# Assessment of land and housing policy instruments for the provision of affordable housing in a European metropolis

## Case study: Nantes (France)

## Master Thesis Report

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# Table of content:

## List of figures

## List of tables

## List of acronyms

| Acronym | Meaning in French | Translation in English |
|---------|-------------------|------------------------|
| AANM | Accession Abordable Nantes Métropole | Affordable homeownership Nantes Metropolis |
| ANRU | Agence Nationale pour la Rénovation Urbaine | National agency for urban regeneration |
| AURAN | Agence d'Urbanisme de la Région Nantaise | Urbanism agency of Nantes Regions |
| BRS | Bail Réel Solidaire | Real supportive lease |
| GI | - | Green infrastructure |
| INSEE | Institut National de la Statistique et des Etudes Economiques | National institute of statistics and economic studies |
| NBS | - | Nature-based solutions |
| NM | Nantes Métropole | Nantes Metropolis |
| NMA | Nantes Métropole Aménagement | Nantes Metropolis Planning |
| NMH | Nantes Métropole Habitat | Nantes Metropolis Housing |
| OFS | Organisme Foncier Solidaire | Solidary land organisation (for the BRS) |
| PADD | Projet d'Aménagement et de Dévelopement Durable | Planning and sustainable development project |
| PAS | Prêt d'Accession Sociale | Social accession loan |
| PAZ | Plan d'Aménagement de la Zone | Development zoning plan |
| PDU | Plan de Déplacement Urbains | Urban mobility plan |
| PLAI | Prêt Locatif Aidé à l'Intégration | Assisted rental loan for integration |
| PLH | Plan Local de l'Habitat | Housing local plan |
| PLI | Prêt Locatif Intermédiaire | Intermediate rental loan |
| PLS | Prêt Location Social | Social renting loan |
| PLU(m) | Plan Local d'Urbanisme (métropolitain) | (Metropolitan) local urban plan |
| PLUS | Prêt Locatif à Usage Social | Rental loan for social usage |
| PSLA | Prêt Social Location-Accession | Social lending for lease-to-buy |
| PTZ | Prêt à Taux Zéro | Interest-free loan |
| QPV | Quartier Prioritaire de la Ville | Priority (sensitive) district of the city |
| SCOT | Schéma de Cohérence Territoriale | Territorial coherence scheme |
| SEM | Société d'Economie Mixte | Semi-public company |
| UGS | - | Urban green space |
| ULS | Usufruit locatif social | Social rental usufruct |
| ZAC | Zone d'Aménagement Concerté | Concerted planning zone |

## Abstract

Nowadays, in economically growing European metropolises, gentrification processes and their resulting social exclusion from urban centers, starts affecting middle-income residents, leading thereby to a risk of social polarisation in cities. Based on this observation and the questionable effectiveness of public policies, the objective of this thesis is to evaluate how the combination of land and housing policy instruments for middle-income residents guarantees their access to affordable housing in urban regeneration projects. To achieve this objective, and gather data on effectiveness and implementation, narrative interviews were conducted with seventeen actors in Nantes (France), complemented by policy documents and already conducted semi-structured interviews. The results show that even though the land instrument ZAC generally conforms to the target of producing a specific amount of affordable housing in PLS (rental) and PSLA (accession), the performance of the affordable housing policy to resolve the collective problem of social polarisation is however discussed. It has been found that the main elements restraining the effectiveness of the policy were rather relying on the political context of the city of Nantes than on the implementation process of the policy instruments.

**Key words**: social polarisation, policy analysis, land policy instruments, effectiveness, implementation.

## Summary

Whereas, in the 1990s, urban regeneration projects emerged in Europe to limit urban sprawl and socio-spatial segregation by reinforcing the local economy of cities, their associated state-led gentrification has been criticized for its negative impacts on low-income residents being forced to displacement. Based on this observation, but also acknowledging for the economic benefits of gentrification, public policies have been adopted to mitigate the negative effects of gentrification on low-income residents, notably by increasing the social housing stock of cities. However, more recently, it appears that the urban competitiveness of European metropolises and middle-sized cities started to transform the dynamic of gentrification into a dynamic of social polarisation. The exclusion from urban centralities, experienced by low-income residents in the past (and relatively well mitigated now), also starts affecting middle-income residents.

Observing the lack of studies on current public policies adopted to mitigate the exclusion of middle-income residents, and noticing that the effectiveness of usually recommended policy instruments to mitigate exclusion of low-income residents is mainly relying on their implementation and strategic use at the local scale, it has been decided to evaluate how the combination of land and housing policy instruments for middle-income residents guarantees their access to affordable housing in urban regeneration projects.

Therefore, an approach based on the evaluation of effectiveness and implementation has been adopted, inspired by the previous schools of thoughts on policy analysis and evaluation. As public policy instruments are mainly context-specific, the following study based its analysis on the case study of Nantes, in France, an attractive European metropolis, adopting strong social and affordable housing policies. In practice, narrative interviews have been conducted to gather data on the objectives, achievements, and implementation of a land policy instrument, the ZAC, and housing policy instruments, the PLS (rental) and PSLA (accession). Secondary data sources such as policy documents and already conducted semi-structured interviews have also been analysed to complement the data.

As a result, in Nantes, it has been found that the land policy instrument ZAC is relatively effective to conform to its objectives in terms of production of PLS (rental) and PSLA (accession), although its implementation give some space for modification depending on the priorities of public authorities at a specific time. However, at the scale of Nantes metropolis, the conformance of the affordable housing policy to the objectives is rather moderate and its performance to resolve the collective problem of social polarisation in the city seems to be lacking. Public authorities in Nantes thus have introduced new national instruments such as the BRS and intermediate housing to ensure a more long-term affordable housing stock for more various profiles, but their potential effectiveness is discussed. It is therefore argued that the political context and tight housing market of Nantes is probably the main brake on the effectiveness of the policy instruments. Finally, in contrast with other studies, it is not recommended here to adopt further policy measures, but however to reconsider the roots and narratives of the actual urban planning model based on economic growth and land scarcity.

# Introduction

- **Urban regeneration**

In the 1990s, the terms "urban renewal" and "urban redevelopment", formerly used to describe the physical transformation of European cities (Roberts and Sykes, 1999), gave place to a new term, namely "urban regeneration", a more comprehensive approach to planning interventions. Urban regeneration is defined as a « *comprehensive and integrated vision and action which seeks to resolve urban problems and bring about a lasting improvement in the economic, physical, social and environmental conditions of an area that has been subject to change or offers opportunities for improvement* » (Roberts and Sykes, 1999). In the more recent literature, the definition also includes terms such as « multi-faceted problems » and « deprived urban areas » (Ercan, 2011 ; Zheng et al, 2014 ; Marra et al, 2016). Urban regeneration emerged in response to urban socio-spatial segregation, to the decline of the local economy in cities, and the loss of population in city centers (Cameron, 2003). Moreover, urban regeneration differenciates itself from urban development interventions, which was encouraging urban sprawl, which at that time, started to be considered as land-consuming and unsustainable (Roberts and Sykes, 1999). As recent studies show, urban sprawl increases local temperatures (Emadodin et al, 2016) and CO2 consumption due to higher transportation needs (Arellano and Roca, 2010 ; Bart, 2010). To cope with these two main issues (socio-spatial segregation and urban sprawl), urban regeneration projects were considered as opportunities to address urban decay, by providing socio-economic revival (Marra et al, 2016) through social mixity (Lees, 2008), and by integrating sustainable development agendas in cities (Jones and Watkins, 1996).

- **Gentrification**

Urban regeneration projects in residential areas imply the demolition of existing buildings in low-income neighbourhoods and their replacement by new housing (Cameron, 2003). These place-based interventions also entail the replacement of low-income residents by new middle-income or high-income residents, described by the phenomenon of *gentrification* (Cameron, 2003). This well-known concept, firstly mentioned by Ruth Glass in 1964, has evolved over time and is still highly debated in the literature nowadays, as explained in the following sections.

- ○ **Types of gentrification**

In the literature, two types of gentrification are distinguished: state-led gentrification and spontaneous gentrification. Whereas *state-led* gentrification is deliberately fostered by mixed tenure policies (Hochstenbach, 2017), *spontaneous* gentrification is rather described as an indirect and unintended consequence of political changes and strategies, such as economic investments (Salgamcioglu and Ünlü, 2014). Even if the distinction between both types of gentrification is not always very clearly identified in reality, this study will mainly focus on

state-led gentrification, deliberately initiated by public authorities.

### o **State-led gentrification**

State-led gentrification can generate direct- or indirect displacement of lower-income residents (Davidson and Lees, 2010). Direct displacement refers to eviction processes of residents due to new development projects (Davidson and Lees, 2010). On the contrary, indirect displacement, or "*exclusionary displacement*", is explained by the inaccessibility of lower-income residents to housing, often due to an improvement of the surrounding environment, within or even beyond the area under regeneration (Davidson and Lees, 2010). This improvement of the environment is explained by the fact that in order to attract middle-income and high-income residents into stigmatised neighborhoods, urban regeneration projects need to improve the image of the neighborhood, not only by providing new housing, but also by renovating public spaces (Cameron, 2003).

### o **Attractivity strategies**

One of the most commonly adopted land use planning strategy to increase the attractivity of European cities are greening strategies, through the implementation of urban green spaces (UGS), such as green infrastructures (GI) and nature-based solutions (NBS) (EC, 2013 ; EC, 2011; EC, 2016). More than a tool for attractivity, urban green spaces also provide environmental and social benefits (Sadeghian and Vardanyan, 2013; Haq, 2011; Sorensen et al., 1997). They mitigate the urban heat island effect (Lafortezza et al., 2009 ; Bowler et al., 2010; Gill et al., 2007); provide climate-regulating ecosystem services (Larondelle et al., 2014); improve mental, physical health (Nutsford et al, 2013 ; Mytton et al, 2012) and safety feeling (Kuo et al., 1998); and support economic regrowth notably through the increase of real estate prices (Liebelt et al, 2018; Tajima, 2003).

### o **Green gentrification**

Greening strategies have produced a particular type of gentrification called *green gentrification*, namely « *the implementation of an environmental planning agenda related to public green spaces that leads to the displacement or exclusion of the most economically vulnerable human population, while espousing an environmental ethic* » (Dooling, 2009). Whereas greening was previously considered more as a causal factor of gentrification, it is now rather recognised as a "*catalyst or accelerating factor*" of gentrification (Ali et al., 2020). Today, the causal factor of green gentrification is acknowledged to be mainly market forces in urban real estate (Ali et al., 2020; Pearsall and Anguelovski, 2016; Anguelovski, 2016; Gibbs et al., 2013). Indeed, the proximity to urban green space is one of the main factors positively influencing housing and rental prices (Conway et al, 2010; Wu et al, 2015; Liebelt et al, 2018). As a consequence, private developers, landowners and homeowners cash out the value increase of their land or property, by selling or renting the latter at a higher price, often at the expense of lower-income residents, usually tenants, being displaced to less desirable places (Haase et al., 2017; Anguelovski et al, 2018; Anguelovski et al, 2019;

Pearsall and Anguelovski, 2016; Connolly, 2019; Curran and Hamilton, 2012).

- o **Impacts of green gentrification**

Displacement of low-income residents has been reported as having many negative impacts (Atkinson, 2002), such as social exclusion (Marcuse, 1985; Fullilove, 2001), instability of the community network (Sheppard, 2012), declining physical and mental health of displaced residents (Lim et al, 2017; Bentley et al, 2012; Triguero-Mas et al, 2015; Pearsall, 2012) and increased criminality (Atkinson, 2002).

- **Approaches to deal with gentrification**

  - o **Private-sector approach**

The private-sector approach in urban regeneration projects presented above is thus critized for its dominant role of property capital, displacement of low-income residents and its negative consequences.

  - o **Social-sector approach**

In contrast, adopting a fully social-sector approach to urban regeneration projects by involving commmunity-based housing associations do not seem to be the best option to resolve the issue of social deprivation and segregation of social groups. Indeed, it was shown that when this approach was adopted, low-income residents continued to remain very concentrated in the same areas, also called "*ghettos*" (Bailey and Robertson, 1997). This spatial concentration of low-income residents is considered as an isssue, since it might inhibit their ability to get out of poverty due to the influence of their socially disadvantaged network, as illustrated by the concept of *neighborhood effect* (Randolph and Wood, 2003).

  - o **Policy-based approach**

To mitigate green gentrification processes and their resulting socio-spatial inequalities, by supporting what is known as *positive gentrification* (Cameron, 2003), environmental justice scholars formulate prerequisites and recommendations for inclusive greening policies (Haase et al, 2017; Kabisch et al., 2017), or « just green enough » strategies (Curran and Hamilton, 2012).

However, Buitelaar et al. (2016), argue that by doing so, scholars tend to make a normative leap from the observation of inequalities to the judgment of them - also called a normative leap from "is" to "ought to" (Rein and Schön, 1993) -, without sufficiently recognizing the political aspects of gentrification. Indeed, gentrification is first and foremost driven by public policies which reflect social and political objectives of city councils (Cameron, 2003). Urban planning is thus essentially political and context-specific (Klosterman, 1978; Hartmann and Gerber, 2018). Many policies exist to mitigate gentrification, such as tax exemption, rent

control, community land trust, modification of zoning plans and by increasing tenant opportunity to purchase act (Marcuse, 1984; Bates, 2013). Nonetheless, the effectiveness of these policies on the mitigation of displacement mainly relies on how policy instruments are strategically used by urban planners in order to fulfill politically defined objectives (Gerber et al, 2018; Leshinsky and Legacy, 2015).

## Societal problem

By the time, the context of European cities evolved and not only low-income residents but even middle-income residents start to be subject to displacement out of the cities as explained hereunder.

- **European context**

Whereas urban regeneration was originally used to strenghten the local economy of the city, the 21st century experiences an increase competitiveness between European cities, showing the use of urban regeneration not only to strenghten the local economy but also to contribute to the national- and global economy (Brown et al, 2013). Large European cities, such as Amsterdam, Milan and Barcelona, underwent and are still undergoing significant urban changes in order to compete for qualitative urban environments, sustainable achievements, and economic leaderships (Brown et al, 2013). With less agglomeration advantages, but historic and attractive potentials, European medium-sized cities also start joining the game of urban competitiveness (Giffinger, et al, 2007). The urban transformations experienced by these competitive cities are accompanied by gentrification processes and a tertiarisation of the economy, leading to a growing polarisation of income groups (Lees et al, 2008; Musterd et al, 2017; Krätke, 2007; Lang, 2011).

- **Social polarisation**

One of the definition of social polarisation is "*the increase in the number of people who belong to the upper and lower classes, as opposed to the middle classes, however these are defined*" (Pratschke and Morlicchio, 2012). This can be explained by a housing system which, on the one hand, incentivizes higher-income groups to buy homes at significant housing prices, and on the other hand, proposes more and more rental social housing for low-income residents in order to avoid their exclusion of cities due to gentrification (Andersen et al, 2000). So, whereas urban regeneration and induced gentrification processes were aimed at increasing social mixity, it is reported that this social mixity is only temporal and that in the long run, gentrification creates social polarisation and reinforces socio-spatial segregation (Musterd et al, 2017; Lees, 2008).

- **Social mixity**

Even if social mixity at the neighborhood level, in the sense of social interactions, seems to be

neither achievable, nor desirable (Atkinson and Kintrea, 2000; Cole and Goodchild, 2001), at the city level, a diversification of the housing stock is however advisable (Fincher and Iveson, 2008). If the political will is to enhance housing equity, public actors should ensure a balance between rental and homeownership housing and guarantee a diverse range of housing prices to enable different income groups to have access to housing, including middle-income residents (Stegman, 2017). Some countries and cities take initiatives in order to redress this balance, but the effectiveness of these policies is however discussed.

- **Strategies to limit social polarisation**

To prevent social polarisation, the city of Amsterdam provide more rental dwellings for middle-income residents in new development projects (Hochstenbach and Ronald, 2020). But in existing housing, the increase in housing prices continues to exclude middle-income residents (Hochstenbach and Ronald, 2020). In terms of homeownership, in urban regeneration projects, public authorities can also adopt policies to help middle-income residents to access homeownership, such as the "right-to-buy" policy in the UK (Jones and Murie, 2008), which is actually criticized for its hollow promises to middle-income residents (Cooper et al, 2020; Kleinhans and Van Ham, 2013). However, the role of middle-income residents in economically growing cities is rarely discussed in the literature, whereas they initially represented the population used to generate gentrification and enhance urban economic growth.

- **Public policies and their effectiveness**

Combining urban containment, growth management strategies and the provision of affordable housing for middle-income residents brings many dilemmas to metropolitan planning (Gurran, 2008). To avoid the incompatibility of strategies, metropolitan planning needs to be supported by strong public policies and legislative frameworks (Gurran, 2008). The aim of public policies is to « *modify the behaviour of social groups presumed to be at the root of, or able to solve, the collective problem to be resolved (target groups) in the interest of the social groups who suffer the negative effects of the problem in question (end beneficiaries)* » (Knoepfel et al 2007, p.24). In practice, policies are implemented through policy instruments, which are defined as « *the detailed forms of intervention or measures planned to fulfil the objectives of a public policy* » (Knoepfel et al. 2007, p.156–157). One public policy types used in metropolitan planning is land policy. The analysis of land policies requires putting the spotlight on actors and their actions, such as their mobilization of a strategic set of policy instruments in order to implement politically defined objectives (Gerber et al, 2018b, p.11). This explains why "*land policy is not a public policy, but a strategy*" (Gerber et al, 2018b, p.11). Policy instruments from public and private laws can thus be combined in order to support the implementation of specific planning objectives (Gerber et al, 2018b). But similarly to policy instruments aimed at mitigating gentrification, the effectiveness of policy instruments aimed at limiting social polarisation depends on their implementation, the interests of the actors involved, and the political regimes in which the policy instruments are used (Gerber et al, 2018).

In a nutshell, political aspects of today's urban planning strategies are not sufficiently highlighted in the literature, and studies on the role of middle-income residents in current economically growing cities are lacking. Besides, it is the role of urban planners to deal with land scarcity, to prevent uncontrolled development, and to balance public and private interests by meeting certain political objectives through the combination of policy instruments (Gerber et al, 2018). So, this study will analyse a city which seeks to become a European metropolis by adopting green and social strategies, namely Nantes, in France, to understand how the adopted strategy of combining land and housing policy instruments guarantees the provision of affordable housing (both in rental and access to homeownership) for middle-income residents in urban regeneration projects.

## Research questions

The main research question of this thesis is: *How does the combination of land and housing policy instruments for middle-income residents guarantee their access to affordable housing in urban regeneration projects?*

This main research question implies to measure the *effectiveness* of the combination of land and housing policy instruments, and then to question the way this effectiveness is achieved. To support this second argument, the *implementation* process of the instruments will be explored. Based on this approach, three sub-research questions can be formulated :

1)  What are the objectives of land and housing policy instruments used by public authorities to provide affordable housing for middle-income residents in urban regeneration projects?
2)  What are the achievements of land and housing policy instruments for the provision of affordable housing on middle-income residents?
3)  How does the implementation of land and housing policy instruments for the provision of affordable housing for middle-income residents in urban regeneration projects influence their effectiveness?

## Research design

The objective of the study is to evaluate the effectiveness of land and housing policy instruments for the provision of affordable housing for middle-income residents and explore how the implementation of these instruments can influence their effectiveness. The study design chosen to accomplish this goal is an "after-only" design (Kumar, 2014). The study will thus evaluate the effects of a situation, after it has been experienced by the study population (Kumar, 2014). The following exploratory study will be an evaluative research mobilizing qualitative primary and secondary data, collected in a particular case study. As mentioned before, policy instruments are context-specific and thus need to be analysed in a specific geographical area, in this case, a city. Selecting a case study for the topic at hand will enable to collect narratives and explore the roles of different actors involved in a particular political

context. This is the reason why a case study approach seems to be adequate to answer the research questions.

## Case study

To be coherent with the societal problem and the research questions, the case study is chosen according to three elements: 1) the city must be an eloquent case, mentioned as an exception in terms of green and social objectives; 2) the city must undertake large urban regeneration projects; 3) the city must make use of land policy instruments for the provision of affordable housing.

Even though French cities, as many other European cities, are struggling with development pressures, land scarcity, population growth and social polarisation, the French institutional context and its specific urban strategies seem to give French cities the potential to manage and/or to mitigate social polarisation. Indeed, the institutional context in France is characterised by new and traditional horizontal power relations at the metropolitan level, and a strong State commitment (Carpenter et al., 2015). Moreover, the country has a strong culture of consensual politics and local political leadership (Boino, 2009), based on cooperation rather than hierarchy (Carpenter et al., 2015). This cooperative institutional system giving more power to regional actors, distinguishes France from Germany, where the power is mainly given to private developers, and the Netherlands, where the State has the highest responsibility (Lord et al., 2015). Besides, the political context in France seems to favor social redistributive strategies in urban planning. Indeed, urban regeneration projects are presented as a success in dealing with challenging processes such as gentrification (Darchen and Simon, 2018) due to planning management led by a single development agency funded by public budget, a clear leadership ensuring long-term projects, transactional urbanism[1], the flexibility of plans, the sale of below-market prices land, and the subsidies of housing for low-incomes (Darchen and Simon, 2018). Finally, as many other liberal countries in Europe, France is characterised by a strong property-rights regime, established already in the human rights declaration of 1789, when this regime of democracy and private liberties substituted the monarchy regime (Bély, 2018).

In this context, the city of Nantes is regularly mentioned as a model of green and affordable city (Garcia-Lamarca et al, 2019; Béal, 2017). Nantes is located in the department of Loire-Atlantique, in the region Pays-de-la-Loire. According to the last census, the municipality of Nantes counts 309 346 inhabitants (INSEE, 2019), and the metropolis of Nantes counts 638 931 inhabitants (INSEE, 2020). Nantes received in 2013 the title of European Green Capital, providing the city a certain visibility on the international stage (NM, 2014a), increasing thereby its competitiveness. Besides offering 57 m2 of green space per capita (Joly, 2020), Nantes is also one of the French city with the highest percentage of social housing within its housing stock: 21.5% in 2015 (AURAN, 2016a), 22,1% in 2017 (NM, 2018), compared to

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[1] Transactional urbanism is known as the negociations between development agencies and collectivities (Darchen and Simon, 2018).

Paris and Lyon, which counted 18.5% and 16% of social housing respectively in 2014 (Guelton and Le Rouzic, 2018). Next to its social housing stock, the city of Nantes and Nantes metropolis as a whole also offers *affordable housing*. They are housing in rental or for homeownership, below market prices, specifically targeting middle-income residents who do not have the resources to buy at market prices, but are not eligible for rental social housing (AURAN, 2016a). Whereas from 2010 to 2016, 613 housing/year in affordable accession were built (8% of the total production) in the metropolis (NM, 2018), the authorities set the objective to provide 700 to 800 new housing in affordable accession per year by 2025 (NM, 2018). To achieve this goal, Nantes makes use of specific land policy instruments, detailed in the theoretical framework section. In brief, the city of Nantes in the French context appears as an exceptional case study within which large urban regeneration projects are undertaken to provide qualitative public green space and a diversity of housing, including affordable housing for middle-income residents.

More specifically, two of the urban projects undertaken in Nantes will be studied in this thesis: the project of Bottière-Chênaie and the project of Euronantes. These two geographical areas were selected based on certain criteria's: (1) the majority of the urban operations of the projects must have been delivered (ideally recently), in order to be able to identify middle-income residents already living there and having an opinion on their experience; to have an overview on the amount of affordable housing actually built in the area; and to be able to identify the actors involved in the implementation process; (2) the urban projects must include clear objectives in terms of affordable housing provision (a certain proportion of the total housing provision); (3) the urban projects must make use of the selected land policy instruments (more detailed in the theoretical framework section); (4) the two urban projects must show different and contrasting approaches in the use of the land and housing policy instruments.

For a matter of coherence and clarity of the text, the next chapter on the theoretical framework in which this study is embedded will be presented before the chapter on research methodology.

## Theoretical framework

This section will provide an overview of the literature on the theoretical concepts of land policy analysis and land policy instruments, before digging into the theoretical debates around implementation and effectiveness of instruments. In each section, the theoretical notions are also applied to the framework of this thesis.

### *Policy analysis*

One of the first scholars identified to have made policy analysis one of its main research topics is Wildawsky (1979). He defended the idea that policy analysis should be a discipline in itself of which the content should be evolving depending on the circumstances and the

nature of the problem at a given time. According to Knoepfel et al. (2007), in policy analysis, three distinct schools of thought studies the actions of public authorities.

The first one connects policy analysis with the theory of the State. It is thus a politically-oriented approach questioning the role of the State over time to which Mény and Thoenig belonged to (1989). In that school of thought, pluralists focus on the State as an institution that serves the needs of the society (Simon, 1957; Lindblom, 1959); neo-Marxist emphasizes the role of the State as serving only specific social classes, and the weak independence of the State from the capitalists interests of its members (Castells and Godard, 1974); and neo-corporatists and neo-institutionalists rather study the organisations of actors with specific power and interest, and who interact according to specific institutional rules (Jobert and Muller, 1987; March and Olsen, 1984).

The second school of thought develops an approach that studies how public action works, especially through the operational function and logics of the political system (Lasswell, 1951). It is rather an understanding of the system and its rules than the application of a theory (Knoepfel et al, 2007). This approach includes both the study of policy creation and implementation processes as well as the development of knowledge that could be used within policies (Knoepfel et al, 2007). The scholars of this school of thought promote a higher connections between researchers of the social sciences and economic sciences as well as policy makers; and develop the idea that the State is part of a broader political-administrative system which needs to be aknowledged to formulate recommendations (Knoepfel et al, 2007). As part of this approach, the application of the science of systems analysis to the policy sphere was supported by Easton (1965).

The last school of thought evaluates the results and effects of policies. The amount of policy evaluation studies is increasing since the beginning of the 2000s in France and Switzerland (Duran, 1993). Scholars make use of different tools for evaluations such as statistical processing, multicriteria analysis and cost-benefit analysis (Maystre et al, 1994; Krutilla, 2005). By the time, the process of evaluation and its impacts on public decision making started to be assessed in the US, France and Switzerland (Rossi and Freeman, 1993; Monnier, 1992; Bussmann, 1998). Whereas in Switzerland, the evaluation structures can be found even within administrative authorities, in France, policy actors are rather little involved in the evaluation of public policy and this evaluation is usually not used to improve public policies (Knoepfel et al, 2007).

This thesis follows the great interest for evaluative studies of public policies developed by this last school of thought, while also being inspired by the implementation processes and broader political-administrative system as well as the role of public authorities, notably towards different social classes, of the first and second approaches.

Considering these aspects and the societal problem of this thesis, it appeared relevant to carry out an analysis of land policy in particular. Moreover, whereas conventional land planning approaches focus on specific development objectives, the analysis of land policies enable to fill the gap in the literature of land policy instruments implementation, as mentioned by

Gerber et al (2018b, p.22). The next section will thus present the theory on land policy instruments and the specific tools analysed in this thesis.

*Land policy instruments*

Policy instruments are defined as « *the detailed forms of intervention or measures planned to fulfil the objectives of a public policy* » (Knoepfel et al. 2007, p.156–157). Land use plans are one type of policy instruments, specifically related to land policy; they are considered as « *responses of public authorities to the problem of uncoordinated spatial development that might result from the involvement of unrestrained property titleholders* » (Gerber et al, 2018b, p.13). As a high number of policy instruments are available, actors make the choice of using "*specific instruments over others, based on the objectives they want to achieve*" (Gerber et al, 2018b, p.22), according to their interests in a certain framework that limits their understanding of the collective problem (Gerber et al, 2018b, p.22). This concept, inspired by the idea of *forum shoppping* of Benda-Beckmann (1981) and referred to as *instrument shopping* by Gerber et al (2018b), illustrates well that "*land policy is not a public policy, but a strategy*", as mentioned by Gerber et al (2018b, p.11). Similarly to the book of Gerber et al. (2018), the object of this thesis is thus not only policy instruments themselves that public authorities and target groups use but also the strategies and power games hidden behind the implementation process of these tools.

The choice of policy instruments by public authorities to solve a given societal problem and respond to politically defined objectives is particularly debated in the litterature. Howlett (2004) describes three generations of theories on instrument choice. Initially, the study of instruments use and design was studied from two independent perspectives: political sciences and economics (Howlett, 2004).

The first generation of instrument choice theory tried to simplify the political world of instrument choices (Howlett, 2004). But this theory was criticized for its over-simplification of instruments categories, with its dichotomy between "good and evil", "market and state" (Woodside, 1986) or its trichotomy between "carrots, sticks and sermons" (Vedung, 1998).
Instead of questioning a single policy instrument, the second generation of scholars studied policy mixes and the contexts in which they were chosen. It is argued that both external contexts (cultural norms, institutional and political arrangements) and internal contexts (combination of instruments) that constrain instrumental choices, needed to be taken into account in the study of policy mixes (Minogue, 2002).
As the start of new and third generation, Howlett (2004) stressed an important aspect of the contexts in which instruments are chosen, which refer to the set of existing arrangements and preferences for some instruments, known as the "*implementation style*". Whereas Howlett (2004) focuses more on the *why* (context and preferences of decision-makers), Capano and Lippi (2016) propose a framework to analyse *how* instrument are chosen.

Following the will of Howlett (2004) to move beyond the simplistic categories of policy instruments defended by the first generation, and the increased desire to open policy analysis

to broader socio-economic systems analysis, combining political sciences and institutional economics, Gerber et al (2009) argue for a distinction between policy instruments deriving from public laws, and policy instruments related to private laws and property rights (fig.1).

For the good understanding of the following arguments, some notions need to be clarified. *Use rights* in relation to land are "*the rights to use the land resource in accordance with the zoning plan*" (Lawinsider, 2020). *Disposal rights* are "*the rights of retention of an ownership title and the rights to sell the good*" (Oxford reference, 2020). *Property rights* are "*the rights for an owner to access his/her land, to harvest its fruits, to manage it, to exclude potential users, to sell it and to burden property titles by taking out mortgages against them*" (Gerber et al, 2009). "*Property*", as explained by Bromley (1991), "*is not an object such as land, but rather a right to a benefit stream that is only as secure as the duty of all others to respect the conditions that protect that stream*". Property owners have use- and disposal rights, but non-owners (for instance tenants or developers) can also have use rights (fig.1). As all these rights are intrinsincally linked, modifying use or protection regulations in order to legally protect certain interests at the cost of others can alter the use rights of policy actors (Gerber et al, 2009). Moreover, as stressed by Hartmann and Gerber (2018, p.4), "*policy instruments are political in nature: public intervention creates losers and winners*", what necessarily result in a redistribution of use rights to the land.

So, both public authorities and target groups can combine policy instruments from public and private laws; in order to support the implementation of predetermined planning objectives, and to defend their interests related to the use of land resources (Gerber et al, 2018b, p.11). Instruments used by public authorities will be the focus of this section, whereas target groups strategies will be touched upon in the implementation section.

As visible on figure 1, Gerber et al (2018b, p.15) identified four ways through which land policy instruments can modify use rights, disposal rights, and/or property rights. The first ones are the policy instruments with no impact on the content of use or disposal rights, e.g. information campaigns, economic incentives (tax or subsidies). The second ones are the instruments using public policy that impact the scope and content of use or disposal rights, e.g. zoning, land readjustment etc. The third ones are instruments that redefine property rights and that impact the scope and content of use or disposal rights, e.g.pre-emption rights, tradable development rights etc. And the last ones are the instruments that redistribute property rights, e.g. formal expropriation, privatization.
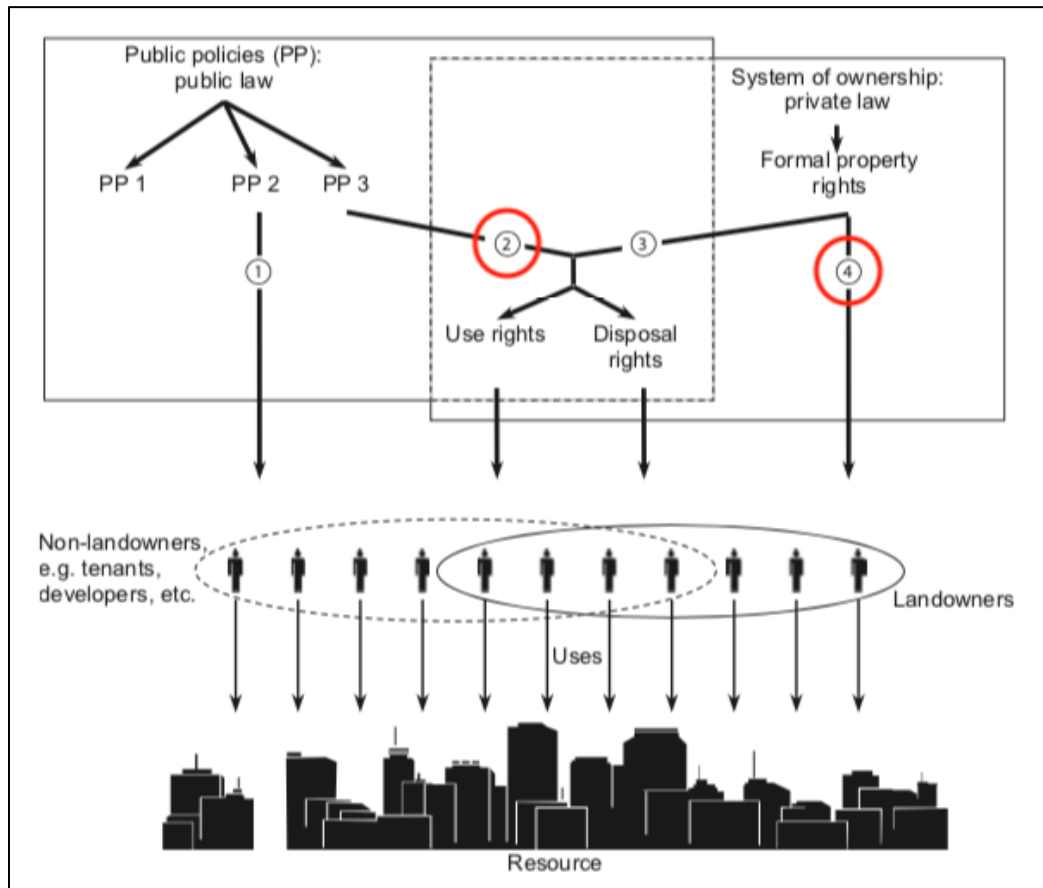
*Figure 1*: Four ways of interventions. Retrieved from: Gerber et al, 2018b, p. 15. © 2018 Jean-David Gerber, Thomas Hartmann, and Andreas Hengstermann and contributors.

Based on these four types of instruments, and as the study is explorative, it is argued that three different but complementary policy instruments will be studied, corresponding to two of these ways of interventions (in red on fig.1): one instrument related to public rights, a land policy instrument, corresponding to the second type of instruments mentioned above; and the two others related to private laws, housing policy instruments, corresponding to the fourth type of instruments mentioned above. All instruments are used simultaneously in Nantes but have their own purpose.

The first instrument selected for the study is a land policy instrument, a national zoning tool, called the ZAC (Zone d'Aménagement Concertée), or zone of concerted development. According to the French urban planning code, ZACs are "*zones whithin which a public collectivity or public institution decides to intervene to carry out the development and the equipment of lands, notably the ones that this collectivity or institution acquired or will acquire in order to transfer them to public or private users*"[2]. Carpenter (2015) gives a complete overview of the territorial organisation in France, described hereafter, and supported visually by figure 2.

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[2] Code de l'urbanisme, article L311-1 (modifié par la Loi n° 2018-1021 du 23 novembre 2018 portant évolution du logement, de l'aménagement et du numérique).
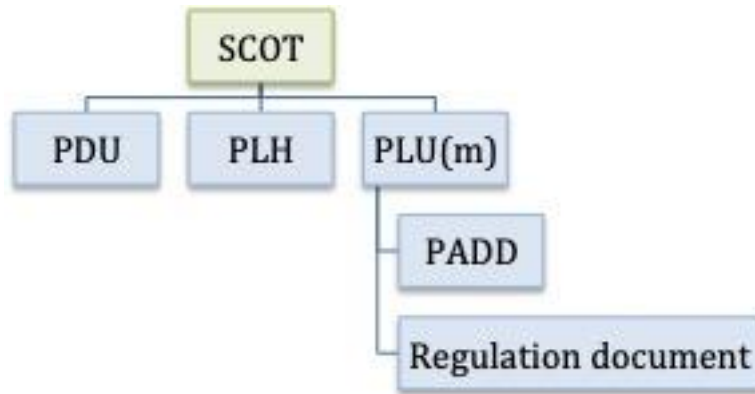
*Figure 2*: Hierarchy of the main urban plans in France. Own elaboration. Source: Carpenter, 2015.

In 2000, the SRU act (national law on Solidarity and Urban Renewal) redefined the official planning documents for urban renewal. This law set the requirement for core cities and surrounding municipalities in France to establish a planning document called the SCOT (territorial coherence scheme), which draws the major planning strategies at the scale of the agglomeration (Carpenter, 2015). Three regulatory land-use plans are linked to the SCOT: the PLU (Plan Local d'Urbanisme, or local urban plan), the PDU (Plan de Déplacements Urbains, or urban mobility plan) and the PLH (Plan Local de l'Habitat, or local housing plan). The PLU can also be called the PLUm if it concerns a metropolitan area. The PLU(m) includes two main documents: the PADD (Projet d'Aménagement et de Dévelopment Durable, or the planning and sustainable development project) which defines the main urban planning strategies for a period of 10 years; and a legally binding document regulating land use zones and planning permits (Carpenter, 2015). The PLH is a land policy instrument defining, for a period of 6 years, the objectives and principles of local housing policies aimed at increasing social mixity and providing a diversity of housing on the territory of a group of municipalities (Baudet-Collinet et al, 2016). Since 2000, the development programme of the ZACs can not anymore follow the independent PAZ (plan d'aménagement de zone, development zoning plan) specific to the zone, but is subject to the urban regulations defined by the PLU(m) at the metropolitan level (Foras et al, 2015). That allows municipalities to foster the amount of social and affordable housing, encouraged by the national SRU act, as explained hereafter.

The national SRU act requires municipalities of more than 3500 inhabitants belonging to an agglomeration or group of municipalities of more than 50 000 inhabitants to attribute at least 20% of their total housing supply to social housing[3]. In 2012, this rate was increased to the objective of 25% of social housing by 2025 (Carpenter, 2015). This rate is annually evaluated by the State[4]. The municipalities which are not respecting the legal objectives of 20 to 25% social housing are: (1) liable of an annual deduction on their ressources, proportionaly to their

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[3] Code de la construction et de l'habitation, article L302-5 (modifié par la Loi n°2017-86 du 27 janvier 2017 relative à l'égalité et la citoyenneté).

[4] Code de la construction et de l'habitation, article L302-6 (modifié par la Loi n°2017-86 du 27 janvier 2017 relative à l'égalité et la citoyenneté).

fiscal potential and deficit of social housing[5]; and (2) submitted to a catching-up scheme defined for 3 years aimed at enabling the municipality to achieve the legal objectives in 2025[6]. Through the regulating documents of the PLU(m), municipalities can delimit urban sectors within which a certain percentage of the development programme will be allocated to certain categories of housing in respect to social housing mixity objectives[7] defined by the urban planning code[8]. As the ZAC must follow the objectives of the PLU(m), notably the ones related to the share of social and affordable housing supply, this policy instrument enables the metropolis to control land in order to reach the objectives of the PLH (NM, 2018).

The second instruments analysed are housing policy instruments aimed at providing financial helps to middle-income residents, in what is called affordable housing. *Affordable housing* is consensually defined in the literature on the idea that a household shoud not pay more than 30% of their income for housing, including utilities (Baqutaya et al, 2016). In French cities, the notion of affordable housing is also based on the level of income of households (Adéquation, 2014). In Nantes, affordable housing correspond to housing which are considered compatible with the income of lower middle-class households, between the 3d and 5d income deciles, corresponding to an income of the range 1600€/month - 2400€/month (Adéquation, 2014). This represents 20% of the population and 50% of new housing demand (Adéquation, 2014).

In new urban regeneration project, the accession to homeownership for middle-income households is facilitated by four main financial devices (CIF, 2020a). The first three devices are national: the PSLA (Prêt Social Location-Accession, a social lending for lease-to-buy), the BRS (Bail Réel Solidaire, real supportive lease), and the VAT reduction of the ANRU (Agence Nationale pour la Rénovation Urbaine). The last one was initiated by the metropolis: the AANM (Accession Abordable Nantes Métropole). All four devices include fiscal advantages and security for middle-income households such as a reduction of the VAT (tax) and a guaranty of rehousing or resale in case of life accidents. For a matter of feasibility of the study, and because the PSLA (and to a lower extent, the AANM) is more commonly used in Nantes for the affordable accession, it has been decided that only these two tools were going to be evaluated.

The affordable rental housing for middle-income residents is facilitated by the PLS (Prêt Locatif Social, or social renting loan) (AURAN, 2016a). This loan provides fiscal advantages to the owners of the housing to request lower rent prices to their tenants, and benefits families who can not access private rental housing market, and are not eligible for other social loans

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[5] Code de la construction et de l'habitation, article L302-7 (modifié par la Loi n°2017-86 du 27 janvier 2017 relative à l'égalité et la citoyenneté).
[6] Code de la construction et de l'habitation, article L302-9-1-1 (modifié par la Loi n°2017-86 du 27 janvier 2017 relative à l'égalité et la citoyenneté).
[7] Code de l'urbanisme, article L101-2 (modifié par la Loi n° 2016-925 du 7 juillet 2016 relative à la liberté de la création, à l'architecture et au patrimoine - article 105).
[8] Code de l'urbanisme, article L151-15 (créé par l'Ordonnance n° 2015-1174 du 23 septembre 2015 relative à la partie législative du livre Ier du code de l'urbanisme).

such as the PLUS and PLAI[9], targeting specifically low-income residents (AURAN, 2016a).

Beyond the social rental housing for low-income residents, and affordable rental housing and affordable housing in accession for middle-income residents, included in the requirements of the SRU, the PLH recently integrated a new category of housing instruments: the intermediate housing [10]. In 2014, a law introduced the notion of *intermediate housing* to refer to housing that is subject to a financial public support; is aimed at being occupied as first residence by households who do not exceed a certain treshold of resources; and has a rent or price of accession which does not exceed a certain amount, depending on the location[11].

In brief, the study will focus on the effectiveness and implementation of the following land and housing policy instruments in the municipality of Nantes, and more specifically in the ZACs Bottière-Chênaie and Euronantes : (1) the zoning tool ZAC and (2) the financial housing instruments PLS and PSLA.

### *Implementation*

Policies include both *substantive* and *procedural* elements; whereas the former refer to technical aspects of policies and the legal content of instruments, the latter refer to processes through which policy actors formulate, decide and apply the programmes (Howlett, 2011). The procedural elements of policies will be the subject of this section.

Policy implementation theory has evolved over time. The first influential study on this subject was published by Pressman and Wildavsky, in the US, in 1973 (Schofield, 2001). Policy implementation theory emerged from the reflexion that « *policy does not implement itself* » (Barret and Fudge, 1981) and that policy evaluation, previously focused on policy design, must also consider who, how and why policy is put into effect (Schofield, 2001). What characterises the evolution of implementation theories is the link (or distinction) between politics and administration, or between political science research and public administration research. Scholars mention three generations of policy implementation models (Goggin et al, 1990).

The first generation of models provided case study approaches for the measurement of policy implementation and outputs (Bardach, 1977 ; Rein and Rabinovitz, 1978 ; Van Horn, 1979). But this approach was criticized for their pessimistic focus on policy failure, explained by imperfect legislation and failure of bureaucratic compliance (Goggin et al. 1990; Lester et al. 1987); and their assumption that policy implementation was a linear process (Schofield, 2001).

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[9] PLUS (Prêt locatif à usage social, rental loan for social usage), PLAI (Prêt locatif aidé à l'intégration, assisted rental loan for integration).

[10] Code de la construction et de l'habitation, article L351-2 (modifié par la Loi n°2017-1837 du 30 décembre 2017 de finances pour 2018 - article 126).

[11] Code de la construction et de l'habitation, article L302-16 (modifié par la Loi n°2015-990 du 6 août 2015 pour la croissance, l'activité et l'égalité des chances économiques).

The second generation is characterised by more analytical studies for predicting policy outcomes through a certain number of variables (Goggin et al, 1990 ; Barrett and Fudge, 1981; Mazmanian and Sabatier, 1983). The main critique of these works was that the numerous case studies did not provide enough validation, replication and consistent explanatory theory, as well as a unified approach to implementation analysis (Matland, 1995 ; Ryan, 1995).

In response, the third generation developed large longitudinal studies in multiple locations aimed at finding synthetizing models (Goggin et al, 1990 ; Matland, 1995 ; Ryan, 1995). However, the way the model takes into account capacities and distinction between decisions and actions is not sufficiently stressed according to Schofield (2001). Whereas the first generation was influenced by organizational theory, the third generation is driven by institutional theories (Schofield, 2001), which evolved in the 2000s with the development of the broadly used *governance* concept in policy implementation analysis (Hill and Hupe, 2006 ; O'Toole, 2000).

One major debate that appeared among scholars analysing policy implementation is the distinction between top-down and bottom-up visions (Knoepfel et al, 2007 ; Schofield, 2001). The *top-down approach*, strongly defended by Sabatier (1991), considers the policies and legislative objectives as the essential factors on which the linear process of implementation is based. It does consider the policy as distinct from the implementation process (Schofield, 2001). However, this approach got criticized for its overestimation of the capacity of the law and the central government to control administrative actions (Hjern and Hull, 1983), and its lack of consideration of political rhetoric, pre-legislative phase (Nakamura and Smallwood, 1980; Winter, 1986) and street-level bureaucrats (Lipsky, 1980).

In the 1970s and 1980s, scholars adopted a *bottom-up vision*, arguing that implementation analysis should rather take into account the actions and motives of local implementers, the nature of the collective problem to be addressed and the organisation networks of actors (Bardach, 1977 ; Hjern and Porter, 1983 ; Hanf and Scharpf, 1978 ; Berman, 1978). But their interest for complexity of political realities (rather than analytical simplicity), the influence of the normative standpoints of researchers, and their lack of consideration of the central government, received some criticism (Schofield, 2001).

This is the reason why some scholars tried to reconcile top-down and bottom-up approaches, including strong defensers of the top-down approach such as Sabatier (Lester et al. 1987; Linder and Peters, 1990; Sabatier 1991, 1993; Sabatier and Pelkey, 1987), influencing thereby more current research on policy implementation (Matland, 1995; O'Toole, 2000; deLeon and deLeon, 2002; Hill and Hupe, 2014). It is thus by considering the strengths and weaknesses of both approaches that policy implementation in urban regeneration projects will be here investigated.

Policy implementation has many different definitions. One of the major differences relies in the inclusion (or exclusion) of the programming stage of policies in the definition. American scholars (Pressman and Wildavsky, 1973) include the programming in the implementation whereas others argue that the action of programming and implementing a public policy should be distinguished (Knoepfel et al, 2007). In this thesis, the second standpoint will be adopted;

policy implementation will be considered as "t*he set of processes after the programming phase that are aimed at the concrete realisation of the objectives of a public policy*", as defined by Knoepfel et al (2007). This includes the production of administrative acts (action plans), as well as all the processes needed to organise these action plans (Knoepfel et al, 2007). The end of the implementation process is then marked by the production of outputs, - actions that directly affect the target groups and end beneficiaries - (Knoepfel et al, 2007).

Policy implementation always include *interactions* between public and private actors (Knoepfel et al, 2007). Bardach (1977), who criticized the top-down model for its overestimation of the government action, was one of the first scholar to stress the importance of *interactions* in the decision-making process. By developing the concept of the "*implementation game*", he argued that institutional rules, or the "*rules of the game*", are not the only factor influencing the outcomes of public policies, the way actors play the game, through their strategies and tactics and the way they enter (or refuse to enter) the game can affect the results even more (Bardach, 1977 p.56). For Bardach (1977), implementation is the "*process of assembling the elements required to produce a particular programmatic outcome*", a definition which resonates with the definition of policy instruments, aimed at "*fulfilling the objectives of a public policy*" (Knoepfel et al. 2007, p.156–157). Based on this idea of multi-actor *interactions*, scholars developed frameworks for policy implementation evaluation that go beyond the initial debate between top-down and bottom-up approaches (Knoepfel et al, 2007).

Knoepfel et al (2007) provide a theoretical framework for the analysis of *interactions* between actors, adapted to the framework of this thesis, and the instruments to be analysed (fig.3).
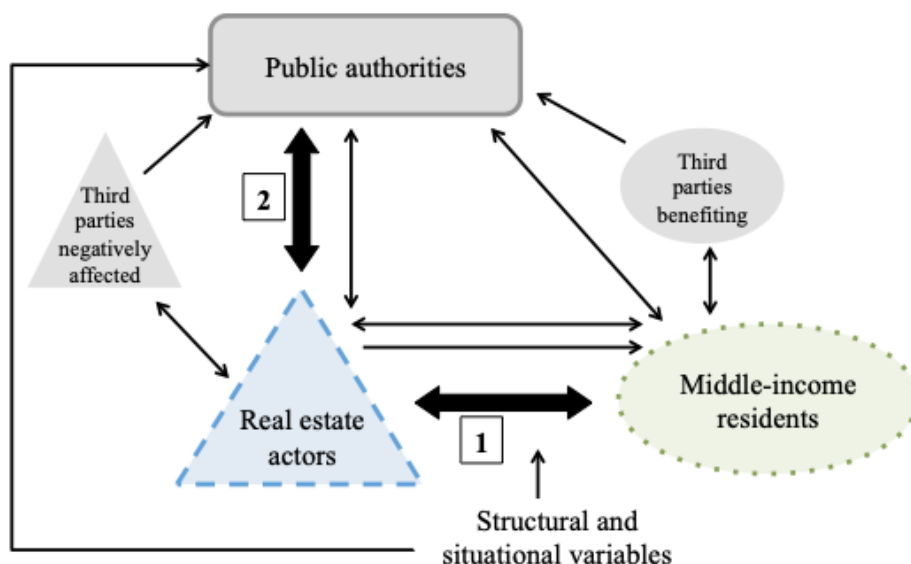


*Figure 3*: Actors and interactions in policy implementation. Adapted from: *Public policy analysis* by Knoepfel et al, 2007, p.213. © 2007 Peter Knoepfel, Corinne Larrue, Frédéric Varone and Michael Hill. 1: causal hypothesis; 2: intervention hypothesis.

As a reminder, the aim of public policies is to « *modify the behaviour of social groups presumed to be at the root of, or able to solve, the collective problem to be resolved (target groups) in the interest of the social groups who suffer the negative effects of the problem in question (end beneficiaries)* » (Knoepfel et al 2007, p.24). Based on this definition, Knoepfel et al (2007) highlights the importance of three main elements for the analysis of interactions within policy implementation, namely the *actors*, the *resources* and the *institutional rules*.

The *actors* are hereafter presented both theoretically and empirically, related to the context of the ZACs and affordable housing tools.
*Public authorities* are the actors in charge of resolving the collective problem at stake, under direct government control and legal rules and procedures (Knoepfel et al, 2007). For this case study, they will correspond to the official elected of the metropolis of Nantes.
The *target groups* are the actors whose behaviour is politically defined as the (in)direct cause of the collective problem and whose change of behavior could resolve the latter (Knoepfel et al, 2007). In this thesis, they are called "real estate actors", refering mainly to private developers, and to a larger extent to social landlords and cooperatives. Private developers were identified as the main target group of the land policy instrument ZAC, since the latter was initially adopted in 1967 at the national level to increase the collaboration between public authorities and private developers, thereby increasing public control over urban regeneration projects (Foras et al, 2015). Besides, more related to the housing policy instruments, social landlords and housing cooperatives are also integrated in the analysis, since they are essential actors in the provision of affordable housing in ZACs (Barthel and Dèbre, 2010).
The *end beneficiaries* are the social groups identified as being the ones who suffer the most of the collective problem at stake and who should be positively affected by the policy (Knoepfel et al, 2007), in this case middle-income residents from the 3d to 5th deciles of income.
The *third parties* are the ones indirectly positively or negatively affected by the policy (Knoepfel et al, 2007). They are not identified yet, but will probably emerge throughout the study.

Between these actors, six types of interactions (represented by the arrows in fig. 3) can take place. Based on the theoretical explanations of these interactions formulated by Knoepfel et al (2007), the experienced relationships between actors throughout the implementation of ZACs in Nantes will be analysed and presented in the next chapters (see results: implementation). These empirical results will then be confronted to this theory in the discussion.

To analyse *interactions*, the researcher first needs to clearly define the boundaries of these interactions, mentioned as *areas of interaction*, identifying which actors are taken into account and defining a clear timeline of the implementation process under analysis (Knoepfel et al, 2007). In the case of ZACs, the process under study will be starting after the programming stage and end when the last buildings and infrastructures are delivered. Based on the literature previously presented, *interactions* are here understood as the performed actions (and reactions) of actors who, under certain institutional rules, use specific strategies to defend their own interest, determining thereby the outcomes of the implementation game.

*Interactions* can be described by the resources actors mobilize and the institutional rules which restrict them (Knoepfel et al, 2007).

The *resources* (or strategies) are the legal, human, financial, informational, interactive, confidence-based, temporal, property, political and force resources that can be mobilized by the actors in order to defend their interests (Knoepfel et al, 2007).

For each types of interaction, clear *institutional rules* are established (Knoepfel et al, 2007). *Institutional rules* are both the formal legal rules and the implicit informal norms which "*establish structures and procedures that facilitate or limit the political participation of actors and the efficacy of policies*", leading to a stable and/or dynamic set of strategic behaviours and/or behaviours guided by social norms (Knoepfel et al, 2007).

Beyond these rather technical mechanisms of instrument implementation, Gerber et al. (2018) also advice to enlighten the particular societal, economic, and political context in which implementation takes place. Indeed, the latter can also affect the effectiveness of the policy instruments, as explained in the next section.

### *Effectiveness*

As explained earlier, public policy evaluation is gaining attention among scholars. In the planning field, a similar trend is observed; an increasing number of scholars study planning evaluation (Alexander, 2012; Khakee et al., 2008; Talen, 1997). Although some scholars promote the use of different criterias for the evaluation of policy instruments to be able to take into account intended and unintended impacts of policies (Shahab et al, 2019), effectiveness remains one of the most commonly used criteria (Salamon, 2001).

In the literature, there are two ways of conceiving effectiveness: the conformance-based approach and the performance-based approach (Berke et al., 2006; Faludi, 1989; Oliveira and Pinho, 2010 ; Laurian et al., 2004). By testing *conformance*, scholars analyse whether the outcomes of a plan (or instrument) correspond well to the objectives set by the plan (or instrument) (Faludi, 1989). It refers to the functional and technical aspects of the policy instrument (Alexander et al, 1983). Besides, testing *performance* entails asking whether the plan (or instrument) was useful to solve a given societal problem (Alexander et al, 1983). This approach questions the decision-making process, from the instruments adoption to its implementation (Alexander et al, 1983). In the past, both approaches were distinctively used: sociologists and economists focused more on evaluation research, based on conformance, while political scientists and planners focused on implementation analysis (Alexander et al, 1983). Nowadays, both approaches are actually merged because both questions are intrinsically linked (Alexander et al, 1983).

Based on the theory of effectiveness of Knoepfel et al (2007), which integrates both the conformance- and performance-based approaches, the objectives, outputs, impacts and effects will be all covered in this study.

The objectives refer to "*the status to be attained by the adopted solution that would be considered statisfactory*" (Knoepfel et al, 2007). The objectives of the instruments are legally defined in the programme of the policy instrument, which describes the resolution of a specific public problem, as well as the rights and obligation imposed on target groups to achieve that goal (Knoepfel et al, 2007). The programme thus includes the *causal* hypothesis, - the identification of target groups and their role during the implementation of the policy (number 1 in fig.3) -; the *intervention* hypothesis, - the means used to modify the behaviour of the target groups - (number 2 in fig.3); and the principles of the policy implementation process (Knoepfel et al, 2007). Both hypotheses can have considerable impacts on the effects of the policy. Indeed, ineffectiveness of policies often relies on the wrong establishment of *causal* hypotheses, and thus the identification of the wrong target groups and end beneficiaries to contribute to the collective problem. In addition, the degree of effectiveness of policies can also be affected by the methods used by the State to enforce certain behavioural changes (through economic incentives, permits requirements, or manipulation through campaigns), which are related to the *intervention* hypotheses (Knoepfel et al, 2007). Finally, *situational and structural* factors (in fig.3) might also influence effectiveness (Knoepfel et al, 2007).

Two types of objectives are distinguished: 1) the normative objectives, corresponding to the general aim of a policy, which is to solve a given societal problem; and 2) the action plans, which define priority measures to be produced such as, in this case, the number of affordable housing to be delivered, (Knoepfel et al, 2007). Whereas the former will thereafter be referred to as the *qualitative* objectives (and *intrinsic qualitative* objectives for the objectives of the instruments themselves, - in contrast of the ones of the policy as a whole), the latter will be referred to as the *quantitative* objectives (both at the scale of the ZACs and the metropolis). This distinction is important because even if a policy instrument might conform to its quantitative objectives, it might not be able to resolve the societal problem, and thus not perform well (Faludi, 1989). Alexander et al (1983) take an illustrative example to explain that; in case the instrument is aimed at attaining complete control over development and that it achieves this goal, it might not be improving the objectives for which the system has been conceived. This situation is called an endemic failure (Alexander et al, 1983). It can be explained by conflictual and incompatible objectives of the planning system; in that case, modifying the system's values or norms should correct the failure. In other cases, this failure is explained by the physical boundaries of the planning system (Alexander et al, 1983).

Beyond the objectives, three other criteria need to be analysed : (1) the *outputs* of a policy, refering to the administrative acts, which could be in this case the number of actual affordable housing built within the perimeter of the ZAC; (2) the *impacts*, which reveals to what extent the *intervention hypothesis* (nr.2 in fig.3) was achieved, in other words whether the instrument changed the behaviour of the target groups as expected; and (3), the *effects*, of which the analysis tests the *causal hypothesis* (nr.1 in fig.3), which questions whether the target groups and end beneficiaries were well identified to solve the problem (Knoepfel et al. 2007). These three criterias are covered under the term "achievements" used in the second sub-research questions.

Whereas the evaluation of conformance can be relatively easily achieved through a quantitative comparison between the objectives and the outputs, the evaluation of performance requires more difficult tasks such as identifying the societal goals of the planning system (qualitative objective), or to compare the achievements of the analysed system with a situation where no such system exists (Alexander et al, 1983). The best way to evaluate performance thus appears to be an assessment through perceptions of the actors involved in the implementation (Alexander et al, 1983), although they might be influenced by their interests and behaviour (Mazmanian and Sabatier, 1980). These two research methods will be further explained in the next chapter.

## Methodology

### *Research methods*

> *"In policy research, almost all likely sources of information, data, and ideas fall into two general types: documents and people"* (Bardach, 2009, p. 69).

As illustrated by the above-mentioned citation, the main qualitative research methods used in this thesis are document analysis and narrative interviews. These methods have been selected to respond to each of the three sub-research questions and their respective theoretical concepts (see tab.1).

Document analysis is "*a systematic procedure for reviewing or evaluating documents—both printed and electronic material*" (Bowen, 2009). Among its various purposes, document analysis will serve here as a way to get supplementary research data (Bowen, 2009). Documents will mainly be used in this thesis to identify the quantitative and qualitative objectives of the land and housing policy instruments, and the outputs of the policy instruments implementation.

The way of analysing a policy instrument depends on how the instrument is perceived by the researcher (Gerber et al, 2018b, p.20). In the approach that conceives the policy instrument as a *dependent* variable, the researcher focuses more on why an instrument has been chosen over another; the study thus analyses actors'perceptions of the instrument. If the instrument is conceived as an *independent* variable, the study analyses the effectiveness of the instruments to solve a given problem. In the last approach, the policy instrument is considered as an *intermediary* variable, and a technical and social device that frames the interactions between stakeholders, according to what the policy instruments mean and represent for the actors that adopt and implement them. In that approach, instruments are considered as "*markers of change*" (Gerber et al, 2018b, p.20). As the goal of this study is to analyse in-depth stakeholders' narratives on the effectiveness and implementation of the policy instruments, following these two last approaches (*independent* and *intermediary*), narrative interviews appear as being an adequate research method.

Narrative interviews enable the interviewees to freely and openly tell a story about their experience, and the interviewer to be an active listener by asking broad and less rigidly formulated questions than in semi-structured interviews (Hopf, 2004). This type of interview is a qualitative research method, particularly useful to analyse a specific development project or local politics (Jovchelovitch and Bauer, 2000). Whereas unstructured interviews are recommended in conducting narrative policy analysis (Roe, 1994), narrative interviews are nowadays rarely used in policy analysis and evaluation. The most common method in policy implementation research is the semi-structured interview (Alexiadou, 2001), which appears probably as a more appropriate method when it comes to compare the opinions of a high number of stakeholders. But in this study, only a dozen of actors will be interviewed, and for small samples, narrative interviews are more appropriate (Alheit, 2005). Even if narrative interviews take more time than semi-structured interviews (Hopf, 2004), they enable to find out more information about what is actually happening, beyond the pre-determined believes of the researcher (Lofland et al, 1971; Hopf, 2004). Finally, narrative interviews can provide in-depth information on human interaction and perceived roles in a particular context (Overcash, 2003), and are thus appropriate for this case in which the roles and interactions between stakeholders during the implementation process of the policy instruments are at the core of the research.

### Sampling methods

The selection of the study population is mainly based on *purposeful sampling*, one of the three qualitative sampling methods (Koerber and McMichael, 2008). That means that the interviewees are selected according to their characteristics and knowledge linked to the three sub-questions, as well as their involvement in the two urban projects selected. A particular attention is given to targeting a wide variety of actors with different perspectives within the specific scope of each research question, and to clearly explain the purpose of interviewing each of these actors, as advised by Koerber and McMichael (2008).

The other sampling method used is *snowball sampling*, a sampling method described as the access to respondents through contact information provided by other respondents (Noy, 2008). It is one of the most common sampling methods in qualitative social science studies (Noy, 2008).

### Population size

The number of interviews conducted will depend on the saturation point, which refers to the moment where the amount of data collected is sufficient to cover the different aspects of the research questions, and where adding further interviews would not add any new information (Francis et al, 2010). The saturation is particularly important, as the adequate number of interviews will influence the content validity of the study (Francis et al, 2010).

*Research methods and related theoretical concepts*

This section will present the research methods through the different sets of data sources (documents, already conducted semi-structured interviews, and self-conducted narrative interviews), as well as their links to the theoretical concepts, indicators and variables (tab.1).

*Table 1*: Methodological framework and its related theoretical concepts. Own elaboration.

| Concepts | Indicators | Variables | Method |
|---|---|---|---|
| Effectiveness | Objectives | Quantitative objectives | Documents |
| | | Qualitative objectives | Documents |
| | | | Interviews |
| | Achievements | Outputs | Documents |
| | | | Interviews |
| | | Impacts | Interviews |
| | | Effects | Interviews |
| Implementation | Interactions | Actors | Interviews |
| | | Ressources | Interviews |
| | | Institutional rules | Interviews |
| | Political context | | Interviews (incl. from BCNUEJ) |

- *Secondary data sources*

Document analysis will enable to identify the quantitative and qualitative *objectives* of the land and housing policy instruments, at the national, metropolitan and local scale; as well as the *outputs* at the metropolitan and local scale.

The policy documents which will be analysed are: (1) national urban planning laws concerning the selected policy instruments, within which the national objectives of the instruments can be found; (2) metropolitan planning documents, such as the PLH and PLUm mentioning the metropolitan objectives of the land policy instruments; (3) specific municipal reports and published documents describing the quantitative objectives in the two ZACs selected in Nantes; and (4) evaluation studies on the number of affordable housing actually delivered in the ZACs under study, in order to test whether the intended outputs are actually delivered.

The actual policy documents analysed are presented in the following table (tab.2).

*Table 2*: Policy documents analysed. Own elaboration.

| | |
|---|---|
| Legal documents (linked to the urban planning code) | - SRU law<br>- Law ELAN<br>- Law ANRU<br>- Law on intermediate housing<br>- Law Pinel<br>- Law on housing taxes<br>- Urban planning code<br>- Code on construction and housing |
| Metropolitan planning documents | - Follow-up of the PLH (NM 2018)<br>- PLH 2010-2016 (NM, 2010)<br>- PLH 2019-2025 (NM, 2019a/b)<br>- PLUm (NM, 2020b) |
| Publications | - Adéquation (2014): study on housing in Nantes metropolis<br>- Devisme et al (2007/2008): studies on the objectives of the ZACs (from POPSU).<br>- AURAN (2013/2016a/b): studies on housing in Nantes metropolis |
| Websites | - CIF (2020a/b/c)<br>- CISN (2020)<br>- Demande de logement 44 (2020)<br>- Dossier familial (2020)<br>- GHT (2020)<br>- Propriétaire maintenant (2020a/b)<br>- Selexium media (2020) |
| Evaluation studies | These studies are usually not undertaken. For the ZAC Bottière-Chênaie, an excel sheet has been provided by an interviewee (an urban planner), including information about the actual number of housing delivered (by type). For the ZAC Euronantes, only few figures were mentioned by email by an official elected. |

Data from documents will be used as a knowledge basis to prepare the interview schedule but also as a set of information that will be confronted and compared to the results of the interviews.

Another secondary data source will be used to complement the data. Nineteen semi-structured interviews have been conducted with several actors such as public authorities, greening agencies and activists, in October and November 2019 in Nantes, by two researchers from the BCNUEJ[12], as part of a large scale study called GreenLULUs, investigating the impacts of urban green space projects on gentrification in 29 global north cities. These interviews provide information on the perceptions of interviewees on actors'cooperation, residents' displacement, political orientations, and planning strategies. As part of a collaboration between the student and these two researchers, resulting from the involvement of the student

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[12] Barcelona Laboratory for Urban Environmental Justice and Sustainability. More information can be found here: http://www.bcnuej.org.

in the research institute during an internship, the content of these interviews is allowed to be used in this thesis.

- *Primary data sources*

Next to the analysis of documents and already conducted semi-structured interviews, narrative interviews will be conducted to collect data on the qualitative objectives of the instruments but also on the *achievements* realised, *interactions* during the implementation process and the *political context* of Nantes. These interviews will enable to confirm and complete the secondary data, and will provide essential information on effectiveness and implementation of the policy instruments. It has to be noted that due to the covid-19 situation, all the interviews carried out were realised by phone or via an online videoconference platform.

As explained in the theoretical section, three main groups of actors have been identified: public authorities, real estate actors, and middle-income residents.

The interviewees belonging to *public authorities*, selected through purposeful sampling are:

➢ Representatives of Nantes Metropolis (official elected), in charge of the elaboration of the PLH and PLUm, and implementation of the policy instruments.
➢ Representatives of Nantes Métropole Aménagement (NMA), a semi-public company involved in the planning and implementation of ZACs.

Interviews with public authorities and planners will enable to gather information on the implementation process itself and their roles in the latter. Their perception of effectiveness will also be touched upon. In practice, due to the covid-19 situation and the resulting amount of work asked to public authorities, some actors were not available for interviews but accepted to reply by email (see tab.1).

The interviewees belonging to the target groups of the land and housing policy instruments, also called *real estate actors* in this thesis, selected through purposeful sampling are:

➢ Private developers involved in the selected ZACs
➢ Social landlords involved in the selected ZACs
➢ Housing cooperatives involved in the selected ZACs

As policies are aimed at modifying their behaviour, it is interesting to evaluate if this change of behaviour is actually observed, and to what extent their power and interest influence the implementation process. These actors have been identified through a purposeful sampling method, but the list is purposefully left open, in order to include other relevant actors that might be mentioned in some interviews. In this case, the sampling would also become a snowball sampling.

Finally, the interviewees belonging to the end beneficiaries of the policy instruments, *middle-income residents* in this case, were selected through purposeful sampling for the categories but through snowball sampling for the actual interviewees. They correspond to:

➢ Middle-income residents (local and/or coming from another region) living in affordable housing (owners) in the selected ZACs;

➢ Middle-income residents (local and/or coming from another region) living in affordable housing (tenants) in the selected ZACs;

➢ Local middle-income residents who could not afford neither private, nor public housing, did not apply for affordable housing, and settled down outside the city of Nantes.

Narrative interviews with middle-income residents will enable to collect data on the effects of land and housing policy instruments, thereby testing whether the qualitative objectives are met in the reality. These three categories are defined purposefully in order to represent a variety of profiles. But practically, a snowball-sampling method will be used for this step. It will enable the researcher to access residents more easily as they represent a rather specific range of actors. In practice, the residents concerned by affordable housing built within the ZACs were difficult to reach, first because there are only few of them and secondly because no fieldwork could be carried out due to the covid-19 situation. As a result, the fixed categories mentioned above gave place to more flexbile criterias, such as living in the ZACs (but not necessarily in affordable housing), nearby the ZACs, or in the outskirts, in all kind of housing.

The actors effectively interviewed between the 10th of May and 14th of June 2020, as well as the actors interviewed by the BCNUEJ between October and November 2019, are presented in the following table (tab.3).

*Table 3*: Profiles of the interviewees and reference numbers in the text. Own elaboration.

| Interview nr | Method | Profile |
|---|---|---|
| 1 | interview | Private developer 1 |
| 2 | interview | Private developer 2 (hybrid social landlord-cooperative-developer) |
| 3 | interview | Private developer 3 |
| 4 | interview | Nantes Métropole Habitat 1 |
| 5 | interview | Nantes Métropole Habitat 2 |
| 6 | interview | Nantes Métropole Habitat 3 |
| 7 | interview | Nantes Métropole Habitat 4 |
| 8 | by email | Nantes Métropole Aménagement |
| 9 | by email | Nantes Métropole (urban planning department) |
| 10 | by email | Nantes Métropole (operational manager) |
| 11 | interview | Nantes Métropole (official elected) |
| 12 | interview | Nantes Métropole (housing department) |
| 13 | interview | Resident 1 (live in the city center, in free-market housing) |
| 14 | interview | Resident 2 (live in Bottière-Chênaie, owner of a free-market housing but in a mixed building) |
| 15 | interview | Resident 3 (future resident; searching a free-market housing to buy in the outskirts) |
| 16 | interview | Resident 4 (live in Bottière-Chênaie, owner of a free-market housing but in a mixed building) |
| 17 | interview | Resident 5 (previously member of the neighborhood team of Malakoff) |
| | | |
| 18 | interview BCNUEJ | Researcher and activist |
| 19 | interview BCNUEJ | Project manager of Bas-Chantenay (NMA) |
| 20 | interview BCNUEJ | Representative of SAMOA (SEM for the island of nantes) |
| 21 | interview BCNUEJ | Director of NMH |
| 22 | interview BCNUEJ | Activist - collective against green urban projects near malakoff (Du Rififi dans la Bergerie) |
| 23 | interview BCNUEJ | Activist - collective (Bois Hardy, at Chantenay) |
| 24 | interview BCNUEJ | Informal green gardening collective (la Nizannerie) |
| 25 | interview BCNUEJ | Green space public service (SEVE) 1 |
| 26 | interview BCNUEJ | Urban farm representatives (Agronaute, at Doulon-Gohard) |
| 27 | interview BCNUEJ | Green space public service (SEVE) 3: focus group |
| 28 | interview BCNUEJ | Green space public service (SEVE) 5: study group representative |
| 29 | interview BCNUEJ | Green space public service (SEVE) 2: focus group |
| 30 | interview BCNUEJ | Representatives of the collective gardens project |
| 31 | interview BCNUEJ | Activists collective against the green transformation of Chantenay |
| 32 | interview BCNUEJ | Green space public service (SEVE) 4 |
| 33 | interview BCNUEJ | Nantes Métropole (official elected, metropolitan advisor) |
| 34 | interview BCNUEJ | Director of the green space public service (SEVE) |

*Data analysis*

The narrative interviews were transcribed, translated and coded according to the different variables identified in the theoretical framework, but also to additional empirical categories of information not expected in the theory but that are essential to have a complete understanding of the topic. These two coding methods are known as deductive (based on theory) and inductive coding methods (emerging from the interviews) (Fereday and Muir-Cochrane, 2006). Besides, the data of the policy documents were identified, selected, synthetized, and analysed through content analysis (Labuschagne, 2003), aimed at retrieving information about quantitative objectives, outputs and qualitative objectives, and at completing and/or verifying the information of the interviews.

*Biases*

Similarly to quantitative studies, qualitative studies include many potential biases. To deal with these biases, it is first and foremost important to recognize and acknowledge them (Noble and Smith, 2015). Firstly, the document selection might generate biases. Indeed, an incomplete collection of documents might emphasize only one particular organizational perspective of the topic, known as the biased selectivity (Bowen, 2009). However, combining qualitative methodologies, through a triangulation process between document analysis and interviews, can reduce the biases of single methods (Bowen, 2009).

Besides, the narrative interviewing method also has its own limitations and biases. First, it might be more challenging for some interviewees to "*tell their stories*" as the researcher does not ask as many guiding questions as in semi-structured interviews (Anderson and Kirkpatrick, 2016). Besides, as in any other interviewing method, both the interviewer and interviewees might be unconsciously biased by the surrounding environment and the nature of their interaction (Diefenbach, 2009). Furthermore, the selection of respondents might be biased by their availability but also by their knowledge of the subject and their power in the specific organization (Diefenbach, 2009). Finally, narrative interviews do not enable to generalize the results as they represent a specific discourse of an actor, in a particular setting, at a given time and about a particular context-related project (Anderson and Kirkpatrick, 2016). By taking into account these potential biases and limitations, throughout the study, as advised by Noble and Smith (2015), the researcher will keep records of documents- and actors selections, the environment in which the interviewer and the respondents interact, and the subjective worldviews of the actors involved in the data collection, in order to provide a transparent overview of the biases that might affect the validity and reliability of the results (discussed in the chapter on limitations).

# Results

This chapter will present the results of the data collection deriving from the three data sources presented in the methodology (documents, already conducted semi-structured interviews, and self-conducted narrative interviews). The first section relates to the *effectiveness* of the land and housing instruments, and will enable to reply to the first two sub-research questions. The second section will present the results of the *implementation* process of the instruments and will enable to reply to the third sub-research question. Finally, a third section will dig into the *political context* in which the land and housing instruments are implemented. Even though not identified as the subject of a sub-research question, the results of the last section are essential to the full understanding of the subject.

## *Effectiveness*

### 1. Objectives

### *Affordable housing definition*

As explained in the theoretical framework chapter, affordable housing is defined as being both for homeownership and for rental. The two main tools to provide affordable accommodation used by public authorities are the PSLA (and AANM) and the PLS respectively (1, 12).

The PSLA is a social loan for accession proposed to households with a maximum resource ceiling of 32 990 €/year for a couple (CIF, 2020a), mostly first-time buyers, - or at least not homeowners for more than 2 years - (11; NM, 2020a). The arrangement is that the household rent the dwelling for a certain period of time (maximum 4 years), during which it has to pay the rent and a part of the loan that will be deducted from the sale price (GHT, 2020). This period enable to test the repayment capacities of the households (1, 12; GHT, 2020). At the end of this period, the household has the choice to exercise the purchase option and buy the good (GHT, 2020). An anti-speculative clause prevents the owner to generate revenue of the sale of his/her property within a time span of 7 years (CISN, 2020). The advantage of this process is that households in PSLA are ensured to be relocated in the social park if they do not have the possibility to exercise the purchase option or in case of life accidents (1, 4, 12). The candidates can benefit from reduced VAT rates (5, 5% instead of 20%), and a tax exemption on built property for 15 years (12; GHT, 2020). The price of housing in PSLA is fixed at maximum 2500€/m2 of living area and parking in the metropolis (7; NM, 2018). The AANM is also another affordable housing tool, also fixed at 2500€/m2 maximum, but with a VAT at 20%, and no rental period; it is direct accession (2). As a comparison, the average housing price in Nantes is 5000€ (7).

The PLS is a social loan for rent which is provided only to households whose resources do not exceed 36 231 €€/year for a couple (SIGMA, 2020). But the resources ceilings differ according to the situation of the household (SIGMA, 2020). It is a social rental loan granted by the Caisse des Dépots and other banking organisations (12). This type of housing in PLS are built by private developers or social landlords, bought by individual or institutional investors, to be rented to tenants respecting the resources ceilings, according to the rent ceilings set by the metropolis (12).

*Qualitative objectives*

In 2010, the municipality of Nantes realised, after having carried out a territorial diagnosis, that an increased number of low- and middle-income households (from the 3d to the 7d deciles of income distributions) were making acquisitions beyond the agglomeration limits (8, 11; NM, 2010). This urban escape was explained by: 1) the lack of reflex of these households to apply for social housing in the agglomeration, while they were actually eligible [13]; 2) by a growing gap between social housing for disadvantaged populations and a more and more inaccessible free-market housing stock in the city; and 3) by a mismatch between the typology of accommodation offered in the city the typology (size) of these households (11; NM, 2010). The 3d to the 5th deciles were identified as the population that was subject to "forced" urban escape, in comparison with households that simply had made the deliberate choice to live outside the city boundaries (11; Adéquation, 2014). Therefore, the goal of the municipality of Nantes, in the PLH 2010-2016, was to reduce this urban escape by one third (11). Affordable housing thus appeared as a public policy that would enable to match the typology of housing to the ability of households to contribute, by meeting the goal of allowing more households to have access to housing, or in rental, or in ownership, in the city of Nantes (12; NM, 2010). Besides, the goal was also to respond to the residential journey of the population (11; NM, 2010). A maximum sale price for affordable accession was set at 2500€/m2 (including garage) (11). This ceiling price was fixed in order to make these housing attractive compared to the free-market housing price, or at least similar to the price of housing found in the urban periphery, in which the free-market prices are significantly lower than in the city centre of Nantes (11). This illustrates well that beyond the will to diminish urban sprawl, a real attractivity policy was developed in order to increase density, improve energetic efficiency and accessibility to build "*a city for all, mixed, more compact and more polarised*" by 2030 (NM, 2010); the term polarised is here refering to the territorial polarisation between the core city and its surrounding communes (not social polarisation within the city). Even if a cooperation concerning land development between the different municipalities surrounding Nantes was already set up at that time, the attractivity strategy was reinforced by the project of metropolisation starting in 2015 (Légifrance, 2014). The targeted households of the affordable housing were the ones whose resources were intermediary, in other words, slightly higher than for conventional social housing and lower than the budget needed for conventional free-market housing in the city (12; NM, 2010).

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[13] Around 70% of the population in Nantes is eligible for social housing (5, 11).

### *Quantitative objectives*

*Metropolitan objectives*

*Table 4:* Share of housing types during the period 2010-2016: comparison between objectives and production per year (in absolute and relative numbers). Own elaboration. Based on the sources cited in the text.

| **2010-2016** | Absolute numbers | | Relative numbers | |
|---|---|---|---|---|
| | Objectives | Production | Objectives | Production |
| Total new housing | 5500 | 7600 | 100% | 100% |
| Total social housing | 1400 | 1705 | 25% | 22% |
| Total affordable housing | 1300 | 1141 | 22% | 15% |
| Rental affordable housing (PLS) | 500 | 565 | 9% | 7% |
| Affordable accession housing (incl. PSLA) | 800 | 613 | 14% | 8% |
| Free-market housing | 2800 | 4754 | 53% | 63% |

As seen on table 4, the metropolis of Nantes, which includes in total 24 municipalities (incl. Nantes) (21), has clear and ambitious quantitative objectives concerning the production of new housing per year.

The PLH 2010-2016 initially fixed an objective of 4500 to 5000 new housing per year (NM, 2010). In 2014, the municipality of Nantes increased the number of new housing to be built per year to up to 6000 housing (AURAN, 2016a). The same target was recently adopted for the period 2019-2025 (NM, 2018).

In terms of social housing, the targeted share in the PLH 2010-2016 represented 25% of the total new housing stock (about 1400 housing per year), mainly in PLUS and PLAI (NM, 2010; NM, 2019a). Since 2016, and in the new PLH 2019-2025, this objective increased to 33% of the new production of housing (about 2000 housing per year) (NM, 2019a). While the PLS housing share is clearly included since a long time in the national counting of social housing according to the SRU law (NM, 2018), housing in PSLA will only be included in the next counting[14], as required by the ELAN law of 2018 (12; MCR, 2019). But for now, the political objectives do not consider affordable housing as part of the social housing counting (11; NM, 2019a).

In total, the aim is thus to dedicate about 50% of social and affordable housing in the annual new housing production of the metropolis by the end of 2025.

These quantitative objectives in terms of total housing production to achieve including the share of social and affordable housing to be built, are defined in the PLH, by every municipalities and official elected of Nantes metropolis (12), based on the number of new inhabitants, demographic trends, the level of social housing demand, the income and

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[14] Only 5 years after the purchase option has been exercised on the housing in PSLA (MCR, 2019).

capacities of households, the number of demolition, the building capacities of the municipalities etc., in order to meet the needs of the population (10, 12). The PLUm then translates these objectives into obligations of realization, including social and affordable housing, enforceable to individuals and developers building housing on the territory (12).

*Strategic lever to reach the objectives*

Aware of the potential risk for the municipality to observe an increase in land values due to the attractivity of the centrality (already experienced before 2010), the public authorities decided to have a strong strategy of land control (NM, 2010). The enforcement of the obligations of the PLUm just mentioned above is the first lever for the application of this strategy. The second lever is the land planning instrument ZAC, more specifically public ZACs (10; NM, 2010). They enable to control the sale prices of social and affordable housing through the control of land charges and a partnership with planners and developers to ensure the global economic balance of the projects (NM, 2010). They also enable to balance the lack of production of social and affordable housing outside ZACs (10). Within public ZACs, Nantes Metropolis thus defined slightly higher objectives of 35% social housing, up to 25% affordable housing and 40% housing in the free market (10). The share of public operations (ZACs, urban renewal projects and municipal projects), represented 30,6% of the total amount of delivered housing on average between 2010 and 2015 (AURAN, 2016a).
In 2018, the metropolitan territory counted 47 land acquisitions (representing 34,1 hectares of land), within which 28 perimeters of ZACs were delimited: 20 ZACs are undergoing and 8 are planned (NM, 2018; NM, 2019a). In total, this represents 26.600 new housing, of which 46% are already produced (NM, 2018).

*Local objectives*

In the ZAC Bottière-Chênaie, the objectives were 25 % of social housing, 45% of affordable housing, and 30% of free-market housing (Devisme et al, 2007), for a total of 2418 housing units (8). In the ZAC Euronantes, the objectives were 25 % social housing, 15% affordable housing, 60% free-market housing, for a total of 1600 housing units (NM, 2014b).

But defining objectives and regulations is not sufficient, public authorities, project managers, planners, private developers, neighborhood teams, construction companies, real estate agencies, and social landlords need to work together in order to achieve these ambitious goals. The next section will dig into the actual achievements of affordable housing in Nantes metropolis.

## 2. Achievements

### *Metropolitan outputs*

For an easier reading of this section, the reader is invited to have a look at the comparison between the objectives and the production of housing types between 2010-2016 (fig.4), based on the quantitative data presented hereafter.

The objective related to the total amount of new housing production per year has always been met in the metropolis, since 2010 (AURAN, 2016a). The numbers vary depending on the year but in 2014-2015, 7600 housing were built, which corresponds more or less to the average amount of new housing built in 2010-2011 (AURAN, 2016a). In comparison, between 2004 and 2009, on average 4650 housing per year were produced (NM, 2018). The average production is thus increasing.

While the total production of housing is increasing, the objective of affordable housing production to achieve remains the same for the next period 2019-2025; which means that the share of affordable housing (in accession) decreases: it is expected to drop to 7 to 8% of the global production during this period since the whole production is about 8000 housing/year (11; NM, 2018). In the diagnosis, between 2010 and 2017, on average 565 affordable housing in PLS were provided each year, exceeding thereby the objectives for that period in absolute numbers (NM, 2018). Since 2010, on average 613 affordable housing in accession were built (NM, 2018). Concerning both affordable housing in accession and rental, on average 1141 housing were built every year, which represents 15% of the annual production while the objectives were 22% (NM, 2018). Between 2010 and 2016, 73% of affordable housing in accession were built in ZACs, while in diffuse land only 15% were produced, mainly by social landlords or cooperatives (NM, 2018).

In terms of social housing, between 2010 and 2017, the share of social housing in the city improved from 20,3% to 22,11% (NM, 2018). The city of Nantes, representing 55,60% of the population of the metropolis (12), and the city of Saint-Herblain, are the only two municipalities of Nantes metropolis to have achieved the national social housing objectives of the SRU law (12), whereas 17 other municipalities are still below the requirements (NM, 2018). In the diagnosis of 2018, on average 1705 social housing per year were produced between 2010 and 2017 (NM, 2018), while the objective was 1400 housing per year (NM, 2010).

Concerning the achievements of the objectives at the level of the metropolis, the observatory of housing of the PLH, part of AURAN (urbanism agency of Nantes region), carries out regular studies since 2004 to evaluate the number of housing produced per year and of which type (NM, 2010).
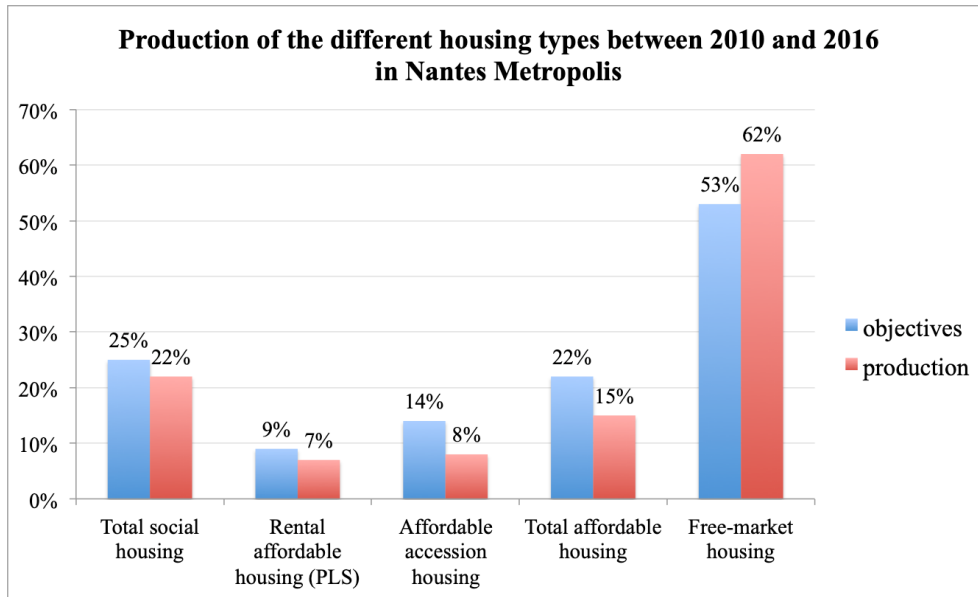
*Figure 4*: Comparison between the objectives and production of the different housing types delivered between 2010 and 2016 in Nante metropolis. Own elaboration. Based on the sources cited in the text.

### *Production of affordable housing in ZACs*

Compared to the evaluation studies at the scale of the metropolis, within ZACs, the follow-up of quantitative and qualitative objectives and production is not really supervised. In 2016, it was mentioned that such an evaluative tool was inexistent and was still to be established (AURAN, 2016a). The main sources of information to be found today about to the outputs actually delivered are the french assessment studies of the POPSU (observation platform of urban projects and strategies). For this research, a planner of the ZAC Bottière-Chênaie accepted to share one of its confidential documents in which the numbers of actual delivered housing were stated. For the ZAC Euronantes, one of the official elected shared the numbers by email, but no published documents could certify these figures.

The reason why such evaluations are not available is unclear but one potential explanation is hereafter provided. To carry out a ZAC, specific development and planning agreements are decided between the Metropolis and the planners, in which, among others, the share of affordable housing is set, following the regulations of the PLUm (12). The developers must then follow the regulatory specifications set up by this agreement (1). The objectives are thus considered as necessarily achieved since the developers are supervised and framed by the planners and public authorities (1).

While, in the ZAC Bottière-Chênaie, the objectives were 25 % of social housing, 45% of affordable housing, and 30% of free-market housing (Devisme et al, 2007), for a total of 2418 housing units (8), the achievements were little different. In total, 37,5 % of social housing, 22,3% of affordable housing and 40,2% of free-market housing were built (8, fig.5). Besides this significant decrease in the affordable housing share compared to the objectives, it is important to note that the PLS share of the ZAC was only 7%, and was included in the social housing counting.



*Figure 5*: Share of housing types in the ZAC Bottière-Chênaie, comparison between objectives and production. Own elaboration. Based on the sources cited in the text.

In the ZAC Euronantes (fig. 6), the objectives were 25 % social housing, 15% affordable housing, 60% free-market housing (NM, 2014b). At the end of the project, according to an elected official, 30% of social housing, 20% of affordable housing and 50% of free-market housing were actually built (10). So the share of affordable housing was higher than expected.



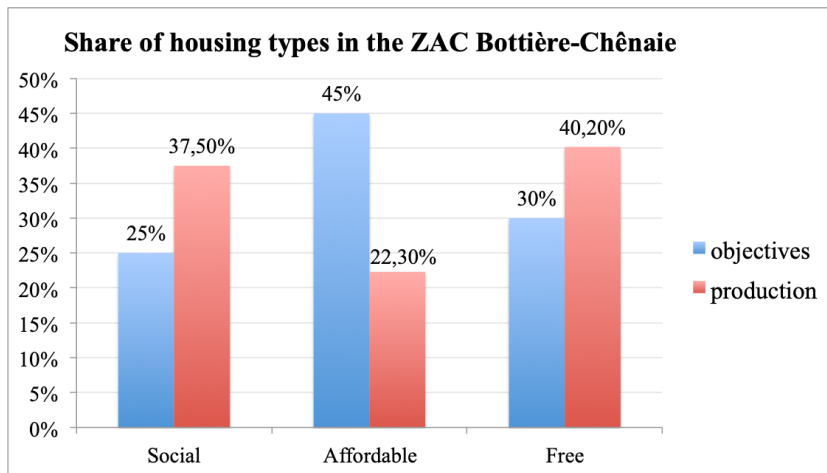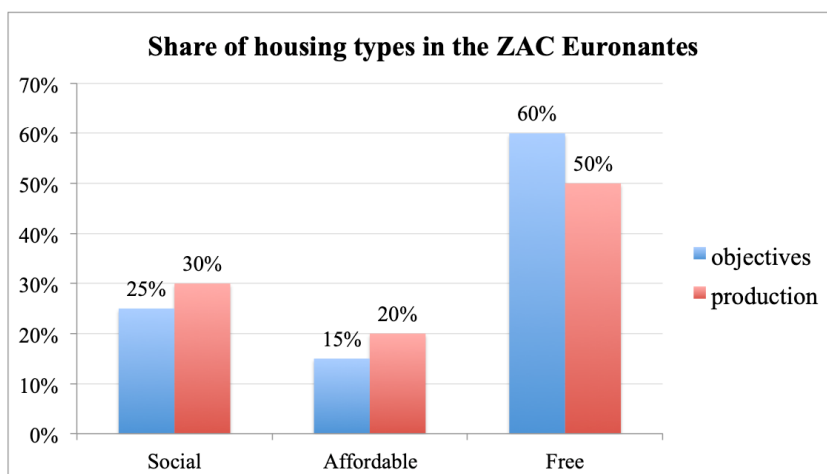*Figure 6*: Share of housing types in the ZAC Euronantes, comparison between objectives and production. Own elaboration. Based on the sources cited in the text.

The next sections will elaborate more on the outputs of affordable housing in rental and accession in the metropolis as a whole. First drivers evoked in the interviews as explanations for the difference between the objectives and the outputs will be presented herafter, but the main elements of this mismatch will be deepen in the next chapters (implementation and political context).

### *Rental affordable housing*

As illustrated by figure 4, in the metropolis of Nantes, the production of rental affordable housing is below the objectives. In the period 2010-2016, on average 7% of housing in PLS were built, whereas the objective was about 9%.

Today, social landlords in the metropolis produce a small amount of rental affordable housing. For the main social landlord of the metropolis, Nantes Métropole Habitat (NMH), which has on average 1/4 of the total production of affordable housing in the territory, housing in PLS represent 5 to 10% of its total production of housing per year (6). This is the equivalent of 20 to 30 homes per year (6). The production of this kind of housing is thus marginal. Several reasons might explain this rare production.

Firstly, PLS devices are competing with other tools such as the Pinel device[15], which seems to be more profitable for investors, as it will be explained hereunder.

Housing in PLS is partly realised through the dismemberment of property, called the ULS (1), the Social Rental Usufruit (1, 6). For NMH, 10 to 20% of PLS housing is carried out through the ULS arrangement (6). This type of housing is built by a developer, bought by an investor at lower prices than market prices (for instance, 3000€/m2 instead of 4000€/m2) but from whom the building will be managed by a social landlord for 15 years, during which the housing will be rented under the PLS conditions (6). At the start of the lease, the social landlord buys the building at a reduced price to the developer (for instance, 1000€/m2) (6). At the end of the 15 years, a renovation of the building, costing on average 10.000€/housing is undertaken by the social landlord (6). After this renovation, the investor regains the full ownership of the good and the land (1, 6). This dismemberment is beneficial for both social landlords and the metropolis because it allows to speed up the construction of social housing (1, 2) and is also more cost-effective for social landlords (6) and private developers (3).

However, this operational arrangement remains today less attractive than the Pinel device. Indeed, even if with the PLS under ULS the investor has the advantage of benefiting from a VAT at reduced rates (saving thereby 10% on the housing price), and a property tax exemption which corresponds to 8 to 10% of the rent, the Pinel device attracts more investors for its higher flexibility. Indeed, instead of waiting for 15 years before being able to have the

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[15] The Pinel device is a scheme during which an investor can buy a good which will be rented at ceiling prices for 6, 9 or 12 years before the investor can retrieved his full ownership. In return, the investor benefits from a tax exemption depending on the value of the good (20; CIF, 2020b).

full ownership, the Pinel proposes more flexible periods of 6 to 12 years and tax advantages that can go up to 25% (1).

Secondly, the marketisation of dwellings in PLS encounters some difficulties. In PLS, the rent price is on average in the metropolis around 9 €/m2 (6) but it can go up to 11€/m2 for smaller appartments (AURAN, 2016a). Compared to the average social rental price in PLAI, at 5.50€/m2, and PLUS, at 6.30€/m2, the PLS prices are significantly higher (6). The clientele of these housing is thus a population whose resources are higher than the candidates for social housing, but who hardly manage to afford market rents which are around 12,50€/m2 (6). Even if the demand might be high (5, 6), clients are difficult to find (1, 5, 6). For social landlords this clientele is identified as a niche of people interested in renting but who do not necessarily have this reflex to turn towards social landlords, and who often refuse to live in mixed operations that also include social housing (5, 6). To be sure to find candidates, social landlords build the PLS housing in attractive areas of the city center, outside QPVs (priority districts), and in lower volumes, by collaborating with private developers, via VEFA [16] purchases (5, 6). They also partner with intermediaries such as Action Logement, which manage the marketisation of the dwellings (6).

Thirdly, social landlords are used to build housing for a clientele, which rather fits into the social housing criterias, and continue to give priority to the social housing production, which also needs to be sustained and even increased (6). Indeed, social housing production in the whole metropolis also struggles to meet the requirements set by the objectives (fig. 4). For NMH, the demand for social housing represents 60 to 70% of their total demand, while their park only proposes 25 to 30% of the programming (6). Even if this argument is legitimate, there is also a growing demand by middle-income residents for affordable rental, which is not sufficiently provided by the municipality of Nantes (Adéquation, 2014).

*Affordable housing in accession*

Next to rental affordable housing, there is also affordable housing in accession, the PSLA, for which the situation is different. Clients are found more easily because the demand is higher and more easily identified (6). The clientele is growing because it is more difficult to buy at market prices in the city (6). Between 70 to 80% of households are actually eligible for affordable housing in the metropolis (12). They are usually young households, first-time buyers, who consider more easily applying for social accession (6). Social landlords manage sales directly with clients or subcontract the marketization to cooperatives or real estate agencies (6).

Today, it is important to note that about 80% of affordable housing is built in ZACs (11). This is mainly explained by the advantages of working in ZACs for private developers and social landlords in Nantes. Firstly, working in ZACs enables to be less subject to recourses, more

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[16] The VEFA (Vente en l'état futur d'achèvement) is corresponding to an off-plan sale agreement between the developer and the purchaser while the housing is not delivered yet.

frequent in diffuse land (3). By balancing projects in ZAC and in diffuse land, private developers can have more stable and regular turnover between operations, which is important for their images vis-à-vis bankers (3). Moreover, it is a "*tool for emulation between developers*" (1), which encourages them to compete for the best and most creative ideas, while respecting the wishes of the collectivity (1,3). Besides, the land prices are more attractive as the land charges are well controlled by the public authorities in ZACs (6, 7). Furthermore, working in ZACs is considered as more "*comfortable*", as the regulations and the "*rules of the game*" are clear, the building permits more easily obtained, and the partnerships easily set up (7). Finally, the ability of producing affordable housing enables private developers to quickly launch their project and reach the pre-marketisation criterias (imposed by banks) more easily since these housing are sold "*like hotcakes*" (2, 11).

However, in the metropolis, the achievements in terms of affordable accession housing (8%) are not meeting the objectives (14%) (fig. 4). This might be explained by the constraints of building affordable accession housing in ZACs. All the private developers and cooperatives interviewed mentioned the issue of equalization, which describes the fact of increasing sale prices of free-market housing in order to be able to produce affordable housing, arguing thereby that they would otherwise produce "*at a loss*" (1, 2, 3). However, the equalization is not similar for every real estate actor. Indeed, while housing in PSLA was previously built by both private developers and social landlords, it has been recently decided that only social landlords and cooperatives would be allowed to propose this housing type (3). This decision has been taken because it was considered as a difficult arrangement for private developers to ensure a relocation in the social park, to manage the rental and ownership periods, and because social landlords and cooperatives defended the fact that proposing social and affordable offers corresponded more to their core business, their know-how and their philosophy (3, 4, 12). Given the difference of tax rates existing between the PSLA and the AANM, another reason that could explain this decision is the will of public authorities to constrain the private developers, even if it has not been mentioned as such in the interviews. Indeed, even if both devices have the same limited sale price of 2500€/m2, the PSLA has a tax rate of 5% and the AANM a tax rate of 20% (CIF, 2020a). Today, as private developers are constrained to build affordable housing only in AANM, it implies that if the building cost of the dwelling is 1700€/m2 or 1800€/m2, the cost price would be 2083€/m2 excluding taxes (-20% of 2500€). The profitability is thus lower than in PSLA, for which the cost price would be 2370€/m2 (-5% of 2500€) (2, 3). Cooperatives thus tend now to prioritize PSLA over AANM (3), and private developers are constrained to provide only dwellings in AANM (2).

In contrast, public authorities tend to disagree with the arguments of private developers about equalization. Some public actors consider that it is an "*easy speech*" from private developers to advocate for their ability to raise the prices of free-market housing, and that in reality, they do not produce "*at a loss*", but make simply less margin on affordable housing (4, 11, 12). Another official elected recalls that this speech is an argument of private developers to remove certain important rules and that this argument has to be put into perspective since the share of affordable housing remains overall marginal (12). In contrast, another representative

of Nantes Metropolis thinks that the equalization is difficult to avoid with increasing construction costs, and that this system of equalization will soon reach its limits (10).

Taking into considerations the context of the ZACs and the debates around the equalization for affordable housing in accession, one could question why not more affordable housing is built in diffuse land, while most of the actors interviewed develop their activities both in ZACs and in diffuse land (2, 3, 6, 7). The reason is that the PLUm sets up specific obligations related to the share of affordable housing to be built for a private developer starting an operation outside ZACs, depending on the size and location of the operation (2, 11, NM, 2020b). So even if the parcel is large, private developers will tend to make smaller operations than the imposed treshold size, under which a certain percentage of affordable housing is enforced, in order to avoid the construction of affordable housing, and thus also the equalization between affordable and free-market housing prices (2). The main reason of building under enforced quotas is thus related to economic balance and profitability (2). Moreover, diffuse parcels are often smaller parcels that easily give the chance to real estate developers to avoid the quotas of affordable housing (11). Finally, by working in diffuse, private developers and social landlords do have to face more recourses through which residents oppose to the construction of buildings in their surroundings (7, 11). Even if the residents often lose the recourses because of the strict urban regulations plans, they tend to hold back the projects for many years and sometimes request for compensation money to private developers (11).

In brief, the production of dwellings in PLS is rather marginal in the total amount of affordable housing produced in the metropolis, mainly because clients are difficult to find. For dwellings in PSLA, the objectives are also difficult to meet because even if their marketisation is easier, their implementation implies specific economic arrangements. Based on the information about the objectives and delivered outputs presented in this section, the next section will elaborate on the effectiveness of ZACs, housing in PLS and PSLA, and the affordable housing policy as a whole, through the opinions of the actors interviewed.

## 3. Effectiveness

### *Effectiveness of the ZACs*

Even though the local achievements are not always met in reality (fig. 5), there is an overall agreement on the fact that ZACs are effective to achieve the overall quantitative objectives of the metropolis in terms of affordable housing produced.

Indeed, ZACs are considered as "*perfectly supervised*", and "*very powerful*" tools (1, 6, 7, 12), effective to enforce the production of affordable housing at very affordable rental- and sale prices, around half the price of the free market ones (6), due to their well-controlled land charges (6, 7, 11, 12), often effective to also keep the higher prices of housing lower than the ones in the diffuse land (2, 12) - even if that depends on the land charge, the instructions of

the planner and the context (4, 12). Secondly, they are considered effective to balance the low amount of affordable housing provided in the diffuse land where the rules of the PLUm are usually bent (2), and effective to increase the overall production of housing, what also contributes to the control of housing prices in the metropolis (3, 7, 10). This last argument contradicts with the argument of a private developer according to whom the limited sale prices in ZACs constrain the number of housing produced, while in tight housing markets, freeing prices appears as the best option to regulate the market (1). It was also mentioned that ZACs enable to give priority to the quality of housing and the architecture (7, 10). Finally, ZACs are considered effective tools to control the programming (7, 9, 10), a "*political responsibility, not subject to concertation*" (9), whose "*objectives are not negotiable*", but however subject to a continous adaptation of the collectivity that can "*regularly modify the programme, the calendar or the qualitative objectives according to developments*" (10).

Moreover, ZACs also tend to meet their qualitative objectives. As a reminder, one of the goals of the ZAC instrument was to increase the collaboration between public authorities and private developers, thereby increasing public control over urban regeneration projects (Foras et al, 2015). Indeed, the ZAC tool enables this collaboration between collectivity and developers which is, in diffuse land, only possible until the building permit (10). Another qualitative goal of ZACs was to build functionally and socially mixed micro-districts (4, 10). And this goal is usually met, under the control of the metropolis (2, 4, 10), even if the long-term aspect of social mixity is discussed (5). Moreover, ZACs enable to smooth the visual differences between social, affordable and free-market housing, which is also a goal of Nantes Metropolis (11).

However, even if this planning policy tool in itself is considered effective to meet its quantitative and intrinsic qualitative objectives, the use of ZACs "*is not sufficient*", planners and project managers need to ensure "*a good balance of power with developers and vigilant political management*" to be able to meet this goal (10). This argument show the importance of the implementation process of ZACs to ensure their effectiveness (further explained in the implementation chapter).

### *Effectiveness of the PLS and PSLA*

Concerning housing instruments such as the PLS and PSLA, even if they are considered effective to provide the acquisition to a maximum of households and families due to their attractive advantages, the amount of offers in PLS and PSLA remains lower than the objectives (1, 5, 12). Indeed, as explained earlier, the territory is not only covered by ZACs, and on the whole metropolis, the objectives are difficult to meet in terms of construction of affordable housing.

However, the demand for affordable housing is high (12), and the objectives of 800 affordable housing (in accession), should probably be doubled to meet the needs of the whole population (12). The objectives are thus considered not high enough to meet the demand (5, 12). But

increasing affordable housing objectives seems too ambitious for social landlords, who already have difficulties following the social housing goals (6). For an objective of 2000 new social dwellings per year in the new PLH 2019-2025, only 1300 dwellings were actually provided in 2019 (6; NM, 2018). For all the social landlords in Nantes in general, it is difficult to meet these goals (6). The explanation for this tension between ambitious objectives, higher demand and difficulty of achievements will be provided in the two next chapters (implementation and political context).

### *Effectiveness of the affordable housing policy*

In terms of meeting the qualitative objectives of the affordable housing public policy, which were: *to match the typology of housing to the ability of households to contribute, to allow more households to have access to housing, or in rental, or in ownership, in the city of Nantes, and to respond to the residential journey of the population as it is, while fighting against urban sprawl* (11, 12), the results are rather moderate.

   *a) Matching the typology of housing to the ability of households to contribute*

On average, social and affordable housing are rather small size dwellings, which can be T2 or T3, which means two to three rooms apartments maximum (3, 4, 5), usually in collective buildings (6, 12; NM, 2010). This is mainly explained by the fact that private developers, social landlords and cooperatives need to keep a reasonable price, in order to match the ability to contribute of these households (NM, 2010), but also to ensure the economic balance of their operations (3, 7). The first goal of the policy seems thus well achieved since the prices are kept reasonable enough to match the resources of the households.

However, the match between the size of the households and the size of affordable dwellings is to be questioned. Indeed, one interviewee stated: "*The more we save housing, the cheaper the housing will be. So actually we are hunting for square meters in a little too distended manner yes.*" (7). In 2010, the observation was made that housing in the city was not really matching the typology of low- to middle-income families escaping to the outskirts (11). Following this observation, it has been identified that the highest demand for affordable housing corresponds to family households and to a lower extent to seniors or young couples without kids (NM, 2010). But appartments T2 and T3 in collective housing did not succeed to attract these family households (NM, 2010). In general, the overall decline of the average size of households observed is explained by the fact that the demand for small housing is high, due to the increase of single-parent families and a lower number of family members in households (5; NM, 2018). However, the average numbers do not show irregularities; the actual family size of the low- to middle-income households concerned by affordable housing might be different than the average trend and these households might therefore need other size of housing than the ones provided.

*b) More households to have access to housing*

This goal can be interpreted in two ways, "*more households*" can be understood as more households in terms of socio-economic profiles, or in terms of numbers of households.

For the first interpretation, it is necessary to understand which households are actually benefiting from the tools, compared to the end beneficiaries of the public policy. The end beneficiaries of affordable housing units were supposed to be the 3d to the 5d decile who could not afford homeownership in the agglomeration, mainly families, and usually not corresponding to social housing households profiles (11; NM, 2010; Adéquation, 2014). In reality, the beneficiaries of housing in PSLA appear to be mainly young households, first-time buyers, who, over time, will see their resources increase (3, 11). The conclusion of an official elected is "*we are in a race for personal subsidies, rather than being in a housing policy.*" (11). For the new period to come, the PLH 2019-2025 clearly states that affordable housing in accession will help the residential journey for middle-income households and young workers on the whole territory (NM, 2018). This focus on young workers show that the targeted population seems to have changed over time, compared to the initial expected end beneficiaries of this tool. Besides, more related to the trends of gentrification in the city (18-34), the actual origins of the people accessing affordable housing has not been clearly mentioned but raised question (4, 5). According to an official elected, no distinction is done between natives of Nantes and residents recently settled in Nantes (11).

Besides, one could also question the long-term aspect of this goal (in terms of more socio-economic profiles). For housing in PLS, even though the beneficiaries might be corresponding to the expected groups, this device is critized for its short-term aspects. As it is usually done via ULS due to profitability reasons, it remains affordable only for 15 years (6). For housing in PSLA, the anti-speculative clause is at the center of a debate. This clause allows the owner of a PSLA dwelling, after 7 years of ownership, to sell his housing at market prices, and thus do a significant margin on the good (3, 4, 5). This fact implies that the public authorities (and other actors) actually invest in these affordable housing only for a small amount of years, after which the goods do not remain affordable housing, but become free-market housing (3, 4, 5). The PSLA dwellings are thus considered as a short-term strategy that only creates an ephemeral social mixity (5). For the ZAC Euronantes, a representative of Nantes Metropolis stated: "*Free housing will be maintained, social housing too. The first "affordable" housing* (refering to PSLA) *will switch to free, reducing diversity a little.*" (10).

Furthermore, the land tax exemption of 15 years is also criticized. Since the recent decision of the french State to cancel the housing tax by 2023[17] (DILA, 2020), households who are just above the resource ceilings, bought in the free market, and pay their taxes (both housing and land taxes), consider the PSLA tool as being unfair, since their owners do now benefit from both land and housing tax exemption (3, 16).

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[17] Loi n° 2019-1479 du 28 décembre 2019 de finances pour 2020. JORF n°0302. Texte n°1.

Finally, the price of PSLA housing, 2500€/m2, is also discussed. Besides the debate around the equalization of private developers, it is considered too low and therefore accessible to too many people (about 80% of the population) (3,5). In some cases, social landlords have the possibility to sell a bit above the fixed price of PSLA, around 2700€/m2, but it remains very exceptional (3). Some cooperatives would like to propose PSLA dwellings at 3000€/m2 instead of 2500€/m2 (2), but social landlords such as NMH does not agree with increasing the prices of the PSLA to 3000€ because they defend their social housing orientation and want to avoid this "*intermediate logic*" (6). Even if there is a need for intermediate offer, according to NMH, "*it shouldn't be the job of social landlords*" to offer it (6). In the last PLH, launched in 2018 (for 2019-2025), official elected decided not to raise the price of the PSLA for clarity reasons and to keep this offer for households who do not have sufficient resources (12).

So, the goal of housing more households (in terms of more socio-economic profiles) is moderately achieved depending on the tool. Concerning the second interpretation, the goal of housing more households (in terms of number) in the city has probably been met due to the increase of housing types at affordable prices, even though in a marginal amount.

### c) *Respond to the residential journey*

This goal of responding to the changing needs of the households throughout life is rather well achieved by the social landlords and cooperatives. Indeed, they provide the possibility for households in social housing to be moved to affordable housing, in case their revenues increase, or the possibility for households in affordable housing to be relocated in case of life accidents in another dwelling of the social housing park, especially since only social landlords and cooperatives can provide housing in PSLA (2, 4). Moreover, affordable housing in AANM, direct accession, which has slightly higher resource ceilings also enable a transition in the residential journey of the households. However, once the households are owners, especially in a housing in AANM or in a free-market housing, the possibility to move according to the needs of the households (different size or revenues), become more difficult. According to the experience of residents, households in Nantes, once settled, generally stay in the same dwelling, due to the difficulty to find an accomodation in Nantes in terms of time and resources (13, 15). Most of them thus undertake renovations to expand their dwelling (13).

### d) *Fighting against urban sprawl*

It is clear that the affordable housing policy will not solve the problem of urban sprawl in Nantes (12), even if it was one of the possibilities to mitigate and limit it (6, 11). Urban sprawl is part of a larger set of parameters and policies, linked to demographic, planning, financial, and transportation measures that go even beyond the territory of Nantes metropolis (12). Interviewees agree to say that this goal is not achieved, and what is interesting to note is that the reverse effect is even observed.

On the one hand, some households, even though corresponding to the resources ceilings of the PSLA or the AANM, will not have this reflex to ask for affordable housing in the city, because they assume there are no offers for their profile (in terms of size and price of the dwelling) (11). It was the case for one of the residents interviewed (15). As a result they search for housing in the outskirt of the city, in the first or second belt, contributing thereby to urban sprawl (15).

On the other hand, since the metropolisation of Nantes, the main social landlord, Nantes Métropole Habitat (NMH) started to have the opportunity to build also beyond the city, in the peripheral municipalities (4, 6). As the national policy of urban renovation, through ANRU projects[18] evolve, NMH is constrained to demolish more and more buildings of its own social housing assets (6, 7). Simultaneously, NMH needs to build more and more housing to balance the demolition of the previous ones and keep an economic balance (7). In this context, most of their direct contracting operations take place outside the city, where the land costs are lower and where there are less QPVs (priority districts) (6), what also contributes to urban sprawl (4). However, the balance is kept, since NMH also has operations in collaboration with private developers, in the city itself (6).

In brief, even if considered as very effective tools to achieve their intrinsic qualitative objectives, the land and housing tools analysed in this study appear to have a more moderate effectiveness in terms of achieving their intrinsic quantitative targets, thereby contributing moderately to the overall goal of the affordable housing policy. Their implementation seems to contribute to their moderate effectiveness, as it will be explained in the next chapter.

### *Implementation*

Coming back to the mismatch between the objectives and delivered outputs, either upward (in the ZAC Euronantes) or downward (in the ZAC Bottière-Chênaie) (fig. 5 and 6), one might wonder what can explain this difference, whereas the ZACs are considered as very effective to achieve their objectives. In the case of Bottière-Chênaie, according to the planners, the lower amount of affordable housing (than expected) is mainly explained by a priority given to social rental housing (which increased by 12,5% compared to the objectives) due to the 2008 crisis, year of the delivery of the first programme of the ZAC (8). Moreover, some programs have also prioritised the retail sector instead of housing (8). In contrast, the higher share of free-market housing of the ZAC Bottière-Chênaie compared to the objectives might be explained by the global economic balance of the ZACs itself (7). As a result, at the end of the ZAC implementation process, planners might realize that allowing for more free-market housing would enable to find a better balance (7).

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[18] ANRU projects are urban renewal projects specifically focussed on QPV, priority districts of the city. It follows a national policy enforced by the ANRU law of 2003. It will be further explained in the chapter on the political context.

Thus, depending on the economic context and priorities, the collectivity can constantly adapt the requirements of the whole ZAC in terms of numbers of affordable housing (10). But the elements mentioned above might only show the top of the iceberg of all the elements interfering in the implementation of ZACs. It is therefore important to dig more into the socio-political games of actors and the actual process of implementation of ZACs in Nantes in order to understand what could affect the effectiveness of the planning and housing instruments under analysis.

### 1. Actors'roles

This first section will present the different actors involved in the implementation of ZACs and affordable housing in Nantes, while the next section will present their interactions during the implementation process (fig.7).
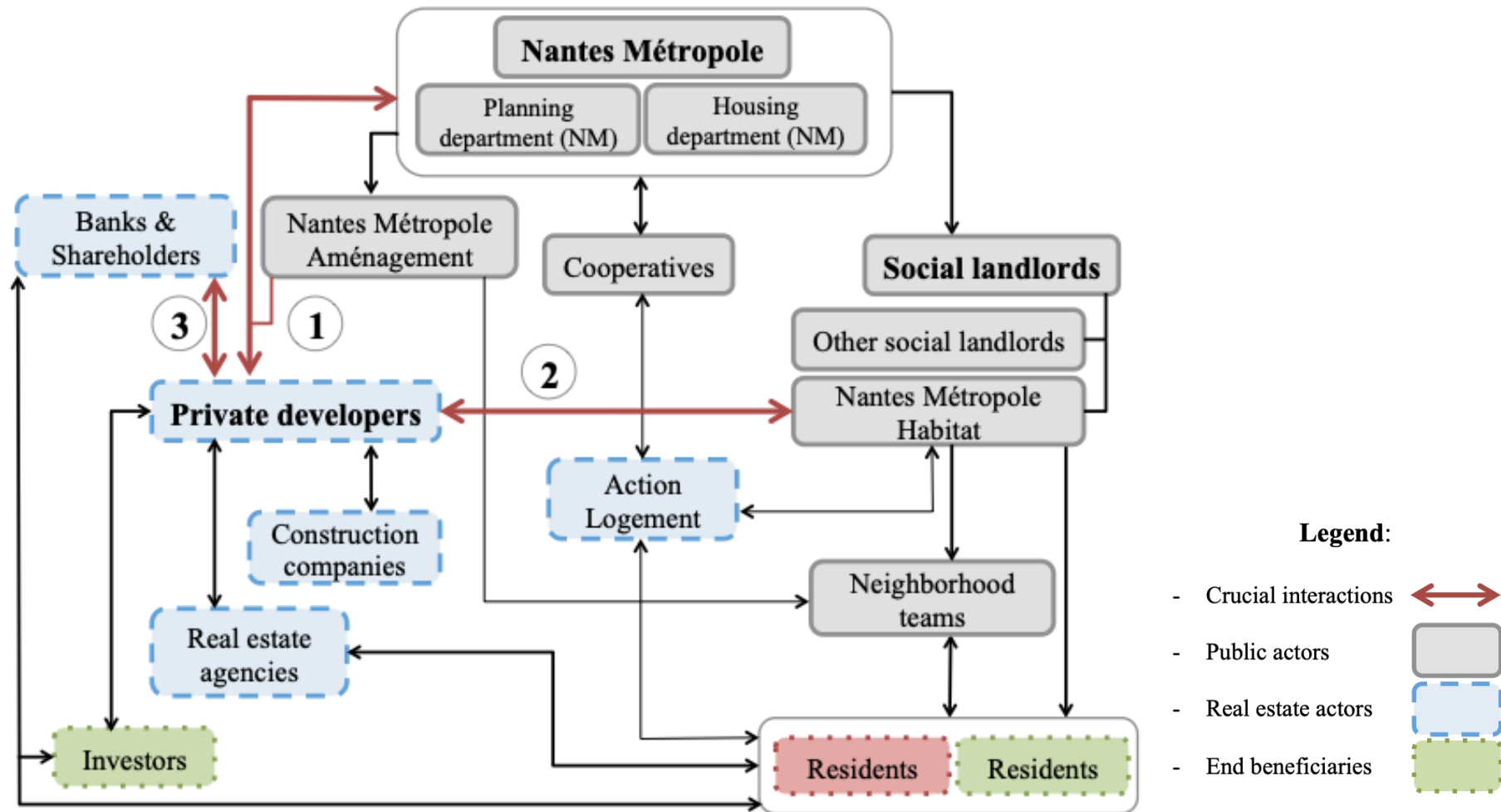
*Figure 7:* Actors and interactions in policy implementation. Own elaboration. Inspired by: *Public policy analysis* by Knoepfel et al, 2007, p.213. Adapted to the situation of Nantes.

*Public actors*

    *a) Nantes Metropolis (NM)*

Nantes Métropole is an administrative organisation (public collectivity) representing the 24 municipalities of the metropolitan territory. It includes a president, a metropolitan council, a metropolitan office and eight departments. All the representatives of NM are official elected.

The *housing* department is made of three services, one in charge of the financing of social housing; another in charge of the PLH, observatory studies, and partnerships; and the last one in charge of the implementation of the orientations of the PLH (12). This last service is realised by translating these orientations into actions such as improving old housing and developing affordable housing in accession and rental (12). The urban *planning* department of NM is in charge of preliminary studies and the implementation of the operation (9).

    *b) Nantes Métropole Aménagement (NMA): urban planners*

Nantes Métropole Aménagement (NMA) is a SEM (mixed economy society). In coordination with the project managers of the housing deparment of NM, planners try to balance the operations by consulting private developers (8) and enforcing them to build a certain share of social and affordable housing (3, 4), according to the objectives defined in the PLUm (12). Planners basically "*set the rules of the game*" (3, 4).

    *a) Social landlords[19]*

Nantes Métropole Habitat (NMH) is a public housing office which has a "*privileged link*" with the collectivity since NM is their main shareholder (4). The office is more than 100 years old (4). It is the second largest social landlord in France and manages over 25.000 dwellings in total (6) and make 500 social and affordable housing units per year (7). They have a huge heritage accumulated since the years 50s-70s (6). Their priority is to meet the needs of the inhabitants by providing not only housing but also social shelters, libraries and areas for associations (4). They pay attention to the relationship with their tenants and work mainly in QPVs (priority districts) (4). They have a know-how on social housing (4).

NMH is in close connection with urban planners and Nantes Metropolis to develop and build products that meet their needs and the ones of their tenants (4). However, the advantages of this close relationship have decreased over time. Even if 10 years ago, NMH used to have the

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[19] While the initial idea was to include social landlords in the real estate actors category (see methodology), it has been decided that it would be part of the public authorities category. This is explained by the fact that social landlords are at the service of the public policies and do not have the role of making private revenues on housing (in comparison with private developers). They rather thus opt for small margins at the benefit of social and affordable housing policy (6).

priority on urban projects, by getting 75% of the production of social rental housing in ZACs, today this position got lost (5). NMH has difficulties to develop and tries to pull their own production towards 1/4 of the total production of social housing (6).

In the last years, the number of social landlords increased in the metropolis (5, 6). Since the metropolisation of Nantes, it has been a political will to diversify social landlords (6). As their number is growing, the competition between them starts to intensify (6).

*a) Cooperatives*

Housing cooperatives differentiate themselves from social landlords by the fact that they usually do not provide further services after having sold housing (4). However, some cooperatives can also have a hybrid role by being a social landlord, a developer and a cooperative at the same time, and thereby still ensuring a trustee role, as it was the case for one of the interviewees (2).

*b) Neighborhood teams*

A neighborhood team is a public service of the city of Nantes (17). It usually includes public employees (7 for Malakoff for instance) and one official elected responsible for the neigbhorhood (17). Neighborhood teams are in charge of the communication between the different actors, mainly between inhabitants and the collectivity, but also with landlords and planners, in order to ensure the application of the public policies of the city (17). This dialogue goes beyond housing, to subjects such as neighborhood animations, public spaces, or commercial needs (6, 16, 17). Neighborhood teams are essential for the facilitation of consultation with residents and implementation of urban projects such as ZACs (14).

**End beneficiaries**

c) *Residents*

This category includes tenants or owners of affordable housing in PLS or PSLA (or AANM) made in ZACs, occupants of their dwellings, therefore referred to as "*residents*". Some residents can be positively affected (in green on fig. 7) by affordable housing constructions in ZACs, usually the middle-income households who will acquire a good in this ZAC (10). Other residents can be negatively affected (in red on fig. 7), usually the residents from neighbouring districs, against the constructions of ZACs for several reasons (such as the defence of green spaces or refusal of increased density in the city). They can even sometimes carry out recourses against urban projects (11).

d) *Investors[20]*

Investors are the second positively affected beneficiaries (in green on fig. 7) of housing construction in ZACs. They are considered here as individuals seeking to invest in real estate to create revenues, without necessarily living in the goods they buy, but rather renting it to other households. Investors in Nantes are especially active in the most attractive areas of the city (6), and private developers need them to produce housing (1). To illustrate the fact that investors are well present in Nantes, in 2016, the share of housing occupied by their owner amounted to 52%, and the share of housing occupied by tenants represented 47% (AURAN, 2016b).

### Real estate actors (private actors)

a) *Private developers*

Private developers can be regional or national groups, referenced once they have the ability to build more than 30 homes per year (3). Usually regional developers work hand in hand with the collectivity (4) and produce less housing per year since their territory is relatively limited (1). One of the regional developers interviewed produced around 400 housing per year (1). In contrast, national developers work at a bigger scale and can produce more than 1000 housing per year (3).

b) *Construction companies*

Often forgotten in the analysis of planning and housing policies, they are one of the cornerstone of the implementation of projects (12). Their role will be further explained in the challenges section of the next chapter (political context).

c) *Real estate agencies*

Even though their roles has not been explored and studied in this thesis, they have been mentioned as one of the main intermediaries between private developers and residents.

d) *Banks and shareholders*

Banks support the production of affordable housing because it represents a reduction of risks (2). Indeed, affordable housing are more easily sold then housing at free market prices, because they are usually even cheaper than old housing in Nantes (2). Shareholders financially support the activities of certain private developers, while earning interests over time (1).

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[20] The distinction between residents and investors in reality is not obvious, since households in PSLA can also buy their dwelling for the purpose of generating revenues 7 years later (as mentioned earlier), but for a matter of simplification for the good understanding of the situation, both roles have been distinguished.

*e) Action Logement*

Action Logement is a private intermediary actor which helps financing the operations (4). The group give grants to social landlords in order to be able to allocate housing to their clients, especially workers (4). They usually position themselves on certain areas at the end of operations in ZACs in order to ensure an easier marketisation of their housing (5).

## 2. Implementation process and interactions

To carry out a ZAC project, Nantes Metropolis (NM) first acquires lands amicably or by preemption[21] (10; CERTU, 2006). Once in the hands of the public collectivity, the planner (designated by the collectivity to be in charge of the implementation) can "*freeze the land market within the perimeter of the ZAC*" in order to avoid land prices increase and to enable the construction of all types of dwellings, at a reasonable price (10). Through this arrangement, the price of the free-market housing is also controlled in ZACs (12). For instance, in the ZAC Euronantes, the prices of new housing oscillate between 1700 €/m2 (for social housing) and 5500€/m2 (for free-market housing) (10). In the programming phase, the share of social, affordable and free-market housing, and the delimitation of plots are fixed by NM and urban planners, based on the objectives of the PLH, defined by the housing department of NM.

The urban planning department of NM then starts a call for tender for each islet in the ZAC that the planners acquired beforehand (1, 4, 9, 11). Many private developers apply; it can go up to 180 applications sometimes (11). The selection of the developers is realised by Nantes Metropolis and NMA. Once the developers are alloted a specific islet, the urbanist arranges, by working together with developers and urban planners, the different projects on the islets and the planning of public spaces (8).

- **Interaction between NM and private developers** (nr.1 on fig.7)

Whereas the programming phase is not subject to concertation, the implementation of the projects might include consultation with developers (9). Private developers usually have the will to stick to the program, in order not to lose their credibility in front of NM (2, 10). However, after having received the building permits, some developers "*may be tempted to change the share of affordable housing, their typology or sale price*" (10). However, actors control each other, and a dialogue between the planner, the collectivity and the developers enable to keep the monitoring of the operations (10). All the decisions concerning the modifications of the program for specific islets are taken collectively by the different actors: NM, planners and developers (10). A solution that might be decided in case of difficulties for private developers or social landlords to provide the expected products, is to change the typology of housing (smaller housing) or the distribution between owner occupant and

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[21] The preemption right is the right for local authorities "*to acquire real estate put up for sale by private individuals or companies, in preference to any other buyer*" (Notaires de France, 2014).

investor, but never the sale price (10). It can also happen that external private developers involved in the ZACs do not respect the programming decided but in these cases the collectivity is more reluctant to select them for the next ZAC projects (10). Overall, what generally explains the difficulty to achieve the quantitative objectives is an evolution of the market or a technical issue (10).

- **Interaction between private developers and social landlords** (nr.2 on fig.7)

Once a developer is assigned to an islet, he will generally decide with which social landlord he wants to collaborate for the realisation of affordable housing within its operation (1, 2, 3, 4). It can also happen that the collectivity positions the social landlords (or cooperatives) on the different islets, in which case, social landlords carry out direct operations (5). But for indirect operations, the developer will built affordable housing in blocks and will sell them to a social landlord through what is called a VEFA (an off-plan sale) (2, 3). This mechanism is more and more common for social landlords, such as NMH, which sees its VEFA share increasing towards 50% of their total production (5, 6, 7). Although, at first glance, this arrangement does not seem problematic, some drawbacks were mentioned. According to NMH, the increase of VEFA share is increasing the risk of having to reduce their number of employees because less human ressources are needed, and it can also decrease their know-how (6). Moreover, it can contribute to the standardisation of the housing and decrease the quality of the dwellings sold (6). Indeed, social landlords do not have much influence in the planning phase on the type of housing to be sold (6). However, for social landlords, building in ZACs becomes extremely difficult since private developers have better capacities to manage profitability even on projects with high land charges (outside ZACs), due to economies of scale they make on their large operations (6). If they want to build to increase their own heritage, social landords thus turn themselves to the outskirts of the city to build social and affordable housing since the land charges are lower than in diffuse land in the agglomeration (6, 7). The last possibility for social landlords is to buy their building permits to private developers within ZACs, which is also quite common in Nantes (3).

- **Interaction between banks and private developers** (nr.3 on fig.7)

The interactions between banks and private developers might also be affecting the effectiveness of ZACs. Banks impose around 30 to 40% of pre-marketing criterias to private developers (2, 3, 11), unless the latter manage to launch an operation with its own funds which is rather unusual but possible, since it was the case for one of the interviewee (3). Pre-marketing criterias explain why most of the developers sell affordable housing in blocks to launch their operations (11). Banks also induce pressure of margins, and regular turnovers, a game in which the developers enter since they necesarily need the banks to produce real estate goods (2, 7). That means that private developers will seek for a maximum amount of margin depending on the willingness to pay from the households (4, 7, 11). This seek for higher margins might be another explanation than the equalization argument for the rise of free-market housing prices (11).

Besides these operational elements affecting the effectiveness of ZACs to achieve their quantitative objectives in terms of affordable housing, it is also important to understand why the affordable housing public policy as a whole has achieved mixed results compared to its goals. This might be explained by the fact that the housing situation in Nantes faces broader challenges that will be presented in the next chapter.

### *Political context*

Whereas the political context was meant to be part of the implementation concept, as explained in the methodology (tab.1), it has been decided that it would be more adequate to dedicate a full new chapter to this topic, since it was frequently mentioned in the interviews.

### 1. Public policies

Next to the affordable housing policy, a social housing policy and an urban renovation policy were simultaneously drawn up in the recent years in Nantes (NM, 2018). They are part of the overall context of the city and are important to take into account for a full analysis of the affordable housing policy.

### *Social housing policy*

The city of Nantes has developed a quite strong and rapid response to the requirements of the SRU law of 2000 concerning the aim of reaching 20 to 25% of social housing in the city (7). To achieve 22,1% of social housing in 2017 (NM, 2018), representing about 50.000 social housing (21), the city has been increasing property tax on owners (7). Between 2012 to 2017, Nantes was considered as having one of the highest increase in property tax compared to other regions, with an increase of 19,09% (Dupuy, 2019). This social housing policy is explained by the fact that Nantes has always have a political will to produce social and affordable housing for a long time (2). On this subject, Nantes is considered "*proactive*", "*successful*" (2), and "*historically very open*" (7). Indeed, this proactiveness might be explained by the stability of the left-wing parties at the head of the municipality which has also ensured a political regularity in this city for about 40 years (2, 28). There has always been in Nantes the "*desire to integrate into the heart of the city, the diversity of the population as it is corresponding to a diversified economic fabric*", mentioned an official elected (11). Moreover, in Nantes, the QPVs (priority districts) are situated within the agglomeration, compared to cities like Marseille or Lyon where they are located outside the city belt (11, 29). This absence of "*satellisation*" of social housing districts means that these districts have never been completely isolated from the network of transport and services that the city provides (11). Even though relatively well integrated, the city started engaging in a restructuration of social housing disctrics as it is explained in the next section.

*Urban renovation policy*

In 2003, a national law for urban renewal was introduced in France, called the ANRU law[22] with the goal to decrease socio-spatial segregation in cities[23] (10). In order to achieve social mixity and urban renewal, both renovation of buildings and renovation of entire neighborhoods are carried out. On the one hand, social landlords collaborate with collectivities to renovate old degraded condominiums, for which they receive subsidies (2, 14). On the other hand, social landlords also procede to renovation of entire neighborhoods, called the QPVs, priority districts (21). Priority districts have usually been built after second World War, in the 50's, while there was a high and quick need for social housing (21). In France, the HLM districts built at this period usually concentrate low-income residents in the same living space, resulting in strong socio-spatial segregation and social issues such as drug networks, considered as non-beneficial for the inhabitants of the city (21).

Today, the process of urban renovation is realised in collaboration between the ANRU (National Agency for Urban Renovation), collectivities and social landlords (5, 6). The renovation of the QPV districts includes not only refurbishment but also the demolition of buildings, which decreases the building heritage of social landlords in QPVs, on top of the HLM sales encouraged by the State (6). For NMH, this is quite problematic since 60% of their heritage is situated in QPVs (5, 6). NMH is thus encouraged to increase its development by building outside QPVs, usually even outside the city where land costs are lower and the economic balance of operations easier to achieve (as explained earlier) (6). The ANRU agency contributes to the financing of the reconstruction of new buildings, only outside QPVs (6). The goal of the demolitions goes hand in hand with the strategy of social mixity, since demolitions are meant to decrease the share of social housing in these areas (5). Social housing buildings are thus replaced by new buildings of affordable housing, free-market housing or both (5; 21). In case of demolitions, social landlords are in charge of the residentialization (5). That means that residents of demolished buildings are relocated, rehoused, accompanied by a service provider of the housing department of Nantes Metropolis, and can receive a financial compensation (5). In specific cases, instead of demolitions, another strategy can be adopted to decrease the share of social housing, which is the densification of districts by adding more affordable housing or free-market housing (5). However, this situation is quite rare since the aim of the renovation policy is firstly to de-densify sensitive districts (6). In any case, affordable housing is not only produced in ZACs but also in ANRU zones, or at least within a perimeter of 300 meters around ANRU zones, through housing with reduced VAT, at 5,5% instead of 20% (2). The resource ceilings to apply to affordable housing in ANRU are slightly higher than for the PSLA and the AANM (CIF, 2020a).

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[22] Loi n° 2003-710 du 1 août 2003 d'orientation et de programmation pour la ville et la rénovation urbaine (1).
[23] All the objectives of the ANRU policy were recently gathered in : Loi n° 2014-173 du 21 février 2014 de programmation pour la ville et la cohésion urbaine (1).

To increase social cohesion in public spaces, some consultation processes take place with residents of the neighborhood under renovation and adjacent neighborhoods in order to rethink together the heart of the districts where new shops, schools and cafes for instance could be implemented (14). According to a member of NMH, "*all these big actions on public spaces are meant to transform the image of neighborhoods*" (5).

In brief, it becomes clear that beyond the high share of social housing achieved in the city, the metropolis of Nantes engages now for more than 10 years in a strategy of re-distribution of social housing over the territory (7, 21). A member of NMH stated: "*You have to believe in social diversity because that's the answer today ... It's the only answer*" (7).

*Attractivity policy*

The renovation of sensitive districts in the city of Nantes is accompanied by a policy of restructuration of the city, which started in the 1990s, years during which urban renewal in Nantes was at its early stages (Chasseriau, 2004). Since then, the demography of Nantes (and its surroundings) has not stopped growing (Garat, nd), with an intensification of population growth with the metropolisation of the city in 2015 (9). Today, this growth is supported and encouraged by the municipality and the results are higher than the expectations.

Indeed, in 2010, the objective of the municipality was to attract back to the city one third of the residents that had left the city, in order to reach 100.000 inhabitants in the city by 2030, compared to the 70.000 inhabitants identified in the census of 2007 (11). In 2030, it is now evaluated that the city will count more than 135.000 inhabitants (11), so 35.000 more than expected. The demographic growth rate of the city is similar to the one of the metropolis and the one of the department of Loire-Atlantique, which is about 1,2% (11). Between 2010 and 2015, the demographic growth in the metropolis was +1,4% per year (NM, 2018). The attractivity policy thus goes beyond the city boundaries, and it is the whole region which experiences a strong demographic pressure. This growth can be explained by the high fertility rate in the Pays-de-la-Loire region (compared to other regions of France) which is around 2, but also by the attractive employment sector  (10, 11). Indeed, for already 30 years, the Pays-de-La-Loire region is classified as one of the first three french regions in which the employment rate is the strongest (11), with a growth of employment of +1,2% per year (NM, 2018). Both the industrial sector, with rail- and aeronautical companies such as SFR and AirBus (1, 3, 12), and the services sector with high tech companies on medical research, industry or agrifood (12), are participating to the "*dynamic economy of the west*" (3). The majority of these companies are local businesses participating to the endogenous economic growth of the region (11), but some are more external businesses installing their headquarters in the city of Nantes (5, 12). It is an area where "*a qualified couple can find two jobs*", compared to other regions in France, mentioned an official elected (11). Moreover, the residential attractivity is high for 19-30 years notably due to the increased quality of the high education sector (NM, 2018 ; 11).

Even though already attractive for a long time on the scale of France, probably due to its strategic location near the maritime frontage and proximity to Paris (5, 6), Nantes experiences an increased attractiveness since 2015 (7). This date matches the beginning of the metropolisation process of Nantes which started in 2015 (6, 9). Two other events might have contributed to the increased attractiveness of Nantes: the acquisition of the title of European Green Capital in 2013 (NM, 2014a) and the change of mayor in 2014, when J. Rolland replaced J-M Ayrault at the head of the municipality (23, 34). Even though of the same political party as her predecessor, J. Rolland strongly promotes the beautification of the city through urban regeneration projects, and the economic growth of the city (22). The single fact that landscape architects are perceived to have more influence in urban projects than urban planners illustrates this political will for attractivity, as reported by the greening service of the city (29):

"*All are interdisciplinary teams, but the leaders are landscape designers. It's a big change. For us too. Because now, we are more influent, we have never been more influent than right now. I remember when I was a young director of these green space areas, I was just invited for decisions at the scale of the area. But not outside. Right now, we are everywhere*."

Improving quality of life in Nantes is achieved due to the development of the cultural sector and public transportation, and to the greener environment (1, 11, 12; 22, 34).

With its 100 municipal parks, Nantes counts now more than 57 m2 of green space/capita (Joly, 2020). The new Extraordinary Garden in the district of Bas-Chantenay is maybe one of the icones of the public green spaces in Nantes (29, 31). This old quarry has been replaced by a luxuriant and spectacular garden including a waterfall and exotic species (31). Several community gardens are also initiated in the city in collaboration with residents (21, 23, 28). Besides, many cultural events such as the "Voyage à Nantes" start to gain national and international renown (20, 26). It has been mentioned in the interviews that there is a strong "*territorial marketing*" of the city through communication agencies which adverstise the city even beyond the goal of tourism (12; 18, 22). This illustrates the concept of *urban green boosterism* (Garcia-Lamarca et al, 2019), but also the urban competition between large french metropolises such as with Rennes, Lyon, Bordeaux, Toulouse, and Marseille (3, 7, 10).

In terms of transportation, the affordable housing policy has been thought in relation with the PDU, the urban travel plan of the metropolis, in order to provide affordable housing in specific well-connected and dense urban areas, supplied by commercial services and public transport lines (11). These centralities are targeted areas of the affordable housing policy not only in the city of Nantes but also in the smaller cities of the metropolis (11). There has been a real desire, from 2010 onwards, to buid a "*city of short distances*", in which the reduction of cars per households is highly encouraged (11).

In a nutshell, the combination of strong and effective urban renovation and attractivity policies have been successful in meeting the goals of increasing the number of inhabitants in the city of Nantes, without any discrimination between natives and non-natives (6, 11).

Whether the new inhabitants are exactly corresponding to the one third of the people forced to migrate to the outskirts of the city of Nantes at the end of the 90's (as mentioned before) has not been confirmed, and is probably difficult to measure. But what is certain is that this population growth, even though economically beneficial, can become an obstacle to the long-term effectiveness of the affordable housing policy, as explained in the following section.

## 2. Challenges

### *Tight housing market*

All interviewees agreed upon the fact that the city of Nantes experiences today a tight to very tight housing market. The last figures of the vacancy rates in the city are less than 1% (1). Due to the lack of development, the increase of construction costs, the high demand for housing, and the strong competition between developers, housing prices tend to escalate.

- **Lack of public land**

Overall, as every territory, the territory of Nantes is limited; and as urban development grows, the availability of public land decreases (4, 5, 6, 7). This means that to be able to continue to launch new ZACs with affordable housing, the collectivity needs to find a constant balance between the end of current projects and the anticipation of future ZACs, for which it has to acquire new land. However, interviewees mention a lack of anticipation from the collectivity in the last years (3, 5). Indeed, whereas 20 ZACs are undergoing, only 8 are planned for the future (NM, 2018). Moreover, today some ZACs also face recourses, what implies relatively long delays on operations (3, 6). As a result, in the next years, there is gonna be a hole in the production of new housing in ZACs, and thus also of affordable housing (3).

- **Lack of development**

The lack of development is already experienced by NMH today, which is very dependent on the actions of Nantes Metropolis to be positioned on land on which they can built (5, 6). This lack of development is also reinforced by regulations : the new PLUm is more restrictive than the previous one, including thereby more regulatory constraints, which also puts a brake on development, as social landlords and private developers evoque (3, 6). These restrictions among others include a higher share of affordable housing in the whole territory (in ZACs and in diffuse), up to 20% (7). Even for Nantes Metropolis, it becomes difficult to respond to the diversity and quantity of the population needs (10). Indeed, the city center of Nantes is protected by a regulatory urban plan, called the Plan of Safeguard and Implementation Value, that constrains the programs and costs of new operations and restructuring of buildings (10).

- **Higher land costs**

As a result of scarcity of land, land costs become more and more expensive (6). *"Everything that is rare is expensive",* mentioned a private developer (1). A social landlord stated: "*in Nantes, the cost of land is exorbitant*" (4). Acquiring land is thus more and more challenging, both for collectivities and other operators. Some regret the lack of land reserves by Nantes Metropolis, compared to Rennes which manages better the increase of the cost of land (6, 7). For social landlords, "*the lack of land resources is more and more worrying*" (7). Representatives of Nantes Metropolis have a more nuanced discourse and ensure that there is still public land that can be free up and that this scarcity of land under public control is only temporary (11, 12). To have an idea in terms of surface area, the land reserves of Nantes Metropolis now represent 61,4 hectares (NM, 2018).

- **Higher construction costs**

Besides land costs, construction costs were regularly mentioned as a constraint for private developers and social landlords to produce affordable housing (3, 5, 9, 12). The increase of construction costs from 1450€ to 1800€/m2 (3) is explained by the fact that very few large construction companies detain most of the realisation of urban development orders (12), as well as the seek for quality of materials and architecture, and the seek for better energy performances of buildings in coherence with sustainability goals of the city, found in the PADD [24] (3, 9, 12;  NM, 2018). Moreover, there is a scarcity of bio-based materials supply, and a cost of labor that increases (12) due to a low amount of manpower, and higher wages (3).

- **Stable affordable housing price**

Some developers consider it anormal that the price of affordable housing has not increased since 10 years, whereas the land and construction costs increased (3). They also disagree with the idea that the sale prices of affordable housing are decorrelated from the real market value of the property (3). Indeed, affordable housing are usually built in attractive areas with lots of services and green spaces (6) which are elements that usually increase the market value of real estate goods (3, 10).

- **Higher housing demand**

In addition, the demand for housing is high (3, 12), not only due to population increase, but also because the size of households has diminished over time (5). There are more single-parent families, separations and people living alone asking for more dwellings and smaller dwellings (5; NM, 2010).

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[24] The PADD is the Program of Planning and Sustainable Development describing the political orientations of the city. It is one of the document part of the PLUm (12).

- **Higher number of private developers**

Furthermore, the number of private developers in Nantes has exploded (6). Today, in Nantes metropolis, more than 100 referenced developers are active, which means that there is one developer for 60.000 inhabitants (1, 2, 3), "*which is enormous*" (3). As a consequence, there is a very strong competition between developers in the metropolis (1, 2, 3, 12, 16). To keep their position in this tight market, private developers have to make more and more equalization (as mentioned before), in order to build affordable housing (3), which then leads to soaring prices of the free-market housing. For private developers, the prices of affordable housing should thus be reassessed according to the increase in construction costs (3). But the equalization for representatives of Nantes Métropole is considered to have a minimal influence on the increase of free-market housing prices (12). What is more influential is the speculation realised on new real estate goods (3, 9), and not only on new (7).

- **Escalating housing prices**

Housing prices in the new free market can escalate up to 10.000€/m2 in Nantes, while 3-4 years ago it was around 5000€/m2 (7). But whereas the old housing park was until now considered as a refuge market in which the prices were relatively affordable, enabling first-time buyers and middle class households to access homeownership in the city, today it is not the reality anymore (7). A social landlord said: "*We realize today that the market for old is as tight as the market for new*"(7). A resident reported the fact that new or refurbished appartments are now sold at the same price than old appartments which have to be renovated, because it is easy for the sellers to find buyers (13).

Aside from the distinction between new and old housing, the housing prices also differ depending on the location in the metropolis (11). An official elected claimed that it is important to keep in mind that in other municipalities than Nantes, the market prices of housing usually correspond to the affordable housing price of the city (11). As a result, not 800 housing, called "affordable" in the urban plans, but maybe 2000 housing units are built every year in the metropolis even if not recognised as such (11). Nevertheless, housing prices in the first belt around the city started to increase as well, as explained by a resident struggling to find a house corresponding to its budget in the outskirts of Nantes (15).

*Land charges in ZACs*

In ZACs, urban planners and the collectivity control land charges by providing subsidies on land charges to developers (3, 6, 7, 11, 12), supporting thereby the equalization and encouraging the production of affordable housing (3; Devisme et al, 2008). In the past, the subsidies were proportional to the land charge, what was contributing to the increase of land costs (6). Aware of this issue, the authorities decided to fix the land charges according to the type of housing to be built (social, affordable or free) (3), as it was the case in the ZAC Bottière-Chênaie and the ZAC Euronantes (3). But according to a private developer, the rules

have recently changed 4 years ago: in some new ZACs, land charges are no longer fixed (3). Due to the lack of public funding, urban planners thus start entering the game of competition of developers, which is the one of the "*highest bidder*" (3). A developer reported: "*We are asked for architectural quality, supervised prices and a large land charge. So there it is, the difficulty*" (3). However, social landlords argue that in general, land charges in ZACs remain "*relatively mastered*" (6). It is thus observed that for the two ZACs analysed, land charges were controlled and limited, but that for actual and future ZACs, the reality is different and land costs soar as much as the housing prices.

### *Lack of control of urban development in diffuse land*

To handle the housing price increase of the free-market housing outside ZACs (in diffuse land), collectivities do not have much tools to regulate the market (12). They can use their right of pre-emption of land that enables them to have the priority on a land that is sold. But to exercise this right, they need to have legitimate reasons such as the contribution to the implementation of a public policy (12). Moreover, they do not always have the means to buy the land of which the price is decided by the seller (12). If the collectivity can also use ists expropriation rights in order to buy the land for a lower price, but then the judges fix the value of the land, which is usually corresponding to the market value (12). The only other strategy that the collectivity can adopt to regulate market prices is increasing the supply of housing, - which is very challenging in a tight market -, or using urban planning regulatory documents such as the PLUm to enforce strict rules related to building permits on the territory (12).

## 3. Consequences

The tight housing market in the city of Nantes and its surroundings are resulting in numerous consequences of which the (un)desirable effects will be discussed in the last chapter of the thesis.

### *Poor quality of housing*

Firstly, the competition between private developers and the speculation of land and housing prices tend to run counter to the quality of the housing produced, not only of affordable housing (3) but also free-market price housing (7, 16). Representatives of Nantes Métropole Habitat reported that the increasing share of VEFA arrangements with private developers to build social and affordable housing have adversaly effects such as the standardisation of the housing (6). Standardisation of the real estate offer is considered as a common effect of an attractive city as Nantes (10). And unfortanutely in VEFA, social landlords are not supposed to interfere in the planning phase to influence the type or quality of the products (6). In terms of private developers' operations, they attest dealing with the quality of the housing (3), whereas another person reveals that sometimes, "*developers themselves are ashamed of what they create*" (anonymous actor). Due to their seek for profit, they tend to focus more on the amount of margin they make then to the decent state of the housing they produce (7). In the context of ZACs, collectivities are in charge of maintaining the overall quality of housing (as

mentioned in the effectiveness section) by selecting the projects and developers active in the ZACs. But depending on the operations, and during the implementation process (as explained earlier), collectivities, at the behest of developers, can modify the criterias of housing (10), including the quality level.

A resident of a free market price housing in the ZAC Bottière-Chênaie reported that whereas Nantes was previously called "*the Venice of France*", the urban development in the city is described as "*awful*", "*disgusting*", "*appalling*", at the expense of the quality and the cachet of the city (16). In that ZAC specifically, the households living in affordable housing (indirectly contacted) did not wish to witness (16). Their silence is explained by the fact that they are now in court for problems of water infiltration and cracks in their housing (in a mixed dwelling types building), a few years after having bought them (16). The resident interviewed (not living in affordable housing but also concerned by the issue) related that even an expert from Paris was astonished by the quality of his *housing: " It is not possible, the apartment inside, it is not finished. Even the quality of HLM housing is better, they are better finished than these*" (16). Still talking about the quality of housing, the resident interviewed stated : "*it is not only in Bottière-Chênaie, but everywhere in Nantes (...) It seems that with the group y, it is the same thing next door. It's a system.*" (16). He mentioned the term "*corruption of the group x*", to which he had bought his dwelling (16). According to this person, the poor quality of housing is explained by speculation and the high number of real estate players in the city, as well as the fact that they cut their expenses and "*do not pay attention to quality*" (16). As a result, he and his neighbors now have to pay for repairs and hire advocates, although their means are limited (16).

> "*It is unbearable. Even legal lawyers do not respect the opinion of experts regarding the quality of housing. (...) Here at Bottière-chênaie, it was done very very quickly, with means that they* (dwellings*) are not very good. (...) With these stories of social housing, you have to go fast. (...) It is a question of competition in relation to prices etc. shenanigans. (...) There are shenanigans you can not imagine ... at the money level. Unimaginable.*" (16).

Even though this testimony is the single one collected, it reveals an interesting picture on the problematic of quality of housing experienced by middle-income people recently installed in ZACs.

### Increased risk of social polarisation and urban sprawl

Even though ZACs are rather controlled and effective tools to increase the offer of affordable housing, the amount of affordable housing in Nantes remains particularly low compared to the amount of social housing (7). As a result, the tight housing market and all its drivers start to generate a growing gap between social housing and free market prices (2, 7, 11, 12). A tight market in which the prices of the free market real estate goods soar, is "*a market which excludes whatever happens... which excludes a lot of people*" (7). A private developper

confess: "*And here I, as a citizen, I am not very comfortable today to build a city for the poor and for the rich*" (1).

All the residents interviewed agreed with the fact that there was more demand than supply in Nantes in terms of housing offers and that it was extremely difficult to find an accomodation (13, 14, 15, 16). One of them said that they took for about 18 months to find a flat to buy (13). In order to find offers in homeownership, two of the interviewees used the strategy of renting a flat in the meanwhile (13, 15). However, beyond the difficulty to find the type of housing which corresponds to their criterias for the people with relatively high means (such as the majority of the residents interviewed), others might face a real difficulty to find the type of housing that corresponds to their revenues and resources (13). A social landlord reported :

"*Buying in Nantes is almost impossible for people with normal income, at least in the centrality*" (7).

A private developer stated:

"*Because today, we favor social housing, below cost prices and then who has the opportunity to buy? Only people who are relatively affluent or who take advantage of fiscal measures. But today, France, the middle class which works, is completely excluded from it. And it is this economic model that must be re-examined.*" (1).

If the real estate housing system and the economic system behind continue, related this developer, urban sprawl is gonna be indirectly encouraged (1). And it is already happening now (as previously mentioned), with households not even looking at offers in the city center of Nantes (15) and social landlords being somehow forced to build in the peripheral municipalities (6). Even though they build mainly collective dwellings (6), the amount of land consumed is higher. The demographic growth in the urban periphery absorbed 65% of the observed growth (NM, 2018). These consequences of an attractive housing policy and a social housing policy are inevitable and logic, as a social landlord stated "*we must not want to both increase the population and at the same time be surprised that there is urban sprawl*" (6). It becomes clear that the people contributing to urban sprawl are "*our fellow citizens who are in a middle class situation*", just above the resource ceilings of the PSLA and AANM, but without enough means to afford the soaring prices of the free market (1). Thus, in terms of urban sprawl, compared to the 2000s when the affordable housing policy was put in place, the situation does not seems to have evolved much, except the fact that few more people (not sure whether from Nantes or outside; with investment purposes or not), from the 3d to the 5th deciles, have benefited from an easier access to homeownership in the city.

Thus, the lack of intermediate offer, between the affordable housing at 2500€/m2 and the free market price housing which starts at 5000€/m2, clearly shows a risk of increased social polarisation in the future with the exclusion of the middle class outside the city (1, 10, 12).

*"It is like everywhere, gentrification phenomena that are taking place, because of the quality of urban developments, and then the attractiveness of the city*" (4).

*"Gentrification affects all the cities of France, in fact all the developing cities. And Nantes is no exception*" (21).

Gentrification, and particularly green gentrification in Nantes is a contested subject (17; 22, 28, 29, 31). A strong network of activists claim their right to the city and highly critize flagship green space development projects in ZACs or nearby by arguing that they are part of the attractivity strategy of the city (31). Besides, more related to the urban renovation policy, the confrontation of different social classes in one district show an increase of violence, with vandalism acts, such as the one reported by a previous development worker of Malakoff district (nearby the ZACs Euronantes) (17). The context of the story is the following.

Urban renewal strategies were adopted for the Malakoff district, one of the QPVs under urban renovation in Nantes (NM, 2018), to improve its connection to the city center, increase its social mixity and its social cohesion. Next to Malakoff district and nearby the train station, a new ZAC was created, the ZAC Euronantes, which includes, besides a share of social and affordable housing, lots of offices and high standards housing (17). In Malakoff, a projet of new centrality was realised, in order to gather different services in one place, among others a social center, in which several associations were supposed to work together (17). Once the social center freshly renovated, the library of the center was set on fire by people from the Malakoff district, resulting in the dispersion of social services, as it was the case initially (17). Some inhabitants of the ZAC Euronantes also feel an insecurity in the neighborhood (17), reflecting thereby the difficulty to bring together two distinct social classes in the same living space.

In brief, today, Nantes Metropolis is facing various challenges such as the tight housing market and the resulting increase of land and housing prices as well and the consequences of its real estate market system which induces a poor quality of new housing, including affordable housing, as well as an increased exclusion of the middle class out of the city and resulting urban sprawl. Public authorities realise the negative social, economic and environmental impacts of these consequences, and are aware of the urgent need to rebalance the market in order to keep the desired mix of population in the city. They therefore develop responses which will be presented in the next chapter.

### 4. Political response

An obvious response to a tight housing market is to increase the production of real estate goods. However, as explained before, it is not an easy task in a limited territory, characterised by increasing land and housing prices due to competition and attractivity, and with limited budget and time. The supply is not sufficient to meet the demand (7). But Nantes Metropolis is proposing another political answer to mitigate the risk of social polarisation in the city, which is the diversification of tools to offer housing at several prices, and through different arrangements (4, 10).

This thesis focuses mainly on the analysis of the most common affordable housing tools, which are the PLS and PSLA. Two other tools were already mentioned as well, the ANRU and AANM accession devices. But a bunch of other instruments exist in France and in Nantes particularly both for social and affordable rental and accession. As seen in table 5 and 6, Nantes metropolis proposes a variety of tools at different ceiling prices according to different resource ceilings, in order to ensure a "*continuum of offers*" between all the housing types and prices and avoid having a "*hole in the racket*" between the affordable and free-market housing (11, 12).

*Table 5*: Overview on the different housing types in Nantes metropolis and their respective assisted grants for homeownership. Own elaboration.
*for a childless couple.

| | | Name of the device | Mechanism | Advantages and requirements | Ceiling price | Resource ceiling / year* |
|---|---|---|---|---|---|---|
| **Homeownership** | social | PAS | social accession help | can be added to other loans | 1700€/m2 (a) | 42 000 € (b) |
| | | HLM sales | social accession | - | - | - |
| | affordable | PTZ | social accession help | interest-free loan; only for first-time buyers | - | 42 000 € (c) |
| | | PSLA | social location-accession | tax exemption for 15 years | 2500€/m2 (d) | 32 990 € (d) |
| | | | | interest-free loan if first time buyer | | |
| | | | | relocation in case of life accident | | |
| | | | | only for primary residence | | |
| | | BRS | dismemberment of property | land charge reduced of 30%; only for primary residence | 2500€/m2 (d) | 32 990 € (d) |
| | | ANRU | within ANRU zone (300m) | VAT 5,5%: economy of 14,5% on the sale price | 2500€/m2 (d) | 40 216 € (d) |
| | | AANM | affordable accession | affordable price | 2500€/m2 (d) | 35 802 € (d) |
| | inter-mediate | - | intermediate accession | - | 2600€-2900€/m2 (e) | 36 231 € (e) |
| | free market | under control | initiative of private developers | - | 3600€/m2 (f) | no ceilings |
| | | free | | | 5000€/m2 and > (g) | no ceilings |

*References of table 5:*

(a): Propriétaire maintenant (2020a)     (d): CIF (2020a)     (g): interviews 1, 3, 7, 11, 12

(b): interview 10     (e): NM (2019b)

(c): Propriétaire maintenant (2020b)     (f): interview 3

*Table 6*: Overview on the different housing types in Nantes metropolis and their respective assisted grants for rental housing. Own elaboration.
*for a childless couple.

| | | **Name of the device** | **Mechanism** | **Advantages and requirements** | **Ceiling price** | **Resource ceiling/ year*** |
|---|---|---|---|---|---|---|
| **Rental** | social | PLAI | social rental | - | 5,50€/m2 (a) | 21 527 €(b) |
| | | PLUS | social rental | - | 6€/m2 (a) | 35 877 €(b) |
| | affordable | PLS | affordable rental via ULS | dismemberment: investor buys, but 15 years lease during which the housing become affordable housing managed by a social landlord | 9,80 €/m2 (c) | 36 231 € (d) |
| | | | affordable rental via Pinel | investor buys but engage to rent with affordable rent for 6, 9 or 12 years, tax exemption in compensation | 10,44€/m2 (e) | 41 868 € (f) |
| | inter-mediate | PLI | intermediate rental | - | 10,44€/m2 (g) | 40 241 € (g) |
| | free market | | | | 12€/m2 (a) | no ceilings |

*References of table 6:*
(a): interview 6
(b): Dossier familial (2020)
(c): NM (2019b)
(d): Demande de logement 44 (2020)

(e): Selexium media (2020)
(f): CIF (2020c)
(g): DGALN (2019)

Two of these tools have been launched recently to remedy to the shortcomings of the housing system as it is now: the BRS -real solidarity lease-, and the intermediate housing (11).

The BRS, even though existing for some time already in France (4), is a very recent tool in Nantes as the third dossier has just been delivered (2). It will be used mainly on the ZAC île-de-Nantes (6). The BRS is a dismemberment mechanism (dissociation of land and building) that allows for a long-term land lease on housing. It is operationaly and financially supported by the OFS (solidary land office), which is a partnership between Nantes Metropolis, the Carene (territory of Saint-Nazaire), the department of Loire-Atlantique and 9 public operators (including cooperatives and social landlords), to which the land belongs (2, 12). The candidate buys the property but not the land (1). The purchaser has to pay a rent for the use of the land to the OFS, of about 10€/month (6). This arrangement enables to decrease significantly the total cost of the property (4, 6). The price will be between 2300 € and 2400€/m2 depending on the political decisions (7). This low price will allow the purchasers to be more "*creditworthy for banks, and more easily eligible for a loan*" (12). The duration of the lease is 99 years theoretically, but in reality they are endless lease (Guelton and Le Rouzic, 2018).

The BRS was regularly mentioned as a good alternative to the PSLA (2, 3). The reason for that is that it enables the housing to remain affordable in the long-term, compared to the PSLA and its anti-speculative clause that only last 7 years (2, 11). Indeed, when the owner wants to resell his property in the BRS system, he must inform the OFS which will impose a selling price that can evolve depending on the housing market, and the economic state of the OFS (12). So even if the sale prices and resource ceilings are very similar, the BRS will provide more durability of public subsidies in time (2, 11, 12). It is therefore considered as more effective than the affordable housing as it is now (3, 11). For a private developer, the BRS finally enables social landlords to do their "*real job*", which is "*to provide housing and manage it for a population that needs help*", without being the investor of the stone (1). According to an official elected, the use of the BRS will enable cities and metropolises, similarly to social housing parks, to build an affordable housing park (11).

However, there is also reluctance related to the adaption to this new legal instrument but also related to economic balances (5, 6, 7). The price of the housing is under discussion and will probably become 2500€/m2 because social landlords argue that again the equalization must be done (6, 7). Indeed, even if the land price is lower, the construction costs are still high, that means that, if the BRS is capped at 2300€/m2, the cost price of the housing excluding taxes will be around 2100€/m2, whereas social landlords are building for 1800-1900€/m2 (7). Moreover, the land does not cost anything for social landlords since they must pay a contribution to the collectivity when they buy the land (6). For sure this contribution is lower than the land price in PSLA but as land value continues to rise, it must be considered in the economic balance of operations (6). As a result, doing a margin on the BRS is considered as very complicated (6). The BRS also changes the relationship to homeownership since it is "*responding to a decline in income linked to the life cycle, but responds less to the desire for transmision*", which was a historic driving force of homeownership until today (11).

Related to the strata of tools, the municipality is thinking about increasing a bit the price of the PSLA to 2800€/m2 instead of 2500€/m2 once the BRS will be well established, but this has not been decided yet (7).

The next new layer is intermediate housing. Not included in the previous PLH, it is a new national tool, created in 2014, in order to respond to the needs of the middle class (NM, 2018). Intermediate housing includes intermediate rental and intermediate accession (7, 12). Intermediate rental is provided through the PLI (intermediate rental loan), which has the same rent price than the Pinel device, around 10,40€/m2, but slightly higher resource ceilings than the PLS (DGALN, 2019). According to the new PLH 2019-2025, the intermediate accession will follow the same resource ceilings as the PLS (which are higher than the ones of the PSLA) but for housing prices between 2600€ and 2900€/m2, thus higher than the housing prices in PSLA (NM, 2019b). This price seems to differ quite significantly from the price of intermediate housing mentioned by interviewees, illustrating thereby the lack of knowledge due to the newness of the tool. A private developer, a social landlord and an official elected evoked a sale price from 3300 to 3500€/m2 (1, 7, 11). As it was observed that the housing stock in the metropolis does not meet all the needs of families with intermediate revenues (NM, 2018), the production of 250 intermediate housing in accession per year are planned in the PLH 2019-2025 (NM, 2018; NM, 2019b). But for now, "*very few are made*" (2). This intermediate housing (whatever its price) is again considered by a private developer as an additional type of housing that will make the prices of free-market housing rise even more due to equalization (1).

Next to intermediate housing in the new, it is important to note that renovations of housing can also give the opportunity to develop old renovated housing at intermediate prices (11), and social accession housing through HLM sales which can target households with similar resource ceilings as for the PLI, but it remains marginal (12). Besides, some private developers sometimes propose housing below market prices, at under control prices (around 3600€/m2), such as it was the case in the ZAC Euronantes (3). Even though the municipality encourages such initiatives, it does not prevent private developers to therefore increase the free-market housing prices at for instance 5200€/m2, considered "*a bit expensive for the neighborhood market*", explained a developer (3). Finally, there is also the PTZ (interest-free loan), which also enables to help the accession to homeownership for a long time already in Nantes (3), but which is criticized for its windfall effect for first-time buyers who can benefit from it whereas their financial resources are rapidly increasing (10). The beneficiaries of the PTZ thus do not correspond well to the target groups of this tool (10).

What has been at the center of a political debate is also the rent control, which has finally not been adopted in Nantes (1). It was considered as not necessary given the considered absence of speculation on rents (2). The second reason even more obvious in current times, is that adopting rent control in times of economic crisis in which interest rates are rising, and investors needed, would have "*seized the machine*" and tighten even more the housing market, instead of opening it up (1).

In brief, the main political response to the tight market and risk of polarisation of the city is under process of implementation in Nantes metropolis, corresponding to an increasing number of tools aiming at ensuring middle-income people to have access to housing. Similarly to the previous situation, the objectives for the future are very ambitious in the next PLH 2019-2025 as seen on the following graph (fig. 8).
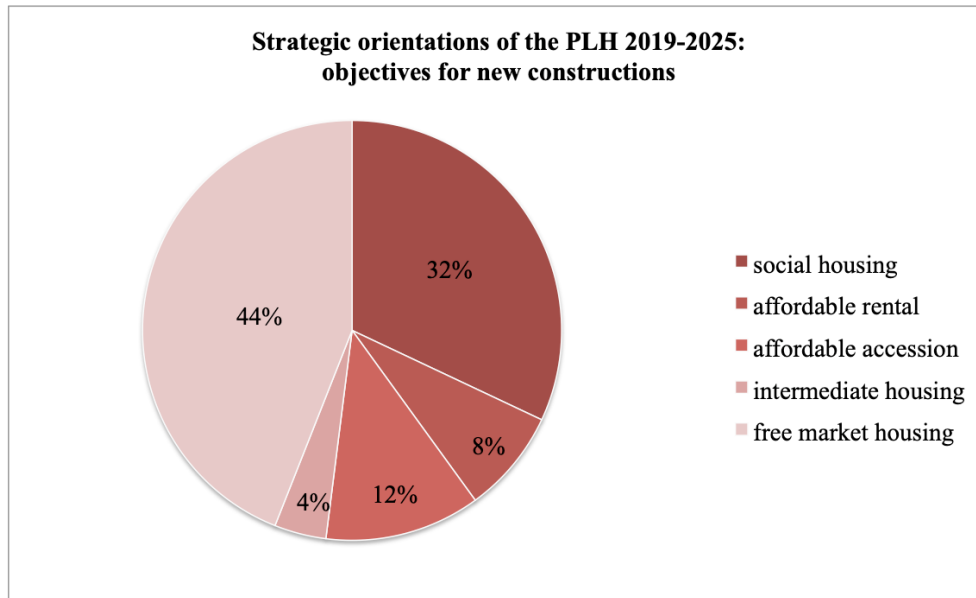


*Figure 8*: Strategic orientations of the PLH 2019-2025: objectives of the share of housing types in new constructions. Own elaboration. Source of the data: NM (2019a), p.215.

In the effectiveness evaluation of tools such as the ZACs, PLS and PSLA, the high amount of other tools reinforcing the affordable housing policy and the political will behind cannot be overlooked. To deepen the analysis, one could question the effectiveness of this accumulation of tools. But today, there is a consensus from Nantes Metropolis to say that these tools are the most effective response to the actual housing situation, as the following statements illustrate. One official elected reported: "*We are well aware that the stacking of devices is not necessarily a policy*" (12), but it seems that "*in the long term, it is the provision of land under public control that can influence the market price*", expressed another representative of the city (11). A last official elected reported that these tools are "*useful and effective moderators of the land market and real estate market mechanisms*" (10).

# Discussion

This chapter provides an analysis of the relationship between the results and the theoretical framework as well as a discussion on how the combination of land and housing policy instruments for middle-income residents guarantee their access to affordable housing in urban regeneration projects in Nantes.

Nantes is presented as being at "*the top of the list of accessible and relatively affordable green cities*" (Garcia-Lamarca et al., 2019). As a reaction, aware of the local political desire to obtain this title but also of the difficulties of other cities to effectively ensure housing affordability, this current thesis intends to question this quote by evaluating the affordable housing policy used in Nantes, through the assessment of land policy instruments (ZACs) and housing policy instruments (PLS, PSLA).

*Conformance*

- **Collective problem**

Since 2010, the affordable housing policy attempts to deal with the following collective problem: the exclusion of the low middle-income households "*forced*" to leave the agglomeration due to a growing gap between social housing and a more and more inaccessible free-market housing stock in the city (11).

- **Objectives**

The qualitative objective of the affordable housing policy was drawn up to: *enable to match the typology of housing to the ability of households to contribute, to allow more households to have access to housing, or in rental, or in ownership, in the city of Nantes, and to respond to the residential journey of the population as it is, while fighting against urban sprawl* (11, 12). To achieve this goal, a strong public land control was needed, materialised in Nantes by the simultaneous use of ZACs and housing assistance grants as the PLS (in rental) and PSLA (in accession).

In terms of intrinsic qualitative objectives, ZACs had the goals to: 1) increase the collaboration between public authorities and private developers, in order to increase public control over urban regeneration projects (Foras et al, 2015); 2) build functionally and socially mixed micro-districts (4, 10); and 3) prioritize the quality of housing and architecture (7, 10).

In order to achieve these qualitative purposes, Nantes Metropolis set ambitious quantitative objectives from 2010 to 2016: to provide 6000 new housing per year, of which 25% social housing (NM, 2010), 22 % affordable housing (9% in rental, 14% in accession) and the rest in free-market (NM, 2018). Within ZACs the objectives were slightly higher: 35% social housing, up to 25% affordable housing and 40% housing in free-market (10).

- **Conformance to the quantitative objectives**

*Metropolitan level*

The overall achievements of affordable housing built in the metropolis since 2010 remains rather below the quantitative objectives (1, 5, 12). Indeed, the total amount of housing effectively built in the metropolis increased (AURAN, 2016a), but the share of affordable housing delivered per year (15%) did not meet the objectives (22%), of which 7% in PLS (instead of 9%) and 8% of housing in accession (instead of 14%) (NM, 2018). In absolute numbers, the objectives of new housing in PLS have been achieved (565 units whereas the objective was 500 units) but the production of housing was moderate since 613 units were delivered while the objectives were 800 units per year (NM, 2018). Several reasons explained this moderate achievement. The low production of affordable rental is mainly explained by the competition of PLS tools with the Pinel device and the difficulty to market PLS housing even if the demand is high. Besides, although building affordable housing in accession within ZACs for private developers represents advantages (fast marketisation of operations, easy rules and lowered land charges), the production of this type of housing remains limited due to economic balance difficulties (equalization), and regulations (PSLA only reserved to social landlords and cooperatives). So, at the scale of the metropolis, the housing policy instruments have a limited effectivenesss in terms of conformance.

*Local level*

At the scale of the urban projects, ZACs are considered generally effective to meet their quantitative objectives (compared to operations in diffuse land), due to the control of land charges and housing prices, even if the results are mixed. Indeed, they showed that in the ZAC Bottière-Chênaie, the achievements in terms of affordable housing (22,30%) are not meeting the objectives (45%) (8), and that in the ZAC Euronantes, the share of affordable housing delivered (20%) exceed the objectives (15%) (10).

- **Impacts**

In terms of impacts, the affordable housing policy managed to achieve its intervention hypothesis which was to change the behaviour of the target group, mainly private developers, as expected by the goals of the ZACs. In ZACs, public and private developers collaborate more and mutually control eachother through a strict and regulated implementation process, in order to provide limited housing sale prices (10). ZACs seem thus at first glance appropriate tools to reach the targets, even if their appropriateness will be further discussed.

- **Effects**

In terms of effects of the policy, private developers and middle-class households have been identified as being respectively the target group and end beneficiaries of the policy. Whereas private developers indeed have a role to play in the implementation of the land and housing

instruments, the definition of the end beneficiaries seem to have changed over time. At first, the affordable housing policy was set up to target middle-income residents from the 3d to the 5d decile as they were identified as the group who suffer the most of the collective problem (8, 11, NM, 2010, Adéquation, 2014). In reality, the beneficiaries of housing in PSLA appear to be mainly young households, first-time buyers, who, over time, will see their resources increase (3, 11). Moreover, it has not been proven yet that the end beneficiaries are actually the ones who were living in the outskirts of the city before the adoption of the policy. It has even been confirmed though that no distinction is done between native of Nantes and residents recently settled in Nantes (11). There might thus be a wrong identification of end beneficiaries in the definition of the PSLA instrument.

In brief, the land and housing policy instruments have a moderate effectiveness in terms of quantitative outputs (compared to the objectives). Some elements of the implementation process might help to understand why this is the case.

- **Actors**

The main actors involved in the implementation of the ZACs and affordable housing tools are : public authorities (Nantes Métropole), planners (Nantes Métropole Aménagement in the case of the ZACs studied in this thesis), social landlords (incl. Nantes Métropole Habitat), cooperatives, private developers neighborhood teams, residents and investors. These actors, through their interactions can affect the conformance of the tools to their objectives.

- **Interactions and resources**

Three main interactions, all involving private developers, have been identified as being determinant for the effectiveness of ZACs to produce a sufficient amount of affordable housing. They will be hereafter described alongside with the resources used by the different actors.

The first interaction is occuring between private developers and public authorities/planners. During this dialogue, even if strong regulations on the programme must be applied by public actors, a modification of the amount and typology of affordable housing to be built might be requested by developers and landlords, due to the evolution of the housing market, or for a matter of economic balance of the ZAC (7, 10). During this interaction, public actors mobilize: *legal resources*, through urban plans, which are the main resource they have at their disposal (Knoepfel et al, 2007); *political resources*, since the programme is the result of a political compromise depending on the official parties in power at that specific time; *property resources*, as the public authorities acquire lands that become public to carry out ZACs; *organisational resources*, as the process is very well organised through a collaboration between actors under clear administrative rules (7); and *financial resources*, through financial incentives such as subsidies on land charges in order to change the behaviour of developers. On the other side, private developers mobilize *human* and *financial resources* to modify the

programme as they make use of financial arguments during negociations with public authorities to communicate on their difficulties to meet economic balances.

The second interaction is occuring between private developers and social landlords during the planning phase of an operation in VEFA. This cooperation constrains social landlords, who do not have the right to intervene in the qualitative criterias of the dwellings, and become dependent on developers (6). But the cooperation of the two actors benefits developers who use affordable housing as a mean to achieve the pre-marketing criterias of the banks (11). Private developers here mobilize *human resources* since they have more power to decide thanks to their *property resources* acquired through the economies of scale they make on large operations whereas social landlords struggle to manage independent operations in ZACs (6).

The third interaction is occuring between banks/shareholders and private developers, between which financial pressures are common. Here, the *financial resources* are used by banks and shareholders to impose pre-marketing criterias, regular turnovers and minimum level of margins on private developers (2, 7).

It can be noted that one essential resource is maybe lacking in the affordable housing policy, it is the *informational resource* that could be used by public authorities to advertise even more affordable housing, since today families do not even look for dwellings in the city since they assume none of them will correspond to their budget (15). It is assumed here that this lack of informational resource induces a lack of reflex from households.

In diffuse land projects, three main resources are identified. During recourses, negatively impacted residents hold back projects for some years, thereby using *temporal resources*, and may even ask for financial compensation, thereby mobilising *financial resources* (11). Even if until now recourses were mainly occuring in diffuse land projects, some ZACs also face recourses today (3, 6). The third resource used in diffuse land is the *legal resource* by private developers who tend to bend the rules of obligations concerning the share of affordable housing to be built by using regulations on affordable housing quotas linked to the size of operations, as a basis to bypass these rules (2, 11).

- **Conformance to the qualitative objectives**

Besides the moderate conformance to quantitative objectives, the ability of the affordable housing policy to meet its qualitative objectives is also discussed.

Firstly, the implementation of affordable housing in ZACs enables to match the typology of housing to the ability of households to contribute but that implies that mainly small dwellings are provided. It is usually argued that affordable housing are small because of the economic balance of operations, the lack of success to attract middle-class families in larger collective housing and the average recent decrease of the amount of members in a household.

Secondly, the policy allows more households to have access to housing in the city in terms of numbers, but rather not in terms of socio-economic profiles (as earlier mentioned with the wrong definition of end beneficiaries) and usually for a limited time since the affordable rental stock stays affordable for 15 years and affordable accession for 7 years.

Thirdly, the affordable housing policy responds well to the residential journey of the population thanks to relocation schemes and incentives to access homeownerships.

Finally, the last goal is however not achieved since urban sprawl is determined by more large-scale components. It is observed that urban sprawl is even increasing (Madoré and Garat, 2020), mainly because the demographic growth rates in the city and surrounding are escalating (NM, 2018), and because social landlords are encouraged to build outside the city, as part of the social mixity strategy (6, 7). One could thus question whether the affordable housing policy was used to reduce urban sprawl or to increase the attractivity of the city, which are incompatible goals at the scale of the metropolis (6).

- **Incompatible goals and lack of performance**

Incompatible goals, on top of the wrong identification of end beneficiaries, is causing an endemic failure of the affordable housing policy in Nantes. Indeed, the contribution of the land and housing policy tools to solve the collective problem at hand can be questionned.

Firstly, even though ZACs, PLS and PSLA, are considered rather effective tools to meet the quantitative goals of Nantes Metropolis, it is considered that the achievements are not sufficient to meet the actual demand for affordable housing (12; AURAN, 2016a). Indeed, the tools act only on new housing and public actors do not have much capacity to control affordability of old housing, of which the prices start escalating (7).

Secondly, the land and housing policy instruments tend to constrain private developers, who develop different strategies to fulfill their interest, such as by increasing free market housing prices within ZACs or by bending the rules on the affordable housing share in diffuse land. One private developper even mentioned that ZACs contribute to the tight housing market since they limit the prices and the production, instead of regulating the market (1).

At the end, ZACs and their affordable housing production, even though aimed at increasing access to housing for low middle-class households contribute in a way to the scarcity of housing and to the growing gap between housing prices. But it is important to put this argument into perspective since the affordable housing production remains quite marginal compared to other types of housing.

In sum, even though moderately passing the test of conformance, the policy instruments under study tend to fail the test of performance. But the affordable housing policy is not the only causal factor of this lack of performance; other situational variables intervene into the equation; they can notably be found in the political context presented in the next section.

*Performance*

The collection of data and their analysis showed that the political context had an important influence on the effectiveness of the tools to solve the societal problem. Whereas in the methodology, it was expected (as seen in the sub-research questions) that the political context would just be a part of the implementation process, it appeared in the interviews as being more significant to explain the endemic failure of the affordable housing policy. This is the reason why the political context is presented as a distinct chapter.

To understand why the political context today negatively affects the performance of the affordable housing policy, it is useful to look back at the evolutionary role of the State, similarly to the theory of the State developed by scholars from the first school of thought of policy analysis.

- **Theory of the State**

In the postwar period in france from 1945 to 1975, a strong intervention of the State was needed to provide sufficient housing to all french people through social housing and assisted housing (Pollard, 2009). Assisted housing corresponded at that time to an intermediate type of housing adressed to a specific clientele with a sufficient amount of resources (above social housing criterias) but not able to ensure profitability on the good (such as in free-market housing) (Pollard, 2009), similarly to the notion of affordable housing today. However, the main difference is that in this postwar period, financial support for *housing* was mainly transfered to housing constructors and oriented towards the *supply* of housing, whereas in 1977, the housing reform substituted this scheme with financial support to *people* which was more oriented towards the *demand* of housing by transfering funding to purchasers or future tenants of assisted housing, depending on their income. This shift is presented in the literature as the liberal shift (Lefebvre et al, 1991) from mass production to meet the needs of the population towards a limited regulation of the market (Fribourg, 1998), which has redefined the role of the State as having a decreasing non-market share whereas the market developed a growing share of housing supply (Pollard, 2009).

This evolution led up to the actual situation in which, at the national level, policy instruments correspond to the evolution of public policies and politics[25], whereas at the local level, policy instruments are taken over by market players and of which the effects are trying to be controlled by public actors (Pollard, 2009). It is by 1980 that a real economic approach to homeownership is developed, used by public actors to support the production of new housing (Pollard, 2009). Four years later, at the national level, the first tax incentives to rental investments are created before becoming essential instruments in housing policies from 1996 onwards (Pollard, 2009). Today this type of incentives are materialised by the use of the Pinel device (as explained earlier). At the local level, these tax incentives are usually used by

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[25] Whereas right-wing parties in France rather encourage abondant supply of housing, left-wing parties focus more of providing housing at controlled rental or sale prices (Pollard, 2009).

developers to turn the devices to their advantages (Pollard, 2009). The room of manoeuvre for public control of the perverse effects of this use on the production of housing remains usually limited and materialised by public regulations (Pollard, 2009), that can again be themselves bent by market actors or negociated as it is the case in ZACs.

Moreover, the decentralisation of power since 1980 in France impacted the role of local public authorities whose autonomy increased in terms of urban planning decisions and the use of regulatory documents (Carpenter et al, 2015). That led up to a more common use of public ZACs (Carpenter et al, 2015), created in 1967, but especially used since the SRU law of 2000, of which the reform required ZACs to follow the PLU(m) (Subra, 2016), and not their PAZ anymore (AUDIAR, 2001).

- **Institutional rules**

This evolution of the political and housing market contexts in France has shaped the actual institutional rules (here understood as state structures as mentioned in Knoepfel et al, 2007, p.94) of the actual urban planning context. France is characterised by a private property regime based on established property rights. The french consitution follows the human rights declaration of 1789 and clearly states that property is "*an inviolable and sacred right of which nobody can be exluded, unless it is imposed due to public necessity and under conditions of a just and prior compensation*" (Conseil constitutionel, 2015).

- **Three other policies**

Next to this strong insitutional regimes, established for a long time already, recent policies (other than the affordable housing policy) have been adopted in France since the 2000s, which might also affect the performance of the land and housing instruments analysed.

The proactive *social housing policy* of Nantes prioritises the construction of an important social housing stock (2), of which the affordable housing objectives are excluded (11), and which is being scattered among the metropolis through the *urban renovation policy* (7, 21).

The latter follows a national tendency to support social mixity in cities in contrast with social segregation, which was previously observed in urban areas (7). This social mixity strategy is at the center of ZACs objectives since ZACs are meant to create socially mixed districts (4, 10), by avoiding the visual distinction between the different types of housing (11). This social mixity is however discussed since the affordable tools such as the PSLA are rather short-term answers and that mixity (incl. middle-class) is actually only temporary observed (5, 10). In the literature, this tendency is also mentioned; it is reported that social mixity is only temporal and that in the long run, gentrification reinforces socio-spatial segregation (Musterd et al, 2017; Lees, 2008).

Gentrification is a direct consequence of the *attractivity policies* developed in Nantes (4, 10, 12), which is based on : economic development (11), through the implementation of new

businesses in the city (5, 12), offering a diversity of jobs and ensure high employment rates; green space strategies in order to ensure quality of life and social cohesion (28); and the development of the cultural and eductional sector, and a well-connected mobility network (1, 11, 12; 22, 34).

- **Challenges**

These three policies induce several challenges and consequences, which jeopardize the effectiveness of the affordable housing policy, and might explain the endemic failure of this policy. The housing market in Nantes is today characterised by a temporary lack of anticipation and development of the metropolis (3, 5), an increase of construction costs (3, 5, 9, 12) and land values (1, 4, 6,7), a high demand for housing (3, 12), and a strong competition between developers (1, 2, 3, 12, 16), that all together result in escalating housing prices and a very tight housing market.

- **Consequences**

The first consequence of this tight market is the poor quality of new housing experienced by residents living in affordable dwellings, whereas ZACs were meant to ensure this quality (7, 10). These operations were delivered too quickly, according to residents, and are a result of economic and financial games rather than a public response to basic needs (16).

The second consequence is gentrification. The use of attractivity policies, through metropolisation, the development of international ambitions, and the resulting gentrification processes, are not only observed in Nantes but also in other developing cities of the global north (Atkinson and Bridge, 2004; Hochstenbach, 2017). Even if the local implementation game might vary from one city to another depending on the political parties in power (at the local and national levels), the economic and financial system remain similar in these neo-liberal cities, and the main actors of the game remain the same: public authorities and private developers. In the case of Nantes, public authorities have a strong political desire to control the situation through public actions such as ZACs and their combination with private-law instruments such as PLS and PSLA, however they tend to be less powerful than private developers who possess property titles and usually significant financial resources (Gerber et al, 2018), as observed in the implementation process.

Beyond the gentrification processes, and the poor quality of housing delivered, the main consequence of a tight housing market, is social polarisation in the city, directly linked to the increasing social housing stock[26]; the increasing housing prices in the free-market, which represents the majority of newly built housing in Nantes; and the short-term and marginal responses in terms of affordable housing.

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[26] Even if the social housing stock is growing, it has to be noted however that the demand for social housing in the city (70%) is still higher than the supply (30%) (6), which highlights the fact that not only middle-income but also low-income population are excluded from the city as the scholars on gentrification regularly describe (Anguelovski, 2016; Dooling, 2009).

- **Dealing with scarcity of land**

In Nantes, public authorities and planners are well aware that the limited land availability in this tight housing market induces land value rise and speculation (10), and that their role is actually to manage this scarcity of land in order "*to allocate use rights to spatial resources in order to minimize conflicts*" (Gerber et al, 2018b, p.13).

However, they have limited resources and means to control scarcity (Gerber et al, 2018b, p.11), which are usually legal resources: regulatory documents such as the PLH, zoning instruments such as ZACs and assisted housing schemes. Beyond the scope of ZACs, in the majority of the metropolitan territory, public authorities are lacking tools to regulate the market. The only means available are pre-emption rights, expropriation rights and regulatory documents (12), of which none of them sufficiently effective because rarely used or usually bent. Moreover, private developers are well equipped to resist to these constraining public strategies (Gerber et al, 2018. p.8), thanks to their property rights, which are more resistant to change than public policies (van der Molen, 2015). Private developers even use these regulations as an explanation for the increase housing prices in the free-market housing (1, 2, 3), whereas it actually enables them to do similar and even higher margins than before (7).

As a result, the system seems to reach its limits and to become out of control, even for public actors. Indeed, whereas land charges were controlled in the ZACs Bottière-Chênaie and Euronantes, it has been mentioned that for future ZACs, planners enter the game of the highest bidder, and land values are thereby increasing even within ZACs (3).

Up until today, the restricting rules on urban developments imposed by planners on private developers were beneficial for the attractivity policy of the city since the resulted population growth rate now exceeds the expectations. But today, these policy instruments are rather increasing scarcity of land: a potential outcome of policy instruments as mentioned by Hartmann and Gerber (2018, p.4). As a result, whereas the instruments were meant to increase access to homeownership and rental housing in the city, they actually contribute to the tight market and thus to the exclusion of the middle-income households.

- **Social polarisation**

Such as for gentrification, social polarisation is not only observed in Nantes, but also in many global cities (Sassen, 2006), and has several consequences, stated hereafter.

A direct effect of metropolisation and the exclusion of middle-income households out of the city, as also observed in Nantes, is urban sprawl and periurbanisation (Madoré and Garat, 2020; Hilal et al, 2018). As mentioned in the introduction, urban sprawl is not considered sustainable since it leads to a higher land consumption and higher transportation needs (Arellano and Roca, 2010 ; Bart, 2010).

Within cities, the cohabitation of polarised social groups in the long term can lead to social movements. Indeed, in the long run, it is observed that social mixity is resulting in the fact that low-income people suffer more from losing the benefits they had in their previous neighborhood than what they gain in the new mixed district (Lees, 2008; Cheshire, 2007). The expression of this suffering is already observed in the Malakoff district with acts of vandalism (17). It is also reported that since the end of the campaign against the construction of an airport in Notre-Dame-des-Landes, a growing activism movement against economic boosterism and public-private partnership is moving into the city itself (Howarth and Griggs, 2020).

Moreover, the social polarisation characterised by a massive influx of high-income residents in green cities such as Nantes tend to contradict with the goals of the ecological city which are to, a priori, reduce carbon footprints of residents. At the end, since high-income residents have higher energy consumptions, it is the reverse that is observed (Rice et al., 2019).

Besides, this social exclusion from cities can be considered problematic in the sense that housing is a human right to which everyone should have access to (Herzfeld, 2010). This statement resonates even more during this period of covid-19 pandemic, during which the relationship with housing has been reconsidered (11).

Finally, the last drawback of social polarisation is an ironic return to social segregation (Lees, 2008), as social groups even though mixed in new urban projects, tend in the long run to segregate naturally (Atkinson and Blandy, 2006). Indeed, social interactions are actually rarely observed in socially-mixed neighborhood (Atkinson and Kintrea, 2000; Cole and Goodchild, 2001).

This final argument leads to reconsider the negative effects of social segregation. Social mixity strategies have been adopted because social segregation was considered as having negative effects on socially disadvantaged people, an issue usually referred to as the *neighborhood effect* (Randolph and Wood, 2003). However, Cheshire (2007) argues that segregation is not the main cause of neighborhood effects and Buitelaar et al. (2018) add that the concentration of people with similar social situation also engender benefits for these population, such as a strong social network leading to more social cohesion. There is thus a debate in the literature concerning the real impacts of place-based solutions to deal with a fundamental social problem. This will be further discussed in the alternative responses.

- **Social polarisation or professionalisation?**

Besides, the thesis of social polarisation has been questioned by Hamnett (1994) who argues that it is rather a professionalisation of the city that is observed through the switch from an industrial to service-based city, of which the results is not polarisation but rather an improved education system and thereby an increasing middle-class and decreasing low-class (Buitelaar et al., 2018, p.28). Even if this argument is aknowledged for certain places, in this study, it is rather the thesis of Piketty (2015), more adapted to the french context, which will be

followed. Piketty (2015) argues that the education system in France has a tendency to exclude the lower classes. It is thus considered that in Nantes, even if the higher education system has improved, it is rather an external high-income population who benefit from it. Indeed, universities in Nantes mostly attracts students from other cities and also more and more foreign students (Boucherie, 2018). As illustrated by the concept of internationalization, this education system thus rather attracts international students rather than the local population (Altbach and Knight, 2011). So, in Nantes, it is questionned whether this professionalisation, if present, is really enhancing the social status of low-income residents. Moreover, it is argued here that professionalisation and social polarisation are not mutually exclusive and that both dynamics could actually be simultaneously observed in a city. As the main subject of this study is urban planning (and not employment dynamics as such), it is social polarisation that will rather be discussed in the following sections.

*Responses*

- **Actual responses to the risk of social polarisation**

In brief, aware of the scarcity of land in the metropolis, the tight market and the (un)desirable effects of social polarisation discussed above, induced by a growing gap between social housing and free-market price housing, public authorities recently started developing some responses, such as by introductin the BRS (Bail Réel Solidaire), a long-term land lease, and the intermediate housing, in order to provide a more continuous offer of housing at different prices, in the longer term. These two tools, as well as the continuum of offers, will be hereunder discussed.

First, the BRS, managed by the OFS (a non-profit organisation), is implemented to sustain public grants over time through a controlled resale formula, and to consitute an affordable housing park (11). This new generation of long-term land leases is inspired by the Community Land Trust system of the US also experimented in the UK and Belgium (Guelton and Le Rouzic, 2018). This system enables to better deal with the drawbacks of common long-term land leases used in the past, which are : the diversion of the tools at the advantage of the developers, a contradiction between the will from public actors to generate revenues on their properties while facilitating affordability, and the absence of guarantee for the owner to benefit from the arrangement (Guelton and Le Rouzic, 2018). When managed by public actors such as the OFS, the BRS can be an effective tool to fight against scarcity of land because it allows for a long-term control of the property value which is decorrelated from the land (Guelton and Le Rouzic, 2018). More recently, a law proposal[27] has been adopted to extend the BRS system not only to affordable accession but also to the rest of the market, in situations of tight housing markets and in operations where the goods are sold by a public organism (Zagdoun, 2020).

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[27] Proposition de Loi adoptée par l'assemblée nationale visant à réduire le coût du foncier et à augmenter l'offre de logements accessibles aux Français. Session ordinaire de 2019-2020. N°163. Novembre 2019. Assemblée nationale (15e législature): 2336, 2434 et T.A. 357.

In Belgium, the recent experimented CLT system relies on a bottom-up approach and involvement of inhabitants, and is very much dependent on public subsidies, illustrating that CLTs are neither completely public, nor completely private (Aernouts and Ryckewaert, 2018). However, the dependence on public subsidies raises questions of feasibility to scale up the system and effectively respond to the growing unaffordability of cities (Aernouts and Ryckewaert, 2018). In France, and in Nantes specifically, this bottom-up approach is not adopted, but public authorities associate with social landlords and cooperatives to manage the BRS system. This could avoid this costly resources (in time and money) that bottom-up approaches require. However, in France, such as in Belgium, one could question the real possibility for the CLT system to scale up in order to respond to the overall collective problem, since public authorities need significant financial resources to acquire land in the actual market. Moreover, the fact that the resource ceilings and ceiling prices of the goods will remain the same as the ones of the PSLA (CIF, 2020a) show that this tool is not aimed at filling the gap of housing prices.

Second, concerning the intermediate housing, whereas the goal is to propose a tool for middle-income housing (beyond the resource levels of the actual affordable housing households targets), it is observed that the targets are at the end very similar to the ones of the affordable housing. The households eligible for intermediate housing accession are the same residents profiles than the PLS (36 231€/year) but for slightly higher ceiling prices of housing (up to 2900€/m2) (NM, 2019b). For rental (in PLI), eligible residents need to have resource ceilings between the PLS and Pinel (40 241€/year) for the same ceiling price of rent than the Pinel device (10, 44€/m2) (DGALN, 2019).

Finally, one could question the effectiveness of the accumulation of tools for the provision of housing below market prices. Whereas tools on affordable housing are already used today by private developers as a strategy to increase the price of free-market housing, it is very likely that adding more tools such as the intermediate housing will have perverse effects on the housing market, and thus reinforce the mentioned consequences of exclusion of the middle-income residents. Making land reserves via BRS, seems a priori a good practice, but it also has its challenges, which will need to be dealt with in the future.

- **Alternative responses**

As it is acknowledged that not only one solution is available for public authorities to solve the problem at hand, multiple alternative responses are hereafter discussed, inspired by the case of Nantes and the literature.

o **People-based policies**

The first proposal is to add people-based strategies to the actual policies. Indeed, scholars argue that by using place-based policies in urban regeneration projects, municipalities lack to address social deprivation and criminality through people-based responses, such as by education policies or labour market policies (Cheshire, 2009). Social issues and conflicts tend

to be relocated with displacement, instead of being resolved, and are even amplified in socially-mixed neighborhoods (Cheshire, 2009; Rose, 2004; Cole and Goodchild, 2001). The lack of people-based policies might be explained by the fact that power tends to be place-based (Manville, 2012) and that the state is organised in a territorial way (Buitelaar et al, 2016). Improving housing seems thus more achievable than helping people (Manville, 2012).

The goal of adopting people-based policies would be to increase people's *capabilities* (Buitelaar et al, 2016). The capability approach goes beyond the debate on redistribution of wealth, which is considered not sufficient to manage fundamental inequalities according to Buitelaar et al (2018, p.105). It also differentiates itself from the resource-based approach which takes for granted that social conditions of households are mainly determined by their income levels (Rawls, 1993). The capability approach focusses more on *equity,* which refers to "*an appropriate distribution*" of goods taking the different needs of people into account (Buitelaar et al, 2016), and is aimed at eradicating *absolute poverty*, which designates individuals' positions with regard to a socially *accepted* poverty treshold (minimum level of income, wage or wealth); compared to *relative poverty,* which implies a comparison between individuals position themselves (Buitelaar et al, 2016). From a *material* perspective, it can be argued that a rise in urban inequalities (in terms of access to primary goods, such as green areas of decent housing) might not be problematic if the least well-off improve their position (Rawls, 1971). However, not everyone is able to do the same with the same good (Sen, 2009). Therefore, it is important to also take *absolute capability poverty* into account (Buitelaar et al, 2016).

o **Limitation on free-market housing prices**

As a result from a personal reflection on the housing market in Nantes, the possibility to limit the amount of free market housing prices has been discussed with interviewees. However, it appeared to be a very sensitive issue. The first argument is that it would require to reconsider the right to property stated in the human rights declaration of 1789 and frustrate the will of the owners to generate values (10). The second argument is that if margins of private developers are constrained on all housing, most of them will leave Nantes as they know that in other cities, the market would be more profitable (7). As a result of such situations, the increase of supply of housing would thus not be possible (7), and the ecological transition at the level of the city neither, since it is considered as requiring significant financial means (12). This second argument illustrates the strong dependency between public authorities and private developers in the actual goal pursued by urban planning strategies which is economic growth (Buitelaar et al, 2016). Additional reflection on this last topic and on the fundamental obstacles to which the affordable housing is confronted, were estimated relevant to close this discussion.

- **Additional reflection**

  o **Dichotomies in the housing system**

Based on the literature and interviews, it has been found that the real brake to the effectiveness of the affordable housing policy is the different speeds of dynamics, here referred to as dichotomies.

The first dichotomy is between prices and wages. A social landlord reported: "*Certainly, prices are going up but wages are not going up, at least not at this rate.*" (7). An observation that contradicts with-, or in any case, challenges the definition of affordable housing which is that, as mentioned in the introduction, a household shoud not dedicate more than 30% of their income for housing, including utilities (Baqutaya et al, 2016). This issue faced by households to manage a growing gap between their earnings and expenses for housing has also been mentioned by Guelton and Le Rouzic (2018, p.257).

The second dichotomy of speed describes the fact that public policies are more regularly modified, due to political games, than private property rights, which are much more resistant to change (van der Molen, 2015).

The third dichotomy is between public policies and rapid changing needs. The recent actuality, with the covid-19 pandemic, illustrates that the needs will rapidly evolve in a near future. In the interviews, it was highlighted that there will probably be a repel from urban centers (11), an increased refusal of densification (11), an increase in borrowing rates from banks due to the economic crisis (1, 3) and thus an enhanced difficulty to access housing (1). Moreover, housing will need to be more decent (11) to respond to a growing demand for larger dwellings and the inclusion of balconies for instance (3), but also an increased proximity to green spaces, as reflected in a recent study (Barton et al, 2020).

The last dichotomy identified is between public policies and housing prices**.** The hypothesis of Buitelaar et al. (2018) is that improving the social conditions of the disadvantaged population (through people-based policy) and simultaneously ensuring a provision of decent housing (place-based policy) is crucial (p.108) to be able to accommodate people from all social groups in the city, - although not everywhere in the city (p.93). But it is argued here that even if both policies were combined, public policies, characterized by slowness and instability over time, would not be sufficient to follow and deal with the rapid housing prices increase in the city.

- **Economic growth in urban planning**

The pursue for economic growth and sustainable transition in a limited territory challenges public decision-makers and planners to allocate lands for the majority of the people in cities as described by the resourcial turn in planning (Gerber et al 2018). The question of scarcity of land is essential in the understanding of the actual urban planning system, which is leading to the unavoidable exclusion of social groups, as any public policy by nature creates losers and winners (Gerber et al, 2018). It is important to note that scarcity is not just a fact, it is also an important strategic element on which public intervention is based (Gerber et al, 2018). Land

scarcity is politically and socially constructed (Drahos, 2004; Fuys and Dohrn, 2010; Hess and Ostrom, 2003).

The idea of limitless economic growth in a limited city is a fantasy constructed by capitalism (Kallis, 2019, p.127), as illustrated by the following quote: "*Capitalism can not operate under abundance*" (Kallis, 2019, p.66). In cities where the political aim is economic growth (such as in Nantes), ensuring that policy instruments become effective to really deal with scarcity of land would thus be counterproductive. So, it is rather ironic to believe that public authorities will solve the collective problem if it is not in their interest.

As a response, two options are advanced here, which can be interpreted as idealistic, but nonetheless essential for the future: 1) reconsidering our will for an endless economic growth in a limited world (two incompatible objectives); and 2) reconsidering our own limits, also in urban planning, and adopt a cultural principle of invidual and collective moderation as in the ancient Greece, also referred to as the principle of *self-limitation* by Kallis (2019, p.80). This last point could even be a basis for a reform of the sacred private property right convention, because limits and moderation, if only enforced by public organisations, tend to reinforce economic growth and their undesirable consequences. However, this situation could maybe be rebalanced if the idea of limits is also and foremost becoming a principle of the economic, financial and urban planning domains.

More practically, very close to the idea of enhancing capacities, and creating a new narrative, Thomas Piketty, which looks back in history to question the current economic model, proposes an interesting device to enhance equity in cities : the universal heritage (Faure et al, 2019). Similarly to the universal income, recently adopted in Spain (Euronews, 2020), the universal heritage would enable every citizen to receive up to 120.000€ from the age of 25 years (Faure et al, 2019). This would enable to deal with the imbalance between the increasing global weight of heritage in comparison with the stability of income (Faure et al, 2019). The amount of money provided would be collected though taxes on inheritance and annual taxes on property (Faure et al, 2019). He is not the first one to propose this kind of instrument, as Atkinson proposed a similar tool with rather less ambitious budgets (Faure et al, 2019). But the idea deserves to be analysed more deeply by policy makers.

In a nutshell, contrary to expectations, Nantes is not an exception to the rule of the increased housing unaffordability of economically growing cities. This current urban planning model, even though only at its early stages in Nantes, merits attention and reconsideration, especially if the goal of public actors and planners is to make cities for the greatest number. As seen in this section, plenty of options are available to creatively rethink the urban planning of tomorrow, of which the change is increasingly relevant, especially since the beginning of the actual covid-19 pandemic.

## Limitations

The main data collection method used in this thesis was narrative interviews. This method allowed finding out unexpected information about the topic at hand, such as the importance of the political context, which was regularly mentioned as a response to the very open-ended questions. However, this flexible method, such as other interview methods, has some limitations.

First, the beliefs and interests of the student might have interfered in the way questions were framed or prioritised. Indeed, the interview schedule was constantly adapted to the profiles of the interviewees and to the types of information already collected. It has to be noted that interviewees mainly had high positions in the organisations contacted. As this can be positive for the amount and quality of information gathered, their narratives might be influenced by external expectations, from their group, or from their societal role. Secondly, depending on the interviewees and their acceptance to openly share their stories, more or less data were collected. Thirdly, due to the situation of quarantine imposed during the data collection period, it has been decided that the interviews were going to be conducted by phone or via online videoconference platforms (such as Skype Business and Teams). This constrain appeared to be beneficial in terms of biases that could appear induced by the space in which the interview would normally take place in common research projects. This allowed interviewees to be more focused and less distracted. However, this constrain also had drawbacks, it has been impossible to reach residents of affordable housing since they refused to give their data (phone numbers and email adress) due to a general fear of testifying. Being on the ground would have been easier to meet them.

Besides, the interviewees were purposefully selected due to their participation to the implementation of affordable housing in the city, or due to their resident profile. However, due to time constrains, only one urban planner responded and sent his responses by email (due to his lack of availability), whereas planners'roles are essential in this topic. Also only one social landlord was analysed, through the views of four interviewees (from the same organisation) due to a lack of information provided by the two first ones. Whereas, here again, a diversity of social landlords' perspectives would have been more appropriate.

Furthermore, the secondary interviews used in this thesis, conducted by other researchers, also induced some biased views, both from the researchers standpoints and the interviewees' positions. However, as the student was not present during these interviews, it is difficult to describe those biases.

Finally, the main policy documents analysed, especially including the quantitative and qualitative objectives and achievements at the level of the metropolis were originated from official websites of Nantes Metropolis. They should thus include relatively reliable information. However, other document sources were derived from observatories, and even though also reliable at first glance, some errors were found, notably concerning the achievements. Moreover, at the scale of the ZACs themselves, the only sources available

concerning the number of affordable housing effectively delivered, consisted of an excell sheet provided by a planner, and a written email sent by an official elected. These figures thus have to be carefully interpreted.

It has to be noted that the information, results and analysis provided in this thesis were based on specific geographical areas, which are: the city of Nantes, its metropolis, the region Pays-de-la-Loire and France. This specific socio-economico-political context does not enable the results to be entirely extrapolated to other cities, even though with similar economico-political orientations. Every city is unique. However, lessons can be learned from the case of Nantes, which will be provided in the conclusion.

## Conclusion and recommendations

The scientific objective of this thesis was to fill in the gap in the literature on the position of middle-income residents in economically growing cities and on the political aspects of land use policies, through the assessment of policy instruments. In practice, the research objective was to evaluate the effectiveness of land and housing policy instruments for the provision of affordable housing to middle-income residents and to explore how the implementation of these instruments can influence their effectiveness.

The study has shown that, in the metropolis of Nantes, during the period 2010-2016, the land policy instrument ZAC reached a rather high conformance to its quantitative and qualitative objectives, even if it can be noted that the quantity and quality of the affordable housing delivered within ZACs could somehow have been influenced by negociations between private developers and public actors; by cooperations between private developers and social landlords; by a pressure from banks and shareholders; but also by the economic context and political priorities.

However, ZACs are not sufficient to achieve the overall quantitative objectives in terms of affordable housing in PLS (rental) and PSLA (accession), and the qualitative objectives of the policy are somewhat discussed. This showed that although the land and housing policy instruments have a rather high conformance, the affordable housing policy as a whole is lacking performance, also referred to as an endemic failure, which means that the policy does not contribute to the resolution of the collective problem of forced urban escape of the middle-class, already observed in the beginning of the 2000s.

Beyond its endemic failure, it has been found that the affordable housing policy is inducing a pressure on free-market housing prices, thereby even contributing to the collective problem at hand, which is evolving towards an increase social polarisation in the city. Scholars are discussing whether it is social polarisation or a professionalisation which is resulting from economically growing cities, but it is argued that in the case of Nantes, in France, professionalisation is rather less likely to be observed (even though it is recommended that further studies deepen this subject), and that both dynamics are not mutually exclusive. Social

polarisation is considered as a problem since it can : enhance periurbanisation, urban sprawl, and socio-spatial segregation (which were meant to be avoided by urban regeneration policies); lead to more social movements and violence; increase energy consumption; and represent a violation of human rights.

But the affordable housing policy is not the only responsible for social polarisation in the city, the social housing policy, urban renovation policy and attractivity policy, all reinforce this dynamic. This is explained by the incompatible goals of the four public policies which are: to enhance economic growth and to build a compact and sustainable city for all, in a limited territory characterised by scarcity of land, especially of public land.

Although very proactive in providing an important share of social housing in its new housing stock compared to other french cities to limit displacement of low-income residents, public authorities in Nantes recognise their difficulties to provide affordable housing in the city. Indeed, a growing gap is observed between the controlled social housing prices and the skyrocketting free-market housing prices, whereas affordable housing provided up to now remain very short-term and rare. As a response, Nantes follows, in its recent PLH 2019-2025, the national government suggestions to introduce the BRS instrument, which allows for a more long-term affordable housing stock, and the intermediate housing instrument, supposed to filling the gap of housing prices.

Overall, it is very likely that these political responses through new public policy intruments will have the same effects than the PLS and PSLA. Because in the tight housing market of Nantes, characterised by increasing construction costs, increasing land values, increasing demand for housing and an increased competition between developers, within a limited territory, public policies tend to be very slow to face the dynamics at hand. Besides their slowness, public policies can not regulate the housing market on the whole territory: ZACs enable to build 80% of the whole affordable housing stock, but are only present in very few areas of the metropolis. So, even if further studies are recommended on the evaluation of new instruments such as the BRS, intermediate housing and the accumulation of policy instruments, it is argued that evaluation of policies and the adoption of new place-based policies are not the only way to deal with the issue of social polarisation.

Scholars such as Buitelaar et al (2018) propose to focus on people-based policies and capacity approaches. However, strong dichotomies are observed in Nantes, mainly between public policies, regularly modified but rather slow to react (because of political and administrative obstacles) and a housing market, dictated by static private property rights, but rather rapid to provide housing at escalating prices. Based on this observation, I argue that adding slow people-based public policies will not be sufficient to deal with the rapid increase of housing prices (and thus of social polarisation) in Nantes. Besides, limiting free-market prices at the scale of Nantes only, would probably induce a rapid decrease of economic growth in the city, and a lack of supply of housing which would also lead to the exclusion of social groups. But up to now, no one really requestions the idea of reducing the demand instead of increasing the supply, which would need to reconsider the attractivity policy of the city. It is thus argued that

a reflection at a larger scale concerning economic growth, as a goal pursued by urban planning, is needed as described hereafter.

Inspired by Piketty and Kallis, and the present analysis of Nantes' housing market, which deconstructed the statement that Nantes was "*at the top of the list of accessible and relatively affordable green cities*" (Garcia-Lamarca et al, 2019), the ideological narrative of our times is discussed. Scarcity (notably of land), reinforced by public actors as observed in Nantes, is today the bedrock of capitalism. However, it is argued that tomorrow scarcity and limits could also become a principle adopted by economic actors themselves. This shift of thinking, requiring a reconsideration of the whole economic system (by using the lessons of the past, as argued by Piketty), and a collective mindshift towards moderation (as argued by Kallis), although probably long-lasting, is nevertheless considered as essential for the ecological and foremost social transition of the future.

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## Annex 1: Coding matrix

| 1st level | 2nd level | 3nd level | 4th level |
|---|---|---|---|
| Affordable housing | Definition | | |
| | Objectives | Quantitative | SRU |
| | | | Share in the production |
| | | Qualitative | |
| | Achievement | | |
| | Constraints in ZAC | Equalization | |
| | | Delays | |
| | Demand | | |
| | Perceived effectiveness of ZAC | | |
| | Reasons to work in ZAC | Less recourses than in diffuse | |
| | | Clear rules | |
| | Evaluation of effectiveness | | |
| | Beneficiaries | | |
| | Work in diffuse (not in ZAC) | Recourses | |
| | | Requirements | |
| Location (rental) | Demand | | |
| | Prices | | |
| | Devices (PLS) | | |
| | Production | | |
| | ULS | | |
| | Difficulty to find candidates | | |
| Accession | Prices | | |
| | Limits | | |
| | Reserved to social landlords | | |
| | Difficulty to find candidates | | |
| | Demand | | |
| Other tools | AANM | | |
| | PTZ | | |
| | PSLA | | |
| | Rent control | | |
| | BRS | | |
| | Land PASS | | |
| | ANRU VAT | | |
| | HLM sales | | |
| | Renovated housing | | |
| | Intermediate housing | | |
| | Participative housing | | |
| | Under control prices (developers) | | |

| | | | |
|---|---|---|---|
| **Mission/role** | Own role | | |
| | Perception of others' roles | Social landlord | |
| | | Municipality | |
| | | Planners | |
| | | Cooperatives | |
| | | Banks | |
| | | Action Logement | |
| | | Developers | |
| **Implementation** | Process | | |
| | Interaction | | |
| | Margin | | |
| | Land charges | | |
| | Banks pressure | Pre-marketing | |
| | | Stable turnover | |
| | Context | | |
| **Difficulties (context)** | Regulations | | |
| | Economic crisis (post-covid) | | |
| | Speculation | | |
| | Population increase | | |
| | Nr of developers | | |
| | Lack of offer in the middle range gap (between 2500 and 5000) | | |
| | Metropolisation | | |
| | Urban sprawl (trying to deal with it) | | |
| | Dichotomy salary/housing prices | | |
| | Enough land left | | |
| | Lack of development | | |
| | Construction costs | Construction companies | |
| | | Wages | |
| | | Search for quality | |
| | | High materials demand | |
| | Lack of control in diffuse | | |
| | Housing size and types | | |
| **Consequences** | Middle-class out | | |
| | Urban sprawl | | |
| | Tense housing market | Competition | |
| | | Price increase (incl. land value) | |
| | | Borrowing rates | |
| | | Other cities | |
| | | Quality | |
| | | Old housing | |
| | Gentrification | | |

| | | | |
|---|---|---|---|
| **Solutions** | Control prices of free market | | |
| | Public policy action (other tools) | | |
| | Diversify tools | | |
| | Intermediate housing | | |
| | BRS | | |
| | Economic system change | | |
| | PSLA 3000 | | |
| | PLUm | | |
| | Land reserves | | |
| **Public policies** | History | | |
| | Territorial organization | | |
| | Actuality | New PLUm | |
| | | Municipal elections | |
| | | Health crisis | |
| | Attractivity | Employment | |
| | | Quality of life | |
| | | Economic fabric | |
| | | Urban competition | |
| | Political will (SRU etc) | | |
| | Renovation | | |
| | Urban plans | | |
| **Housing experiences** | Housing type | | |
| | Housing research | How? | |
| | | Why? | |
| | | Where? | |
| | Personal future plans (in terms of housing) | | |
| | Profile | Jobs (or activity if retired) | |
| | | Revenues | |
| | | Origins | |
| | Opinion on the housing situation | ZAC development | |
| | | Nantes (attractivity / gentrification) | |
| | | Affordable housing tools | |
| | | Tight housing market | Rental |
| | | | Homeownership |
| | | Quality of housing | |
| | | Surroundings | |
| | | Other cities | |
| | Characteristics of the neighborhood | Neighbors (moving, origins, social mixity) | |
| | | Services (and urban form/renovations) | |
| | | Prices | |
| | Consultation | | |

## Annex 2: Interview schedule

*Introduction*

Hello, just to remind you a little bit of the context of the call, I am Elsa Gallez, student of regional planning at a university in the Netherlands, and as part of my master thesis, I call you to get your point of view on the realization of affordable housing in Nantes and in the ZAC Euronantes. Thank you very much for accepting the interview. Before starting, I would like to know if you give me your agreement to record this discussion? I agree of course to respect anonymity and not to mention your name or your organization. Feel free not to answer certain questions if you do not wish to. There will be a dozen questions, so for + or- 45min.

*Public authorities*

*Objectives / efficiency:*

- Could you briefly present yourself (organization, since when have you been working there, position, involvement)?
- How do you perceive the problem of access to housing for the middle-class in Nantes? Today and in the long run?

- Can you explain to me why the ZACs and the PLS / PSLA financial support tools for middle-income residents were adopted in Nantes? Which actors have been identified to contribute to the implementation of these tools?
- What are the objectives in terms of the number of affordable housing units in the city and the metropolis? How were they determined (in particular in the Local Urban Plan etc.)?
- Do you think that these objectives are sufficient to respond to the problem of access to housing for the middle class at the scale of the city and the metropolis?
- Is the supply of affordable housing known as "social accession" (PSLA) higher than the supply of affordable rental accommodation (PLS)? If yes, why? If not why? Does this meet the demand of the middle-class?

- To what extent do you think that the ZAC and PLS / PSLA tools are effective in fulfilling the quantitative objectives at the scale of the city and the metropolis? Why? Are they also effective in dealing with this problem of access to housing for the middle class?
- Are there evaluation studies following the completion of a ZAC to find out how many dwellings have actually been built?
- Do you think that the PLS / PSLA tools are more effective in ZACs than in older housing, to increase the supply of affordable housing?
- One of the objectives of the use of ZACs in France was to facilitate consultation between property developers and public authorities, to what extent do you think this objective has been achieved?

*Implementation:*

- How do you think that the operational phases (and therefore implementation) of urban projects influence the effectiveness of these tools, and the number of affordable housing actually delivered?

- How do the x% of affordable housing set at the territorial level (in urban plans) translate on the ground in the ZACs, therefore in the islets etc.? What is the role of Nantes Métropole and Nantes Métropole Aménagement in achieving these objectives?
- I understood that the land costs were reduced in the ZAC? Can you tell me more ? In what context is this possible? Who is funding this lower cost?
- What do you think of the problem of equalization raised by real estate developers (who must rebalance their balance by increasing that of vacant housing to be able to produce affordable housing)?

- What are the constraints to the real increase in the supply of affordable housing in the metropolis?

*More specific questions*

- Why are construction costs escalating?
- A social landlord told me that they would like to increase the price of PSLA housing which is now € 2 500 / m2. What do you think about that?
- What do you think of the 2014 law incorporating the concept of "intermediate housing" in the town planning code? Will this change anything in terms of housing supply for the middle class?
- What do you think of the BRS (real solidarity lease)?
- In ZAC, is the price of free-market housing supervised? How?
- I heard about the fact that there were more social landlords in Nantes than before, what does this imply for the community?
- What do you think of the impact of Covid-19 on the housing situation in Nantes?
- Is there still enough land in Nantes to regulate the market?

*Public policy*

- What were the public policies that have helped Nantes to respond quickly to the SRU law (more than 25% of social housing), compared to other French cities?
- What would it be necessary to put in place as a financial or regulatory / legislative tool to improve access to housing for the middle class and the effectiveness of the instruments in place?
- Many files or articles have been published on Nantes and the gentrification that affects the city. What do you think about that?
- Is there a desire on the part of the city to distribute social housing more over the territory? Why?
- Is the accumulation of devices for affordable housing sufficient to respond to a problem of soaring free prices, and a price gap (between affordable and free) which, in a few years may still accentuate ?

**Developers / social landlords**

*Additional questions:*

- As operations manager / developer for Nantes Métropole / Nantes Métropole Aménagement / social landlord in the ZAC X, how were you involved in achieving the objectives in terms of affordable housing within this ZAC?

➢ With which actors did you interact to ensure the integration of x% affordable housing in operations? And how (consultation, meetings, negotiations)?
➢ What were the difficulties encountered during the implementation of these objectives?
➢ What were your interests in implementing the project?
➢ How did you manage to defend your interests in negotiations with other actors (such as property developers, social landlords, neighborhood teams, residents)?
➢ How have conflicts of interest between actors been managed? What consensus has been reached?
➢ If the number of affordable housing units has changed (between the objectives of the ZAC and actual implementation), in what legislative framework could this change have been made?
➢ What other actors have been indirectly (negatively or positively) impacted by the urban project?
➢ Do you think that the way these tools are implemented should be changed in any way to make them more effective? If yes, how ? If not, why ?

- In the long term, how do you think the neighborhood will evolve, in terms of property prices?
➢ What ensures that these units will remain affordable?
➢ Will the districts remain socially mixed?

*Objectives / efficiency (at the scale of the ZAC X):*

- In the ZAC X project, what were the objectives in terms of the number of affordable housing units (in percentage)?
- How were these objectives determined (programming)?
- How well do you think this objective has been achieved?
- Has the number of affordable housing actually delivered under this ZAC been evaluated?
- What explains the difficulty in achieving the objectives of share of affordable housing in ZAC?

*More specific questions for social landlords:*

- I heard about the Action Logement group, can you tell me more?
- What differentiates a social landlord and a cooperative in the question of the supply of affordable housing?
➢ What are their relationships with property developers
➢ Why do developers go through donors / cooperatives? (because they have the right to rent-access at a lower cost?)
- Do you think that the supply of affordable housing benefits rather the inhabitants of Nantes or an external population (coming from another region, or from another department).
- How do you manage the margins you make on ZAC projects? Are they fed back into other projects?
- As a social landlord, I imagine that you are in contact with the banks (especially for affordable access), what is their point of view on the production of affordable housing? Do they promote it? What do they gain from it?
- Is it difficult to market housing in PLS and PSLA? Why?
- In your opinion, why do some people not have this reflex to turn to these social / affordable support before settling outside the city?

- In a few years, the price of free will be much more expensive again, and we will need new tools ... so ... In the end, wouldn't it be better to find a way to control the price of free-market housing rather?
- What are the operational difficulties of the BRS for NMH?
- What do you think of urban sprawl?
- What are your relationships with property developers? in ZAC and in diffuse?

*Private Developers*

*Additional questions:*

- How do you define the term "affordable housing"?

- In the implementation of the ZAC X project, different actors came together to define objectives in terms of affordable housing. As a property developer, have you been included in this first phase? So defining objectives at regional level (even before operations are carried out)? If yes, what was your experience? If not, do you think it is legitimate for you to be included?

- As a property developer, can you tell me about your role in achieving affordable housing in the two ZACs (once the project is adopted)? How was your implication in the realization of the ZAC? How did the x and y projects go? Partnerships etc.?
  ➢ What are the constraints you face when it comes to affordable housing and how do you overcome it?
  ➢ What were the land charges on these projects? How did that impact your financial balance?
  ➢ Can you tell me about the cost of land in Nantes? In diffuse and in ZAC, who bears these costs, and why the prices of the land increase ?
  ➢ Why are construction costs increasing?
  ➢ How do banks influence your projects?
  ➢ Being aware of the objectives in terms of affordable housing (and the potential constraints they generate), why did you decide to participate in the ZAC?
  ➢ What are your relationships with communities and developers?
  ➢ What were your interactions with social landlords (and other developers) during the implementation of the project?
  ➢ What is the difference between working with a cooperative or a social landlord to provide affordable housing?
  ➢ Why do you work with social landlords / cooperatives? (Because they have the right to make rental-accession at a lower cost?)
  ➢ What were the difficulties encountered during the implementation of these objectives?
  ➢ Is it difficult to market PLS and PSLA housing?
  ➢ What were your interests in the implementation of the project?
  ➢ How did you manage to defend your interests in negotiations with other actors?
  ➢ How have conflicts of interest between actors been managed? What consensus has been reached?
  ➢ What did you gain from your involvement in the project?

- Regarding the problem of equalization mentioned by other property developers, do you think there are other ways than to bring the cost of affordable housing onto vacant housing?
- What do you think of the other tools to facilitate access to housing for the middle class such

as the BRS (Real Solidary Lease), "intermediate housing" (from the law of 2014), the ANRU VAT, the supervision of rents , the AANM (Affordable Accession Nantes Métropole)?

*Residents*

- Can you explain your housing situation to me for the moment: in which neighborhood do you live, have you bought or are you renting? Since when?
- Are you originnally from Nantes?

- Can you tell me more about your experience of finding accommodation?
  - ➢ Have you bought / rented new or old? Why?
  - ➢ Are you having trouble repaying?
  - ➢ How did you find it?
  - ➢ *(if future resident):*
    - o Why are you looking for accommodation in Nantes? In which neighborhood are you looking?
    - o What type of accommodation are you looking for? (rental / purchase; social / affordable / free; new / old)?

- Do you know the PLS / PSLA financial support?
  - o Why did you (not) seek PLS / PSLA financial support?
- Do you think that the resource ceilings of these financial aids (PSLA: € 2,058 / month - tax income - 1 person alone / PLS: € 2,250 / month - tax income - 1 person alone) represent a sufficient part of the middle class who cannot afford to buy at market price (free accession)?
- In your opinion, does this ZAC offer enough affordable housing (rented and owned)?

- In general, what do you think of access to housing in Nantes? Have you seen the housing price increase in recent years?

- Do you have any friends who found themselves in difficulties of accessing property or rental in Nantes?
  - ➢ Are some of them leaving the city for the countryside?
  - ➢ Could you possibly give me their contact?

- Do you think that this financial support for housing benefits rather the local inhabitants of Nantes, or a new population, recently installed in Nantes?
- What do you think of gentrification in Nantes?

- In your opinion, what would be necessary to avoid the explosion of property prices and the displacement of low-income and middle-income populations?
- Do you think that mechanisms other than financial support would be necessary to better control housing prices in Nantes?

- What do you think of the BRS, which consists in buying a property, but only the house, and not the land? Would you be interested?
- What do you think of collective / participative housing?

- Just to get an idea, can I ask you in which sectors you work, your income (bracket)? <2100 €; between € 2,100 and € 2,800; between € 2,800 and € 3,500; > € 3,500 of gross income, monthly?  Based on : AURAN, 2013.