



Evolving institutions to tackle asymmetrical information problems in the housing market: A case study on ‘shrinkage’ of flat sizes in Hong Kong



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ABSTRACT

The phenomenon of floor area ‘shrinkage’ of newly completed units has long been a hot debate issue in Hong Kong’s housing market. Prior to the enactment of the Residential Properties (First-hand Sales) Ordinance in April 2013, news reports had revealed that the actual useable areas of some presales housing units only accounted for 50% of the gross floor areas proclaimed in the sales brochures. Notwithstanding the alarming situation, ‘shrinkage’ of flat size is, in fact, a lawful act in Hong Kong. Akerlof (1970) suggests that under information asymmetry, lemons tend to crowd out non-lemons. This study attempts to investigate whether an adverse selection process is taking place in Hong Kong’s housing market with reference to the shrinkage phenomenon. To measure area shrinkage, 13 private mass housing developments located on the Hong Kong Island were chosen, and a total number of 16,946 flats, were involved. This paper shows that the market is full of lemons due to the delay in responses of the law governing the sales of first-hand properties. We found that the carpet areas of the selected housing developments had fallen short of between 23% and 49% of the proclaimed gross floor area, as stated in the sales brochures. Analyzing a total number of 55,227 transactions between 1991 and 2013 of the subject premises, it shows that the turnover rates of units with the highest shrinkage ratios are about 45% more than those with the smallest shrinkage ratios. ANOVA tests have been carried out and illustrated that there are significant variations between each tenth percentile of the flats in accordance to the flat shrinkage ratios. This paper concludes with a discussion of the evolution of institutions in Hong Kong’s housing market to tackle the lemon problems. Attention has been placed on the effects of mandatory, voluntary and third party information disclosure. The lessons learnt in Hong Kong will shed light on policies and legislations for the fast expanding housing markets in developing countries, especially those densely populated Asian cities undergoing rapid urbanization.

1. Introduction

Adverse selection problems have been elicited in Akerlof’s (1970) seminal paper on information asymmetry. Based on the observations in the used-car market in the US, Akerlof contends that since it is difficult for buyers to discern the latent defects, irrespective of the quality, they tend to offer a lower price for a used-car for self-insurance. Sellers of high quality used-cars, usually with higher private valuations of their vehicles, are thus driven out of the market. Akerlof terms this adverse selection process as the “Lemon Principle”, which could eventually lead to market collapse.

Empirical tests that show the Lemon Principle is at work in the markets that are not affluent. Most of the early studies of lemons (Arrow, 1963; Pauly, 1968; Rothschild & Stiglitz, 1976) were concerned with the insurance market; this is where the term “adverse selection”

originated. More recent empirical tests that affirm presence of the Lemon Principle include Kaena and Stravrunova (2014) in the health insurance market; Cohen and Siegelman (2010) in the general insurance market; Gobbi and Lotti (2004) in the banking industry; and Lambert and Wilson (2003) in the wheat market. In the real estate market, Chau and Choy (2011), found that durable lemons are overpriced under different legal institutions governing sales information. Despite the aforementioned investigative studies, it can be stated that detailed empirical investigations of the adverse selection problem in real estate markets is far from adequate.

Hypothetically, the key reason that can be attributed to the insufficiency of empirical tests on the housing market is the high expenditures involved in conducting measurements. Hong Kong’s housing market is an ideal test bed for the Lemon Principle due to its high transaction volume. Nevertheless, this is based on the premise that

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measurement costs researching the housing attributes be kept affordable. A carefully chosen element has been focused on, in order to carry out an empirical test of adverse selection, – unit size. In Hong Kong, before the ratification of the Residential Properties (First-hand Sales) Ordinance (SRPO thereafter), that came into effect on 29 April 2013, regulations governing the descriptions of unit size were ambiguous and inadequate. Maximizing usage of the regulation limitations, property developers lawfully built housing projects with a smaller useable floor area than was presented in sales brochures. However, for the buyers, the information provided by property developers proved to be a costly concern; the buyers could not precisely calculate the actual useable area their flats would have, prior to entering into a sales purchase agreement. By engaging a building professional to conduct assessments, and by utilizing established consistent procedures; this study aims to systematically measure the actual carpet area, as a proxy of actual useable area, of 16,946 selected housing units on the Hong Kong Island. This information has never been released into the public domain by any means, neither in the first-hand pre-sale market nor the second-hand market. This systematic process will enable us to expose the durable lemons in the Hong Kong housing market.

Once the durable lemons have been identified, we can then study whether Akerlofs (1970) adverse selection problem is persistent in the Hong Kong housing market. This study will trace the 55,227 transactions of the subject premises carried out between 1991 and 2013, and then verify whether or not the turnover rates of the lemons are statistically higher than that of the non-lemons. How institutions evolve to manage the adverse selection problem will be the key issue of focus for discourse, subsequent to the empirical testing. The findings and the experiences of institutional changes in Hong Kong will shed light on the rapidly expanding housing markets in developing countries. It is especially useful in the context of densely populated Asian cities. The structure of the paper is as follows. First, an introduction highlights the study. Then it will give a brief but focused literature review. The subsequent section outlines the methodologies and data sources. The empirical findings will then be discussed with reference to the laws governing sales of properties. Finally, the evolving institutions to tackle lemons in the housing market will conclude the whole paper.

2. Literature review

Information can be exploited to reduce uncertainties in making decisions. Following Coase (1937), subsequent studies such as Williamson (1973, 1985 and 1993) suggest that transaction costs exist in acquiring information, negotiating, monitoring, signing and enforcing contracts. Uneven distribution of information in the marketplace is the key reason for the existence of asymmetries (Philips, 1988). Information asymmetry may occur under different circumstances. For instance, in some economies, producers and manufacturers are reluctant to reveal completely transparent information to consumers, despite such information being available and in their possession. The vendor motivation behind this is for greater financial gain and profitability; the less information available to the consumers, the greater the leverage the sellers have to realize higher sales pricing. Due to the lack of complete information, the consumers stand to make imprecise judgments of the real value of products. Ultimately, the number of transactions within a market will eventually diminish due to a lack of confidence by consumers to purchase goods and services.

Asymmetric information leads to problems such as moral hazard and adverse selection. Williamson (1985) suggested that information impactedness is another complication that is the result of information asymmetry. Information impactedness arises in complex contracting situations, in which the buyer and the seller possess private knowledge and information, respectively. Opportunism is a possible outcome which leads to contract hazards, of which the transaction costs could be prohibitively high to overcome and hence lead to market failure.

Empirical studies of the Lemon Principle are considered less

available than those dealing only with the theoretical work. It is largely due to the high measurement costs pertaining to the qualities of the subjects. In the insurance industry where the idea of adverse selection is originated, some empirical evidences contrary to Akerlof (1976) have been produced. In the French automobile insurance market, Chiappori and Salanié (2000), found neither adverse selection nor moral hazard problems in the industry. In a US study, the National Medical Expenditure survey (Cardon & Handel, 2001) showed no empirical evidence that less healthy people had subscribed to higher coverage of medical insurance products, and thus rejected the notion that adverse selection took place in the market. Nevertheless, also in the US Medigap insurance market, Keane and Stavrunova (2016) concluded that there was adverse selection, but that the effect was negligible.

Contrastingly, several studies have come to conclusions based on empirical evidence affirming the Lemon Principle, for example, Engers, Hartmann, and Stern (2009) in the automobile market; Mocan (2007) in the child-care market; Downing, Jaffee, and Wallace (2009) in the mortgage-backed securities market; and Lambert and Wilson (2003) in the wheat market. In a recent paper by Bajari, Dalton, Hong, and Khwaja (2014) which deployed a semi-parametric analysis on insurance claim data of a large-scale self-insured employer, they found statistical evidence of both moral hazard (overconsumption of healthcare services) and adverse selection (higher premium plans attract more employees with latent health problems). Cohen and Siegelman (2010) also conducted comprehensive empirical studies and reviews of adverse selection and moral hazard in other insurance markets.

In the field of real estate, empirical studies on information asymmetry are also scanty. In an earlier study, Chau, Yiu, and Wong (2002) found no empirical evidence of adverse selection in Hong Kong's housing market between 1995 and 2000. They argued that the most influential piece of information affecting property prices is the cost of land, which is rather symmetrical information in nature.

Referencing an empirical test on Hong Kong's housing market, Chau and Choy (2011) investigated problems from information disclosure perspectives. Results suggested that even if transacting parties are forced to disclose adverse information, this does not necessarily increase efficiency; but it may render desirable effects if the total social costs can be saved by such disclosure. For specific information that is very costly to research and obtain, a compulsory disclosure requirement might suffice. As an example, presentation of flat size by property developers; current regulations require property developers to disclose the unit size in a specific format during pre-sale. Prior to April 2013 there was no standard definition or prescribed format to convey the information on the size of the flat to the buyer. This can and has resulted in considerable variance in the flat size buyers perceived during the pre-sale stage, and what they realized upon completion and seeing the actual flat. Several factors may give rise to the variance in flat sizes; the thickness of the load bearing walls inside the flats, the provisions of bay windows, curtain walls, room divisions, external hallways, and public areas. Construction projects carried out by different developers exemplify significant variances in terms of floor area efficiency. To reliably calculate the real shrinkage of usable area requires a consistent measurement method of floor areas. This paper attempts to track the adverse selection process in the housing market by the review of empirical test results used to measure the shrinkage ratios and turnover rates of 16,946 premises over a study period between 1991 and 2013.

3. Methodology

This study posits that those durable lemons in Hong Kong's housing market can be identified by measuring the shrinkage rates of the housing units. Understanding some key terminologies of area measurement in Hong Kong is useful to understand the methodology.

The two major types of area interpretation customarily adopted in Hong Kong, namely Gross Floor Area (GFA) and Saleable Area (SA), could have confused the general public. GFA is the most commonly

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