Reflection

Name:	J.H. (Jan) Ruttenberg
Study number:	4160541
Institution:	TU Delft
Department: Address:	Management in the Built Environment Julianalaan 134 2628 BL Delft
Theme:	Housing market analysis
First mentor:	Dr. H.J.F.M. (Harry) Boumeester Drs.
Second mentor:	P.W. (Philip) Koppels

Delegate board of examiners:	Dr. H.D. (Herman) van Bergeijk
Graduation company:	Cushman & Wakefield
Address:	Gustav Mahlerlaan 362-364 1082 ME Amsterdam
Company supervisor:	Ir. F.J.J. (Fabian) Pouwelse

1 Reflection

This report will concisely describe my experiences of the courses AR3R010 and AR4R010, the courses that form the track towards graduation. The first part will reflect on the process, which includes the build-up towards the P4 presentation and the experiences during my internship and its role within the process. The second paragraph discusses the research topic and methods, whereas the third paragraph focuses on the societal and scientific relevance and the dissemination of the research and the results. The reflection finishes with a concise view on the ethical issues that occurred during the study.

1.1 Process reflection

1.1.1 Build-up towards P2

The course starts with an intensive week full of lectures, subjects and finally the choice of a graduation subject and a mentor. Because the first quarter of the academic year is also used to follow electives, which in my experience does not consider the graduation course in its planning, the students are forced to skip lectures and make choices between courses. A more spread out introduction would prevent this situation.

When the subject is chosen, I spent most time finding an internship for my graduation, since this is desired by most students and therefore has become an obligation. My mentor Harry Boumeester was very helpful in this process and found me an internship at the NVM, but an unexpected job interview at Cushman & Wakefield and their subsequent job offer had my preference. In the meantime, the P1 presentation came closer, which made it difficult to already focus on a research question and adapt the literature research on this question. A very positive side on the P1 presentation is that it forces the students to already start this research.

1.1.2 Literature study and P3

Although I did pass my P2 on the first try, Harry Boumeester told me to continue the literature study and work towards a more complete and clear-cut research proposal. Since the housing market is a topic that interfaces with a lot of societal and political subjects, it remained difficult to define the boundaries of my research. Moreover, colleagues, mentors and lots of other people which whom I discussed my research did not stop sharing their (extensive) knowledge and bringing new ideas into the scope.

Secondly, the clear distinction between the literature study and the development of the models made it difficult to switch between the two topics. The more passive reading and connecting of literature on the one hand and the more proactive model making and the logging of results on the other would have formed a nice variation.

During the third presentation moment, it became clear that graduating before the summer holidays would be nearly impossible, since the dataset was not yet provided by the NVM. This will be discussed to further extent in Paragraph 1.2.2. This delay did not positively contribute to my research effort, but rather provided me with extra time for my internship.

1.1.3 Researching to P4

When the dataset did come through, the 'real' research could finally commence. This was the most enjoyable part of the process: it was great to work with the dataset and structure the model. However, this part too had its problems. At times, it was very difficult to come to a point of decision-making: which variables to include and how to process economic and environmental characteristics.

1.1.4 Internship

When the P1 presentation was passed, exams and the fulltime statistics course made it difficult to proceed with the graduation plan. Moreover, I decided to start my internship at Cushman & Wakefield on the first of December, since the only course that I was following required only three meetings. On the one hand, this offered me the opportunity to already get used to the working life and the consequential limited time to work on the graduation plan. Herein, the disadvantage of starting early also comes forward: the limited time. Although I doubt the benefit of an empty schedule, since it leaves much room for procrastination and inefficiency, the lack of time did limit me towards the deadline of the P2 graduation plan. It became clear that the combination of full days and weeks of work and research didn't leave much energy during the evenings and in the weekends to put in the required time.

During the third quarter, the atmosphere on the department remained easy-going and my quality and efficiency as a valuer grew by the week. Moreover, it felt more easy to ask questions about the different valuation-related aspects. The professional environment became more natural, and I was involved in the operational activities more often. However, this sometimes made it difficult to solely focus on my study during the days that were reserved to work on my thesis.

My conclusion regarding the internship is that it provides a great way to get introduced to the professional environment of the real estate sector, but that the combination with graduating made it difficult to fully devote to either aspect. This does not necessarily goes for all internships, but the approach of Cushman & Wakefield - three days of work, two days of study – makes it hard to keep focus on the research, which costs a lot of start-up time. Especially, because on the days I was supposed to be working, work-related assignments still came along.

1.1.5 Personal study targets

My personal study target focuses on structure, focus and preventing a lot of last-minute work. As already explained, the internship did lead to a lot of last-minute work, since it caused a structural time shortage. Regardless, thanks to the structure of regular working days my attention span and ability to work for a consecutive time extended. Moreover, the workflow for the past months changed my derogatory attitude towards the regular professional life.

1.2 Research reflection

1.2.1 Literature study

My literature study can roughly be divided into three topics:
- Causes and consequences of increasing house prices
- Time-regression models
- Hedonic price models

About all three topics, numerous books and papers have been written, which made it easy to understand the subjects and conceptualise them.

The chapter that contains the history of Amsterdam and Nijmegen as well as the causes and the consequences of the current house price development was difficult to bound, since the list of potential subjects that concern the housing market is almost endless. Moreover, quantifying the effect of the difference causes was too difficult, which was feeling like a shortfall of the thesis. A fully qualitative approach, with case studies or interviews with (professional) experts probably would also form a sufficient scope for a graduation thesis. Nonetheless, the made selection and the depth of the descriptions and analysis are satisfying.

Secondly, the literature on time-regression models that contributed to the formation of the hedonic price model was very exhaustive. The initial plan to redo this research and make a time-regression model was rejected throughout the process, since the body of literature has proven itself to be very constant and reliable, which makes the repetition of the research superfluous.

Subsequently, the hedonic price models were studied. Hereby, the differences within Western Europe (Boelhouwer & Hoekstra, 2012), let alone the United States or other countries, hinder a direct comparison and application of international sources to the collection of informative input. Luckily, there were sufficient studies conducted in the Netherlands to result in a clear overview.

1.2.2 Data collection
My mentor Harry Boumeester preferred to be the intermediary in the data collection process, since he has been maintaining contact with most data supplying parties, such as NVM, for a long time. Since it reflected on the reputation of Boumeester as a reliable partner, I felt my research proposal should be of a higher quality than when the data would have been requested by a non-affiliated party,

When the data became available, it showed that multiple other hedonic price studies used similar versions in their research. On the one hand this is very logical, since the NVM dataset is very extensive in its number of cases and variables. On the other hand, this results in studies that are very alike.

1.2.3 Methodology
The chosen methodology did not fully live up to the expectations in the sense that the overall result is too uncertain and it leaves numerous topics unaddressed. The results and conclusions that were derived from the hedonic price model were sufficient but not very innovative. Besides, the connection from the economic foundation of the price development and environmental characteristics and the influence on the costs was not very convincing in its results. A more specialised overall approach and a better preparation for the actual research would have been helpful.

The same unsatisfying feeling goes for the seventh chapter of the thesis, wherein an estimation of the additional costs is made: it is full of assumptions and estimates. The made calculations are very straightforward, which made it more of a data collection drill than a profound part of the research.

1.3 Relevance and audiences

1.3.1 Scientific relevance

'Housing remains one of the fundamental pillars of both life and lifestyle for us as individuals' (Beer & Faulkner, 2011, p. 1). Since 'housing is an essential need' (Beer & Faulkner, 2011, p. 2) and the house prices are increasing excessively and the affordability is endangered, it is important to investigate the economic foundation beneath and the tenability of the current situation. The connection that is made between on the one hand a practical and evidence-based approach and on the other hand considering its causes and consequences on a more abstract and managerial level is mostly represented in the relationship between the price development and the taxing policy making.

Halfway through the third quarter, I discovered the paper by Droës, Houben, and Van Lamoen (2017), which had a very similar research design. On the one hand, this implied that the concept of my research was relevant: it was published by a notable (online) journal; on the other hand, it meant that my research was already conducted. Hitherto, no decision is made how to cope with this discovery.

The quantitative character of the methodology, however, as the previously mentioned work of Droës et al. (2017) already demonstrated, it is difficult to capture all forces that determine the eventual price in a quantitative model. A follow-up research that tries to isolate and quantify several aspects is recommended.

1.3.2 Societal relevance

This excessive growth raises questions about the affordability of housing in the capital of the Netherlands and the probability of a bubble in the market which could lead to a price correction towards the equilibrium (Himmelberg, Mayer, & Sinai, 2005, p. 68) and thus credit problems for people who bought their houses during the build-up of the bubble (Hekwolter of Hekhuis, Nijskens, & Heeringa, 2017). Besides, this increase doesn't only affect the affordability of new inhabitants of the city, but possibly also for the inhabitants who acquired a house before this growing streak started, since the current price increase has an extensive influence on (housing) taxes and rent levels.

1.3.3 Professional relevance

During my internship, most used valuation methods complied with the list of Shapiro, Mackmin, and Sams (2013, pp. 12-15) present. However, the selection of comparable objects is made manually, and the number of objects used in the comparison is fairly limited. To prevent subjectivity, the hedonic price models could form a great predictive indication of the market value of dwellings. Competing companies already use model-based valuations methods, and it is widespread believe that the valuer's profession will move towards a computerized one.

Another intern already created an automatic valuation model for his graduation, but this model was focused towards commercial real estate, which tends to be less homogeneous than the housing market. The created hedonic price model could be a helpful addition to this model.

Besides, the results could be of interest for the taxation (and valuation) system of the Municipality of Amsterdam, since the government should treat its citizens fairly and

equally. When the current price levels turn out to be unfounded, the translation towards a legal change is a very interesting aspect.

1.4 Ethical considerations

Ethics are an important part of each research project. They 'distinguish between right and wrong' and besides prevent falsification, plagiarism, which together results in truthful research (Center for Innovation in Research and Teaching, n.d.).

The American Psychological Association emphasises that the use of human subjects within a research project rises the most ethical questions, for example on how to handle the acquired data and the subjects' privacy (Smith, 2003). Although my data is acquired by other institutions and I only access their adaption of it, the level of detail of the data and the confidentiality agreement with the NVM made me aware of the importance of decently handling the data. Keeping it away from colleagues and only reporting results which could not be brought back to individual persons.

The second ethical consideration that is addressed is the independency of my research in concern to my graduation company, which could be harmed because they pay me a small compensation of course there was the possibility of future employment. Herein, it was beneficial that my research topic and question were independently chosen, and that Cushman & Wakefield did not desire any voice in the research. Therefore, it was easier to remain objective and critical towards my research. Besides, it is not immediately clear what result would be beneficial or disadvantageous to Cushman & Wakefield. The research did never seem to entail any direct criticism or obligations, which was never deliberate, but simply not relevant for the research.

Lastly, the handling of the results is a subject of ethics. As a proponent of sharing valuable information, supposing my results will be valuable, I want as much information as possible to be freely accessible for interested people. The TU Delft repository is accessible for all its students and employees, so this covers a part of my wish. Besides, the NVM demands an abstract of the results, which could be shared with their members. Hereby, the feeling of working towards a likable summary is very extant. Although this A4 isn't part of my thesis, it is derived from my research and therefore, this part should remain critical and nuanced.

2 References

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