

Changing planners' perspectives:

How strong is the influence of the media on the perception of real estate investors in Amsterdam?



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Title: Changing planners' perspectives: How strong is the influence of the media on the perception of real estate investors in Amsterdam?

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Table of Contents

Abstract	4
Introduction	5
Research problem	6
Structure & reading guide	6
Theoretical framework	7
Methodology	10
Conceptual Model	10
Hypotheses	10
Case selection	10
Data collection	11
Data analysis	14
Media analysis	14
Interviews	15
Ethical considerations	15
Results	16
Discussion	20
Conclusion	21
Literature	22
Appendix 1 - interview guide English	26
Appendix 2 - interview guide Dutch	28
Appendix 3 - consent form	30
Appendix 4- source code	32

Abstract

Little is known about the behavior of real estate investors in the property market. Real estate investors tend to be generalized on a regular basis, also by planners. The media is known for its frequent generalizations and indiscriminate opinion. This research explores if online news media shape public opinion on real estate investors and if relationships between public planners and real estate investors in Amsterdam are affected by the media. This research was built up of a sentiment analysis on 8110 articles with a natural language processing algorithm, in depth analysis of news articles and expert interviews with planners. The sentiment analysis revealed limitations, but opportunities for future research. In depth analysis of articles indicate a negative sentiment by news media on real estate investors. Although planners state to be aware of an influence by the media on their work, further research is needed to gain better understanding about investors and their relationship with planners.

Introduction

According to the IMF (2021) housing prices soared in recent years. In The Netherlands the costs of housing have increased significantly. From June 2013 to November 2021 housing prices have increased almost 86% (CBS, 2021). According to the ministry of interior affairs The Netherlands lacks 279.000 houses (July 2021) (Ministerie van Binnenlandse Zaken en Koninkrijksrelaties, 2021). Popularly called, The Netherlands is in a 'housing crisis'. In the coalition agreement of the newly formed 'Rutte 4' government, housing is a well discussed topic (Rijksoverheid, 2021). This puts pressure on planners to build high amounts of housing in a short period of time.

There has been a recent rise in rental housing that is privately owned by investors in Europe (Aalbers, 2019). In the coming years there is an even bigger rise in privately owned housing expected across the world (IMF, 2021). Real estate investors can be seen as necessary enablers to build enough housing in the highly financialized property market (Aalbers, 2019). Despite this rise, planners tend to see real estate investors mainly ambivalent but also as enablers of real estate projects (Raco et al., 2019). Previous research shows a research gap in the behavior and understanding of real estate investors, which leads to generalizations by planners and scholars (Campbell, et al., 2014; Özogul & Tasan-Kok, 2020; Theurillat, et al., 2015; Raco et al., 2019). Therefore it is relevant to further increase understanding of real estate investors.

The media is covering the housing crisis rigorously because it is one of the few common interests that most of society shares, most people live in a house (Soo, 2013). But the media is known for its frequent generalizations and indiscriminate opinion (Seiter, 1986; D'Angelo & Lombard, 2008). Real estate investors are often mentioned in the discussion of the housing crisis (nos.nl, 2021). The documentary 'Push' (2019) for example is centered about the role of real estate investors and investment companies in the worldwide housing crisis. This documentary can be interpreted with a negative bias towards real estate investors, but also mentioning them as essential to solve the crisis.

This research explores if online news media shape public opinion on real estate investors and if relationships between public planners and real estate investors in Amsterdam are affected by the media. Sentiment analysis on 8110 articles with a NLP (Natural language processor) algorithm provided weak results due to limitations, but could be implemented in future research. In depth analysis of key articles and expert interviews with planners resulted in negative bias towards investors by news media. This research shows that planners are influenced by the media, although planners state to be aware of this influence. A discrepancy between planners that work with real estate investors and planners that do not is noticed. Planners need to be aware of their position and it should be highlighted that further research is recommended to gain further understanding of the relationship between planners and real estate investors.

Research problem

This research is centered around the following main research question: ***“How has the portrayed image of real estate investors in Dutch online news media affected the relationship between public planners and real estate investors in Amsterdam during the last five years?”***

To answer the main research question the following sub questions are stated:

1. How did online news media portray real estate investors in Amsterdam during the last five years?
2. What is the public planner's perspective on real estate investors and did the relationship between real estate investors change?
3. Does the media representation of real estate investors affect how planners view and interact with real estate investors?

Structure & reading guide

With an introduction to the theme and the research problem defined, core theoretical concepts are discussed in the second chapter. The third chapter elaborates the case selection, research methods and data collection methods. In the fourth chapter results from the collected data are presented. Based on the data, the fifth chapter will discuss the data and offer recommendations for future research based on the data.

Theoretical framework

A better understanding of relevant scientific literature is needed to build a foundation for this research. Firstly it is important to define the real estate investor within the housing market. Followed by the position of the planner in the property market. After that, the relationship between planners and real estate investors is covered. And lastly the role of the media in the housing market will be discussed.

Investing is the process of buying something which is worth buying because it might become profitable in the future (Hwang, M. and Cheng, 2011). A real estate investor therefore will be defined as someone who invests in property in the form of land or buildings (Oxford dictionaries ,2022). However real estate investors are often defined by one standard in scientific literature, but not all real estate investors are the same. The meta categorisation of Özogul & Tasan-Kok, 2020 divides investors in 4 groups based on:

1. Spatial scale of operation
2. Size and social composition
3. Investment object and finance
4. Investment and social behavior

Besides the frequent generalization of real estate investors (Campbell, et al., 2014; Özogul & Tasan-Kok, 2020). There is also a research gap on real estate investors and their behavior (Theurillat, et al., 2015; Raco et al., 2019). This has an impact on the relationship with planners in practice. The following citation highlights the importance of this research: *"For Planning scholars in particular, generalizations of investors in their analyses may omit crucial elements that could impact their research findings and hinder the development of tangible recommendations for practice. Not only is there a risk of further enlarging the gap between theory and practice, but a lack of specificity in relation to residential property investors in Planning research may leave practicing planners and policy makers disillusioned, and at worst defeated, in light of contemporary urban dynamics."* (ibid., p. 476). Due to the introductory character of this research it is deliberately chosen not to divide investors in different categories but recommend for further research.

Investors have become an important actor on the property market. Since the 70s investment capital made a surge, the digital revolution and changes in demography offered more demand for profitable investments. The term financialization became increasingly used in the 1990s, with the rise of finance in capitalism in general. Financialization means that financial motives, financial markets and financial actors receive more power in society and the economy in general (Foster, 2007; Sawyer, 2013). After the housing crisis in 2008, the financialization of the housing market has gotten more attention in scientific literature (Byrne, 2020; Wijburg, 2021).

Housing can be split up into owner-occupied housing and rental housing, which can be owned by a diverse range of investors from individual investors to large insurance companies. Housing is rapidly financializing in four different ways, mortgage debts, Mortgage securitization, rental housing and housing companies (Raco et al., 2019). This financialization does not only occur in owner-occupied housing, but also social and private rental housing. Rental housing has become an investment that has a low risk and good return on investment compared to other assets. Not only for private investors, but also larger hedge funds and private equity funds (Aalbers, 2019). In the Netherlands the

financialization of rental housing is however relatively low in relation to the high mortgage debt and securitization of the housing market in comparison to other countries. However a couple of housing corporations are highly involved in the derivatives markets (Aalbers, 2017).

Financialization goes hand in hand with the neoliberalization of the housing market, the process in which regulation is kept to a minimum and more power is given to the free market (Thorsen & Lie, 2006). Already before the 2008 crisis, housing corporations have become more liberalized and market oriented in the Netherlands (van Gent & Hochstenbach, 2020). Research by Taşan-Kok & Özogul (2021) focussed on the governance architecture of Amsterdam specifically and concludes that although the high amount of land ownership and its reputation of highly managing its development, Amsterdam's housing development has become fragmented which fits the global and national trend of financialization and neoliberalization. Increasing the importance of real estate investors on the property market in Amsterdam.

Housing has become a neoliberal and financialized market. However, it is important to explain the role of the planner in the neoliberalized real estate market and get an understanding how different market actors interrelate, especially the real estate investor and the planner. The housing market is defined as a social construct in which both planners and real estate investors both continuously engage. Both the planner and the real estate investor can be seen as important actors in the housing market (Adams and Tiesdell, 2010). However, planners are either not aware of their role as property market actors (ibid.), or they perceive themselves too much as a mediator between different interests instead of an enabler on the property market (Fox-Rogers & Murphy, 2016). This can be problematic considering the recent changes in property markets which have become quantitatively oriented (Loon & Aalbers, 2017). Therefore investors can also be found in the role of regulators, creating victorious financial investments that are distanced from the built environment and current residents (Aalbers, 2019). In the article by Adams and Tiesdell (2010) the role of urban planners in the land and property market is discussed. Concluding that a gap is present between the market and the planners. Planners would be helped by connecting more with the market, engaging more in the market and reconstructing markets instead of just being inferior to the market.

Planners need to work together with real estate investors on a daily basis to develop cities for people. But there is a research gap present in existing literature as discussed earlier (Theurillat, et al., 2015; Raco et al., 2019). Articles that display the investor's perspective to planners can be found such as Raco et al. (2019). The article explains that planners are seen as a certainty for quality and more return of investment in the case of London. However the planning system is seen as inefficient and too politically flavored, at least in the UK. This article also explains that real estate investors are too often expressed as enablers with financial motives but are also willing to solve social issues.

The media is a channel which can have generalized perceptions (Seiter, 1986; D'Angelo & Lombard, 2008). But operates as an important bridge that reports policy and research to the public. Although news media can be too sensational or politically flavored it can influence public debate (Heslop & Ormerod, 2020). An article by Soo (2013) investigates the role of the media on the housing market. The housing market is a widely discussed topic in the media because the biggest part of society lives in a house, one of the few things we all have in common. Soo (2013) attempts to measure sentiment through media outlets and find correlations between housing prices. However the paper of Soo's (2013) states that further research is needed on which factors drive sentiment and what the exact role of the media is on the market. Research from Raynor et al (2017) shows that the media does have an influence on the topics planners debate regarding urban consolidation. Therefore it could be

interesting to research the influence of the media on the relationship between planners and real estate investors.

Based on the previous research, this paper wants to contribute research on the role of the media on the housing market. Specifically researching how the media portrays real estate investors and to what extent the media affects the relationships and perception between real estate investors and planners as property market actors.

Methodology

Conceptual Model

The conceptual model shows how the previously key concepts interrelate with each other .

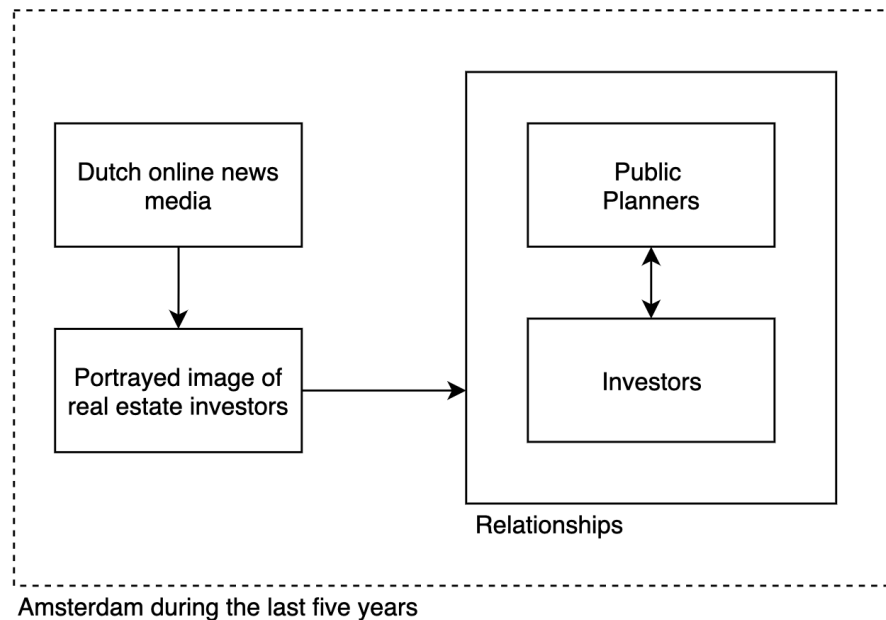


Figure 1 - Conceptual model. Visualizing the link between the online news media and the possible influence online news media can have between public planners and real estate investors during the last five years in Amsterdam.

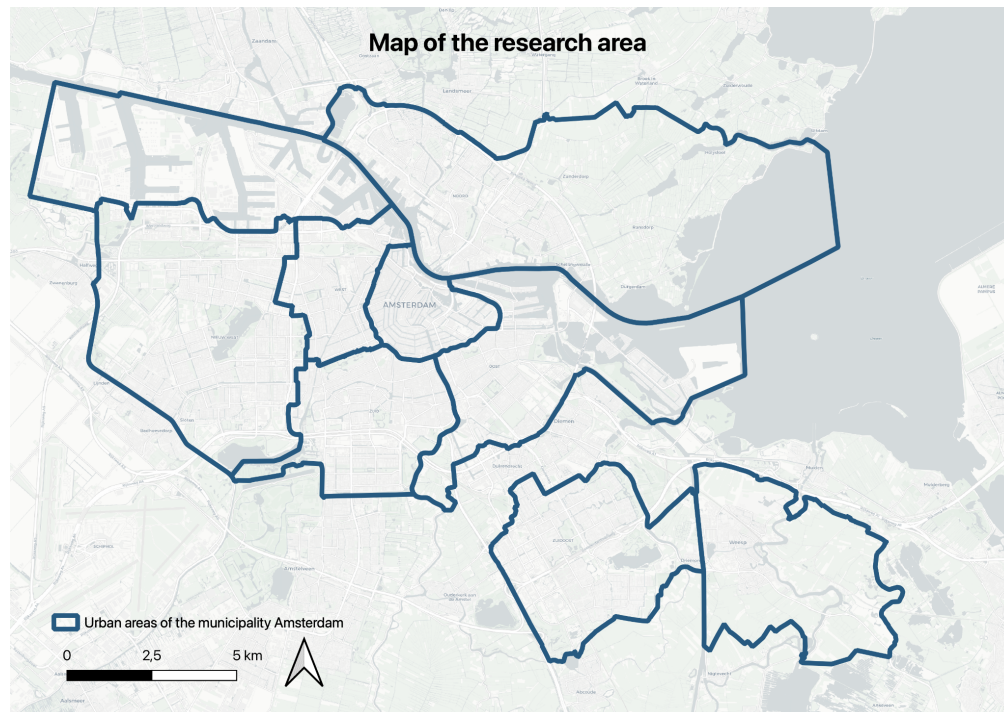
Hypotheses

It is expected that the media will have a generalized negative view on real estate investors and it is expected that there is an influence of the media on public opinion. But it is expected that planners are aware of media influences and therefore approach work issues cautiously thus it is not influencing them in their work significantly.

Case selection

This research is conducted in the municipality of Amsterdam. The Amsterdam area is well suited for research on this topic because of the high amount of investors that invest in real estate in the city, in 2021 35% of all houses sold in Amsterdam went to investors (NOS.nl, 2021). In The Netherlands, Amsterdam is the most expensive city to live in and it has a high housing shortage which makes the case extra interesting to review (Ministerie van Binnenlandse Zaken en Koninkrijksrelaties, 2021). Amsterdam is also an interesting place for investors to invest, in comparison to a region such as Zeeland (van Loon & Aalbers, 2017). Another interesting aspect is that the municipality owns 80% of the land, making it an obvious property market actor (R-03, 2022). This gives the municipality a lot of control on the building of new housing, but on the other hand there is little control or regulation

possible on current housing stock (Hochstenbach & Ronald, 2020). The area Amsterdam will be defined as the municipality Amsterdam as seen in map 1.



Map 1 - The 9 Urban areas of the municipality of Amsterdam which together form the research area.

Data collection

To gather data for this research a triangulation of research methods was used, this strengthens the research (Clifford et al., 2010). At first essential literature was discussed to gain fundamental knowledge for this research. This background helped to make a media analysis which then was strengthened by in depth expert interviews. To answer the main question this research is split up into a main question and multiple sub questions which will help answering the main question.

The first sub question: "**How did online news media portray real estate investors in Amsterdam during the last five years?**" Was answered by a sentiment analysis. This was done by scraping news headlines from the past five years and analysis by an NLP. Research has shown that a sentiment analysis through an NLP on news articles can offer interesting results (Balahur et al., 2013; Godbole et al., 2007). Especially with the advancements in developments of NLP's in recent years, high levels of accuracy (76% for positive, 75% for negative) can be reached on news articles with a well trained model (Souma et al., 2019). On other text sources that have been researched to a greater extent, accuracies of over 90% are reported (Delobelle et al., 2020; Hee et al., 2021). The data range of five years is defined as 1-1-2017 till 16-5-2022 for the ease of coding the script. Six articles that stood out were analyzed in depth, to gain a deeper knowledge of the subject. This improved the understanding about how the media portrays real estate investors. Relevant news articles were selected by keywords as described in table 1. Media is limited to online news media and articles in Dutch. A

database of articles was made using Python Script for Google News. The database was filtered to increase the quality of the database, and a couple of popular sources were removed.

Keywords are selected based on general terms that correspond to the housing market, rental housing and real estate investors. The keyword "Huisjesmelker" is a word that was commonly found in news articles about landlords. It defines a landlord that asks too much money for its rental property. This keyword does have a negative bias by itself. It should therefore be used with care, it can not be analyzed as the other keywords which have a rather neutral stance. But it was added as possible validation of the sentiment analysis as a negative sentiment is expected.

"Vastgoedinvesteerder amsterdam" (Real estate investors Amsterdam)	"Huizenprijs Amsterdam" (House price Amsterdam)	"Vastgoed Beleggers Amsterdam" (Real estate investors Amsterdam)
"Huizenmarkt amsterdam" (Amsterdam housing market)	"Woningmarkt Amsterdam" (Amsterdam housing market)	"Huisjesmelker amsterdam" (slum landlord Amsterdam)
"Huurwoning amsterdam" (Rentalhousing Amsterdam)		

Table 1 - Keywords used as queries in google news to find news articles

The second subquestion: ***"What is the public planner's perspective on real estate investors and did the relationship between real estate investors change?"*** is answered through semi-structured expert Interviews with public planners in Amsterdam. The interviews focussed on the relationship between planners and real estate investors. Potential candidates were found through cold approaches on LinkedIn, referrals and snowballing. The process of finding suited candidates was quite challenging therefore it was decided to also ask planners with less or no direct contact with real estate investors and project developers for an interview.

All interviews were done online for practicality. The interviewees can be found in table 2. Semi-structured interviews provide enough freedom to ask follow up questions that come up during the conversation which allows to get more in-depth into the topic. At the same time, the interview guide will offer enough structure to allow for data collection and comparison (Clifford et al., 2010). It was important to introduce the topic with care to interviewees to limit biased responses. R-5 is not a planner but due to his position within the municipality offers valuable insights in the relation between planners and real estate investors.

Function	Instance	Respondent	Interview date	Contact	Amount of contact with investors
Senior planner - space & sustainability	Municipality of amsterdam	R-1	28-04-2022	Linkedin	Some direct contact
Planner - energy transition & strategy	Municipality of amsterdam	R-2	29-4-2022	Linkedin	No direct contact
senior Urban planner - demography and housing market	Municipality of amsterdam	R-3	4-05-2022	Linkedin	No direct contact
Strategic advisor and planner - space & sustainability	Municipality of amsterdam	R-4	16-05-2022	Snowball, linkedIn	Incidental direct contact
Strategic advisor area development and mead of fund management	Municipality of amsterdam & Development company Amsterdam	R-5	18-05-2022	Snowball	Lots of direct contact

Table 2 - interviewees

The data of the sentiment analysis was compared to the experience of the interviewees to answer the last subquestion: ***“Does the media representation of real estate investors affect how planners view and interact with real estate investors?”*** offering interesting insights and recommendations for future research.

Data analysis

Media analysis

The database of scraped news articles was further analyzed in Python with a sentiment analysis algorithm. First the database was prepared for analysis by translating from Dutch to English with a google translate API (Application Programming Interface). The English database was analyzed using a simple neural language processing library Textblob (Textblob, 2022). Textblob ranks the headlines with a polarity score of -1.0 to +1.0 to show its sentiment. With -0,5 to -1,0 meaning negative, 0 neutral and +0,5 to +1,0 positive. Results can be found in table 3. Research from Zhu et al., (2022) on the Chinese housing market shows that a sentiment analysis with NLP and machine learning of social media tweets can be a useful and a better method than surveys to analyze the housing market. Although that research made use of a more advanced and custom trained NLP.

Keyword	AVG Polarity	Total count	Negative counts	Neutral counts	Positive counts
"Vastgoedinvesteerder Amsterdam"	0.0500	58	10	21	28
"Vastgoed Amsterdam"	0.0759	4019	421	1836	1763
"Projectontwikkelaar Amsterdam"	0.0738	328	37	163	129
"Woningmarkt Amsterdam"	0.0842	1794	274	702	819
"Huizenmarkt amsterdam"	0.0811	924	159	365	401
"Huurwoning Amsterdam"	0.0572	822	150	328	345
"Huisjesmelkers Amsterdam"	0.0306	165	25	94	47

Table 3 - sentiment data from the analyzed news articles divided by keyword

Initial exploration of sentiment analysis was interesting. The initial orientation was done on individual articles with a simplistic and pre-trained sentiment analysis library. However retrieving full articles on a large scale, which are needed to make grounded conclusions, was challenging. It would have involved building custom scripts for all separate news sites. Therefore it was decided to only work with websites which could be easily scraped using google news. This process resulted in the analysis of headlines for 7 search queries and 8110 articles. However the data from the NLP shows a strong neutral and slight positive result which can be doubted, this will be discussed in the results. Due to the potentially weak data from the algorithmic sentiment analysis it was decided to do an in depth analysis of six articles that stood out from data. This was done to gain a better understanding about the topic but can also help increase knowledge about the script which can be found in table 4. The articles were selected based on high (> 0.5) and low (> -0.5) polarity scores but also based on relevance for the research and quality of the source. It is advised to read the limitations in the discussion regarding the sentiment analysis thoroughly.

Worth mentioning is that python scripts used in this research are mostly combinations of scripts from online tutorials and customized by the researcher to fit the research needs. Although written by the

researcher they are not designed by the researcher. Further understanding and time is needed to write a dedicated script for the sole purpose of this research. The source code can be found in appendix 4.

Header	Source	Date	Type of source	Polarity
Woningnood: 'Zo erg is het sinds WO II niet geweest'	Metronieuws.nl	13-01-2020	Popular newspaper	-0,7
Hypotheekrente stijgt 'als een raket': 'Niet te zeggen waar dit ophoudt'	Telegraaf.nl	19-4-2022	Popular newspaper	-0.67
De wanhopige zoektocht naar een woonhuis	Parool.nl	24-12-2021	Quality newspaper	-0.6
Ruim 600 woningen in gebied rond station Noord	Parool.nl	10-04-2017	Quality newspaper	0.5
Komt het nog goed met de woningmarkt? "Amsterdam blijft een magneet"	AT5.nl	13-9-2021	Local newspaper	0.8
'Ik ben zo blij dat de expat ruling komt te vervallen'	Parool.nl	17-8-2018	Quality newspaper	0.8

Table 4 - Hand picked articles with high and low polarity scores which are relevant to the research topic

Interviews

The aim of the interviews was to gain insight into views, experience and perceptions of interviewees on the topic at hand, based on their statements, explanations and personal anecdotes. Therefore, systematic coding with Atlas.Ti would not have offered any useful additional insights. Interviews were recorded with an Iphone and transcribed using Amberscript. The transcriptions were summarized, from which key elements and quotes were used in the results.

Ethical considerations

The usage of data scraping to gain access to a large database of articles is a gray area which needs to be handled with care (Krotov, 2020). No data was scraped from external websites which might not allow data scraping in their terms of use. But for further research insights in full articles would need a process which not all news websites would allow. Therefore it would be advised to use the legal database which pays royalties and does not violate the terms of service of certain news websites.

Interview data is a sensitive form of data and interviewees need to be reassured that all information is handled with care. Therefore a consent form was sent to participants, permission for recording was requested and it was explained that their information will be solely used for this research. This was rechecked at the beginning of each interview. The interviewees had the right to stay anonymous and to correct the transcription on factual mistakes. The consent form is attached in appendix 3. The personal data of the interviewees will be stored for 6 months after the research is finished and deleted afterwards.

Results

In this chapter the analyzed data is presented, along the order of the research questions. The media analysis showed weak results but in depth analysis of multiple articles shows indications for a negative image on real estate investors. Analysis of the interviews shows that planners are aware of a negative image. The planners are also aware that the media has influenced the discussions on the workflow and in (local) politics.

What does the media think of real estate investors?

The sentiment analysis of news headlines did not offer any significant results. Figure 1 shows the total distribution of sentiments for all search queries. The amount of headlines which received a neutral polarity is significantly higher than expected compared to past research (Balahur et al., 2013; Godbole et al., 2007; Souma et al., 2019). The high number of articles with a neutral sentiment according to the sentiment analysis can be explained by the lower quality model that was used for this research. But also due to the writing style of qualitative newspapers with less sensational headings which do not trigger a lot of sentiment. Search queries such as "woning amsterdam" (Home amsterdam) also offered weaker data due to the fact that events that took place inside a home are also picked up by the scraper but have nothing to do with the housing market. During verification of the database, articles with headlines such as: "76ste Kamerlid vooral bekend om gedoe met zijn pandjes" (nos.nl, 2019) or "Oververhitte huurmarkt 'perfecte voedingsbodemp voor oplichters'" (nos, 2021) which a human would categorize as negative, are rated with a polarity of 1.0 indicating a very positive article. Highlighting reliability concerns of the algorithm. Therefore it was decided to not make any conclusions or recommendations based on the data of the NLP.

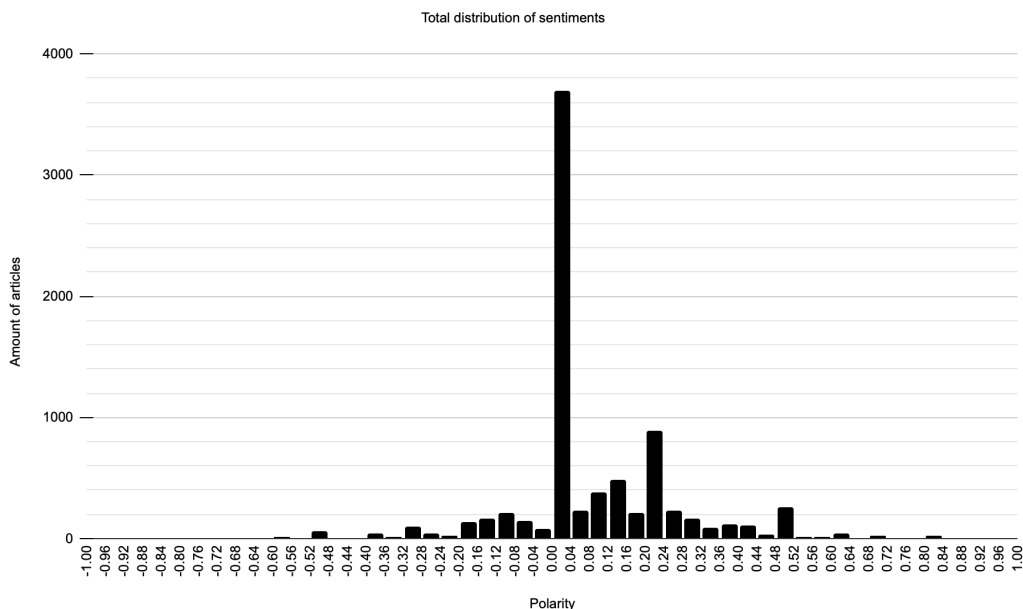


Figure 1 - distribution of polarity from all news articles combined

In figure 2 a trend is visible, the amount of articles that fit the search queries did increase in the last five years. Although it can not be said with certainty that this change is due to increased media attention on the topic. It could also be clarified by the growing rise of online news media or changes in the Google news search algorithm. By using curated databases as mentioned before, a conclusion with more certainty could be made.

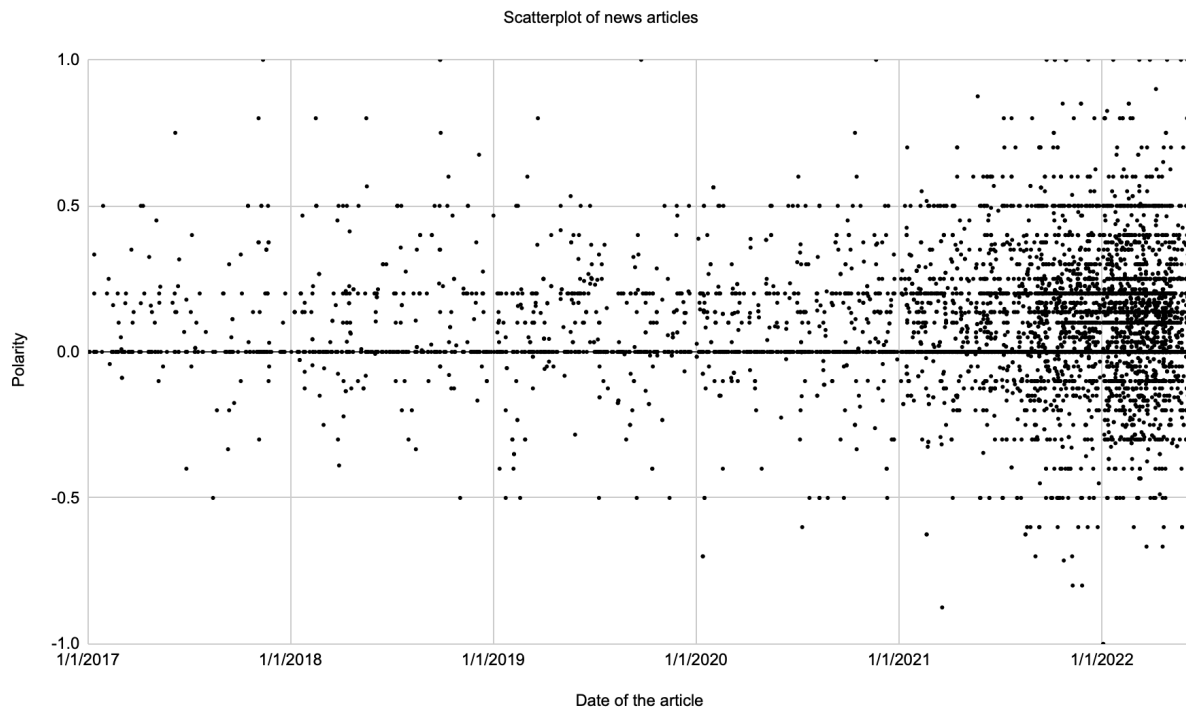


Figure 2 - Scatterplot of sentiments found of all articles in total in relation to the timeframe of five years.

To overcome the reliability issues of the NLP an in depth analysis of six articles was made, three categorized as negative and three categorized positive. Negative articles tend to dramatize by using adjectives comparing the housing market with 'Anarchie' (*anarchy*) (metronieuws.nl, 2020), or 'zieke huizenmarkt' (*diseased housing market*) (nhnieuws.nl, 2021) and 'Wanhopige huizenmarkt' (*desperate housing market*) (telegraaf.nl, 2022). Whereas in positive articles such as: "Ruim 600 woningen in gebied rond station noord" (More than 600 homes in the area around Noord station) from the Parool (2017) not one single adjective can be found. But also the article by AT5 (2021) "Komt het nog goed met de woningmarkt? Amsterdam blijft een magneet" (*Will the housing market become okay? Amsterdam remains a magnet*) which is categorized as highly positive (polarity 0.8) by the NLP can rather be seen as neutral or negative in human interpretation as it discusses problems but also offers nuances to the existing problems. Furthermore articles from trade magazines in the real estate branch talk about a negative image of real estate investors (vastgoedjournaal.nl, 2021) and the planners all agree on a negative sentiment on real estate investors to some extent (R-1, R-2, R-3, R-4, R-5, 2022). Therefore it would be justifiable to conclude that there is a slight indication of a negative image on real estate investors, but more in depth analysis is needed.

What does the planner think?

Because not all planners have direct contact with real estate investors as initially anticipated. It was decided to compare data from planners working at different departments and with different levels of contact to investors. There is a gap visible between the planners that work with real estate investors on a regular basis and planners who do not. This gap is also confirmed by R-5.

All of the respondents except R1 see real estate developers as essential to finance the high amount of housing that is needed. One planner is open to new alternatives and nuanced on the topic: *"We need housing, lots of it. That will not work without real estate investors, but at the same time I do think that I contradict myself a little bit. We should explore more how we can do it without real estate development investors, because the developers often do not only aim to solve the housing shortage"* (R2, 2022). But R-1 goes as far as saying that the current market should move back to "volkshuisvesting" (public housing). *"I think it's very commercial, so we have to go to a, I wouldn't call that a housing market, because that's ask & demand. Housing must become public housing again. That means a different kind of entrepreneurship"* (R-1,2022). Contradictory, R-1 also sees himself as a co-creator together with a real estate investor and thinks the image of the media is too negative. R-2 mentions that it is hard for him to work with real estate investors, they can block sustainability interventions due to profit margins.

All planners agree to some extent that real estate investors in Amsterdam are in the market for the long term and want to create investments that maximize profits over a long time period by creating livable projects, built with the people in mind. Not a lot of "hit and run" investors can be found in Amsterdam (R5, 2022). these "cowboys" as R-3 calls them, get ruled out of the market in no time, since the municipality owns 80% of the land, thus has a lot of power. *"All developers I know also have a social component, so they certainly want their real estate to make money, but also want to ensure that it becomes a good and beautiful project. And in the end they benefit the most from it.... Someone who buys and exploits that building for a long time must be assured the comfort that it will also yield return in the long term"* (R1, 2022). R-2 and R-4 see a difference in investors that buy existing stock in comparison to the investors that invest in new housing stock. The buyers of existing stock are viewed more negatively.

All respondents agree to some extent that the media can be too shallow, biased and tends to magnify negative news. Most respondents notice a negative trend toward real estate investors. A difference between local and national news media was mentioned by R-5 who doesn't notice a negative trend in local media. However the positive examples of AT5 that R-5 mentioned are not picked up by the scraping algorithm which again highlights the reliability concerns. *"Negative imaging is very easy. But yes, if you look under the hood at how things work in practice, you will see that they are committed to solving the housing problem as well. And they just want to make money. But that's yeah, you know that's how it's going to be, that's part of it, I'd say, we just want to make sure profits don't become too big"* (R-5, 2022).

R-3 as a demographer thinks you can not blame investors for following the market trends, but believes that the market reacts to slowly to the current situations: *"As a planner I see that the market actually reacts quite slowly to trends that we saw ten or twelve years ago, namely a need for smaller homes and for influx into the city. Then it was very much said: that is not cost-effective, we just need large homes. The market actually reacts very slowly to that. Now they only want to build small. So we really*

have to advise yes, certainly with regard to the starter homes, those medium-priced homes and the social housing" (R-3, 2022).

R-3 and R-4 are debating whether Amsterdam is drowning in its own success. Amsterdam is following the direction of London, a global city. So people with high-middle income won't get a house anymore. Therefore hoping for a national policy. The planners did not notice any significant change in the type of investors during the last five years. There is a little indication that the field has become more international (R-1;R-3;R-5, 2022). According to R-3 in the last 10 years a change is visible, the power of the corporations declined. But no evidence for a change in relationships during the last five years has been found.

Does the media actually have an impact?

All planners state to be cautious to limit biases or unwanted influence from external sources such as the media in their work. Amsterdam is a very international city with lots of different cultures and people therefore a lot of knowledge is present regarding bias. And if there is a lack of knowledge it is important to enter conversations with residents in the city or organize public hearings in politics according to R-1 and R-5 (2022). The planners all have to follow policy from national politics and the municipality and therefore they expect that the room for biases is limited. R-2 likes to tackle problems with scenario approaches, and R-3 as a demographer uses his data as a basis. This helps limit unwanted influence according to them.

However, multiple respondents argue that the media can have influence on their work. A conscious process in which planners and policy makers deliberately read and discuss news articles on the workfloor. This offers valuable opinions, critique and an insight in the voice of the city. Giving the media a controlling function. *"The media can actually put something higher on the agenda...Than we would actually put it, so the media certainly is an actor or factor in it" (R-4,2022).* Therefore the media does have influence on the planner. *"We have de Parool here in Amsterdam and that is a kind of a love-hate relationship that we have as an official apparatus. It is often incorrect or it is much more nuanced. But we do have a sense of the voice of the city. Those pieces, we read them, we are confronted with them, so they at least determine the conversations we have. So we get it back indirectly from the policymakers" (R-4, 2022).*

Reflecting back on the interview data it is worth noting that although all planners evidently state not to be biased, big fluctuations are visible in opinions on real estate investors. R-2 admits a discrepancy between his personal opinion and his opinion as a planner. Interestingly his opinion sits in line with negative discourses from news articles. This can also be said to a lesser extent about R-3. Three planners link their responses on bias to diversity which had nothing to do with a bias on real estate investors. All in all it is hard to state all interviewees are truly unbiased.

In the end, indications for an influence by the media are present. The media does have an influence on public opinion and discussions in national and regional politics. The policy that planners need to follow is based on national and regional politics. therefore arguing that the media does have an influence, may it be indirectly.

Discussion

The research started with the discussion of key concepts, followed by a sentiment analysis and expert interviews. The media analysis delivered weak results, but with the insights of the experts and an in-depth analysis of news articles a slight indication for a negative perception on real estate investors was found. From the interviews a clear influence from the media on the work of the planners has become evident. This chapter will translate the results to practical implications, note limitations of the research and offer advice for future research.

This research can be positioned next to research from (Campbell, et al., 2014; Özogul & Tasan-Kok, 2020; Theurillat, et al., 2015; Raco et al., 2019). Highlighting the importance to gain further understanding on how real estate investors behave. The influence of the media is generally in line with other research such as Raynor et al. (2017). This research offers new insights on how investors are perceived by planners and the media. It sheds light on planners' experiences, working in the field of housing which is very much contested right now and receives a lot of attention. On the one hand, planners are supposed to facilitate massive housing production, and on the other hand, views on real estate investors are quite negative and governments become more restrictive. This can create a challenging situation for planners.

Although sentiment analysis with NLP is propitious as shown by other scholars (Hu et al., 2022). Shortcomings of execution in this research have to be acknowledged. Improvements for future research should include:

- Access to a proper database such as LexisNexis datalab with quality newspapers instead of scraping.
- Full text analysis of all articles.
- A native Dutch NLP such as BERTje, developed at the university of Groningen or robBERTa with higher accuracy (Delobelle et al., 2020; Hee et al., 2021).
- Using a specialized database to train the NLP for sentiment in news articles. Increasing accuracy and offering the ability to validate accuracy.
- Improvements to the filtering process of the database
- Improve the python knowledge of the researcher.

Next to the limited amount of news articles in the in-depth analysis it could also be further improved by using a framework for analysis. Initially this research anticipated interviewing planners with direct contact to investors. This turned out to be not feasible, therefore planners with no direct contact were also interviewed offering interesting results that were not anticipated beforehand. But increasing the amount of planners with direct contact is advised in future research. In this research deliberately no differentiation between types of investors is made due to the exploratory character. In future research it would be recommended to go in depth on the perception of different kinds of investors with the use of the meta categorisation of Özogul & Tasan-Ko (2020) for example.

It can be interesting to explore other methods of sentiment analysis in future research. For example by running a sentiment analysis on tweets. Another topic for further research is the limited influence of the media on the work of planners according to the planners themselves. But there is a clear influence shown and a rather significant discrepancy in perception of real estate investors by different planners which should be studied further.

Conclusion

In the end it can be concluded that the media does have an influence, but planners state that they are aware of this influence. This is in line with the hypothesis stated at the start of the research. It remains unclear if planners are truly unbiased in their opinion and there is no evidence found for a change in the relationship. However there is significant discrepancy in perception of real estate investors with direct contact to investors and planners that have no direct contact. Other insights consist of the process in which planners are influenced by the media. It is expected to be coming mainly from policy set by national and local politics. It is however interesting to notice a difference in opinion on real estate investors by the planners. Where two planners want to investigate alternatives to the 'housing market', the other planners are totally happy with the current system on the housing market in Amsterdam. This can be due to personal views and beliefs but also due to different positions regarding the amount of collaborations with real estate investors and this should be researched further.

It is recommended for planners to be aware of their position and planners should not be led by their personal opinion. Planners should tackle work issues according to the facts. Although this sounds obvious, everybody has biases and it is important to stay aware of that to limit unwanted influences. The planners should stay open minded for alternatives and innovations for the current housing market in the long term but also agree that working together with real estate investors is the only solution to solve the housing crisis in the coming years. Highlighting the importance of knowing more about real estate investors and their behavior. And gain further understanding that investors are not all the same even though the media, planners but also planning literature tends to portray them as a homogenous group.

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Appendix 1 - interview guide English

1. Introduction

- a. Welcoming the interviewee and explaining the aim of the research
- b. Confirm time
- c. Personal introduction of the researcher
- d. Explaining what kind of questions can be expected and that answering is not obligatory
- e. Privacy consent and asking for permission to record the interview.

2. Warming-up questions

- a. What is your current position within organization X?
- b. On what kind of projects are you working right now in Amsterdam?

3. Relationship with real estate investors

- a. Are you currently working with real estate investors?
 - i. If yes: What kind of relationships do you form with investors?
- b. Is it challenging to collaborate with real estate investors?
 - i. Why is it challenging?
 - ii. Why is it not challenging?
- c. Do you think the type of investor (or the behavior of investors) has changed in the last few years?
- d. What is the most challenging aspect when working with investors?

4. Media outlets

- a. Media analysis shows that investors are increasingly addressed in the media, did you notice this shift as well?
- b. How do you think the media is presenting investors?
- c. To what extent do the views of investors in the media overlap with your own experiences?
- d. Does the media influence your work as a planner?
- e. Do you approach your work in a certain way to minimize biases?

5. Conclusion

- a. Are there any important topics that I overlooked but are relevant regarding the research?
- b. Thank you message
- c. Any final questions?
- d. Do you want to have a look at the transcript?

Appendix 2 - interview guide Dutch

1. Introductie

- a. De geïnterviewde verwelkomen en het doel van het onderzoek uitleggen
- b. Tijd bevestigen
- c. Persoonlijke introductie van de onderzoeker
- d. Uitleggen wat voor soort vragen kunnen worden verwacht en dat antwoorden niet verplicht is
- e. Privacy Toestemming en toestemming vragen om het interview op te nemen.

2. Opwarm Vragen

- a. Wat is je huidige functie binnen organisatie X?
- b. Aan wat voor soort projecten werk je nu in Amsterdam?

3. Relatie met vastgoedinvesteerdere

- a. Werk je momenteel samen met vastgoedinvesteerdere samen?
 - i. Zo ja, Wat voor soort relaties ga je aan met investeerdere?
- b. Is het een uitdaging om samen te werken met vastgoedinvesteerdere?
 - i. Waarom is het uitdagend?
 - ii. Waarom is het niet uitdagend?
- c. Denkt je dat het type belegger (of het gedrag van beleggers) de afgelopen jaren is veranderd?
- d. Wat is het meest uitdagende aspect bij het werken met investeerdere?

4. Media outlets

- a. Uit media-analyse blijkt dat beleggers steeds vaker in de media worden genoemd, is deze verschuiving jou ook opgevallen?
- b. Hoe denk je dat investeerdere in de media worden gepresenteerd?
- c. In hoeverre overlappen de meningen over investeerdere in de media met je eigen ervaringen?

- d. Beïnvloeden de media je werk als planner?
- e. Benader je je werk op een bepaalde manier om vooroordelen te minimaliseren?

5. Conclusie

- a. Zijn er belangrijke onderwerpen die ik over het hoofd heb gezien, maar die wel relevant zijn voor het onderzoek?
- b. Dankwoord
- c. Zijn er nog nog laatste vragen?
- d. Wilt je het transcript inzien?

Appendix 3 - consent form

Consent Form

Research project: Bachelor Thesis Spatial Planning & Design

Working title: Changing planners perspectives: How strong is the influence of the media on the perception of real estate investors?

Institute: University of Groningen

Student: Yannick Schurwanz y.schurwanz@student.rug.nl

Supervisor: Sara Özogul s.ozogul@rug.nl

I would like to thank you for your support in my research about the relationship between real estate investors and public planners in Amsterdam. And how news media have an effect on this relationship. The interview will explore your work as a planner in collaboration with real estate investors. Your data will be handled with care and will only be used to answer the research questions. The interview will either take place online or in person. It will be an open interview and it is possible to stop at all times or to not answer certain questions.

By signing this document I Acknowledge:

- The interview will be recorded and my recording will be stored for the duration of the research
- Participation in this research is voluntary and I do not have to answer every question
- Any data or conclusions gathered out of this research can be used in future publications
- My interview will be transcribed and I can check my transcription for factual inaccuracies. The transcriptions will not be included in the research
- My data and recordings will be deleted as soon as the research is finished or as if requested
- My first name can be used in the research

Hereby I agree to participate in the research of Yannick Schurwanz and I acknowledge the statements mentioned above.

Name:

Organization:

Email:

If you want to receive a transcript of the interview via mail please enter your email, otherwise, leave blank.

Date:-.....- 2022

Signature:

Appendix 4- source code

```
#instal packages

!pip install requests_html --quiet

!pip install pygooglenews --upgrade --quiet

!pip install newspaper3k --quiet

!pip install pandas

!pip install textblob

!pip install googletrans==3.1.0a0
```

```
#call libraries

import datetime

from datetime import date

from pygooglenews import GoogleNews

from googletrans import Translator

gn = GoogleNews(lang = 'nl', country = 'nl')

#loop script for the last five years

for yyear in range(2017,2023):

    for mmonth in range(1,13):

        for dd in range(1,29):
```



```

start_date = datetime.date(yyyy, mmonth, dd)

end_date = datetime.date(yyyy, mmonth, dd)

#search query

delta = datetime.timedelta(days=1)

search = gn.search('Search quarry', from_=start_date.strftime('%Y-%m-%d'),
to_=(end_date+delta).strftime('%Y-%m-%d'))

#translate data from Dutch to English

links=[]

translation = []

for item in search['entries'][:100]:

title_text = item.title

if title_text:

title_text = title_text.encode("ascii", "ignore")

title_text = title_text.decode()

translator = Translator()

result = translator.translate(title_text, des='en')

trans_text = result.text

links.append(title_text)

translation.append(trans_text)

```

```

#write data to CSV

date=[]

for item in search['entries'][:100]:

date.append(item.published)

import pandas as pd

d={"Headline": links, "Translation" : translation, "Timestamp": date}

df = pd.DataFrame(d)

df.to_csv (f'headlinesX_{yyyear}_{mmonth}_{dd}.csv')

```

```

#merging of CSV's

import pandas as pd

import glob

import os

# join the seperate CSV files

files = os.path.join("path to headline files", "headlinesX_*.csv")

files = glob.glob(files)

```

```

#import library

import pandas as pd

```

```

import numpy as np

from textblob import TextBlob

import matplotlib.pyplot as plt

plt.style.use ('fivethirtyeight')

#store data

df = pd.concat(map(pd.read_csv, files), ignore_index=True)

#get polarity

def getPolarity(text):

    return TextBlob(text).sentiment.polarity

#new collum

df['Polarity'] = df ['Translation'].apply(getPolarity)

#show sentiment

def getSentiment(score):

    if score < 0:

        return 'negative'

    elif score == 0:

        return 'neutral'

    else:

        return 'positive'

```

```
#sentiment collum

df['Sentiment'] = df['Polarity'].apply(getSentiment)

#show dataset

df.head(100)
```

```
#plot sentiment

plt.title('Sentiment Analysis')

df['Sentiment'].value_counts().plot(kind= 'bar')

plt.xlabel ('sentiments')

plt.ylabel ('counts')

plt.show
```