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Land-management strategies and the detached housing stock in shrinking municipalities – evidence from Germany

Landmanagementstrategien und der Einfamilienhausbestand in schrumpfenden Gemeinden – Erkenntnisse aus Deutschland

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Abstract: For some years, increased attention has been paid to the single-family housing stock in Germany and the further designation of building land by municipalities. A Germany-wide anonymous survey of municipalities sheds light on the municipalities' land management strategies with regard to declining populations and their anticipation of future problems for the further use of the single-family housing stock. The results of the quantitative survey are supplemented by qualitative interviews with municipal experts from case studies that were selected on the basis of criteria such as population decline, old-age dependency ratio, the share of single-family homes and vacancy rates. The aims of the survey and the interviews are to assess municipal representatives' perceptions of population decline and of the necessity of undertaking measures to deal with shrinkage. Research questions are: What measures do municipalities consider appropriate to counter population loss and falling demand for housing in shrinking regions? How important are single-family housing areas in the perception of German municipalities? The results indicate that a continued designation of building land seems to be one of the most important measures used to cope with insufficient demand. The aim is to attract new inhabitants, particularly to shrinking cities. However, this approach reinforces current problems because it lowers demand for the housing stock and increases the risk of vacancies.

Keywords: Detached houses, demographic change, shrinking municipalities, land management strategies, vacancies, village centres

Kurzfassung: Seit einigen Jahren wird der Einfamilienhausbestand in Deutschland und die Praxis weiterer Baulandausweisungen von Kommunen mit erhöhter Aufmerksamkeit betrachtet. Der vorliegende Beitrag gibt Aufschluss über die Landmanagementstrategien von Kommunen vor dem Hintergrund sinkender Bevölkerungszahlen. Die Einschätzung möglicher zukünftiger Probleme für die weitere Nutzung des Einfamilienhausbestandes fußt auf einer anonymen deutschlandweiten Befragung auf der Gemeindeebene. Die Ergebnisse der quantitativen Befragung werden ergänzt durch qualitative Interviews mit Expertinnen/Experten in Fallstudiengemeinden, die nach Kriterien wie Bevölkerungsrückgang, Altenquotient, prozentualer Anteil von Einfamilienhausgebieten und Leerstandsraten

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ausgewählt wurden. Ziel der Befragung und der Interviews war es zu erfahren, wie die Expertinnen und Experten den Bevölkerungsrückgang einschätzen und ob sie die Notwendigkeit sehen, Maßnahmen gegen Schrumpfung zu ergreifen. Forschungsfragen sind: Welche Maßnahmen halten Kommunen für geeignet, um Bevölkerungsrückgang und rückläufiger Nachfrage bei Einfamilienhäusern entgegenzusteuern? Wie wichtig sind Einfamilienhausgebiete in der Wahrnehmung deutscher Kommunen? Die Ergebnisse deuten darauf hin, dass eine weitere Ausweisung von Bauland eine der wichtigsten Maßnahmen zu sein scheint zur Bewältigung einer unzureichenden Nachfrage, wenn das Ziel ist, neue Einwohnerinnen und Einwohner zu gewinnen, vor allem in schrumpfenden Städten. Dieses Vorgehen verstärkt jedoch die aktuellen Probleme, weil es die Nachfrage nach Bestandsgebäuden senkt und das Leerstandsrisiko erhöht.

Schlüsselwörter: Einfamilienhäuser, demographischer Wandel, schrumpfende Kommunen, Landmanagementstrategien, Leerstände, Ortszentren

1 Introduction

Demographic change and urban shrinkage cause a wide range of socio-economic issues, including an increase in unemployment rates, a decrease in revenue and a degradation of properties at the local level (Martinez-Fernandez/Kubo/Noya et al. 2012). Despite some years of extreme in-migration to Germany, population decline, ageing and de-industrialisation have resulted in spatially disparate developments at the local level (Kemper 2011). Against the background of a rising demand for housing in economically prosperous or metropolitan regions, which can often no longer be satisfied, the situation of rural municipalities in economically dependent regions is currently rarely addressed. Since German reunification in 1990, several studies have dealt with the phenomenon of urban shrinkage, either by conducting empirical research in declining urban areas or by conceptualising the implications of shrinkage for planning theory and policies. Most of the empirical research has studied the effects of out-migration and de-industrialisation in large cities in eastern Germany after reunification (Hannemann 2003; Oswalt 2005; Lang 2012). Some investigations have examined the long-term social effects and policy responses related to vacancies in large eastern German housing estates (Kabisch/Grossmann 2013; Radzimski 2016).

Nelle, Großmann, Haase et al. (2017) provide an extensive overview of the historic evolution of German discourse on urban shrinkage and focus on the interplay between the debates, conditions and policy responses since 1990. The authors define four different stages of the shrinkage debate and conclude that discussion and policy actions on urban shrinkage are dependent on influential actors, as the phenomenon itself is perceived as a transitional problem and is possibly interest-driven and thematically selective. Moreover, they point out that responses to shrinkage are more likely if the effects of urban decline are observed in emblematic locations, such as big cities. Decline and vacancies in well-known locations lead to high priority policy responses, while the same phenomena in small and medium-sized German cities do not provoke a similar reaction, either in the academic debate or in terms of changes in policies (Nelle/Großmann/Haase et al. 2017: 121 f.). This last conclusion is particularly interesting, as it reveals a research gap on the implications of demographic decline or stagnation in 'non-emblematic' locations, such as small and mid-sized German cities.

Small to medium-sized towns dominate the German cityscape: 61.4% of total population, 56% of jobs and 57% of actual taxable capacity are located in these types of towns (BBSR 2012: 12).[1] However, small and mid-sized towns have been losing population for more than a decade (BBSR 2012: 12). While 37% (221) of all mid-sized towns and 52% (1.103) of all small towns experienced demographic decline between 2005 and 2015, only 14% (88) of the mid-sized towns and 13% (274) of the small towns were characterised by stable population during this time period (BBSR 2018: 12). Small and mid-sized towns have a high percentage of detached houses although the share of single-family homes in eastern Germany is lower (BBSR 2012: 37).

Overall in Germany (in all sizes of cities), approximately 24.5% of detached houses were built before 1948, while the majority (35.1%) was built between 1949 and 1978, and 26.2% of the detached housing

1 Small cities (*Kleinstädte*) = municipalities with 5,000 to 20,000 inhabitants and at least basic central functions; medium-sized cities (*Mittelstädte*) = municipalities with 20,000 to 100,000 inhabitants and medium central functions; see https://www.bbr.bund.de/BBSR/DE/Raumbeobachtung/Raumabgrenzungen/deutschland/gemeinden/StadtGemeindetyp/StadtGemeindetyp_node.html (23.05.2019).

was built after 1990 (Effenberger 2015: 4). In western Germany most single-family homes (39.3%) were built in the post-war era (1949-1978), the highest share of single-family homes in eastern Germany (30.5%) was built after 1990 (Effenberger 2015: 4). These statistics on building stock and age classes reveal the differences in housing policies in the German states in the post-war era. While West Germany promoted owner-occupied detached housing after the adoption of the Second Housing Law in 1956 (von Saldern 1997: 268; von Beyme 1999: 107), the construction of new detached houses in East Germany was suppressed until 1971 (Topfstedt 1999: 429). While new construction and the detached housing stock from the post-war era in the east and west of Germany differ, the single-family homes built during the interwar and Nazi period are similar. According to previous studies (Pergande/Pergande 1973; Hafner 1996; Kornemann 1996; Spellerberg/Woll 2014), the detached housing stock from the era between 1918 and 1949 is mainly located in what were initially leasehold developments in small cities and rural areas. These developments were endorsed and initiated by the municipalities, but in suburban areas on city fringes construction was more piecemeal, to some degree informal and consisted largely of self-build homes (Kuhn 2006). However, to date there is no systematic classification of the detached housing stock with regard to its building age and location. There is also a lack of comprehensive, aggregated data on the physical condition of the single-family housing stock.

Single-family homes were until recently considered a 'fast-selling item' (Krause 2014: 384). However, there is a high degree of uncertainty regarding the long-term perspective of detached housing. In 2014, a study based on a demographic forecast and data on building stock predicted a significant increase of vacancy rates not only in multi-story housing blocks but also in single-family homes in some regions of Germany (Effenberger/Banse/Oertel 2014). This prognosis was confirmed by a study on long-term housing demand in eastern Germany, which found evidence for a 'second wave of vacancies' from 2025 onward (Banse/Deilmann/Fritzsche et al. 2017; Kretzschmar 2017). Kretzschmar (2017: 29) points out that vacancies will be regionally dispersed across different regions and areas and will affect several age classes, a variety of housing typologies and different types of owners.

Currently, there is not only a lack of longitudinal data on vacancies but also no coherent definition of problematic vacancy rates (Rink/Wolff 2015). Moreover, since 2007, studies have started to address a number of challenges possibly affecting detached housing areas in the long term. The challenges include, for example, declining population growth, ageing and increased mobility due to flexible work regimes (Häußermann 2007; Nuissl/Bigalke 2007; Fina/Planinsek/Zakrzewski 2012; Berndgen-Kaiser/Bläser/Fox-Kämper et al. 2014; Krause 2014; Adam/Berndgen-Kaiser/Jochimsen et al. 2018). Moreover, some studies on suburban detached housing have also identified a mismatch between user preferences and the idea of single-family homes due to a loss of traditional family values, the pluralisation of lifestyles, precarious work models and women joining the workforce (Zakrzewski/Berndgen-Kaiser/Fox-Kämper et al. 2014). Some authors have discussed a renovation backlog in many parts of the detached building stock, potentially increasing the risk of declining prices and resulting in vacancies. According to these authors, most detached homes do not comply with the current standard of energy efficiency and need comprehensive remodelling in order to provide age-friendly residential design (Aring 2012; Krause 2014). A study on renovation identified the reluctance of German homeowners to retrofit their homes to make them energy efficient (Galvin 2014).

Consistent with Galvin's findings, a small qualitative study on renovation has shown that the majority of owner-occupiers in newly acquired, used detached homes refrain from energy-efficient retrofitting but rather implement measures that increase housing comfort and make the home-improvement investments necessary to preserve the value of their houses (Lorbek 2017). However, attractive detached housing areas need more than well-maintained housing stock and well-kept lawns. Previous case-study research on detached housing also points to the importance of adopting adequate planning instruments, subsidies and tax incentives for the sustainable redevelopment of single-family housing areas (Simon-Philipp/Korbel 2017). Such case studies invariably focus on municipalities that have already started to address the challenges directly and taken appropriate action. Against the background of the housing shortage in growing agglomerations and the challenge to integrate refugees, the regeneration of single-family housing areas is currently not on the priority agenda of municipal stakeholders. However, taking a mid-term perspective, existing detached housing areas need to be strategically redeveloped as a countermeasure to spatially disparate urban growth and in order to retain the network of small to mid-sized cities that is characteristic for Germany.

The research results presented in this paper originate from the research project 'Homes uP – Single-Family Homes under Pressure?' Within this

project, an international network of research institutions investigated the future of single-family housing estates. The aims of the survey and the interviews carried out in this context were to assess municipal representatives' perceptions of population decline and of the necessity of undertaking measures to deal with shrinkage. Research questions were: How important are single-family housing areas in the perception of German municipalities? What measures do municipalities consider appropriate to counter population loss and falling demand for housing in shrinking regions? What incentives are necessary to discourage shrinking municipalities from designating further building land and to instead concentrate on stock improvement?

In the following section (Section 2), the methodology applied in the research project is described. The results of the online survey and the interviews with experts from the case studies are presented in Section 3. The relevance of the results is assessed and discussed in Section 4. Section 5 attempts to briefly summarise the main results.

2 Methods

In 2015, the authors conducted a Germany-wide anonymous online survey on the topic of single-family housing areas that were undergoing demographic change. All German municipalities with more than 10,000 inhabitants were included. Participating municipalities answered questions on land management strategies and assessed the potential future risks for detached and semi-detached housing areas. One part of the survey included the assessment of measures that were developed in a former project (Wüstenrot-Stiftung 2012) to evaluate those measures by municipalities.

To receive a high response rate, the authors cooperated with the two major municipal associations: the Association of German Cities (*Deutscher Städtetag*) and the German Association of Towns and Municipalities (*Deutscher Städte- und Gemeindebund*). In their association media, they supported the participation of their members in the survey. As smaller municipalities are understaffed, the German Association of Towns and Municipalities suggested protecting smaller municipalities from the survey workload. Therefore, the survey was limited to municipalities with more than 10,000 inhabitants. The quantitative partial survey was sent to 1,549 municipalities (all municipalities with more than 10,000 inhabitants; approximately 13% of all German municipalities) via e-mail with a link to an online survey tool providing standardised anonymous questionnaires. 832 municipalities took part in the survey (54% of all municipalities with more than 10,000 inhabitants).

This limitation has a significant impact on the results. According to the authors' calculations, 9,590 municipalities with less than 10,000 inhabitants face a total population decline of -0.73%, while the 1,597 municipalities with more than 10,000 inhabitants expected a total population growth of +1.2% from 2008 to 2015.[2] Thus, the municipalities most affected by population decline could not be included in the survey, resulting in a probable underestimation of the emerging problems. That distortion of the results needs to be kept in mind when considering the findings.

The results of the quantitative survey were supplemented by qualitative interviews with experts from case-study cities. First of all, the online survey offered the possibility of participation in further interviews on a face-to-face basis. 11 municipalities (with more than 10,000 inhabitants) were willing to take part in the qualitative interviews. To reduce the distortion of the survey results mentioned above, additional cities with less than 10,000 inhabitants were specifically requested to participate as potential case studies. However, only nine municipalities with less than 10,000 inhabitants could be persuaded to participate. Interested municipalities with more than 10,000 inhabitants were selected, using socio-economic and housing data, such as population development, old-age dependency ratio, share of single-family homes and vacancy rates, as selection criteria in order to identify municipalities with structural problems and possible deficits in single-family housing areas. Furthermore, the datasets of possible case studies were compared to future risk assessments based on preceding research results (Wüstenrot-Stiftung 2012; Adam/Berndgen-Kaiser/Jochimsen et al. 2018). The selected case studies should meet as many selection criteria as possible, but not necessarily all. Due to the project's focus on single-family housing, the vacancy rates were one of the main selection criteria. The decisive factor, of course, was the willingness of the case-study experts to participate in qualitative interviews. Especially cities with declining populations and economic difficulties were not willing to take part in interviews, because they feared negative

2 http://www.geodatenzentrum.de/geodaten/gdz_rahmen.gdz_div?gdz_spr=deu&gdz_akt_zeile=5&gdz_anz_zeile=1&gdz_unt_zeile=15&gdz_user_id=0 (12.06.2019). The difference in the number of municipalities over 10,000 inhabitants between the survey and the statistical data is a result of the different years in which the data was gathered (2013 and 2015).

Figure 1: Case studies

headlines. All in all, 28 case-study municipalities were selected.

Based on these criteria and the number of their inhabitants, the municipalities (Figure 1) were categorised using BBSR data on town sizes[3] to increase comparability within the sample groups and to identify those with a combination of population loss, high share of older inhabitants, single-family housing and vacancy rates. Table 1 shows the case studies as well as the city size categories to which they belong and population development between 2011 and 2016. Attention has been paid to ensure a similar number of case studies in different size categories from villages and small towns to large medium-sized towns.

3 https://www.bbr.bund.de/BBSR/DE/Raumbeobachtung/Raumabgrenzungen/deutschland/gemeinden/StadtGemeindetyp/StadtGemeindetyp_node.html (12.06.2019).

Table 1: Case studies, federal states and inhabitants

Municipality size (inhabitants)	Municipality	Federal state	Population (2011)	Population (2016)
2,000 – under 5,000 village or small town	Dahlem	North Rhine-Westphalia	4,196	4,220
	Bad Elster	Saxony	3,761	3,723
	Altdöbern	Brandenburg	2,999	2,518
	Marksuhl	Thuringia	2,977	2,784
5,000 – under 10,000 small town	Villmar	Hesse	6,941	6,794
	Hellenthal	North Rhine-Westphalia	8,235	7,922
	Bad Düben	Saxony	8,093	7,986
	Lugau	Saxony	6,919	8,147
	Strasburg	Mecklenburg-West Pomerania	5,652	4,890
10,000 – under 20,000 big small town	Beverungen	North Rhine-Westphalia	13,867	13,313
	Clausthal-Zellerfeld	Lower Saxony	12,616	15,523
	Illingen	Saarland	16,978	16,510
	Selb	Bavaria	15,425	14,999
	Lohr am Main	Bavaria	15,291	15,145
	Alsfeld	Hesse	16,382	15,982
	Jessen (Elster)	Saxony-Anhalt	14,620	14,247
	Querfurt	Saxony-Anhalt	11,526	10,915
20,000 – under 50,000 small medium-sized town	Meppen	Lower Saxony	33,998	34,935
	Erkrath	North Rhine-Westphalia	43,690	44,413
	Pirmasens	Rhineland-Palatinate	40,887	40,416
	Neustadt am Rübenberge	Lower Saxony	43,542	43,902
	Zittau	Saxony	26,777	25,723
	Crimmitschau	Saxony	20,078	18,982
	Sondershausen	Thuringia	23,747	21,974
	Eisleben	Saxony-Anhalt	24,627	23,940
50,000 – under 100,000 large medium-sized town	Arnsberg	North Rhine-Westphalia	74,384	73,990
	Plauen	Saxony	64,468	65,049
	Gera	Thuringia	96,067	94,750

Database: BBSR (2017), *Gemeindeverzeichnis online* (Destatis)[4]

The semi-structured qualitative interviews with municipal experts, such as mayors or heads of planning offices, took place between January 2016 and October 2017 in the form of personal interviews scheduled by prior appointment. A semi-structured interview format was used because of the benefits provided by its non-standardised structure: this more open form of qualitative questionnaire allowed the interviewee to skip questions or to emphasise special questions and not merely consider the main topic defined in the acquisition of information. In most instances, the interviews were followed by a site visit of the town centre and neighbouring detached and semi-detached housing areas, guided by municipal experts. Some of the municipalities surveyed had already participated as case studies in a previous research project. They were questioned in a prearranged phone interview, using the same guidelines. All interviews were recorded and transcribed, and a content analysis with MAXQDA generating the main content categories was

4 https://www.destatis.de/DE/Themen/Laender-Regionen/Regionales/_inhalt.html (24.05.2019).

Table 2: Total number of German municipalities compared to respondents to the survey

Federal State	Municipalities (number)	Surveyed municipalities with ≥ 10,000 inhabitants (number)	Responding municipalities (number)	Share of surveyed municipalities (%)	Share of all municipalities (%)
Baden-Wuerttemberg	1,101	244	49	20.08	4.45
Bavaria	2,056	222	61	27.48	2.97
Brandenburg	419	68	13	19.12	3.10
Hesse	426	165	28	16.97	6.57
Mecklenburg-West Pomerania	805	21	6	28.57	0.75
Lower Saxony	1,010	196	54	27.55	5.35
North Rhine-Westphalia	396	339	105	30.97	26.51
Rhineland-Palatinate	2,306	43	15	34.88	0.65
Saarland	52	40	13	32.50	25.00
Saxony	468	67	21	31.34	4.49
Saxony-Anhalt	220	58	16	27.59	7.27
Schleswig-Holstein	1,116	53	15	28.30	1.34
Thuringia	913	33	12	36.36	1.31
Sum	11,288	1,549	405	26.15	3.77

Source: authors' own calculations based on Destatis (2017)

carried out (Schreier 2012). In the overall evaluation, the qualitative data were used to supplement or extend the quantitative findings.

3 Results of the online survey and interviews

The results of the anonymous online survey are presented below, supplemented by the results of the expert interviews in the case-study cities. When selecting statements from the experts, we endeavoured to reflect a range of different opinions.

3.1 Municipalities participating in the survey

The response rate throughout the whole questionnaire was 27.5% (365 completed questionnaires). In addition, 467 questionnaires were partly completed (plus 30%). Incomplete responses were mostly due to questions concerning the district level as many cities (nationwide 107 towns) are independent from a district or the district-level information was not available. Therefore, many of the incomplete questionnaires could be included in the survey results as well.

The completed questionnaires were returned anonymously so that no conclusions could be drawn about the participating municipalities and their locations. However, information was provided on the size of the municipality and the federal state. A distinctive feature of German federal states is the size of their municipalities and therefore the number per state. These differences are the result of territorial reforms that have not been implemented as categorically in some federal states as in others. As a result, the municipalities in the different federal states are very diverse in size and number. For example, only 2% (43) of the 2,306 municipalities in Rhineland-Palatinate have more than 10,000 inhabitants. In North Rhine-Westphalia, 86% (339) of the 396 municipalities have more than 10,000 inhabitants. Table 2 shows the German federal states with the respective numbers of municipalities and the number and percentage of municipalities that were surveyed and responded.

The table shows that 405 municipalities answered and included their federal states. In total, significantly

more municipalities responded (832 municipalities, i.e. 53.7% of the surveyed municipalities) but did not indicate their federal state; therefore, they are not included in this table.

3.2 Population development

An introductory question requested information about population developments between 2004 and 2014 in the district the surveyed municipality belongs to. This period applies for all questions concerning the development of the preceding years, and the responses to the question revealed the following: 43% of the districts showed a decreasing population, 18% showed stagnation, and 35% showed an increasing population (n = 296). When asked about a forecast up to 2030, 52% of the respondents anticipated shrinkage on the district level, 18% anticipated stagnation and 30% anticipated a growing population (Figure 2).

The survey results are quite similar to national statistics on all German districts and district-free cities, which indicate that 40% of all German districts and district-free cities declined, 24% stagnated, and 36% grew (n = 440) between 2008 and 2015.[5] Based on data from 2015, the forecast of the German federal statistical office projects a slight population increase by 2030 of 1% and subsequently a decrease of approximately 7% by 2060, even assuming stronger immigration.[6] Thus, the municipalities are obviously aware of their specific population development. This information was, on the one hand, necessary to test an assumed correlation between population development and land management strategy and, on the other hand, to divide growing and declining municipalities in the further analysis. Moreover, local demographics are accompanied by increasing regional polarisation, e.g. between economically strong and structurally weak as well as between urban and rural areas (Adam/Berndgen-Kaiser/Jochimsen et al. 2018).

Statements from the qualitative interviews allow in-depth insights into whether the anonymous answers to the survey can be validated by experts in the declining municipalities. The statements related to the case studies describe developments, such as a decreasing proportion of the German population, which may be generalisable:

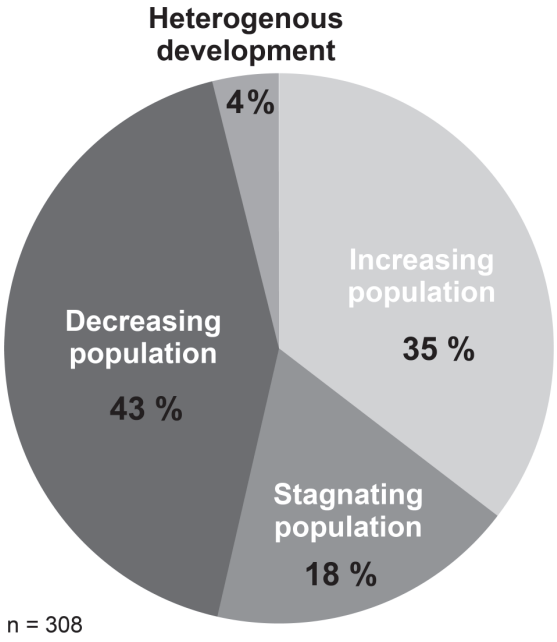

Figure 2: The district level: population developments of the last 10 years in percent (n = 308)

'I have created a statistic, because I wanted to know about the demographic developments during the last two years. Between January 2014 and October 2015, we lost 250 German fellow citizens, the normal decline, and won 150 non-Germans' (town with 16,000 inhabitants). Considerable differences can be verified depending on the municipality's location and whether municipalities are located in or outside metropolitan areas, and show the regional polarisation: 'Many municipalities expected a rather declining population. That has been the case between 2008 and 2011, but it has changed fundamentally. We have gained many inhabitants. Of course, we can only speculate about the reasons. Partly it's only due to spatial factors. Düsseldorf, Cologne and Bonn are incredibly attractive for people' (town with 46,000 inhabitants). A general observation is that ageing and population decline are particularly prevalent in the small municipalities and districts of municipalities. This is confirmed by the following statement: 'The biggest problem for me is demography, will say demographic decline, ageing of the population. We have here six districts. One can generally say, the smaller the district the bigger the population decline' (town with 7,000 inhabitants).

5 www.destatis.de/DE/ZahlenFakten/LaenderRegionen/Regionales/Regionaldaten.html (24.05.2019).

6 https://www.destatis.de/DE/Themen/Gesellschaft-Umwelt/Bevoelkerung/Bevoelkerungsvorausberechnung/_inhalt.html (24.05.2019).

3.3 Labour market

The labour market is a key feature in the future development of towns and municipalities. The question aimed to show the relation between the labour market and demographics. Only 18% of responding municipalities described the labour market as declining, while 32% classified their job markets as stable and 50% as growing (n = 244). The official statistical data on district levels seem to show a more positive development, as the share of growing districts in relation to the labour market clearly dominates in every state. Only a few states, such as Thuringia and Saxony-Anhalt, display a notable share of declining or stagnating districts.[7]

The Bertelsmann study 'Wegweiser Kommune' identified nine different types of communities with a total of 3,017 municipalities (larger than 5,000 inhabitants). Of these, at least two types (type 5 'Cities and municipalities in structurally weak rural areas' and type 9 'Strongly shrinking municipalities with adaptation pressure') have to tackle economic problems, such as low purchasing power and a tight financial situation in the municipality. A total of 793 municipalities and thus 26% of German municipalities (over 5,000 inhabitants) belong to these two categories.[8] A total of 346 of these municipalities, representing 11% of German municipalities (with more than 5,000 inhabitants), have less than 10,000 inhabitants and were therefore not included in the survey. These results show how small-scale examination is rendered important by local disparities and suggest that decline, stagnation and growth are often juxtaposed on a small scale, a differentiation that sometimes disappears once the scale changes to the next higher level.

The majority of respondents anticipated positive developments of their towns in future. A total of 56% of those surveyed expected stable developments, 35% expected a growing labour market and only 9% expected a declining labour market (n = 245) in the future, but not the majority of experts in the case studies. The following statements of the interviewed municipal experts describe the job opportunities in their small and medium-sized towns as not sufficient for graduates and specifically qualified persons: 'If you are a qualified employee, especially in the crafts or services sector, you will quickly find a job. If you are a graduate it's difficult depending on your profession' (town with 17,000 inhabitants). This is confirmed by the following statement, which identifies problems especially for young professionals: 'We haven't yet been able to stop the exodus of younger people. The tendency has slowed down and many of the departures are job-motived. Today, you have professional specialisations of people starting their working life which can't locally be satisfied with appropriate employment' (town with 41,000 inhabitants). The outflow of young people and educationally motivated migration is a general problem of small and medium-sized towns and municipalities. Other municipal experts see no problems regarding the job opportunities of their towns and regions: 'The labour market of the *Sauerland* is mostly very good. I am not aware of the unemployment rate now, but in this context, we are truly sitting pretty. Unemployment is not an issue in any case' (town with 75,000 inhabitants).

However, the municipalities are concerned with a loss of attachment to their location. Former family-owned businesses have been converted to limited companies or other types of organisations with the following impacts: 'Then, you have financial and strategic investors who enter the business, take it over. And the connectedness and short distances which existed are becoming more difficult' (town with 41.000 inhabitants).

3.4 Measures against shrinkage

In the survey, municipalities were asked whether they consider measures against population stagnation and shrinkage as necessary. A total of 84% of the respondents assessed them as necessary, 70% of the respondents had already acted to counter shrinkage or were preparing appropriate measures, and 14% of the respondents could not take action due to a lack of funds. Only 16% did not see any need for action because they are growing (Figure 3).

By analysing the responses about measures municipalities have taken or may conceivably take to counter shrinkage or vacancies, three different approaches could be identified. The first strategy is to subsidise owners: 'We partly have massive problems with our building stock which is one of the urgent tasks of today. […] it's always about money. We must be able to pass on money to the private owners and to change the log jam which dominates in the old town into a dynamic development. We support all this with municipal incentive programmes such as 'the rent-free urban quarter' (*das mietfreie Stadtquartier*) which is one of the pillars' (town with 17,000 inhabitants). The second solution is directed at the state level: the municipalities expressed the need

7 https://www.destatis.de/DE/ZahlenFakten/LaenderRegionen/Regionales/Regionaldaten.html (24.05.2019).

8 https://www.wegweiser-kommune.de/demographietypen (24.05.2019).

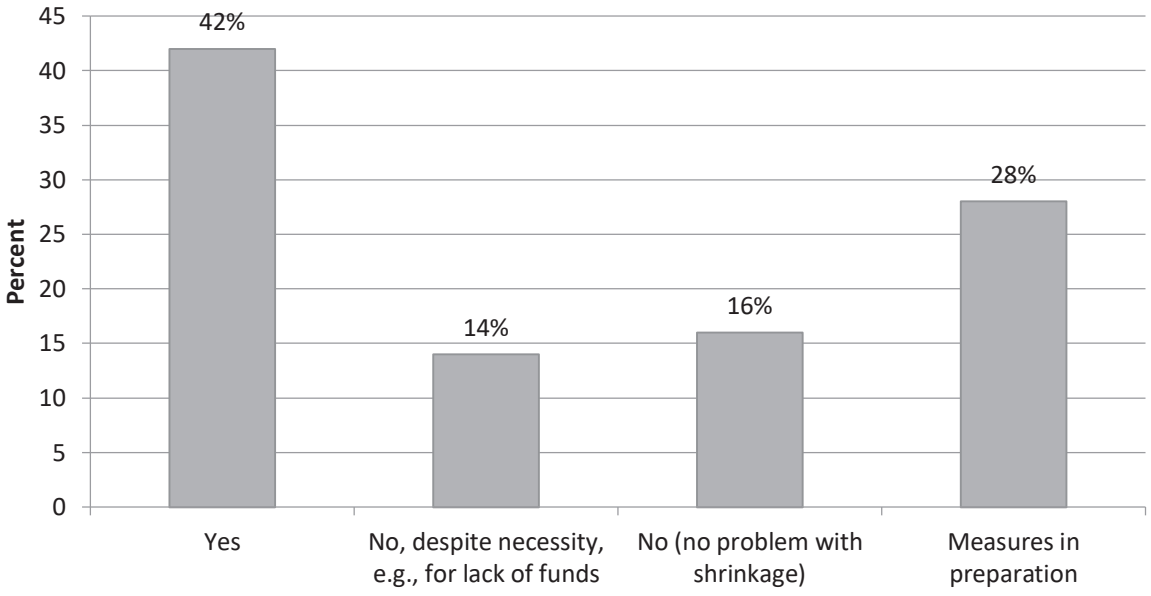

Figure 3: Have you already acted to counter stagnation/shrinkage? (n = 305)

for state-funded programmes to subsidise the demolition of long-term vacant properties: 'These are long-term vacancies and we can only hope for a state project which creates open space by subsidies. Dismantling should be subsidised to get rid of these buildings' (town with 14,000 inhabitants). The third approach is to raise interest through information: 'Yes, we have set up an empty site land register, not published, only internal. We have surveyed all owners with a small questionnaire which was to be completed with little effort. We only wanted to know: what do you intend, do you want to build a house or to sell the plot, and if yes, when? [...] We asked 650 owners of vacant lots […] In the end there were only 11 saying: you can publish my lot on your homepage, I would sell it' (town with 51,500 inhabitants).

3.5 Land management strategies

The question on the land management strategies of the municipalities was motivated by the assumption that the designation of building land often cannot be justified by demographic or economic needs but frequently is rather an emergency solution for municipalities competing for new inhabitants and companies. The result validated the presumption: 36% of the municipalities with a decreasing population still carry out new designations of building land in order to generate an influx of new inhabitants. The share is even higher (36%) than the share in municipalities with increasing populations (32%). The stock of buildings does not seem to be attractive, up-to-date or available when needed. However, in some municipalities the aim of reducing land 'consumption' seems to be realised, since 36% of the shrinking municipalities do not develop new building land but practice qualified brownfield development. A total of 28% of the shrinking municipalities assess the existing supply of building land as sufficient and do not designate new land (Figure 4).

Against the background of population decline, an expansive building land designation can also be described as 'building against oversupply', and usually strengthens oversupply (Köhler/Schaffert 2015). The newly designated areas very often remain largely empty, and the intended tax revenues do not materialise.[9] Therefore, the cost-intensive provision of building land often implies high cost burdens for the municipalities. Figure 5 illustrates population development and the development of the number of residential buildings at the state level in Germany from 2011 to 2015. It can be seen that trends here are in some cases contrary to one another.

Overall, there has been an increase in the number of residential buildings in all federal states, regardless of the positive or negative demographic trends. In

9 It is important to know that in Germany, the costs of providing settlement infrastructure are pre-financed by the municipalities. Infrastructure costs can be passed on to the property owners only after the plots have been sold.

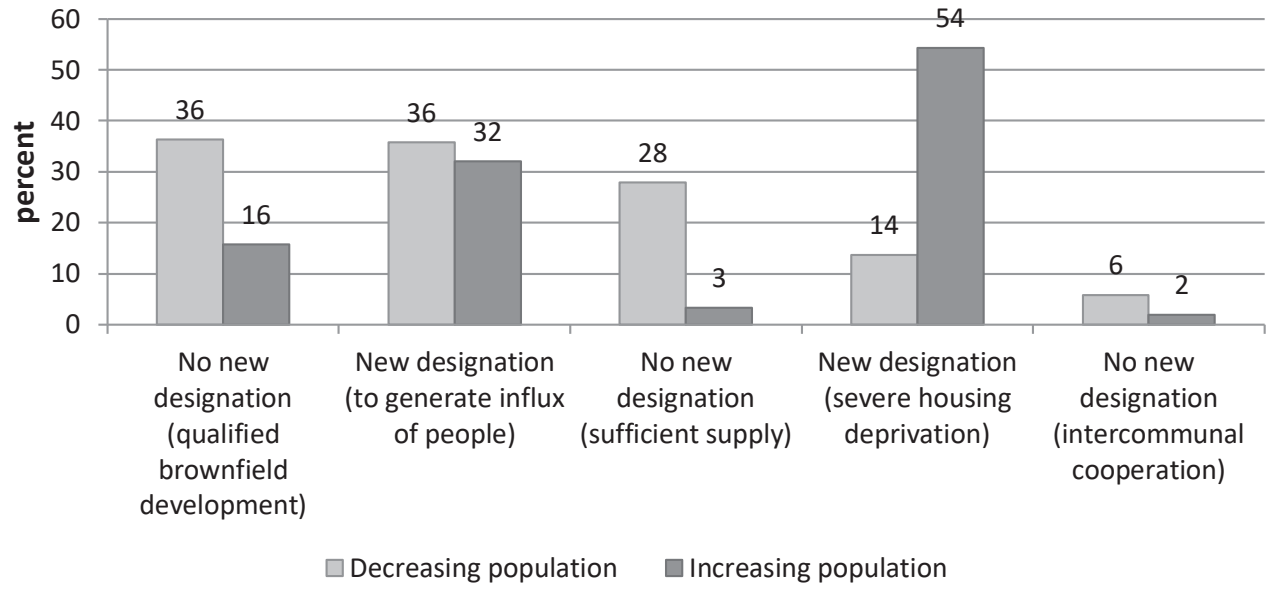

Figure 4: Designation of building land. Communities with decreasing populations: n = 145, communities with increasing populations: n = 153, multiple selections were possible

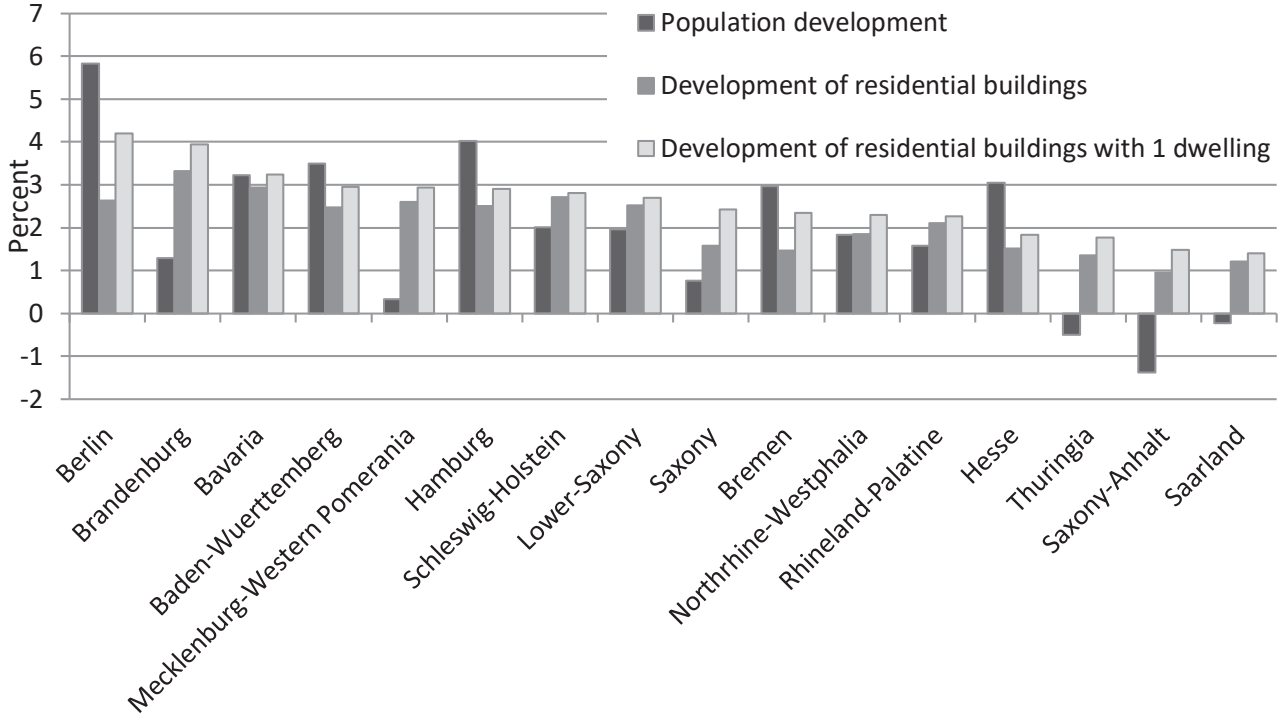

Figure 5: Population development and construction activity. Source: authors' own graph based on Destatis (2017)

particular, the number of residential buildings containing only one dwelling increased more in all federal states than the total number of residential buildings, which points to the continued attractiveness of this form of housing. Especially in federal states with negative population development, such as the Saarland, Saxony-Anhalt and Thuringia, the increase can be explained by the attempt to create an appropriate offer in order to attract new inhabitants. The same applies to states such as Mecklenburg-Western Pomerania or

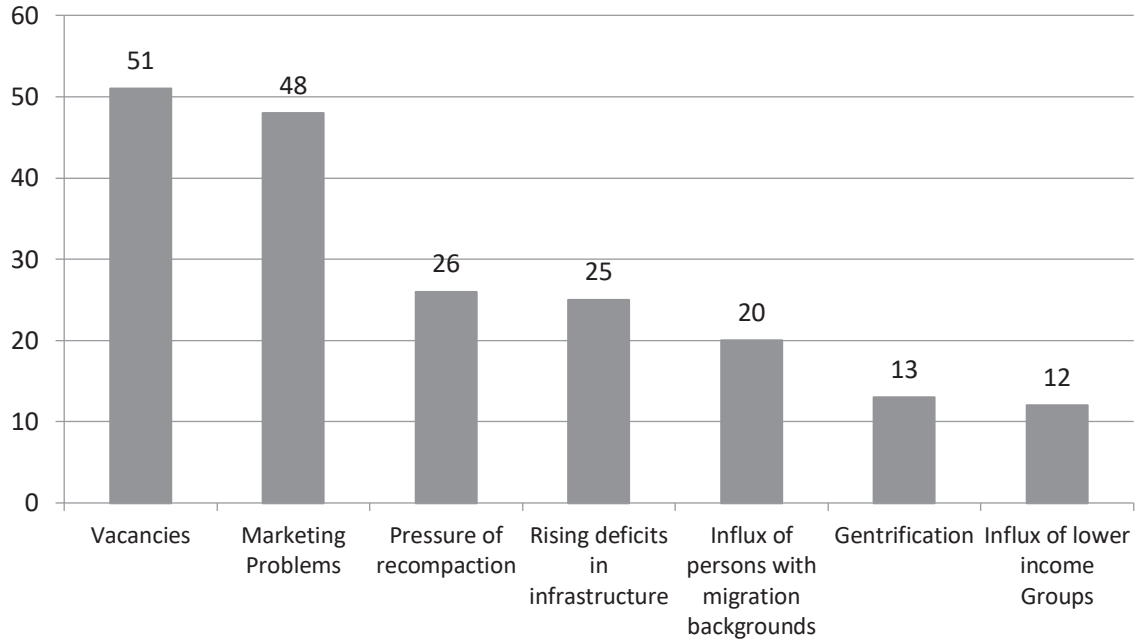

Figure 6: Expected changes in single-family housing areas (n = 77; multiple selections were possible)

Saxony, which record only low population growth but at the same time create comparatively high levels of detached housing.

In the interviews, municipal experts argued in favour of building land designation as follows. The first statement from a municipality with stable population referred to financial reasons and compares new construction to the renovation of an existing building: 'Thinking about the investments to achieve the energy standard and the normal housing standard I believe that demolition or renovation often is a more expensive option than to buy a new plot' (town with 45,000 inhabitants). The second statement, coming from a municipality with a shrinking population, justified the new designation of building land with the need to respond to the competition between municipalities: 'The question arises where and to what extent we truly have to designate new building land? We have the need for it and towns are facing competitive pressure' (town with 16,000 inhabitants).

In contrast to this, many surveyed municipalities declared their explicit support of internal development, which is evidenced by the following two statements: 'More than ten years ago, we developed the last big building area which was a settlement extension. That was truly the last major action. We don't enter anymore into competition with the surrounding communities to designate new building land' (town with 41,000 inhabitants). And: 'We can't designate new building land on and on. That means […] that the inner cities are bleeding out. And we must somehow counter this development' (town with 14,500 inhabitants).

3.6 Trends in single-family housing areas

The municipalities were asked if they expected significant changes, such as vacancies, oversupply and declining prices for used properties as well as a lack of adequate infrastructure, in the stock of single-family houses in the future (Figure 6).

According to the quantitative survey, only a quarter of the participating municipalities expected changes, while more than a third could not yet assess the situation and 40% did not expect any changes (answered by 342). The most cited were vacancies and marketing problems, with counts of 51 and 48, respectively. The third most mentioned change was the pressure of densification, as mainly seen in growing municipalities located in the growing urban neighbourhoods and metropolises. Rising deficits in infrastructure were the fourth most mentioned change expected.

Some interview statements indicate likely vacancies in the future: '… my nephew is a single child. He has married a single child. There are now four houses around him. Should a young couple with one child inhabit them? That's not possible' (town with 7,000 inhabitants). The second statement also points to possible future

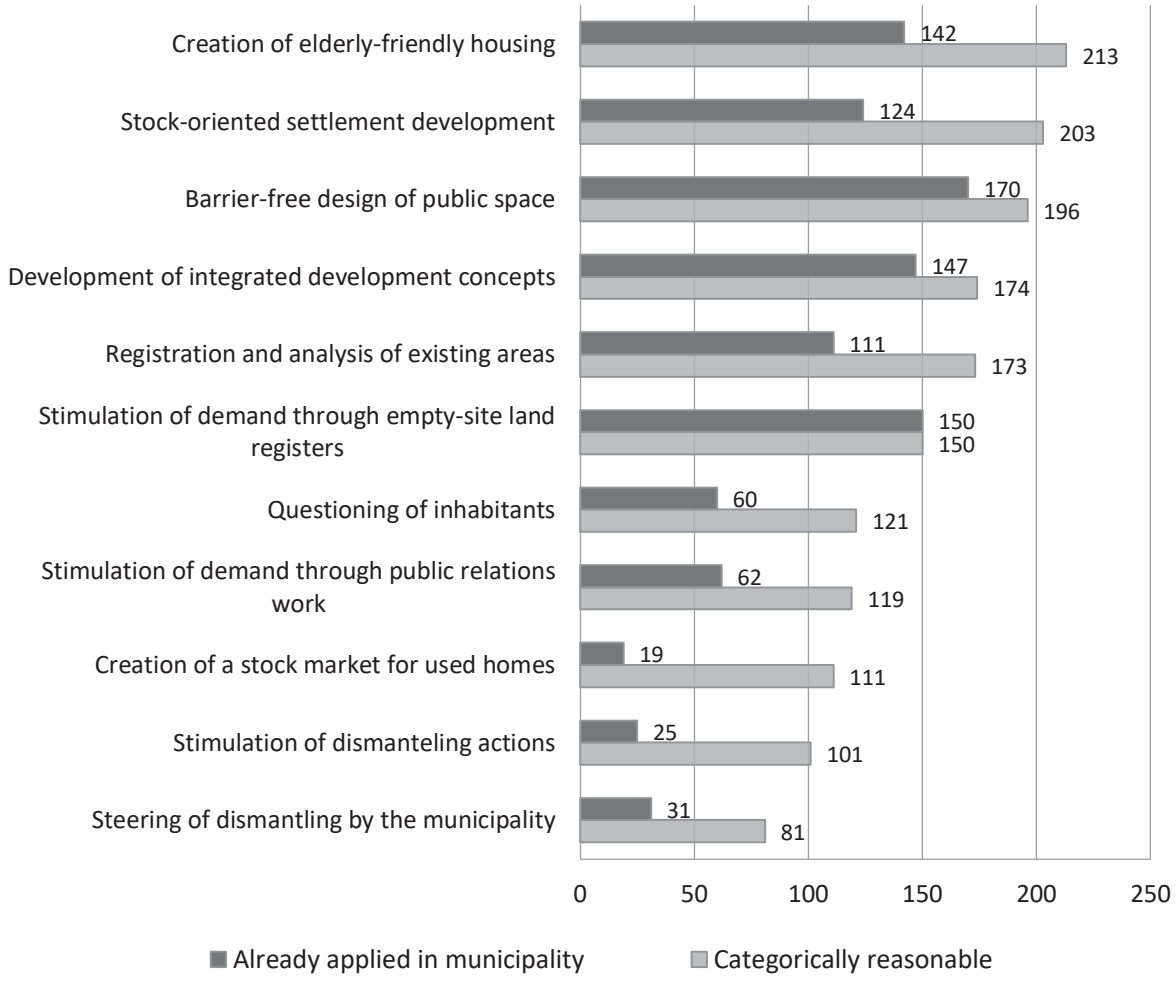

Figure 7: Measures to apply in single-family housing areas (n = 354; absolute numbers are shown; multiple selections were possible)

vacancies: 'Junk properties are only scattered. Mostly they have been abandoned since reunification – 'forgotten stocks'. But in the near future it could definitely be possible that there is no demand for every single-family house which currently is still inhabited' (town with 3,700 inhabitants).

However, some interview statements confirm an ongoing demand: 'Until now vacancy is not an issue. Regarding the past there were only some vacancies in the historical centre (located directly on the main road). Currently people invest their money in property' (town with 2,800 inhabitants). And even the existence of new user groups is pointed out: 'What happens is: China. A Chinese family has bought the butcher's shop in my town. And there was a Chinese person at my door on Sunday who wanted to buy a house, too' (town with 4,000 inhabitants). But most of the demand comes from the neighbourhood, as exemplified by the following statement: 'There are 120 houses in this neighbourhood and only four or five initial owners. […] Mainly local residents bought them' (town with 14,000 inhabitants).

3.7 Measures to develop older single-family housing estates

Based on previous research results (Wüstenrot-Stiftung 2012) about possible measures for municipalities to develop and improve existing single-family neighbourhoods, a set of intervention measures was suggested in the questionnaire (Figure 7). Participants were asked to choose whether they considered the proposed measures to be reasonable (light bar) or whether they had already applied them in their municipality (dark bar). The two measures most frequently chosen were the creation of elderly friendly housing and stock-oriented settlement development. The measures most often already applied were the barrier-free design of

public space, followed by the stimulation of demand through empty-site land registers.

4 Discussion of the results

The importance of caring for the future use of single-family housing neighbourhoods can be evaluated quite differently, as was clearly illustrated by the interviews with municipal experts. However, municipalities do not consider the topic to be very important because they assume decreasing prices lead to properties being unsaleable, and this is regarded as the private problem of rather wealthy population groups. Furthermore, most of the municipal experts did not consider the current situation in older single-family housing areas to be problematic. They are convinced that the market regulates itself. Actually, great losses in value are limited to some regions, while in other regions, especially within conurbations, the prices are stable or growing. However, the great bulk of single-family houses are currently in the middle of a tenure change process that will not be completed before 2030 or 2040. The number of these houses entering the resale market will steadily grow in the upcoming years (Berndgen-Kaiser/Bläser/Fox-Kämper et al. 2014). Together with the forecasted population development of a shrinking and ageing population,[10] the situation will probably become unstable over the next few years or decades. These facts underline the importance of the topic studied.

The above-mentioned problem of the sample bias regarding the quantitative questionnaire – the restriction to municipalities with more than 10,000 inhabitants – could not be corrected by the qualitative interviews due to the difficulty of finding suitable interview partners in the smaller municipalities suffering from a lack of staff. Especially with regard to the development of the labour market, the size and location of municipalities are the decisive influencing factors. Overall, this could have led to the results of the survey being too positive in some respects.

A central finding was the municipal approach to building land designations. The results of the online survey already showed that municipalities with declining populations designate new building land. Thereupon, some of the case-study communities interviewed stated on the contrary that the key to success was the renunciation of new building areas. This also provides answers to the second research question on municipal measures to counter population loss and falling demand. Even in shrinking municipalities, building land is still designated because it is seen as a tool for recruiting new residents and thus as a way to deal with decline.

Municipalities often find themselves forced by competition with neighbouring municipalities to designate new building land. Asked whether they collaborate with neighbouring municipalities in urban development, experts predominately noted cooperation to be difficult. Even though there are realms of cooperation, municipalities compete in urban development and particularly with regard to gaining new inhabitants. The additional supply of building land could even trigger new vacancies in the building stock since residents move from peripheral or very central old houses to new ones. However, both the survey results and the interview results indicate that municipalities also frequently pursue consistent internal development and avoid the new designation of building land. For some years now, computer programmes have been developed to compare the costs and benefits of housing development. The systematic recording of expenditures associated with the designation of building land leads to a sensitisation to the costs of settlement development. Flat-rate assumptions about the effects of a new settlement project on the municipal budget can thus be avoided, especially with regard to the hope of additional income (Dittrich-Wesbuer/Krause-Junk/Osterhage 2008). This at least gives rise to the expectation that in the longer term a more economical use of land will prevail.

The municipalities' assessment of the need to take measures to combat shrinkage confirmed the relevance of this topic. With the exception of municipalities that are not confronted with shrinkage, none of the municipalities surveyed doubted the importance of this topic. The measures to counter shrinkage included different approaches from using subsidies to invest in the old town centres to make them more attractive rather than using subsidies for the removal of vacant and redundant buildings (mostly applied in eastern Germany), to using empty site land registers to activate demand. The demolition of old buildings, e.g., in older single-family housing estates, in order to free up the property for new construction has so far only rarely been practised.

The main topic of the survey and the interviews was the municipalities' assessment of the future development of ageing single-family housing areas. The survey results revealed a great deal of uncertainty in

10 https://www.destatis.de/DE/Themen/Gesellschaft-Umwelt/Bevoelkerung/Bevoelkerungsvorausberechnung/_inhalt.html (24.05.2019).

assessing future developments. More than a third could not yet give an estimate, and 40% did not expect any changes. Only a quarter of the surveyed municipalities expected changes, which were mostly changes related to vacancies and a decline in demand. At the present time, no conclusive assessment of the potentially problematic future development of ageing single-family housing areas is therefore possible. The observation of these areas with regard to demand should therefore be urgently expanded and carried out over a longer period of time.

5 Conclusion

The first research question inquired into the importance of single-family housing areas in the perception of municipalities, and the findings indicate that the maintenance and even monitoring of such neighbourhoods are not perceived as priority tasks. In the interviews, however, local authorities acknowledged that they require greater attention. The conclusion to be drawn is that further developments need to be monitored better to enable municipalities to focus more strongly on the market segment of single-family housing. The restraining forces are to be addressed by governmental framing to help the municipalities. On the one hand, the uncertainty of development could be minimised by a continuous and exhaustive monitoring of demand and supply, and the vacancies or shortage arising from the imbalance between the two. The building stock should also be assessed within new urban plans. On the other hand, municipalities should be enabled to partly intervene in the market of owner-occupied dwellings to manage development. This is especially necessary as demographic and political developments, such as interest rate policy, can change the current situation significantly in the short-term.

Turning to the question about incentives that need to be created in order to accelerate internal and stock development, it is clear that subsidies are unavoidable. This is particularly necessary against the backdrop of a precarious financial situation, particularly in shrinking municipalities. Incentives to reduce new land designation, subsidies and tax incentives for the adaptation of the housing stock to today's housing needs (instead of promoting new construction) and for the demolition of long-term vacancies within the detached housing stock are the prerequisite for avoiding long-term problems. A new way of thinking is certainly needed here because this approach could also ensure the continued use of existing infrastructure. Empty site land registers serve to direct demand for building land to existing housing estates and enable potential builders to find suitable properties within existing developments. In addition, they also have a positive influence on the age mix within a neighbourhood, facilitate generational change and thus keep existing neighbourhoods attractive. Thus, the establishment of monitoring is recommended.

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