AMI) (City of Boulder 2017a: 3). An analysis of IZ in Boulder between 2009 and 2013 shows that almost half of the developers fulfilled their requirements through compensational payments, adding up to \$45 million since the implementation

of the program (Meltzer 2014, City of Boulder 2017a: 7).

In-lieu fee-financed buildings are usually built by the Boulder Housing Partners, Boulder's housing authority, who is also responsible for the management of affordable units and partners with developers to enable the creation of on-site rental units. The mixed-owner approach is necessary to evade the statewide prohibition of rent control. (Boulder Housing Partners 2018, City of Boulder 2017a: 6f)

In a recent Memorandum, the City of Boulder states that the IZ program has exceeded expectations: 24% of the units built since 2000 are affordable and will permanently remain so. Due to the efficient spending of in-lieu fees, this number is higher than the set-aside quote of 20%. By 2016, over 3000 permanent below-market units were created, constituting 7.3% of the total municipal housing stock (City of Boulder 2017a: 2).

6 Analysis of the Case Studies

Table 1 gives an overview of the reviewed cities, their Inclusionary Zoning policies and regulatory framework.

The next chapter will discuss the effectivity of IZ programs regarding housing production, quality and social inclusion. A large number of empirical studies have attempted to assess the effects of IZ policies on the housing development rate, housing prices etc., and their findings vary strongly. In general, the impact of IZ policies is hard to isolate from the background framework and political, social and economic processes. Another major factor for the efficiency of IZ ordinances is the policy design in hindsight to the existence of offsets. Subsequently, some of the limitations of IZ policies are described.

Table 1: Overview of the case studies framework and policy design

	San Francisco (California)	Boston (Massachusetts)	Washington D.C.	Boulder (Colorado)
Population (2016)¹	870,887	673,184	681,170	108,09
Growth (2010-2016)²	+8.15%	+9.00%	+13.20%	+10.99%
Year Adopted	2002	2000	2009	2000
Set in	part of the Planning Code	Executive Order of the Mayor	part of the Zoning Code, DCMR	part of the Land Use Code
Responsible Agency	Zoning Commission	Boston Redevelopment Authority	Department of Housing and Community Development	Boulder Housing Partners, City of Boulder
IZ trigger	5+ units, higher requirements for developments of more than 25 units	10+ units, either (1) partly funded by, or (2) developed for the City, respectively in need to receive zoning relief	10+ units, or when addition of 10 new units to an existing building represents an increase in residential floor space by 50% or more	All new residential developments except single-lot with one owner and total floor area <1.600 ft ²
Spatial exemption	no spatial exemptions	no spatial exemptions, but requirements vary depending on location	neighborhoods with low-density and historical sections in center excluded	no spatial exemptions
Share of AH-units	18% on-, 30% off-site (rental), 20% on-, 33% off-site (ownership)	15% of the market-priced units (13% of total units)	8-10% of square footage	20% of units
Target Income	rental: < 55% of AMI ownership: < 80% of AMI	rental: < 70% of AMI ownership: half of units < 80% of AMI, other half < 100% of AMI	rental: < 60% of AMI ownership: < 80% of AMI	60-80% of AMI
Affordability Control	50 years	99 years	permanent	permanent
Incentives	density bonuses or fast-tracking of permits	alterations of zoning conditions negotiable	up to 20% additional density	waiver of development excise taxes
Off-Site Allowance	yes, but share of units increased to 50%	yes, zone C 15% and zone A and B 18% of market-priced units	only in case of economic hardship, and after a case-by-case assessment	yes, land dedication also possible
In-Lieu Fee	possible, difference between cost of producing a unit and an affordable price	yes, from \$200,000 in zone C to \$380,000 in zone A	not possible	yes, \$18,000 per unit or \$75 multiplied by 20% of total floor area of market rate units (per unit)
Share of overall production	2002-2016: 1,560 IZ units, 3.72% of total units built	2000-2017: 1,737 IZ units, 5% of total units built	2010-2015: 867 IZ units, 6.79% of total units built	2000-2017: 524 IZ units, 24% of total units built

Source: Own research and depiction

6.1 Strengths of Inclusionary Zoning programs

Production of affordable units with little public spending

In theory, Inclusionary Zoning encourages private sector involvement in the provision of affordable housing. The effectiveness of IZ ordinances strongly depends on a “jurisdiction’s specific housing market structure and condition, regulatory context and the design of the policy itself” (Clayton & Schwartz 2015).

The number of IZ units built, in comparison to the growth of the housing stock in a certain area, is the simplest way to assess the effectiveness of such a policy. Following this method, Boulder has the most effective IZ program: 24% of the units built between 2000 and 2017 are affordable (City of Boulder 2017a: 2). Within the same timespan, Boston’s program accounted for a share of only 5% affordable units of the total housing stock (Boston Globe 2017, own calculation).

The set exemptions and especially the different compliance options can have a positive impact on the housing production, as was the case in Boulder, where the share of affordable housing is higher than the IZ requirement, due to effective spending of in-lieu fees. Internal and external factors affecting the production rate are discussed in the following chapter.

All examined programs offer incentives to developers at minimal or no direct cost to the public sector. Three out of four municipalities offer density or other zoning bonuses, while the city of Boulder offers a waiver of development excise taxes instead. In comparison to public financed housing, units built under the IZ program relieve the governmental budget. The affordable housing production rate is not high enough to satisfy the demand, but the private production of affordable housing considerably reduces pressure from the public sector.

High quality standards

Developers of affordable units under IZ regulations are required to meet certain quality standards concerning size, location, design, noise, walls, lighting and amenities. Affordable units included in market-rate projects shall respond to the same requirements of market rate dwelling ones and be comparable to them. In Boulder, the “livability standards” require the design of affordable units to be “functionally equivalent” to market-rate ones but not of identical quality (City of Boulder 2017a: 4). Affordable units must be distributed evenly among market-rate units within the same building instead of being grouped together in a “less desirable” part of the building, as for example determined in the San Francisco IZ ordinance (SFHD 2004: 6). Residents of affordable units can not be

required to pay for additional services and any optional amenities provided must be made available to all residents under the same terms.

Social Inclusiveness

The IZ approach has been promoted as a powerful tool for the stimulation of socioeconomic integration, supporting communities mixed by ethnicity and income and by incorporating lower and middle-income households into upper-income communities (HUD.US: 3ff).

However, the overall potential for inclusionary effects of IZ programs depends mainly on external factors. Two factors matter in particular: the characteristic of the neighborhoods and the quality of schools IZ households are assigned to. Since the housing market by trend excludes low-income households from residing in neighborhoods with prestigious schools, IZ programs could mitigate this trend and promote the academic education of children of IZ beneficiaries (Schwartz et al. 2012).

If economically integrative housing policies such as IZ policies can succeed in integrating low-income families into areas with high-quality public services, in the long run the policy could have positive impacts on academic achievement, cognitive ability and health (Schwartz et al. 2012). A close look at the case studies shows, that spatially the inclusion in expensive neighborhoods has been successful. For example, in Boulder in 2009, 38% of IZ units were located in low-poverty neighborhoods, while 26% were located in high-poverty areas. In Washington D.C., most built and planned inclusionary units under the IZ policy implemented in 2009, are located in areas where the median home sales price is above the local average (Tatian, Oo 2014:9). The percentage of units constructed in high-income neighborhoods varied substantially with the policy design and off-site options. Overall, the findings indicate that the reviewed IZ policies did succeed in providing lower-income households access to high-quality schools and neighborhoods to some extent, which other affordable housing policies in the past have failed to achieve (Deng, 2007; Newman and Schnare, 1997; Pfeiffer, 2009).

Funding for very low-income housing through in-lieu fees

Most IZ policies, including the four analyzed, offer developers the possibility to pay in-lieu fees, instead of building affordable units themselves. These fees are used to provide units for very poor households, which are not entitled to IZ units, as they mostly target households earning between 60 and 100% of the area median income (LIoLP 2015: 25).

One example is Boston’s Inclusionary Development Fund, which collects such in-lieu fees to subsidize public

affordable housing projects, whereas half of the fund is reserved for neighborhoods with a below-average share of affordable housing (Wellesley Institute 2010: 4). In Boulder, developers can pay into the Affordable Housing Trust, which is used to build apartments for households earning less than 60% of the AMI (City of Boulder 2017a: 3).

6.2 Limits of Inclusionary Zoning programs

Affordable housing production rate

The affordable housing production rates in the reviewed areas differ strongly from each other. While there are positive examples such as Boulder, other city's policies like Washington DCs only resulted in a very small number of units. There are many factors influencing the effectiveness of IZ programs, most importantly the policy design, which can be considered as a direct result of political will. Many jurisdictions have reservations about strict policies because they are afraid of negative economic impacts.

Only one city out of the four case studies has set large exempted areas, respectively most examined IZ ordinances apply to a large share of the jurisdiction. Spatial exemptions are set under the pretext, that dense developments would not fit the local character (e.g. Washington DC.), or that the requirements should apply only to certain development areas (DC Real Estate 2009). Apart from spatial restrictions, thresholds regarding the number of units triggering the ordinance, negatively affect the production rate as visible in the comparison of Boulder to the other cities. Boston's and Washington DC's policy only apply to developments of ten or more units, while San Francisco differentiates between small and bigger developments (DRDLA 2009). Only in Boulder, also single unit developments must fulfill IZ requirements.

The production of affordable units is directly tied to the production of units in general. This enables a steady increase of below-market units but limits the number of apartments to a certain point and leads to an unpredictable pace of affordable housing production. To rely solely on the private market comes with the risk that not enough affordable units are built and major fluctuations in the annual production rate occur. Because IZ programs depend on external factors such as the overall economic climate, in times of recession fewer units can be created, even though the demand for affordable housing increases (JCHS 2011).

Social inclusiveness

As stated in chapter 5.1., in comparison to the private housing market without zoning regulations, IZ programs can lead to more diverse communities, especially in case

of on-site development. Different compliance alternatives, such as off-site development or in lieu fees that feed housing funds, might enable the creation of more units, but limit the production of mixed neighborhoods and thereby the inclusionary aspect of the concept.

There are different regulations regarding the location of off-site units. In Washington, developers must make a "good faith attempt" to locate the units within the same census tract, otherwise somewhere else in the district (Tatian and Oo 2014: 8). The wording indicates that the regulation is not very strict and that developers can choose to build in areas with lower land prices. Boston's regulation specifies: "the off-site units must be built within half a mile of the original development" (City of Boston 2015).

Affordable housing authorities in charge of using the in-lieu fees mostly invest in larger buildings for poor and very-poor inhabitants. As the demand for affordable housing is high and the resources limited, the focus is laid on the production of a large number of units rather than on the social inclusion factor. For instance, projects realized by the Boulder Housing partners are usually not located in the cities' core but play an important role in providing low-priced housing. Between 2009 and 2013, not even 30% of all affordable housing units in Boston were built on-site (Meltzer 2014).

The decision between the number of units and the potential for mixed neighborhoods is an intricate one. A higher number of units serves a higher number of families while the concentration of low-income housing units in certain areas favors segregation and diminishes the effect of social inclusion.

Affordability

IZ usually sets income targets between 60 and 100% of the area median income (AMI) which targets low- and moderate-income households (LloLP 2015: 25). Units for very low-income households (around 30% of AMI) are very difficult to finance through zoning tools, and usually rely on public subsidies and housing funds (Coalition for Smarter Growth 2015).

Within the examined policies, there is a variety of different income regulations. The programs in Boulder and Washington target households that earn below 60% of AMI for rental units and below 80% of AMI for sale units, which can be considered rather low. While San Francisco offers units for people earning from 55% to 130% of the AMI, Boston's policy includes only households with incomes between 70% to 100% of AMI.

It must be pointed out, that income levels in growing and central urban areas, as the ones examined, are often already very high, which leads to an equally high AMI. For instance, in the city of Boulder, it is often people with

average-paid jobs, such as vendors or teachers, who are entitled to and in need of affordable units, because many middle-income households cannot afford adequate market-rate units (Meltzer 2014).

In such locations, IZ policies contribute more directly to the provision of middle-class housing rather than tackling the housing need of the poor. However, this may “relieve pressure on the market by creating units that moderate-income households can afford” (Coalition for Smarter Growth 2015). IZ programs can contribute to lower rents and a more affordable housing stock in general, but they cannot be considered as an effective strategy fighting poverty, as they usually fail to directly offer units to very poor households (Grounded Solutions Network 2017: 36). Still, many jurisdictions use the in-lieu fees to realize social developments for poor households and those units, even though very limited in number, can be considered an indirect result of IZ.

7 Inclusionary Zoning in the Viennese context

Vienna has an entirely different framework for planning and land use strategies as well as a rather unique approach to inclusion and affordable housing, which has long been recognized as a public task. Nowadays, Vienna owns 220.000 units, which are rented to very low to moderate-income households. The large stock of affordable units with rent-restrictions has considerably managed to shape the housing market and contributed to a slower increase of rental prices. In Vienna, public housing subsidies are funded through a mix of federal and state taxes (as of 2017, the Austrian federal provinces collect the formerly municipal taxes for public housing). In the U.S., landowners and developers are taxed directly. In the Viennese model of public spending on council housing, only a small percentage targets the demand side by providing an allowance for individuals like the U.S. IZ program (13% of public spending are subject-based subsidies). The subsidies mostly target the supply side and cover the housing construction directly (87% are object-based subsidies). (wohnbauforschung.at 2018) Furthermore, in contrast to the U.S. IZ model, Vienna’s council housing program by design targets very low-income households as there are no minimum income barriers. Another significant difference is that in Vienna, the system of subsidized housing mainly draws on limited-profit housing cooperatives, who construct and maintain the units (although more subsidies for for-profit developers have been made available in recent years). In the U.S., on the other hand, most affordable housing buildings are erected, owned and maintained by private developers for profit.

Although the city shows a very strong will to continuously

invest in affordable housing production, one can recognize a shift towards the inclusion of private market investors. The city is an example for an attractive and highly sought-after place to live and invest. Therefore, Vienna has to make use of its favorable bargaining position in land use matters and proactively share the responsibility for a socially and economically sustainable city with private investors, who, ultimately, will invest even with higher requirements. Some contractual agreements have been set up, but these individual contracts have a rather weak legal position and result in cost- and time-intensive negotiations.

A city-wide regulation such as Inclusionary Zoning could help to establish an actual legal framework for the developer’s contribution to the affordable housing production. This could give security to planners and allow long-term land use policies, while as well further reducing public spending, bureaucracy and transaction cost, for both the public sector and investors. The inclusionary zoning approach could furthermore add another dimension of functionality in promoting the construction of affordable housing all across the city’s territory and not only punctually through city development projects. In hindsight to Vienna’s rapid growth and the attractive, well-connected suburban municipalities, it would be necessary to include some of these municipalities in a zoning ordinance to prevent further urban sprawl. Furthermore, the quality aspects defined in IZ policies could lead to more inclusive structures in Vienna, with units evenly distributed across buildings and similar in size and design. As investigated, the effectivity of IZ programs is highly dependent on the policy design, which must express characteristics of the local housing market and regulatory framework. To implement an IZ policy in Vienna, the responsible agencies must carefully design a regulation fitting the context and the various existing regulations for affordable housing. Especially important are design considerations such as triggers, set-aside and the choice of incentives as well as opt-out options.

Despite the many potentials of an IZ policy in Vienna, it is unlikely that such a program has the power to fulfill the affordable housing demand on its own. Especially considering that the housing production rate through IZ ordinances is depending on the market production and therefore the amount of units produced is hard to predict and control. Another reason for the inability of IZ programs to tackle the lack of affordable housing units in Vienna are the minimum income barriers set in current policies, which fail to enable access to the affordable housing segment for the poorest groups. Therefore, only some design features of IZ programs might be considered useful additions to the city of Vienna’s established system.

8 Conclusion

Inclusionary Zoning is an American approach to provide affordable housing with a minimum of public spending, as it requires developers to provide affordable units as a condition for development approval. Based on case studies of four different cities: Boulder, San Francisco, Boston and Washington DC, IZ policy designs were compared. A focus was placed on the identification of strengths and limits of the instrument, the most important are summarised in Figure 2.

It must be emphasized that the effectivity of IZ ordinances varies strongly as it primarily depends on the specific policy design, which can be considered a sign of political commitment to intervene in the housing market in order to ensure affordability for all social groups. Programs with little exemptions, low thresholds but flexible compliance

come groups. On the basis of this understanding, an extensive social sector owned by the public sector and/or limited-profit cooperatives was established to ensure the availability of affordable housing. Most currently implemented IZ policies set minimum income barriers and thus, without additional regulations, fail to ensure availability of affordable housing for low-income groups.

Against this background, IZ could only be considered an additional tool for Vienna, as the city could benefit from an explicit legal framework for the involvement of the private sector in affordable housing production all across its territory. Moreover, it could produce new units with high-quality standards, evenly spread across the city, with fewer direct subsidies necessary, relieving the public budget.

Figure 2: Summary of the most important strengths and limitations of IZ Policies

Strengths	Limits
Production of affordable housing units with little public spending	Unpredictability of unit development pace due to strong connection to overall housing production, determined by supply side
Potential funding of very low-income housing units (off-site) through in-lieu fees	Risk of displacement of affordable housing units outside of IZ policy areas
Social inclusivity through spatial integration	Inability of most programs to offer very-low income housing
Definition of high-quality standards for affordable units	Reduced inclusionary effect due to compliance alternatives
Promotion of compact structures	Limitation of unit production rate due to exemptions and thresholds
High Flexibility of instrument in terms of local context and other existing regulations	
Reduction of entry-barriers to high-quality housing segment in central areas	

Source: Own depiction

options and opt-outs, such as in? Boulder, were identified as most effective in creating a share of affordable units compared to the overall production. However, even though the existence of opt-out options does not directly reduce the number of units built, it might diminish inclusionary effects by relocation of developments.

Interpreting the potentials of any American regulation in regard of a European context is not a simple undertaking. Inclusionary Zoning is an instrument embedded in the American housing market, which is dominated by the private sector. In comparison, the Austrian housing system is strongly shaped by activities of the limited-profit and public sector in the provision of inexpensive housing.

Vienna is a city with a long tradition of direct public spending on the provision of affordable housing. The city's approach was and still is that the private market is unable to provide sufficient affordable housing for low-in

Consequently, the instrument of Inclusionary Zoning will not be able to replace publicly subsidized affordable housing provided by the limited-profit sector. However, if implemented within a regulatory context that effectively corresponds to the IZ design features and a city with strong political will to advance social inclusion, it could grow to become a powerful tool for the production of higher rates of affordable units in the city of Vienna.

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