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# Valuation tools and politicians' willingness to sell public real estate: a survey experiment

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## ABSTRACT

Public managers often employ valuation tools to support policymakers. These tools are expected to rationalize decision-making. Using a vignette-based, randomized survey experiment with Flemish politicians, the authors study the effect of the type of valuation tool, valuation outcome, and asset salience on politicians' willingness to sell public real estate assets. The purpose is to test whether valuation tools indeed spark rational reactions from politicians, thus demonstrating their value as decision-making support. Findings suggest that cognitive biases emerge when politicians are confronted with valuation tools. Public managers need to take those biases in account when employing valuation tools.

**KEYWORDS** Valuation tool; political decision-making; public real estate management; survey experiment; cognitive bias

## Introduction

This study examines how politicians are influenced by valuation tools and outcomes to assess values at stake for a given policy issue, by employing the case of public real estate disposition by local government. Public real estate refers to buildings (e.g., office buildings, schools, libraries), infrastructure (e.g., roads, waterways), and land (e.g., land for development purposes, parks, forests) that are legally owned by a national, regional or local government (Wojewnik-Filipkowska, Rymarzak, and Lausberg 2015). Public real estate typically accommodates the primary processes of government. For example, a local government owns a town hall and office buildings to provide healthy and productive workplaces for public employees; swimming pools and sports centres to provide residents with facilities for recreation; and schools to offer children facilities for education. Public real estate constitutes the physical environment from which public employees work and public services are delivered, and therefore impacts its users, and influences the efficiency, effectiveness and legitimacy of government (Gibson 1994).

On the one hand, public real estate assets represent an economic value on the real estate market. Hence, the sale of these assets to private or other public entities contributes to government reserves, which can be interesting for governments in times of economic recession. Indeed, ever since the 2008 global financial crisis, in

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search for revenues and savings, governments show a growing interest in no longer owning real estate assets (Wells 2014). On the other hand, public real estate assets are recognized as policy instruments (i.e., critical resources) for governments to achieve policy goals and create public value (e.g., Kaganova and McKellar 2006; van der Schaaf 2002; Wojewnik-Filipkowska, Rymarzak, and Lausberg 2015). Examples of policy goals include providing good employment practices, providing recreation opportunities, providing education opportunities, reaching environmental sustainability goals, improving safety in neighbourhoods, and facilitating the access to and quality of public services. As a result, the sale of public real estate assets by government is accompanied by values trade-offs.

Depending on political considerations, governments determine public goals and tasks. To accommodate those, governments consider whether it is necessary and desirable to own the real estate assets required, taking into account that the ownership of real estate involves responsibilities, risks and management. Kaganova and McKellar (2006, 2) define public real estate management as ‘the process of decision-making and implementation relating to the acquisition, use, and disposition of real property.’ Real estate management, here, includes ‘interconnected functions (e.g., planning, organizing, staffing, controlling) to achieve the [...] [government’s] goals [and tasks] by using available resources efficiently and effectively’ (Wojewnik-Filipkowska, Rymarzak, and Lausberg 2015, 6). Decision-making, here, includes ‘the analysis of alternatives, the application of criteria according to the preferences of the decision-maker, and finally making a choice’ (Wojewnik-Filipkowska, Rymarzak, and Lausberg 2015, 6).

Within local government, elected officials in local councils are typically responsible for indicating required public real estate needs and allocating budgets to accommodate the primary processes of the local authority and accomplish public goals and tasks, and thus approving decisions on the acquisition, use, and disposition of public real estate assets (Robin 2018). In practice, to support the analysis of alternatives and make informed decisions about public real estate, elected officials are confronted with monetary and non-monetary valuation tools that assess the value of public real estate assets (Christie et al. 2012; Lundström and Lind 1996), typically provided by public managers that are part of the administration. Often, the underlying assumption is that valuation tools influence and, ideally, rationalize decision-making behaviour by elected officials. In line with Christie et al. (2012, 75), ‘valuation is recognized as an important tool to help [elected officials and] policymakers better understand, and therefore account for, all of the ways in which people [...] value [public real estate].’ In addition, by means of these tools, elected officials can legitimize their decision-making behaviour (Carpenter and Krause 2012; Coicaud 2002). Importantly, these assumptions concerning the rationality ensuing from using valuation tools are strongly contested on the basis of insights from behavioural science (George 2020; James et al. 2020), which indicate the existence of cognitive biases among politicians (e.g., Battaglio et al. 2019; George et al. 2017). Despite these conflicting perspectives on the impact of valuation tools, little causal evidence can be found on the decision-making consequences of valuation tools among elected officials. As such, it is important to examine how politicians make use of valuation tools and outcomes to assess values at stake for a given policy issue, such as, in the present study’s case, public real estate disposition by local government. Hence, the central research question to this study is: *What is the effect of valuation tools on politicians’ willingness to sell public real estate?*

Answering this question offers new and significant information for public management theory, research and practice. First, this study adds to scholarly work on Public Value Governance, which explicitly calls for more empirical research into how diverse government actors deal with the assessment of (public) values for given policy issues (e.g., Bozeman 2019; Bryson, Crosby, and Bloomberg 2014; Fukumoto and Bozeman 2019; Hartley et al. 2017; Nabatchi 2012; Huijbregts, George, and Bekkers 2021). Moreover, this study adds to scholarly work on Behavioural Public Administration, which explicitly calls for more empirical research into how political decision-making is impacted by different strategy and performance tools (e.g., George 2020; James et al. 2020). Second, this study employs a vignette-based, randomized survey experiment among actual local politicians in Flanders, Belgium, to infer causality concerning the impact of valuation tools on political decision-making. This ensures avoidance of endogeneity issues, which is an often-mentioned shortcoming of traditional survey research in public management (George and Pandey 2017), and, simultaneously, increases the external validity of findings, which is an often-mentioned shortcoming of laboratory experiments (Mutz 2011). Moreover, an agenda for future public management research on valuation tools is offered in conclusion based on the study's findings. Finally, guidance is offered for public managers who design and implement valuation tools to support political decision-making, and for policymakers who make use of valuation tools and outcomes: they are made aware of the potential cognitive biases that exist when using these tools, thus allowing to account for those in the future.

To answer the research question, a vignette-based, randomized survey experiment – as part of a traditional survey – is conducted with 938 politicians from Flemish local government. First, the direct effect of two types of valuation tools (i.e., social cost-benefit analysis, citizen survey) on politicians' willingness to sell public real estate in general and to specified buyers (i.e., non-profit organization, public organization, citizen, company) is compared. Second, the moderating effect of the outcome of the valuation tools on politicians' willingness to sell is examined, distinguishing between a negative outcome to selling and a positive outcome to selling. Third, the moderating effect of the type of real estate asset on politicians' willingness to sell is examined, distinguishing between a politically salient and a non-politically salient real estate asset. Knowledge from behavioural theory is applied to the field of public real estate, as follows: rational choice theory (Downs 1957; Scott 2000) and theories on political responsiveness (Manza and Cook 2002; Page and Shapiro 1983) are employed to hypothesize on the direct effect of the type of valuation tool on willingness to sell. Negativity bias theory (Baumeister et al. 2001; Rozin and Royzman 2001) is employed to hypothesize on the moderating effect of the outcome of the valuation tools on willingness to sell. Salience bias theory (Kahneman, Slovic, and Tversky 1982; Epstein and Segal 2000) is employed to hypothesize on the moderating effect of the type of real estate asset on willingness to sell.

In what follows, first, hypotheses are introduced based on literature review. Next, the survey experiment design is clarified, and the results are presented. Finally, the implications of the results are explained with reference to public management theory, research and practice.

## Literature review and hypothesis development

### *Type of valuation tool*

The direct effect of two types of valuation tools (i.e., social cost-benefit analysis, citizen survey) on politicians' willingness to sell public real estate is compared. As a starting point for comparison, two dominant rationalities to political decision-making are examined, specifically a neoclassical economic rationality and a political rationality (e.g., Bryson 2018; Bryson and George 2020; Conn, Meltz, and Press 1973; Elkin 1985). According to the economic rationality, a decision-maker perceives decision-making as a deductive choice process: to decide on alternatives, relevant economic values must be aggregated. Next, according to the political rationality, a decision-maker perceives decision-making as an inductive sensemaking process: to decide on alternatives, relevant individuals or entities must be consulted to reach consensus on values. In line with these dominant rationalities, diverse valuation tools have emerged that assess the value of public real estate assets. The underlying idea is that these tools help politicians make informed decisions by identifying and assessing values at stake.

In line with the economic rationality, a social cost-benefit analysis is a valuation tool commonly used in practice to support decision-making about public real estate (Freeman, 2003). This tool calculates the impact of a real estate decision based on positive impact where societal welfare is increased and negative impact leading to a loss of societal welfare (Freeman, 2003). Here, 'the welfare of a society depends on the aggregate individual utility levels of all members of that society' (De Brucker, Verbeke, and Winkelmanns 1998, 21). Relevant costs and benefits for society as a whole related to a real estate decision are identified, quantified and valued by appropriate market prices. As such, according to economists, a probable range of values can be arrived at to understand economic trade-offs between alternative decisions and to select the most appropriate one. A social cost-benefit analysis, in this regard, provides a rational choice for political decision-makers.

This is where the theoretical principles of rational choice come in. Rational choice theory emerged from microeconomics and, in short, assumes that individual behaviour is motivated by utility maximization (Downs 1957; Scott 2000). As a method of political analysis, rational choice theory is based on two assumptions: methodological individualism and the concept of rationality. Methodological individualism is the principle that statements about the social world can be reduced to statements about individuals. As such, to study politics, the behaviour of individual politicians is examined. Next, the assumption of rationality is an assumption about what motivates the individual politician, being utility maximization. This implies that politicians, within given constraints and on the basis of information that they have about the constraints under which they are acting, 'will select the behaviour that provides them with most subjective expected utility from a set of possible behaviours' (MacDonald 2003, 552). Rational choice theory is applicable to political decision-making about public real estate because, traditionally, decisions in real estate investment are assumed to be rational (de Bondt 1998; Gallimore and Gray 2002). Real estate investors are expected to act rationally by carefully weighing costs and benefits before acting, based on available information. Within public real estate decisions, government is expected to do the same, yet with respect to the utility or social welfare of society as a whole (Kaganova and McKellar 2006).

Then, in line with the political rationality, a citizen survey is a valuation tool commonly used in practice to support decision-making about public real estate (Glass 1979; Irland 1975; Seltzer and Mahmoudi 2013). This tool provides insight into the preferences or values of citizens on the basis of aggregated responses of individual citizens. Citizen surveying functions as a tool to consult citizens about public real estate decisions. A citizen survey, in this regard, provides representational input for politicians to guide decisions.

Here the theoretical principles of political responsiveness come in. According to Manza and Cook (2002, 630), 'the capacity of a political system to respond to the preferences of its citizens is central to democratic theory and practice.' Theories on political responsiveness assume that preferences of citizens resonate in political decision-making (Manza and Cook 2002; Page and Shapiro 1983). Political responsiveness also relates to the argument that politicians derive benefit from pursuing decisions that are or appear to be in accordance with the preferences of citizens. After all, it is in the best interest of politicians to minimize the distance between their own positions and the public's, since they periodically have to be (re)elected. Theories on political responsiveness are applicable to political decision-making about public real estate because public real estate assets are physical displays of how government operates and spends taxpayers' money. In other words, these assets are displays of the values that a government represents. As such, public real estate assets are prone to public opinion, today easily expressed through (social) media. Citizen surveying has functioned as a tool, on the one hand, to increase citizens' trust and confidence in government, and, on the other hand, to improve decisions by giving citizens a voice in decision-making (Fung 2015; Irvin and Stansbury 2004; Michels and De Graaf 2010).

Examining the effect of valuation tools on political decision-making is not new. Scholars have already examined the effect of cost-benefit analyses (e.g., Eliasson and Lundberg 2012; Odeck 2010; Sager and Sørensen 2011) and citizen surveying (e.g., Erikson, Mackuen, and Stimson 2002; Jacobs 1993; Page and Shapiro 1983) on political decision-making. In the present study, the effect of these tools are compared. In existing scholarly work, there are different ideas and conflicting evidence as to whether politicians prioritize economic rationality over political rationality or vice versa when it comes to decision-making (e.g., Bryson 2018; Bryson and George 2020; Conn, Meltz, and Press 1973; Elkin 1985). Reasoning from this, on the one hand, it could be argued that politicians are guided more by an economic rationality than a political rationality when it comes to decision-making about public real estate, and, as such, are stronger affected by a social cost-benefit analysis than by a citizen survey. As such, hypothesis H1a is formulated. On the other hand, it could be argued that politicians are guided more by a political rationality than an economic rationality when it comes to decision-making about public real estate, and, as such, are stronger affected by a citizen survey than by a social cost-benefit analysis. As such, hypothesis H1b is formulated.

- **H1a:** The effect of a social cost-benefit analysis on politicians' willingness to sell a public real estate asset is stronger than the effect of a citizen survey on politicians' willingness to sell a public real estate asset.
- **H1b:** The effect of a citizen survey on politicians' willingness to sell a public real estate asset is stronger than the effect of a social cost-benefit analysis on politicians' willingness to sell a public real estate asset.

### ***Outcome of valuation tool***

The present study also examines the moderating effect of the outcome of valuation tools on politicians' willingness to sell public real estate, distinguishing between a negative outcome to selling and a positive outcome to selling. The question of how human beings process information available to them is of interest to scholars studying behaviour in many different settings. A vast amount of scholarship on information-processing heuristics and cognitive biases has emerged (e.g., Evans 1989; Kahneman, Slovic, and Tversky 1982). Heuristics are simple rules or cognitive shortcuts which human beings use to make decisions, and which allow for reduction in the amount of information to be processed. Typically, these rules work well, yet, they can result into cognitive biases, such as negativity bias or salience bias. Reasoning from the outcome of valuation tools, being either positive or negative, a relevant cognitive bias to examine is negativity bias. Following negativity bias theory, human beings tend to weigh negative information stronger than positive or neutral information (Baumeister et al. 2001; Rozin and Royzman 2001). The opposite of negativity bias is positivity bias, which is typically used less often as a predictive framework within public management than negativity bias (Battaglio et al. 2019), although some evidence exists (e.g., George et al. 2020). Diverse explanations for negativity bias exist. Without the assumption to be exhaustive, a few are listed. First, the selective attention principle might be at stake, suggesting that negative information may be more attention-grabbing than positive information (Soroka 2006). Second, in light of blame avoidance, people's fear of costs might outweigh anticipation of benefits (Nielsen and Baekgaard 2015). Finally, the credibility principle could be at stake, implying that when information comes through the opinions or recommendations of another entity, negative information may be more credible than positive information (Mizerski 1982).

Hence, for politicians who make decisions on public real estate, valuation tools indicating a negative outcome to selling, as compared to a positive outcome, might grab more attention, might be taken more seriously out of blame avoidance concerns or might appear to be more credible when provided by external entities. As such, the authors assume that a negative outcome of a valuation tool makes politicians very much aware of their decision-making behaviour. As such, hypothesis H2 is formulated.

- **H2:** The effect of a valuation tool on politicians' willingness to sell a public real estate asset is stronger when the valuation tool indicates a negative outcome to selling as compared to a positive outcome.

### ***Salience of public real estate asset***

Next, the present study examines the moderating effect of the type of real estate asset on politicians' willingness to sell public real estate, distinguishing between a politically salient and non-politically salient real estate asset. A government's real estate portfolio is typically heterogeneous and consists of different types of assets (Kaganova and McKellar 2006). As the main function of public real estate is to support the primary processes of government, assets are the physical embodiment of policy fields or policy issues, some being more politically salient than others. For example, one could argue that office buildings for public employees at the local authority are less politically salient than buildings for the reception of international refugees within a municipality – especially in



a European context where the refugee crisis has dominated the media for some time now (Hatton 2017). Reasoning from the type of real estate asset, being either politically salient or non-politically salient, a relevant cognitive bias to examine is salience bias. Salience entails the importance of a policy issue to elected officials and their electorate (Epstein and Segal 2000; Wlezien 2005). Gormley (1986, 598) states that ‘a highly salient issue is one that affects a large number of people in a significant way.’ It is assumed that the more a policy issue is mentioned by elected officials or (news) media, the more salient it becomes to everyone in a population. Following salience bias theory, as described by Kahneman, Slovic, and Tversky (1982), within information-processing, human beings are more likely to focus on information that is more salient and ignore information that is less so. For political decision-making this might result into a salience bias in favour of policy issues that are striking and perceptible.

Hence, one can assume that politicians are particularly open for the outcome of valuation tools when deciding on a politically salient real estate asset. Disposition of such an asset, although justifiable for financial reasons, possibly touches on political coverage or media coverage. Valuation tools might provide a legitimization mechanism (Carpenter and Krause 2012; Coicaud 2002): when politicians can show that they followed ‘rational’ economic valuation, in case of a social cost-benefit analysis, or resonated citizen preferences, in case of a citizen survey, they are not to blame when something goes wrong. For politically salient real estate assets, the authors assume, a politician will attach more value to a valuation tool as a guiding principle for decision-making. As such, hypothesis H3 is formulated.

- **H3:** The effect of a valuation tool on politicians’ willingness to sell a public real estate asset is stronger when the asset is politically salient as compared to non-politically salient.

## Methodology

### *Empirical setting*

The sample constitutes local politicians from two types of Flemish local authorities: Flemish municipalities and Flemish Public Centers for Social Welfare (PCSWs). Flemish municipalities are multipurpose public organizations responsible for a range of policy fields with the aim of enhancing their citizens’ wellbeing. Flemish PCSWs specifically focus on the provision of social services (e.g., financial help, medical help) to citizens within their jurisdiction. Both authorities have an elected council with seated local politicians. These local politicians are selected, first, because their position is the direct result of Flemish local elections. Second, both Flemish municipalities and PCSWs typically have a portfolio of real estate assets in ownership on which the elected council needs to make decisions. Said real estate can be tied to the actual services they offer or can be the result of historical patrimony. As such, the consideration of selling public real estate assets is a realistic scenario for these local politicians. Third, these local politicians should already have some awareness about social cost-benefit analyses and citizen surveys, as these are commonly used tools in Flemish local government. Conclusively, by reaching out to actual local politicians, focusing on a fictional decision that is a realistic scenario for them, and providing information on tools



they should have been confronted with already, the present survey experiment has a realistic nature, which is an often-mentioned shortcoming of experimental methods (Aguinis and Bradley 2014; Margetts 2011).

### Data collection

To infer causality between valuation tools and politicians' willingness to sell public real estate, a vignette-based, randomized survey experiment is conducted, as part of a traditional survey, using Qualtrics. To illustrate what the survey looked like, Figure 1 presents a flowchart indicating information provided on each page of the survey. This is further explained in the remainder of this methodology section.

All local politicians from Flemish municipalities and PCSWs received an invitation per email to the survey. This amounted to a total population of 8,476 local politicians. The survey adhered to recent recommendations for (experimental) survey research (Aguinis and Bradley 2014; Baekgaard et al. 2015; Lee, Benoit-Bryan, and Johnson 2012) as follows: first, the survey was pretested by a practitioner committee including Flemish local politicians and public managers who are experts in local public real estate (management). This ensured that the information provided

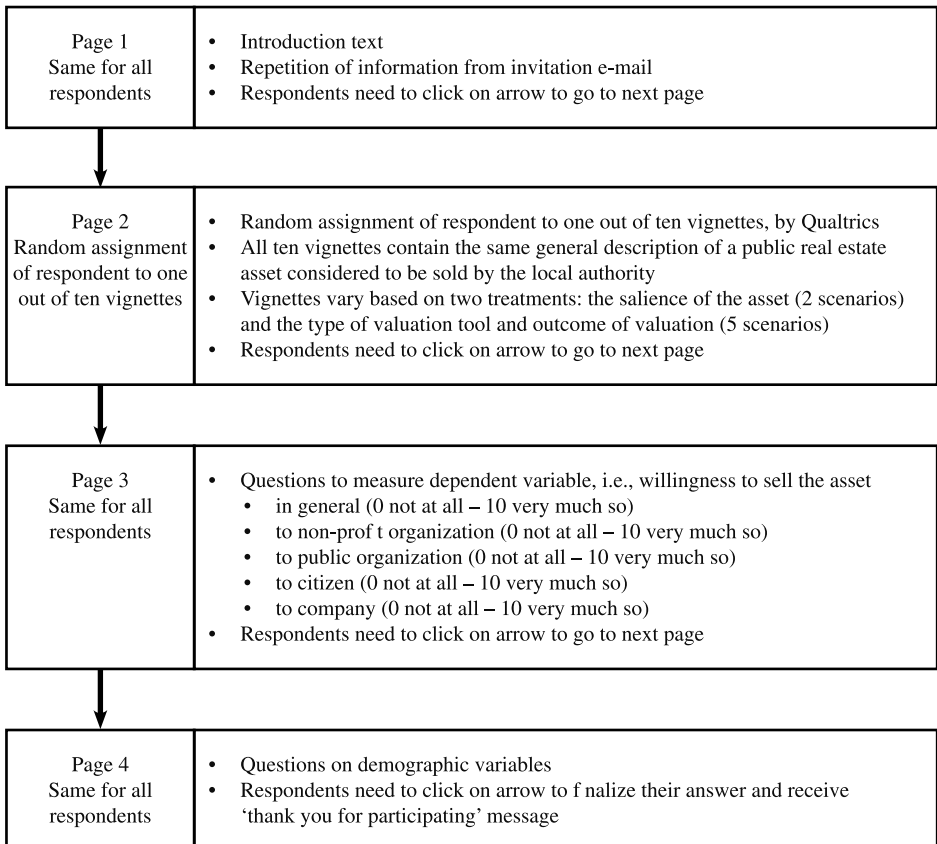


Figure 1. Flowchart indicating information provided on each page of the survey.

in the survey – and in the vignettes in particular – was relevant, realistic and understandable for local politicians. Second, concerning sampling, since the survey was sent to actual local politicians, respondents are experts who are knowledgeable of the context – as opposed to using, for instance, student samples. Moreover, the entire population was surveyed, which implies no need for sample frames. Then, respondents were promised a policy report as an incentive to participate in the survey and pay careful attention to the content, i.e., text and questions, of the survey. To make the survey easy to read, response options were labelled and items were highlighted. To ensure that the treatment was not too obvious, the vignette and questions related to the dependent variable were put on different pages. In addition, a general statement was added in the invitation email and introduction text to the survey as opposed to a very specific statement about what is being researched. Finally, anonymity to respondents was guaranteed.

The survey was sent late October 2018, three weekly reminders were sent and the survey was closed late November 2018. 938 responses were received, a response rate of 11%. While this may not seem like a high response rate, it is a big enough sample to meet experimental power requirements. Moreover, the sample was quite representative for the population, based on several logistic regression analyses on demographic variables available for the entire population (i.e., gender, province in which municipality lies, municipality or PCSW politician, political party membership). Apart from having significantly less politicians from the Limburg province, no significant differences were uncovered for the other variables, implying that the study's findings are quite generalizable to the broader population of Flemish local politicians. Finally, all data were analysed using OLS regression analyses with clustered standard errors at the municipal level. Politicians are nested in municipalities – thus violating the regression assumption of independent observations – and clustered standard errors need to be used to account for this nesting.

### ***Independent variables***

The independent variables – i.e., type of valuation tool, outcome of valuation tool, and salience of public real estate asset – were included in vignettes. [Table 1](#) illustrates all (ten) vignettes, one of which respondents were randomly assigned to. Each vignette included the same general description of a public real estate asset (i.e., building) owned by the local authority, and indicated that the local authority is considering selling this building for financial reasons. This thus implies a financial gain for the local authority if the building is indeed sold and a financial loss if it is not sold.

The first treatment in the vignettes concerned the salience of the public real estate asset. The non-politically salient scenario indicated that the building is used as office space for the financial department of the local authority whereas the politically salient scenario indicated that the building is used to temporarily accommodate asylum seekers within the municipality. The latter deserves some more explanation. In 2015 and 2016, during the political term of the respondents, Europe experienced an unprecedented influx of refugees, particularly due to war and terror in Syria. This influx caused a migration crisis in many European countries, including Belgium, and as such, the accommodation of asylum seekers became, and still is, a salient policy issue ([Hatton 2017](#)), that relates to values such as solidarity, humanity and safety. Belgium has so-called 'reception places' in place for

**Table 1.** Vignettes underlying the survey experiment. Information between brackets and in italic represents treatments.

Imagine the following scenario:

Your local authority owns a building that is currently used as [*office space for the financial department of your authority*]. The building adheres to all requirements concerning isolation norms and safety, has a floor area of 600 square metres, and was built in 2006. Electricity and running water are present. The building is close to the centre of your municipality and is easily reached by car, bike and public transport. The building is not classified as cultural heritage. Your local authority is considering selling this building for financial reasons. [*no further information*]

Imagine the following scenario:

Your local authority owns a building that is currently used as [*location for the temporary accommodation of asylum seekers in your municipality*]. The building adheres to all requirements concerning isolation norms and safety, has a floor area of 600 square metres, and was built in 2006. Electricity and running water are present. The building is close to the centre of your municipality and is easily reached by car, bike and public transport. The building is not classified as cultural heritage. Your local authority is considering selling this building for financial reasons. [*no further information*]

Imagine the following scenario:

Your local authority owns a building that is currently used as [*office space for the financial department of your authority*]. The building adheres to all requirements concerning isolation norms and safety, has a floor area of 600 square metres, and was built in 2006. Electricity and running water are present. The building is close to the centre of your municipality and is easily reached by car, bike and public transport. The building is not classified as cultural heritage. Your local authority is considering selling this building for financial reasons. [*Based on a social cost-benefit analysis from an external consultant, who looked at, amongst others, sale price and impact on local economy and environment, the sale of this building results in significantly more social benefits than costs.*]

Imagine the following scenario:

Your local authority owns a building that is currently used as [*location for the temporary accommodation of asylum seekers in your municipality*]. The building adheres to all requirements concerning isolation norms and safety, has a floor area of 600 square metres, and was built in 2006. Electricity and running water are present. The building is close to the centre of your municipality and is easily reached by car, bike and public transport. The building is not classified as cultural heritage. Your local authority is considering selling this building for financial reasons. [*Based on a social cost-benefit analysis from an external consultant, who looked at, amongst others, sale price and impact on local economy and environment, the sale of this building results in significantly more social benefits than costs.*]

Imagine the following scenario:

Your local authority owns a building that is currently used as [*office space for the financial department of your authority*]. The building adheres to all requirements concerning isolation norms and safety, has a floor area of 600 square metres, and was built in 2006. Electricity and running water are present. The building is close to the centre of your municipality and is easily reached by car, bike and public transport. The building is not classified as cultural heritage. Your local authority is considering selling this building for financial reasons. [*Based on a social cost-benefit analysis from an external consultant, who looked at, amongst others, sale price and impact on local economy and environment, the sale of this building results in significantly more social costs than benefits.*]

Imagine the following scenario:

Your local authority owns a building that is currently used as [*location for the temporary accommodation of asylum seekers in your municipality*]. The building adheres to all requirements concerning isolation norms and safety, has a floor area of 600 square metres, and was built in 2006. Electricity and running water are present. The building is close to the centre of your municipality and is easily reached by car, bike and public transport. The building is not classified as cultural heritage. Your local authority is considering selling this building for financial reasons. [*Based on a social cost-benefit analysis from an external consultant, who looked at, amongst others, sale price and impact on local economy and environment, the sale of this building results in significantly more social costs than benefits.*]

(Continued)

**Table 1.** (Continued).

Imagine the following scenario:

Your local authority owns a building that is currently used as *[office space for the financial department of your authority]*. The building adheres to all requirements concerning isolation norms and safety, has a floor area of 600 square metres, and was built in 2006. Electricity and running water are present. The building is close to the centre of your municipality and is easily reached by car, bike and public transport. The building is not classified as cultural heritage. Your local authority is considering selling this building for financial reasons.

*[Based on a citizen survey from an external consultant, who surveyed a representative sample of citizens in your municipality, the sale of this building meets significantly more support than resistance from your citizens.]*

Imagine the following scenario:

Your local authority owns a building that is currently used as *[location for the temporary accommodation of asylum seekers in your municipality]*. The building adheres to all requirements concerning isolation norms and safety, has a floor area of 600 square metres, and was built in 2006. Electricity and running water are present. The building is close to the centre of your municipality and is easily reached by car, bike and public transport. The building is not classified as cultural heritage. Your local authority is considering selling this building for financial reasons.

*[Based on a citizen survey from an external consultant, who surveyed a representative sample of citizens in your municipality, the sale of this building meets significantly more support than resistance from your citizens.]*

Imagine the following scenario:

Your local authority owns a building that is currently used as *[office space for the financial department of your authority]*. The building adheres to all requirements concerning isolation norms and safety, has a floor area of 600 square metres, and was built in 2006. Electricity and running water are present. The building is close to the centre of your municipality and is easily reached by car, bike and public transport. The building is not classified as cultural heritage. Your local authority is considering selling this building for financial reasons.

*[Based on a citizen survey from an external consultant, who surveyed a representative sample of citizens in your municipality, the sale of this building meets significantly more resistance than support from your citizens.]*

Imagine the following scenario:

Your local authority owns a building that is currently used as *[location for the temporary accommodation of asylum seekers in your municipality]*. The building adheres to all requirements concerning isolation norms and safety, has a floor area of 600 square metres, and was built in 2006. Electricity and running water are present. The building is close to the centre of your municipality and is easily reached by car, bike and public transport. The building is not classified as cultural heritage. Your local authority is considering selling this building for financial reasons.

*[Based on a citizen survey from an external consultant, who surveyed a representative sample of citizens in your municipality, the sale of this building meets significantly more resistance than support from your citizens.]*

refugees awaiting asylum, which include housing owned and managed by municipalities and PCSWs – thus making it a suitable operationalization for the vignettes.

The second treatment in the vignettes concerned the type of valuation tool used and outcome of valuation. In the first scenario no tool was given, the second scenario indicated a positive social cost-benefit analysis, the third scenario indicated a negative social cost-benefit analysis, the fourth scenario indicated a positive citizen survey and the fifth scenario indicated a negative citizen survey. The provider of the valuation tool was kept constant throughout all vignettes, being an external consultant.

Respondents are randomly assigned to one of the ten vignettes, i.e., experimental groups, by using the automatic randomization option in Qualtrics. The large-N of almost 1,000 local politicians increases the likelihood of balanced experimental groups. Nonetheless, to ensure that the experimental groups are indeed balanced, a balance check is conducted – namely a number of logistic regression analyses – to identify whether there are significant differences between groups concerning diverse variables (i.e., age, gender, coalition or opposition membership, education, left-right political spectrum and political tenure). No significant differences are uncovered, implying that

the authors need not to control for these variables in their analyses (Nielsen and Baekgaard 2015). A manipulation check was not embedded in the survey after the treatments, the reason being that the vignettes – while realistic – are fictional and respondents could thus not have had prior knowledge of the information provided in the treatment (Baekgaard et al. 2015). As an attention check, a time count was added on the vignette page of the survey indicating how long it took respondents to click on the arrow to go to the next page of the survey. The logic here is that respondents who click through after just a few seconds (or less) could not have read the vignette in detail. No issues were uncovered.

### **Dependent variables**

All respondents finally received the same questions to measure the dependent variable, i.e., willingness to sell public real estate. The respondents were asked for their willingness to sell the building mentioned in the vignette in general, and, in addition, to specified buyers, to also identify whether the entity selling to matters. Hence, the dependent variables were fivefold: to what extent are you willing to sell this public building in general (0 not at all – 10 very much so); to a non-profit organization (0 not at all – 10 very much so); to a public organization (0 not at all – 10 very much so); to a citizen (0 not at all – 10 very much so) and finally; to a company (0 not at all – 10 very much so). It is important to emphasize that the default value for these dependent variables is a missing value (and thus not 0) – there is no concern with default option bias because even to give a score of 0 the respondents still need to actually assign the score. Table 2 contains descriptive information for the dependent variables.

## **Results**

### **Type of valuation tool**

Table 3 contains the results of the tests of different valuation tools. OLS regression analyses with clustered robust standard errors at the municipal level are used to assess the effects of a positive or negative social cost-benefit analysis, and a positive or negative citizen survey on local politicians' willingness to sell the public building in general (model 1), to a non-profit organization (model 2), to a public organization (model 3), to a citizen (model 4) and to a company (model 5). The direct effects of the salience of the public real estate asset are also included – because this is the other experimental treatment – by adding the 'refugee housing' treatment in the models.

**Table 2.** Descriptives of dependent variables.

Item	Min	Max	Mean	SD
To what extent are you willing to sell this public building in general?	0	10	4.36	2.85
... to a non-profit organization?	0	10	4.17	2.71
... to a public organization?	0	10	4.09	2.61
... to a citizen?	0	10	3.26	2.69
... to a company?	0	10	3.27	2.73

**Table 3.** Tests of direct effects (OLS regression analyses).

	Sell – general		Sell – non-profit		Sell – public		Sell – citizen		Sell – company	
	Coef.	s.e.	Coef.	s.e.	Coef.	s.e.	Coef.	s.e.	Coef.	s.e.
Constant	3.45***	.23	3.40***	.23	3.51***	.21	2.92***	.22	3.01***	.23
Refugee housing	.63***	.17	.93***	.18	.37*	.18	.23	.18	.24	.18
SCBA+	1.22***	.32	.78**	.30	.64*	.28	.36	.31	.31	.30
SCBA-	.09	.28	-.15	.30	.18	.27	-.20	.28	-.09	.28
Survey+	1.25***	.30	.65*	.28	.73**	.27	.62*	.29	.48	.29
Survey-	.39	.30	.16	.29	.41	.27	.33	.30	.01	.30
N	938		919		912		879		870	
Clusters	287		285		284		282		282	
F	10.27***		8.83***		2.88*		2.71*		1.46	
R <sup>2</sup>	.05		.05		.02		.01		.01	

Note: Clustered robust standard errors are used to account for the clustered nature of data.

\*p < .05, \*\*p < .01, \*\*\*p < .001

The results support neither hypothesis H1a nor hypothesis H1b. It seems that both valuation tools have a similar impact, with similar strength. When a social cost-benefit analysis indicates that the sale of public real estate has more benefits than costs, politicians are significantly more willing to sell the building in general (12% higher), to a non-profit organization (8% higher), and to a public organization (6% higher) – but not to a citizen or company. When a citizen survey shows more support for the sale of public real estate than resistance, politicians are significantly more willing to sell the building in general (13% higher), to a non-profit organization (7% higher), to a public organization (7% higher), and to a citizen (6% higher) – but not to a company. Importantly, for both tools, the negative outcome to selling did not significantly influence politicians' willingness to sell (see the section below on Outcome of valuation tool and salience of public real estate asset).

Another interesting pattern emerges. When the public building at hand accommodates asylum seekers as opposed to the financial department, politicians are significantly more willing to sell this building in general (6% higher), to a non-profit organization (9% higher), and to a public organization (4% higher). In other words, apart from the theorized moderating effect, the analyses show that the political salience of a public real estate asset also directly impacts local politicians' willingness to sell public real estate.

### **Outcome of valuation tool and salience of public real estate asset**

To test the moderating effect of the outcome of both valuation tools, Table 3 needs to be studied again and, specifically, how the coefficients differ between positive or negative valuation tools. Interestingly, the authors find evidence for positivity bias – namely that a social cost-benefit analysis and citizen survey only have an effect on politicians' willingness to sell public real estate when these illustrate positive results supporting public real estate disposition as opposed to negative results opposing disposition. This runs counter to hypothesis H2 and the authors thus reject this hypothesis. Next, Table 4 shows the results of the tested interactions between valuation tools and the salience of the public real estate asset. Despite the theorized moderation, the analyses do not support hypothesis H3. In none of the five models there is

**Table 4.** Tests of moderating effects (OLS regression analyses).

	Sell – general		Sell – non-profit		Sell – public		Sell – citizen		Sell – company	
	Coef.	s.e.	Coef.	s.e.	Coef.	s.e.	Coef.	s.e.	Coef.	s.e.
Constant	3.35***	.28	3.21***	.27	3.45***	.27	2.70***	.27	2.95***	.29
Refugee housing	.81	.43	1.29**	.40	.48	.37	.67	.40	.35	.39
SCBA+	1.09*	.43	.70	.40	.51	.37	.58	.42	.28	.43
SCBA-	.23	.38	.34	.42	.33	.42	.03	.40	-.10	.40
Survey+	1.51***	.40	1.09**	.38	.90*	.37	.95*	.40	.56	.40
Survey-	.55	.40	.20	.38	.49	.40	.65	.42	.25	.41
Refugee x SCBA+	.27	.58	.19	.54	.29	.51	-.42	.57	.07	.59
Refugee x SCBA-	-.29	.59	-.95	.55	-.29	.54	-.46	.57	.01	.56
Refugee x Survey+	-.53	.57	-.89	.54	-.36	.53	-.66	.58	-.17	.56
Refugee x Survey-	-.33	.61	-.07	.55	-.16	.55	-.63	.61	-.46	.61
N	938		919		912		879		870	
Clusters	287		285		284		282		282	
F	5.88***		6.00***		1.93*		1.76		.94	
R <sup>2</sup>	.05		.05		.02		.02		.01	

Note: Clustered robust standard errors are used to account for the clustered nature of data.

\*p < .05, \*\*p < .01, \*\*\*p < .001

a significant interaction between one of the valuation tools and the salience of the public real estate asset. Rather, as indicated above, the political salience of the public real estate asset has a significant direct positive effect on politicians' willingness to sell public real estate. The authors thus also reject hypothesis H3.

## Discussion

Now is discussed what the results imply for the effect of valuation tools on politicians' willingness to sell public real estate. Comparing the direct effect of the social cost-benefit analysis with the citizen survey, the authors found that, for both tools, when indicating a positive outcome to selling, politicians are significantly more willing to sell. For both tools, a negative outcome to selling did not significantly affect politicians' willingness to sell. As such, both valuation tools have a similar impact, with similar strength, which indicates that an economic rationality to decision-making and a political rationality to decision-making are not opposites but rather co-exist. Moreover, the results do not indicate evidence for negativity bias, as theorized, but rather for positivity bias, similar as to recent findings of George et al. (2020), as positive valuation outcomes spark a strong reaction. Another potential explanation for these results, instead of positivity bias, could be confirmation bias, which is 'the tendency to selectively search for information that confirms [...] [human beings'] prior beliefs and neglects disconfirmatory evidence' (Battaglio et al. 2019, 312). Confirmation bias might be at stake because in the vignettes it is explicitly mentioned that the 'local authority is considering selling the building for financial reasons.' Finally, the authors found no moderating effect from the type of public real estate asset on politicians' willingness to sell but rather a direct effect. As such, evidence for salience bias is indeed found, although not in the theorized moderating manner. Hence, political decision-making about public real estate disposition is directly influenced by a contextual factor, i.e., the asset being politically salient. Below, the implications of these findings for public management theory, research and practice are explained further.



### ***Implications for theory***

Interestingly, this study's findings run counter to theoretical propositions based on rational choice theory and theories on political responsiveness, as, contra intuitive, for both valuation tools examined, a negative outcome to selling did not significantly affect politicians' willingness to sell. As such, the authors identify the need for a more nuanced approach to the use of valuation tools to support political decision-making: one must not self-evidently assume that politicians use valuation tools and outcomes in a rational or responsive manner but rather one must be aware of cognitive biases influencing decision-making. This is in line with sociologists and social psychologists who have already demonstrated that the decision-making behaviour of human beings is determined by social structures and roles (e.g., March ; Simon 1985, 1997). The authors argue that the use of behavioural theory for the study of the use of valuation tools by government actors – which challenges pure rationality in the decision-making consequences of these tools – is helpful in providing insights into if, when, how and why these tools actually affect decision-making. With regard to broader discussions about public values assessment – given Public Value Governance reforms within government –, based on this experiment, the authors argue that it is relevant to theorize further on the role of contextual factors and cognitive biases in values trade-offs, within and beyond the policy field of public real estate.

Then, to compare the effect of a social cost-benefit analysis and a citizen survey, the authors argued that politicians are guided more either by an economic rationality or a political rationality, and, as such, are stronger affected by respectively a social cost-benefit analysis or a citizen survey. Yet, both valuation tools examined have a similar impact on decision-making, with similar strength. Hence, it is interesting to further theorize on what happens when these two tools are not presented as each other's substitute (like in this experiment) but rather next to each other and with either similar or conflicting results. Imagine, for example, a decision-making scenario for which both a social cost-benefit analysis and a citizen survey are performed – the first indicates a positive outcome to selling and the latter indicates a negative outcome to selling. It is worthwhile to examine what decision-making consequences are expected in such case.

### ***Implications for research***

The authors would like to make a call for further research into if, when, how and why valuation tools affect decision-making for given policy issues. By means of the present experiment, causality is inferred between valuation tools and politicians' willingness to sell public real estate, yet, the experiment did not allow to provide for insights into the underlying causal mechanisms at play. Strikingly, findings run counter to theoretical expectations based upon behavioural theory, however, the authors cannot be sure as to why exactly this is the case. Possibly the respondents are subject to positivity bias or confirmation bias when interpreting information on valuation tools and outcomes. To find out, additional qualitative research is necessary within the particular empirical setting of this study.

This experiment is a cross-sectional measurement of stated preferences. First, concerning external validity, one cannot be sure as to whether results apply to other populations, public real estate decisions, and time periods. In addition, the sample of local politicians self-selectively participated within the survey. While the sample was fairly representative

for the population, the authors cannot rule out that a certain type of politician, with certain views on some topics or with certain personality types is largely present in the sample. Second, concerning internal validity, the present study focused on politicians and their decision-making rationalities in examining the decision-making consequences of valuation tools. While the authors believe that the consideration of public real estate disposition is a realistic scenario for Flemish local politicians, it must be acknowledged that, in practice, the extent to which they are actually involved in such decisions depends on the (size of the) local authority and the politician being a member of the coalition or opposition. In addition, due to the nature of survey experiments, vignettes are designed to operationalize variables. While the authors believe this operationalization fits the empirical setting of this study, it does not fully grasp all aspects underlying public real estate practices by local government and public real estate valuation (tools): other types of real estate decisions exist (e.g., acquisition, refurbishment), other types of real estate assets exist, being the embodiment of other (possibly politically salient) policy fields (e.g., schools, museums, parks), other types of valuation tools exist, etc. Moreover, while the authors only distinguished between a positive or negative valuation outcome, different levels in outcomes of valuation tools could provide more nuance in the results (e.g., 25% vs 50% vs 75% of citizens support selling the building). Taking into account these remarks about external and internal validity, replication of this experiment is desirable (cf., Tsang and Kai-Man 1999; Walker et al. 2019; Walker, James, and Brewer 2017).

Direct replication is encouraged because of the present experiment's cross-sectional character, to be sure as to whether findings hold up in time. Empirical replication is also encouraged to assess whether findings hold up in different populations using the same experimental design. Moreover, conceptual replication is encouraged, involving again the same population but a different (experimental) research design. Then, the effects of different (combinations of) valuation tools and outcomes might be examined, as well as different conditions under which these effects become stronger or weaker, involving different decision-making issues. Just like the authors hypothesized on negativity bias and salience bias as moderating variables, scholars could examine other conditions influencing the impact of valuation tools. In addition, as said, the present study examined stated preferences. Whether or not these stated preferences actually play out in real-life decision-making remains unclear for now. Other research designs must be applied to examine the latter, e.g., revealed preference methods, field experiments or natural experiments. Finally, with generalization and extension in mind, of course both the population and experimental design could be varied. This to expand research into if, when, how and why politicians make use of valuation tools and outcomes to assess values at stake for a given policy issue.

### ***Implications for practice***

In practice, public managers employ all sorts of valuation tools including social cost-benefit analyses and forms of citizen surveying to support decision-making about given policy issues. The underlying self-evident idea is often that these tools support decision-makers in making informed decisions. Yet, within the present experiment, it is found that politicians do not necessarily react rationally and responsive to valuation tools and outcomes. Therefore, practitioners are encouraged to acknowledge that valuation tools and outcomes in themselves may induce cognitive biases. When assessing, for example, the value of public real estate assets by means of a valuation tool, practitioners could elicit in advance

(possible) contextual factors and information-processing heuristics and biases of influence on political decision-making (cf., Pollitt 2013; O'Toole and Meier 2015). Such a reflection possibly ensures a more effective use of valuation tools and outcomes.

As the units of analysis are individual politicians, this experiment focused on the use of valuation tools on a micro level. Practitioners are encouraged to reflect on the practice of valuation and its consequences for decision-making at a higher level, for example at the level of a public organization or department, such as a public real estate management department: who assesses the value of public real estate and why, by which tools? How are valuation outcomes imposed, and on whom? How is this information processed? What are motives to take into account or disregard valuation tools and outcomes? Which decision-making biases (might) occur? Next to scholars studying the effect of valuation tools and outcomes within the field of public management, it is practitioners (i.e., public managers) who understand a particular empirical policy setting best, and who have an eye for the conditions influencing political decision-making about given policy issues.

## Conclusion

This study examined the effect of valuation tools on politicians' willingness to sell public real estate, by studying the direct effect of the type of valuation tool and the moderating effect of the outcome of valuation and asset salience. Findings indicate that valuation tools showing a positive outcome to selling increase willingness to sell, but tools showing a negative outcome to selling have no effect. Moreover, asset salience directly increases willingness to sell. These findings indicate the existence of cognitive biases when using valuation tools, which runs counter to the often theorized rationalities underlying these tools. Concerning external validity, the authors cannot be sure as to whether findings apply to other populations, public real estate decisions, and time periods. Concerning internal validity, (fictional) vignettes are designed to operationalize independent variables, which does not fully grasp all aspects underlying public real estate management practices by local government and public real estate valuation (tools). Hence, the authors encourage scholars to take on additional qualitative research within the particular empirical setting of this article to provide for insight into causal mechanisms at play, and, given remarks about validity, encourage replication of the survey experiment. To practitioners the authors would like to point towards some reflection on the use of valuation tools to support decision-making: be aware that cognitive biases exist and do not assume rational and responsive usage of tools and outcomes. Conclusively, both scholars and practitioners are encouraged to engage with the present study's findings and uncover deeper causal mechanisms as well as specific conditions influencing the effect of valuation tools on decision-making.

## Disclosure statement

No potential conflict of interest was reported by the authors.

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## Data Availability Statement

Data available on request from the authors.

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