

Journal of Contemporary Management Volume 20 Issue 1

Information asymmetry and the functioning of the real estate industry in South Africa: A conceptual paper

DOI: https://doi.org/10.35683/jcm21110.192

FREDDY MARILAHIMBILU MGIBA

Marketing division, School of Business Sciences, University of the Witwatersrand South Africa

Email: freddy.mgiba@wits.ac.za

ORCID: https://orcid.org/0000-0002-4648-3218

ABSTRACT

Background: The prevalence of Information Asymmetry between real estate agents, sellers, and buyers in the South African real estate industry should be an issue of major concern.

The purpose of the study: To systematically investigate how the dual mandate system and the ideological outlook of real estate agents in the South African real estate industry provide a fertile ground for exploiting the inherent information asymmetry in housing transactions to the detriment of optimal functioning of the industry.

Design/methodology/approach: The analysis was conducted by use of the systematic literature review and used the Signaling and Agency theories as lenses.

Findings: The study concludes that information asymmetry can be systematically applied via pricing, marketing practice, the handling of information, and the pooling of services for the benefit of real estate agents, to the detriment of both seller and buyer principals' interests.

Recommendations/value: It is recommended that the South African real estate policymakers enact strategies to both verify the discussed manifestation and to identify other possible manifestations of information asymmetry with the view of mitigating the effects thereof.

Managerial implications: The study outcomes suggest both policymakers and real estate agencies need to cooperatively implement practices that can bolster confidence in the industry.

Keywords

Agency theory; Dual mandate; Ideology; Information asymmetry; Signaling theory, Outcomes.

JEL classification: M31; M37; 018; O35



1. INTRODUCTION

The real estate business incorporates virtually every other business: engineering, design, construction, and all planning activities imaginable (Wafford et al., 2010). In the South African context, this industry had an approximate size of R4.9 trillion in 2012 and accounted for about 8.3 percent of the country's GDP (Tau-Sekati, 2012). When homeowners choose to sell their homes, they first need to determine the asking price for their property and make use of a real estate agent (REA) (Beracha & Seiler, 2014). The real estate agent signs a mandate contract with the seller and helps with initial valuations and with the subsequent marketing of the property. The favoured mandate type is the exclusive agency mandate (EA) or the sole mandate (exclusive right to sell) mandate (Brown & Yingling, 2007; Kadiyali et al., 2014). In the sole mandate arrangement, the seller and broker agree that the contracting broker shall be the only broker that will be entitled to a commission and that no other brokers will have a direct contractual relationship with the seller (Mgiba & Maziriri, 2018). Once an agent is appointed by the seller, the agent determines who gets to see the property and gets involved in the setting of the listing/asking price. This gives the marketer the exclusivity and exactness of the asking price (Erasmus, 2006; Spies, 2013). But the real estate agent also represents the buyer in a typical South African housing transaction and generally appears to solely look out for the buyer's interests (Isakson & Spencer, 2000; Lindeman, 2004). In effect, the agent is in a Dual mandate situation (Mgiba & Chinomona, 2018). The real estate agent is therefore called upon to be the middleman between the seller and the buyer (Salvador, 2011). Under ideal circumstances, the dual agency creates an opportunity for efficiency gain by reducing search costs (Wiley & Waller, 2013). However, this arrangement can lead to situations wherein the interests of the principals (buyer and seller principals) are compromised. It is generally accepted that there are difficulties in reconciling and balancing these divergent interests between the seller and the buyer principal (Mcgovem & Temel, 2005), as it is impossible to serve two masters (Palma et al., 2014), and that dual mandate can create a conflict of interests (Pancak & Sirmans, 2004; De Mott, 2016). As will be shown, concerning pricing, the transaction can be viewed as a zero-sum game in which the interests of the seller and buyer directly conflict (Brastow & Waller, 2013). The real estate agent is in a position to control the: content of the information they communicate to either of the principals (marketing), viewing patterns for properties in their books, listing type, and the information they disclose or withhold from their principals. This problem gets compounded by the information gap between REAs, the buyer, and the seller, a situation usually referred to as information asymmetry (IA). Also, the context of the South African history of racial segregation seems to further compound the problems. Some participants in housing transactions grew up in the apartheid environment, an environment that exposed them to heightened sensitivity to the differences between blacks and whites (Temba & Busisiwe, 2021). In other contexts, this belief system has been shown to impact the housing industry (Quillian *et al.*, 2020). Abaied and Perry (2021) state that people who were socialised in particular ideology-inspired ways are likely to adopt those ways. It can therefore be inferred that the major players in residential real estate transactions (buyers, sellers, and real estate agents) who grew up in the racially segregated South African environment can later do business in ways that are consistent with the learned ideology. It is, therefore, the author's contention that the ideological persuasion of REAs can detrimentally influence real estate transactions and their outcomes, as will be argued below.

2. PROBLEM AND PURPOSE STATEMENT

Real estate transactions provide an unusually attractive setting to test the impact of IA (Levitt & Syverson, 2008). In doing work for both the seller and buyer principals, the REA has access to both the seller and the buyer, which creates IA (James, 2002). According to Wilkie et al. (1998), IA is an antecedent of opportunism. REAs have informational advantages over all other players in pricing, marketing activities, property financing, and property registration processes (Hiischer & Sisli-Ciamarra, 2013). Also, there are information differences between buyers and sellers of properties in South Africa, given the country's history. The South African real estate Industry (REI) is of special interest since South Africa is a developing country with a history of segregation and with a general movement of people from rural to urban areas and also from townships to suburbs in different cities (Selmczi, 2011; Simbao, 2013; Kollamparambil, 2016). Although consumers can likely reduce the extent of IA, REAs are likely to be always better informed than potential consumers (Chod & Lyandres, 2018). Many articles have been written on how IA can be exploited to the disadvantage of principals in many industries, as the following examples illustrate. Information asymmetry has been found to lead to a lack of clarity in communication (Chen et al., 2018), impede the monitoring process within organisations (Rodrigues & Galdi, 2017), and enables misrepresentation to take place (Wathne & Heide, 2000).

However, a major shortcoming of the IA literature is the lack of theoretical insights into how to conceptualise and understand adverse behaviour between REAs and their principals. There has also been no attempt to link IA with the work of REAs and its effect on sellers and buyers in the South African context. South Africa provides an interesting context because of its emerging economic status (Manning, 2022) and its separate racial development history (Dlamini *et al.*,

2021), which enforced the demarcations of people's place of residence based on colour and socioeconomic status (Johansson, 2019). This study aims to fill this gap by using two grounding theories, the Agency theory (AT) and the Signaling theory (ST), to develop a new conceptual model that explains how the dual mandate system and REAs' ideological outlook can lead to the exploitation of IA to the detriment of either one or both the buyer and seller principals. The study highlights the nature of the messages communicated by REAs, how those messages are communicated, how they are received by both sellers and buyers and the consequences thereof. It attempts to extend knowledge by providing a new conceptual perspective to view the operation of the real estate industry (REI) in South Africa. It develops several propositions and advances a conceptual framework that can contribute to effective policy-making and real estate marketing in an emerging economy. Since IA plays a role in both AT and ST, the new model will serve as a linchpin for connecting them in pursuit of new conceptual synergies (Connelly et al., 2011; Bergh et al., 2019). It is hoped that the study will generate interest amongst academics to further research the possible existence of the abuse of customer trust in real estate agents in South Africa (SA). South African policy-making bodies like the Department of Human Settlement (DHS) and the Estate Agency Affairs Board (EAAB) can use some of the propositions to mitigate possible detrimental practices within the industry. The remainder of this paper follows the following order. The first part reviews the literature on AT and ST and the application of these theories to highlight potential gaps. This is followed by a discussion of the study's methodological approach. The third subsection uses the constructs from these theories and the extant literature to synthesise and develop propositions. Finally, the propositions are discussed, the implications of the study for theory and practice are given, and future research directions are highlighted.

3. THE AGENCY AND THE SIGNALING THEORIES

The present study is grounded on the Agency (AT) and the Signaling theories (ST). The cornerstone of agency theory under which the dual mandate system (DMS) operates is the assumption that the interests of principals and agents diverge (Hill & Jones, 1992), and that dissimilarity of goals can be associated with conflict and IA (Ross et al., 1997). Another central assumption of agency theory is that the transacting parties in a reals estate deal have misaligned goals (Panda & Leepsa, 2017), it is difficult or expensive to control each other's behaviour in a transaction (Eisenhardt, 1989), and that the agents will act opportunistically and exploit this information asymmetry (IA) at the expense of either of the principals or both of them (Van Slyker, 2006; Greenberg et al., 2008). The agency theoretical perspective applies to this context because there is potential for asymmetric information and opportunistic behaviour by informational

advantaged parties to a transaction (Eisenhardt, 1989). This study identifies specific agency problems connected to the relationship of the REAs on the one hand and the seller and buyer principals who delegate specific tasks to the REA on the other (Cheng & Kam, 2008). The relationship between these parties seems to provide a fertile ground for opportunistic behaviour. Applying the perspective of AT can provide novel insights into how the principal and policy-makers can reduce possible REAs' adverse opportunistic behaviours. In practice, the behaviours are likely to manifest in the pricing of the properties (because the agent often assists sellers in determining), the marketing communication (because they determine the listing of the property and viewing patterns), disclosure/withholding of proprietary information (because they have access to both the seller and the buyer principals), and in inclusion or exclusion of other agents (except in multi-listing context).

Further, the challenges and opportunities created by IA are fundamental elements of the Signaling theory (Spence 1973) because this theory focuses on situations with asymmetric information (Spence, 2002). The signaling model specifies the process of how signals ultimately influence individual reactions (Connelly et al. 2011). In general, signaling is supposed to reduce information asymmetry between contracting parties (Fletcher-Brown et al., 2018; Xu et al., 2019). However, one of the basic assumptions of ST is that signalers and receivers have conflicting interests. Although several studies have adopted signaling theory in different contexts (Connelly et al., 2011), its application to the REI has received scant attention (Murphy et al., 2007; Nelson et al., 2009; Eddleston et al., 2016). This theory has been used to explain how potential homebuyers can be influenced by information from REAs (Bangerter et al., 2012), but according to Wilhelmy et al. (2017), it has not been sufficiently tested in the REI, especially for a developing country like South Africa. The most basic form of a signaling system consists of a sender, a signal, and a receiver (Wilhelmy et al. 2017). Signalers are individuals who obtain information about a product or service of which outsiders are unaware that might help develop perceptions regarding the underlying quality; signals are informational cues sent out by one party to another to influence desired outcomes, and receivers are people who possess limited information about a property (Boateng, 2019). In the REI, the main focus of the theory is the communication of information about the attributes of a property (Taj, 2016) to influence the actions of the seller or the potential buyer (Connelly et al., 2011), which may be to their detriment (Bliege & Smith, 2005; Taj 2016). In the typical South African REI industry, the REA is traditionally the source of the signals about the property (because of the dual mandate system), the signal is normally sent via marketing platforms and in face-to-face meetings with their principals, and the receiver is either of the

principals, depending on the direction the agent wants to influence the transaction. Given these theories, it is reasonable to infer that the REA in the South African property industry can influence the outcomes of a transaction to their benefit at the expense of either of the principals. Signalers can be beneficiaries of actions of the receivers that receivers would not take otherwise (Connelly *et al.*, 2011). Therefore, the actions can be at the expense of the receiver (seller and buyer principals) (Taj, 2016). To adequately appreciate the implications of possible adverse behaviour by REAs in any housing transaction, one needs to give a brief discussion on what optimal outcomes should entail. According to Xiong and Cheung (2021), optimal outcomes for all parties involved in a housing transaction (sellers, buyers, and REAs) should involve fair pricing, short time on the market, reduced search costs, and the provision of adequate and accurate information to both principals. Deng *et al.* (2022) summarise optimal outcomes as the realisation of the aspirations of participants.

4. METHODOLOGY

The basic idea of this conceptual study is to explore the theoretical and empirical works done on IA and to show how they relate to Agency theory (AT) and Signaling theory (ST). To provide a firm base (Mgiba 2019), the design of this literature survey is based on the scientific literature review approach, an approach that is considered one of the best in the literature review (Rowley & Slack 2004; Kekale et al., 2009). Some of the advantages of the systematic literature review are that: it is transparent, is a reproducible criterion, it applies objective criteria to the inclusion or rejection of articles (Tranfield et al., 2003; Denyer & Tranfield, 2009; Bordeleau et al., 2018), it helps overcome or minimise researcher bias (Roehrich et al., 2014). To further overcome and limit the possibilities of research bias (Tranfield et al., 2003), cross-referencing between researchers was undertaken (Roehrich et al., 2014; Chen & Liu, 2017). Following Creswell and Creswell's (2018) recommendations, the keywords/phrases that guided the search were information asymmetry, heterogeneous information, and agency problems. In line with sound academic practice, the exclusion and inclusion criteria for articles reviewed were initially determined (Roehrich et al. 2014). Unavailable related papers, journal articles on IA whose abstracts did not relate to the constructs of interest (those that relate to the possible abuse of information advantage), and duplicated articles did not form part of the study. The search for information on IA was restricted to peer-reviewed journals, conference proceedings, books, and doctoral theses published in English between 1986 and 2020. Each search was performed in both the titles and the abstract because the title words in the paper can be limited and not specifically refer to information asymmetry; the authors could use synonyms or different terms that equated

to the definition of IA. Once relevant papers were identified, the researcher used the works cited within each article to expand the search and determine which academic fields have been published in IA. The evaluation of the articles consisted of reading the studies through the technique of content analysis as recommended by Mgiba (2019). The available literature was perused to try and unearth any pattern of how IA manifests itself in other industries. A combination of search terms/phrases, as recommended by Igwe *et al.* (2019), led to the isolation of key areas that IA can find expression, which are: real estate pricing, pooling of REAs services, real estate marketing, and the disclosure or withholding of information to principals. These areas are also suggested in both the AT and the ST. The total number of articles used in the IA discussion is 52. These articles together with the grounding theories form the basis for the proposition's development subsection. This section is structured around the constructs emanating from both the AT and ST, which are: use of IA in the pricing of properties, the use of IA in the marketing of properties, the use of IA in the pooling of services, and the application of IA in the decisions to disclose or withhold information to principals.

5. INFORMATION ASYMMETRY

IA refers to the condition wherein different people know different things (Stiglitz 2002), and information is not homogeneously distributed amongst transacting parties (Schmidt & Keil 2013). In the present study, IA refers to the disparity/gap in knowledge and information sets between individuals; and a relationship in which others possess significantly superior knowledge (Chen et al., 2018; Naqvi et al., 2021) and are better off whilst others are worse off (Galinsky & Mussweiler, 2001). When agents do not have the same level of information as their principals, they are in a situation of information asymmetry (Tupangiu, 2017). It is hard for buyers to gain experience and expertise in residential property transactions (Levitt & Syverson, 2008), as these purchases are infrequent, and the time between them is often measured in years or decades (Levitt & Syverson, 2008). Both buyers and sellers are infrequent market participants (Scott & Lizieri, 2012), and they are not informed of the demand and supply conditions in the market (Arnold, 1992). The existing lack of a central trading system, the heterogeneous nature of assets and markets (De Wit & Van Der Klaauw, 2012), and the extensive range of information that has to be gathered and assessed present a challenge to both sellers and buyers (Macallister et al., 2008). For that reason, unsophisticated vendors and purchasers of residential properties rely heavily on the expertise of REAs in matters of market intelligence; searching for properties and buyers; data appraisal and pricing; financing advice; purchase terms and transaction management services; advice on conditions and habitability of the real estate in question even though conflicting loyalties and

objectives commonly exist between the agents and their clients (Mcallister et al., 2008; Kroll, 2010). When principals seek out agents for expert knowledge, the principals are usually oneshooters with no experience (Heimer & Staffen, 1998; Shapiro, 2005), and agents are repeat players. REAs are generally experienced and cognisant of the market forces involved in the industry (Gonzalez-Navarzo & Quintana-Domeque, 2009). A big chunk of housing information is, therefore, likely to be provided by REAs, which gives rise to a potentially serious Principal-agent problem (Levitt & Syverson, 2008; Scott & Lizieri, 2011). REAs are assumed to have superior search technology to locate prospective buyers, superior knowledge of market conditions, and setting an optimal asking price (Rutherford et al., 2005). The above setting makes the housing markets to be prone to IA and incomplete contracts (contracts characterised by high opportunistic risks due to IA) (Vosselman & Van der Meer-Kooistra, 2006; Greenberg et al., 2008; Wang, 2021). In general, IA has negative consequences for any principal-agent (PA) relationship and leads to principals being poorly served (Ross et al., 1997; Levit & Syverson, 2005). One of the reasons is that IA presents opportunities for opportunistic behaviour from anyone who is advantaged thereby. REAs are humans who also like to maximise utility. REAs are self-interested individuals (Varian, 1989) who can manipulate the marketing mix for possible gains (Villanova, 1987; Lindeman, 2004; Lee, 2012). It has been shown in other studies that the presence of IA favours the agent (Gibb & Pryce, 2012; Shapiro, 2005), leading to principals being poorly served (Ross et al., 1997; Levit & Syverson, 2005), and may lead to agency problems due to misaligned incentives (Wiley & Waller, 2013). The high cost of asymmetry of information brings about inefficiency in markets (Knight et al., 1998). The question remains: does this apply to the South African REI and how REAs do their work?

6. HOW BUYER AND SELLER PRINCIPALS CAN BE DISADVANTAGED BY IA

IA results in hidden characteristics, hidden knowledge, hidden actions, and hidden information (Eckardt, 2002; Palazzo & Rethel, 2008). IA would, under normal circumstances, not affect the two principals in the same way. For example, the seller who generally gives the initial mandate has less information than the agent on property prices and is therefore disadvantaged in price-setting and contract negotiations and faces imperfect information about market values and the location of potential buyers (Rutherford *et al.*, 2005). If the agent's objectives differ from those of the principal (as assumed in the Agency theory), the agent may take advantage of the situation to pursue their ends (Molho, 1997).

In a typical housing transaction, the two principals' levels of knowledge are different concerning property pricing levels, property characteristics, and neighbourhood characteristics. To uninformed buyers, for instance, all houses look alike, especially concerning hard-to-observe aspects of construction quality, price (Stroebel, 2014), and neighbourhood characteristics (Guerrieri et al., 2013). On both the quality of the structure and neighbourhoods and the pricing front, the buyer's negotiation position is weak. Also, the listing agent's incentives may be compatible with those of the seller or the buyer but rarely with both (Brastow & Waller, 2013). Another possible source of difficulties for buyer principals arises from what can be referred to as the 'servitisation' (borrowing from a manufacturing environment) of the REI in SA. In the goods markets, servitisation is an increased offering of fuller market packages or 'bundles' of customerfocused combinations of services, support, and knowledge to add value to core offerings' (Vandermerwe & Rada, 1988). As is a general practice, the REA is not only involved in selling the property. They can be involved in the valuation, bond origination, and decisions as to who handles the ultimate registration of the property. Thus, the REA can earn higher profits by earning a commission from the actual sale of the house and from bond origination (Bascavusoglu-Moreau & Tether, 2010; Jergovic et al., 2011; Parry et al., 2012). Buyers are normally not informed of their rights to approach the bond originators directly, and they are sometimes actively discouraged from doing so. In that way, the interests of the buyer principal can be compromised. Other possible ways of exploiting IA would be through cheating, breach of contract, distortion of data, dishonesty, false threats and promises, misrepresentation, and withholding of information (Wathne & Heide, 2000). In light of the above, certain areas in the industry deserve special attention, especially those in which the REA (in the South African context) is the major determinant, namely, property pricing, pooling of services, property marketing, and the withholding or disclosure of information.

6.1 The pricing of properties

As a dual representative of the two opposite sides, a REA has access to inside information. Information asymmetry (IA) can give rise to non-disclosure of useful information to the buyer, like the minimum acceptable price to the seller to get a higher commission (Scott & Lizzieri, 2012); disclosure of information to either of the principals in breach of fiduciary responsibilities (Lindeman, 2004); misrepresentation of the property features to prospective purchasers (Villanova, 1987); limiting of prospective buyers to only those who come through the listing agent. This may lead to an uninformed decision by buyers and a loss of opportunity to sell by owners (Ondrich *et al.*, 1998). REAs' valuation role leads to the setting of the list price (Arnold 1999; Green & Vandel, 1995; Yavas & Yang 1995), and this usually happens between the seller and

the REA and the buyer is unrepresented (Wiley *et al.*, 2013). Generally, REAs do not reveal the valuation figures to potential buyers. For the buyers, the asking price for residential housing is often viewed as a starting point for negotiations (Beracha & Seiler, 2014). Anglin (1997) contends that the listing agent can be informed of both the buyer's and seller's reservation price and other proprietary information such as urgency, motivation, and constraints. A REA can speed up the transaction and earn their commission sooner and reduce the time and effort to be spent on researching, marketing, and showing the house to clients. Price negotiations are usually a zero-sum game in which what one party loses is gained by the other. Due to buyers' limited capacity and knowledge, asking prices for residential real estate is often viewed as a starting point for negotiations (Beracha & Seiler, 2014). Having the above issues in mind, it is safe to assume that a real possibility of REAs under/over representing the value of the house for the principal to adopt a reservation price that is too low/high, depending on the commission structure, exists. The REA may pressure or lean on either the seller (to accept a lower price) or the buyer (to accept a higher price) to hasten the sale (Kadiyali et al., 2014).

6.2 Pooling of services

One value-adding way that the REI uses is in the pooling of property sales, bond origination, and choosing conveyancers. This can be likened to 'servitisation' in the goods markets. Servitisation is the combination of products with an intangible service so that they are jointly capable of fulfilling a specific customer need (Oliva & Kallenburg, 2003; Neely, 2008) and improving profits (Bascavusoglu-Moreau & Tether, 2010; Jergovic *et al.*, 2011; Parry, Bustinza, & Vendrell-Herrero, 2012). By getting involved in the applications for bonds, the REAs earn additional income through bond origination commissions. But, this also results in limiting the number of opportunities to choose ideal financiers for buyers, delaying the closure of a transaction for sellers, and excluding other conveyancers from competing for business in the industry.

6.3 Marketing

As the marketing effort of the property is determined by the REA, compromising the interests of either of the principals can arise when the agent either manipulates viewing patterns to prolong the property's time on the market so that the price can be lowered (Lee, 2012) or through the agent's manipulation of viewing patterns to exclude other people due to the ideological persuasion of the REA (Hendel *et al.*, 2007). Also, opportunities exist for the REA to use blockbusting (Von Hoffman, 1998), to steer potential buyers to other houses (Galster & Godfrey, 2005), to selectively use the information to maximise their utility, and manipulate the marketing mix to favor one side

of the deal. The REA can, for instance, steer potential purchasers to certain properties which have only been listed by the agent (Galster & Godfrey, 2005), reserve the property for a certain type of prospects or friends, and by advertising the property in channels that are only accessible to some and not to others. In their valuation role, REAs can undermine the interests of their principals by undervaluing properties to speed up the sale (Garmaise & Moskowitz, 2004; Palmon & Sopranzetti, 2008), non-disclosure of valuation prices to prospects to advantage the seller due to goals incompatibility (Izzo, 2000), reluctance to present offers lower than what the agent wants to maximise commission because of the difference in goals of REAs and their seller principals (Garmaise & Moskowitz, 2004); and by presenting wrong valuation figures to facilitate a quick sale at the expense of the seller (Lee, 2002).

6.4 Withholding or disclosure of personal information

Information about certain properties in the market can be withheld (Verstraete & Verhaeghe, 2020). On the other hand, with access to both sides, REAs are ideally positioned to disclose confidential information about their clients or help them in either the search or negotiation phase of the purchase process (Fonseka *et al.*, 2020) because they know the motivation of the potential purchaser and that of the seller. Since REAs enjoy an information advantage over buyers and sellers (Agarwal *et al.*, 2019), they can use this advantage to lean on either of the parties to the transaction to effect sale terms favourable to themselves. Information asymmetry arises as buyers and sellers acquiring REA services are often required to divulge personal and sometimes sensitive information such as income, divorce, and even bankruptcy about themselves as they often have less knowledge of the exchange process than does the agent/salesperson (Staelin, 1986).

7. SYNTHESIS

After analysing the literature, the author decided to classify the commentary on information asymmetry and also suggest propositions for further academic interrogation. The information on IA can be classified into three categories, namely: information asymmetry enablers, Information asymmetry attributes, and information asymmetry consequences. Examples of IA enablers in the South African real estate industry are the dual mandate system, the ideological persuasion of real estate agents, unequal access to the agent, real estate agents' motivation, and non-disclosure of implications of signed mandates to potential buyers.

Some of the attributes of IA are listed as different objectives between agents and principals, the presence of a conflict of interests, selective information use, disclosure or non-disclosure of

privileged information, 'servitisation' of services, and unethical business practices. All these practices have a bearing on the welfare of either one or all the principals in a real estate transaction. Possible consequences are a loss of income for the seller principal or loss of discount to the buyer principal, compromising of the interests of either of the two principals or all of them, less than ideal residential location, and general dissatisfaction with the service quality. The above practices (referred to as IA attributes) can be negatively impacted by the ideology of the agent and the presence of IA. Judged by the standard of Xiong and Cheung (2021) and Deng *et al.* (2022) of transactions' optimal outcomes, all these outcomes are less than optimal.

In light of the above analysis, the article posits the following propositions:

- The dual mandate system can lead to the detrimental use of information asymmetry in the South African real estate industry;
- The ideology of real estate agents can lead to the detrimental use of Information asymmetry by real estate agents in the South African real estate industry;
- Information asymmetry in the South African real estate industry compromises at least one of the principals,
- Some homebuyers in South Africa are more likely to be disadvantaged by the presence of information asymmetry;
- The outcomes of any real estate deal are more likely to be favourable to the agent than to any other party to the transaction.

The following model is therefore proposed (Figure 1)

IA attributes mandate Pricing Marketing Compro Sub-IA enablers Pooling of mised optimal services principal outcomes Information Ideology handling **Outcomes**

Figure 1: Proposed Information asymmetry model

Source: Author's own compilation

Key: Information asymmetry is represented by pricing practices, marketing activities, pooling of services, and disclosure or non-disclosure of information; Results are represented by the compromised principal interests and sub-optimal outcomes.

8. DISCUSSION

The main purpose of this study was to use the AT and ST to study the possible effects of IA in the South African residential industry. The above propositions, therefore, should be read in the context of these theories. The ST deals with communication that is meant to influence action. In the REI context, the REA might send a message to either of the principals to influence the ultimate transaction outcomes, the outcomes which could be at the expense of either the buyer or the seller principal. Depending on their objectives (which can be informed by the IA enablers), REAs can use different marketing activities (shown above as IA attributes) to drive a certain decision. In all of these scenarios, the interests of either one or all the principals may be compromised. In that case, the ultimate outcomes would be sub-optimal for at least one of the participants. For instance, according to the AT, as applied to the South African REI, one agent represents two principals whose interests differ and can be difficult to reconcile. Further, the interests of the REA may be at odds with those of all the principals (Deng *et al.*, 2022). Due to these scenarios, agents may maximise their utility by acting against their principals' interests. Also, as shown above, the

actions of REAs cannot be completely independent of their ideological persuasion. The combination of the dual mandate system, the REAs' ideological persuasion, the attributes of IA, and the compromised principals can lead to sub-optimal outcomes for housing transaction principals.

9. RECOMMENDATIONS AND SUGGESTED AREAS FOR RESEARCH

To fully appreciate the effects of IA in the South African REI, further research is suggested to establish the link between IA and the outcomes to principals in any property transaction. Furthermore, research should also be undertaken to identify ways to mitigate the negative effects of one party abusing their position of strength. This can be achieved by firstly identifying ways that countries that share a history similar to South Africa deal/have dealt with this kind of situation. For policy-makers such as the DHS and the EAAB, they should formulate policies that limit the possibility of abuse of information advantage. That might mean enacting some form of educational programs and policies that are aimed at protecting new entrants to the urban housing markets. Given the contribution of the residential real estate industry to the economy of South Africa, institutions of higher learning could be roped in to introduce programs that address issues related to REAs, sellers, and buyers and the possibilities of the abuse of IA. Another way around the possible abuse of IA would be to limit the number of areas that REAs are involved in for any given transaction. For example, stopping the practice of REAs doing property valuations, bond origination, and choosing conveyancing firms. Another possibility would be to ensure that REAs do not represent two opposing sides in the same deal. This can be achieved by ensuring that at least two agents (one representing the buyer and the other the seller) are involved in residential property transactions. This model is successfully applied in Canada (see Reagan, 2021) and in Wuhan (see Kryzanowski et al., 2021; Xiong & Cheung, 2021).

10. CONCLUDING REMARKS

This paper noted that information asymmetry is a reality that cannot be wished away in the South African industry. It went on to construct a conceptual framework that can be used as a springboard for future studies in the industry. In light of the above discussion, the following issues need further attention. There is a gap between the information that real estate agents and their principals possess. This gap can be deployed to advantage one of the parties to the transaction. Anecdotal evidence suggests that at least one party (REA, seller, or buyer) stands to benefit from IA in the South African real estate industry. One of the questions that should be posed is: when deploying

information advantage, is there any systematic discrimination applied to benefit one side at the expense of the other? This question is important given the evolution of the South African society from the apartheid system into a democratic one. Possibilities of narrowing the information gap or mitigating the effects thereof should be pursued by both academics and policy-makers, such as the DHS and the EAAB. All residential real estate participants, such as property developers, financiers, sellers, buyers, and real estate agents, should be sensitised to the prevalence of opportunities for the abuse of IA. Lastly, the propositions advanced by this study should be subjected to rigorous empirical testing to produce more generalisable findings. This would also overcome one of the main limitations of this study which is that the arguments were purely based on a literature review. All the inherent limitations in the accessed literature do carry over to this article.

REFERENCES

- Abaied, J.L. & Perry, S.P. 2021. Socialisation of racial ideology by white parents. *Cultural Diversity And Ethnic Minority Psychology*, 27(3):31. [http://dx.doi.org/10.1037/cdp0000454].
- Agarwal, S., He, J., Foo, S.T. & Changcheng, S. 2019. Do real estate agents have information advantages in housing markets? *Journal of Financial Economics*, 134(3):715-735. [https://doi.org/10.1016/j.jfineco.2019.05.008].
- Anglin, P.M. 1997. The contribution of buyer brokers. *Journal of Housing Economics*, 6(3):277-292. [https://doi.org/10.1006/jhec.1997.0211].
- Arnold, M.A. 1992. Principal-agent relationships in real estate brokerage services. *Journal of the American Real Estate and Urban Economics Association*, 20(1): 89-106. [https://doi.org/10.1111/1540-6229.00573].
- Bangerter, A., Roulin, N. & Konig, C.J. 2012. Personnel selection as a signaling game. *Journal Of Applied Psychology*, 94(7):719-738. [https://doi.org/10.1037/a0026078].
- Bascavusoglu-Moreau, E. & Tether, B. 2010. Servitisation, Survival and Productivity. In DRUID Summer Conference, Copenhagen Business School, Copenhagen.
- Beracha, E. & Seiler, R. 2014. The effect of listing price strategy on transaction selling price. *Journal of Real Estate Finance and Economics*, 49:237-255. [https://doi.org/10.1007/s11146-013-9424-1].
- Bergh, D.D., Ketchen, D.J., Orlandi, I., Heugens, P.P.M.A.R. & Boyd, B.K. 2018. Information asymmetry in management research: past accomplishments and future opportunities. *Journal of Management*, 45(1):122-158. [https://doi.org/10.1177/0149206318798026].
- Bliege, B.R. & Smit, H. 2005. Signaling theory, strategic interaction, and symbolic capital. *Current Anthropology*, 46: 221-248. [https://doi.org/10.1086/427115].
- Boateng, S.L. 2019. Online relationship marketing and customer loyalty: a signaling theory perspective. *International Journal of Bank Marketing*, 37(1):226-240. [https://doi.org/10.1108/IJBM-01-2018-0009].
- Bordeleau, F.E., Mosconi, E. & De Santa-Eulalia, L.A. 2018. Business intelligence in industry 4.0: state of the art and research opportunities. In Proceedings of the 51st Hawaii International Conference on System Sciences, 9:3944–3953. [https://doi.org/10.24251/HICSS.2018.495].

- Brastow, R.T. & Waller, B.D. 2013. Dual agency representation: incentive conflict or efficiency. *The Journal of Real Estate Research*, 35(2):199-222. [https://doi.org/10.1080/10835547.2013.12091358].
- Brown, T. & Yingling, K. 2007. Antitrust and real estate: a two-sided approach. *Competition Policy International* 3(1):225–235.
- Chen, C., Martin, X., Wang, X., Roychowdhury, S. & Billett, M.T. 2018. Clarity begins at home: Internal Information Asymmetry and External Communication Quality. *The Accounting Review*, 93(1):71-101. [https://doi.org/10.2308/accr-51842].
- Chen, S. & Liu, C.C. 2017. From demand response to transactive energy: state of the art. *Journal of Modern Power Systems and Clean Energy*, 5(1):10-19. [https://doi.org/10.1007/s40565-016-0256-x].
- Cheng, S.K. & Kam, B.H. 2008. A conceptual framework for analysing risk in supply networks. *Journal of Enterprise Information Management*, 21(4):354-360. [https://doi.org/10.1108/17410390810888642].
- Chod, J. & Lyandres, E. 2018. A theory of ICOs: diversification, agency, and information asymmetry, Discussion paper, SSRN eLibrary.
- Connelly, B.L., Certo, S.T., Ireland, R.D. & Reutzel, C.R. 2011. Signaling theory: a review and assessment. *Journal of Management*, 37:39-67. [https://doi.org/10.1177/0149206310388419].
- Creswell, J.W. & Creswell, J.D. 2018. Research design: qualitative, quantitative, and mixed methods approaches. 3rd ed. Sage publication: New York.
- De Wit, E.R. & Van der Klaauw, B. 2013. Asymmetric information and list price reductions in the housing market. ECONSTOR Discussion Paper 10-38/3. [https://doi.org/10.1016/j.regsciurbeco.2013.03.001].
- Demott, D.A. 2016. Defining agency and its scope (II). *Comparative Contract Law: A Tale of Two Legal Systems*, 396-413. [https://scholarship.law.duke.edu/faculty_scholarship/3417/].
- Deng, K.K., Chen, J., Lin, Z. & Yang, X. 2020. Differential Selling Strategies between Investors and Consumers: Evidence from Chinese Housing Market. *The Journal of Real Estate Finance and Economics*. (In press).
- Denyer, D. & Tranfield, D. 2009. Producing a systematic review. In D. A. Buchanan & A. Bryman (Eds.), The Sage handbook of organisational research methods (671–689). Sage Publications Ltd.
- Dlamini, S., Testamichael, S.G. & Mokhele, T. 2021. Socio-demographic determinants of environmental attitudes, perceptions, place attachment, and environmentally responsible behaviour in Gauteng province, South Africa. South Africa. Sci. Afr.12, e00772.
- Eckardt, M. 2002. Agent and broker intermediaries in insurance markets an empirical analysis of market outcomes. *Thünen-Series of Applied Economic Theory*, 34: 5-32. [https://doi.org/10.2139/ssrn.655143].
- Eddleston, K.A., Ladge, J.J., Mitteness, C. & Balachandra, L. 2016. Do you see what I see? Signaling effects of gender and firm characteristics on financing entrepreneurial ventures. *Entrepreneurship Theory and Practice*, 40(3):489-514. [https://doi.org/10.1111/etap.12117].
- Eisenhardt, K.M. 1989. Agency Theory: An Assessment and Review. *The Academy of Management Review*, 14(1): 57-74. [https://journals.aom.org/doi/abs/10.5465/AMR.1989.4308385].
- Erasmus, L. 2006. The point of the sole mandate. [Internet: https://www.property24.com/articles/the-point-of-sole-mandate/4143; date accessed: 7/07/2016].
- Fletcher-brown J., Pereira V. & Nyadzayo M.W. 2018. Health marketing in an emerging market: the critical role of signaling theory in breast cancer awareness. *Journal of Business Research*, 86:416-434. [https://doi.org/10.1016/j.jbusres.2017.05.031].

- Fonseka, M., Tian, G.L. & Farooque, O.L. 2020. Impact of environmental information disclosure and real estate segments on cost of debt: Evidence from the Chinese real estate industry. *Economics of Transition and Institutional Change*, 28(1):195-221. [https://doi.org/10.1111/ecot.12238].
- Galinsky, A.D. & Mussweiler, T. 2001. First offers as anchors: The role of perspective-taking and negotiator focus. *Journal of Personality and Social Psychology*, 81(4):657–669. [https://doi.org/10.1037/0022-3514.81.4.657].
- Galster, G.C. & Godfrey, E.B. 2005. By words or deeds: racial steering by real estate agents in the U.S. in 2000. *Journal of the American Planning Association*, 71(3):251-268. [https://doi.org/10.1080/01944360508976697].
- Garmaise, M.J. & Moskowitz, T.J. 2004. Confronting information asymmetries: evidence from real estate markets. *Review of Financial Studies*, 17:405-437. [https://doi.org/10.1093/rfs/hhg037].
- Gibb, K. & Pryce, G. 2012. Future direction in housing economics: Introduction to a special issue of the Journal Of Property Research. *Journal of Property Research*, 29(4):271-279. [https://doi.org/10.1080/09599916.2012.731720].
- Gonzalez-Navarro, M. & Quintana-Domeque, C. 2009. The reliability of self-reported home values in a developing country context. *Journal of Housing Economics*, 18(4):311-324. [https://doi.org/10.1016/j.jhe.2009.07.013].
- Green, R.K. & Vandel, K.D. 1995. Optimal listing price and time on market strategies for residential sales. *The Journal of Finance*, 5(50):1461-1489.
- Greenberg, P.S., Greenberg, R.H. & Antonucci, Y.L. 2008. The role of trust in the governance of business process outsourcing relationships: a transaction cost economics approach. *Business Process Management Journal*, 14(5):593-608. [https://doi.org/10.1108/14637150810903011].
- Guerrieri, V., Hartley, D. & Hurst, E. 2013. Endogenous gentrification and housing price dynamics. *Journal of Public Economics*, 100:45–60. [https://doi.org/10.1016/j.jpubeco.2013.02.001].
- Heimer, C.A. & Staffen, L.R. 1998. For the sake of the children: The social responsibility in the hospital and home. Chicago: Chicago University Press.
- Hendel, I., Nevo, A. & Ortalo-Magne, F. 2007. The relative performance of real estate marketing platforms: MLS versus FSBOMadison.com', econstor. CSIO working paper 0091. [https://doi.org/10.3386/w13360].
- Hiischer, J. & Sisli-Ciamarra, E. 2013. Conflict of interests on corporate boards: the effect of credit directors on acquisitions. *Journal of Corporate Finance*, 140-158. [https://doi.org/10.1016/j.jcorpfin.2012.10.001].
- Hill, C.W.L. & Jones, TM., 1992. Stakeholder-Agency theory. *Journal of Management Studies*, 29(2):131-153. [https://doi.org/10.1111/j.1467-6486.1992.tb00657.x].
- Igwe, E.O., Charlton, K.E., Probst, Y.C., Kent, E. & Netze, M.E. 2019. A systematic literature review of the effect of anthocyanins on gut microbiota populations. *Human Nutrition And Dietetics*, 32(1):53-62. [https://doi.org/10.1111/jhn.12582].
- Isakson, H.R. & Spencer, M. 2000. Total quality management and residential real estate agent issues. *Journal of Real Estate Research*, 20(1/2):179-188. [https://doi.org/10.1080/10835547.2000.12091030].
- Izzo, G. 2000. Cognitive moral development and real estate practitioners. *Journal of Real Estate Research*, 20(1-2):119-141. [https://doi.org/10.1080/10835547.2000.12091028].
- James, H.S. 2002. On the reliability of trusting. *Rationality and Society*, 14(2): 229-56. [https://doi.org/10.1177/1043463102014002004].
- Jergovic, A., Vucelja, A., Inic, B. & Petrovic, Z. 2011. Transformation of business entities from production to service company. *Technics Technologies Education Managemen*, 6(1):118–129.

- Johansson, S. 2019. The right to the city in post-apartheid South Africa: Abahlali base mjondolo's struggle for land, housing and dignity. University of Gothenburg, Germany (MA thesis). [http://hdl.handle.net/2077/61930].
- Kadiyali, V., Prince, J.P. & Simon, D.H. 2014. Is dual agency in real estate transactions a cause for concern? Cornell University, Johnson School Research Paper Series No. 08-07: 2009. [https://doi.org/10.2139/ssrn.1019069].
- Kekale, T., De Weerd-Nederhof, P., Cervai, S. & Borelli, M. 2009. The "dos and don'ts" of writing a journal article. *Journal of Workplace Learning*, 21(1):71-80. [https://doi.org/10.1108/13665620910924925].
- Knight, J.R., Sirmans, C.F. & Turnbull, G.K. 1998. List price signaling and buyer behaviour in the housing market. *Journal of Real Estate Finance and Economics*, 9:117-192. [https://doi.org/10.1007/BF01099271].
- Kollamparambil, U. 2016. Impact of internal in-migration on income inequality in receiving areas: a district-level study of South Africa. *Economic Research Southern Africa*, 646:1-27. [https://doi.org/10.1080/00220388.2016.1277019].
- Kroll, R.E. 2010. Dual agency in residential real estate brokerage: conflict of interest and interests in conflict. *Golden Gate University Law Review,* 12(2):1-27. [https://heinonline.org/HOL/LandingPage?handle=hein.journals/ggulr12&div=21&id=&page].
- Kryzanowski, L., Wu, Y. & Zhou, T. 2021. Conflicts of interest and agent heterogeneity in buyer brokerage. [http://dx.doi.org/10.2139/ssrn.3805973].
- Lee, C.C. 2002. Housing brokerage market and ethics. *Journal of Housing Studies*, 11:35-53.
- Lee, C.C. 2012. Extended service quality mode: causes of agency problems and ethical sales behaviours. *Social Behaviour and Personality*, 40(8):1381-1400l. [https://doi.org/10.2224/sbp.2012.40.8.1381].
- Levitt, S.D. & Syverson, C. 2008. Market Distortion when agents are better informed: the value of information in real estate transactions. *The Review of Economics and Statistics*, (4):599-611. [https://doi.org/10.1162/rest.90.4.599].
- Lindeman, B. 2004. Attrition of agency in real estate brokerage. *The Journal of American Academy of Business*, 4(1/2):377-383.
- Macallister, P., Hughes, C. & Gallimore, P. 2008. Principal-agent issues in the asset acquisition: UK institutions and their investment agents. *Journal of Property Research*, 25(4):269-283. [https://doi.org/10.1080/09599910902837010].
- Manning, S. 2022. From mainstream to niche: How value regimes shift in emerging economy upgrading. *Research Policy* (In press). [https://doi.org/10.1016/j.respol.2022.104532].
- Mcgovem, M. & Temel, N. 2005. Articulating principals, agents, and institutions. Amsterdam. (45th Congress of the European Regional Science Association, 23-27 August 2005).
- Mgiba, F.M. & Chinomona, R. 2018. Dual mandate system and ideological outlook: their influence on conflict of interest, compromising of principal and suboptimal outcomes. *Real Estate Finance*, 35(1):52-71. [https://reapexcellence.com/journals/Chinomona%2009.pdf].
- Mgiba, F.M. & Maziriri, E.T. 2018. The Johannesburg real estate industry characteristics: how buyers and sellers are given less than optimal outcomes. *African Journal of Business and Economic Research*, 13(1):7-49. [https://journals.co.za/doi/epdf/10.10520/EJC-eefa004ea].
- Mgiba, F.M. 2019. Social network theory, sigma six, and customer experience management: common elements that aid positive sales-marketing interface: a review of the literature. *International Review of Management and Marketing*, 9(5):165-172.
- Molho, I. 1997. The Economics of information: lying and cheating in markets and organisations. Oxford: Blackwell.

- Murphy, P.J., Kickul, J., Barbosa, SD. & Titus, L. 2007. Expert capital and perceived legitimacy: female-run entrepreneurial venture signalling and performance. *The International Journal of Entrepreneurship and Innovation*, 8(2):127-138. [https://doi.org/10.5367/000000007780808002].
- Naqvi, S.K., Shahzad, F., Rehman, I.U., Qureshi, F. & Laique, U. 2021. Corporate social responsibility performance and information asymmetry: the moderating role of analyst coverage. *Corporate Social Responsibility and Environmental Engagement*, 28(6):1549-1563. [https://doi.org/10.1002/csr.2114].
- Neely, A. 2007. The servitisation of manufacturing: an analysis of global trends. Turkey. (the 14th European Operations Management Association Conference, 2 4 July 2007).
- Nelson, T., Maxfield, S. & Kolb, D. 2009. Women entrepreneurs and venture capital: managing the shadow negotiation. *International Journal of Gender and Entrepreneurship,* 1(1):57-76. [https://doi.org/10.1108/17566260910942345].
- Oliva, R. & Kalleberg, R. 2003. Managing the transition from products to services. *International Journal of Service Industry Management*, 14(2):160-172. [https://doi.org/10.1108/09564230310474138].
- Ondrich, J., Stricker, A. & Yinger, J. 1998. Do real estate brokers choose to discriminate? Evidence from the 1989 housing discrimination study. *Southern Economic Journal*, 64(4):890-901. [https://doi.org/10.1002/j.2325-8012.1998.tb00109.x].
- Palazzo, G. & Rethel, L. 2008. Conflicts of interest in financial intermediation. *Journal of Business Ethics*, 81(1):193-207. [https://doi.org/10.1007/s10551-007-9488-z].
- Palma, A., Ferreira, N.T., Vilaca, M.M. & Assis, M. 2014. Conflict of interest in the war against obesity: is it possible to serve two masters? Saude e Sociedade, 23(4):47-58. [https://doi.org/10.1590/S0104-12902014000400012].
- Palmon, O. & Sopranzetti, B.J. 2008. Brokers, information, and transaction outcomes: evidence from the real estate market. Rutgers University: New Jersey. (Manuscript).
- Pancak, K.A. & Sirmans, C.F. 2005. The effect of agency reform on real estate service quality. *Journal of Housing Research*, 15(1):41-54.
- Panda, B. & Leepsa, N.M. 2017. Agency theory: review of theory and evidence on problems and perspectives. *Indian Journal of Corporate Governance*, 10(1):74-95. [https://journals.sagepub.com/doi/abs/10.1177/0974686217701467].
- Parry, G., Bustinza, O.F. & Vendrell-Herrero, F. 2012. Servitisation and value co-production in the UK music industry: an empirical study of consumer attitudes. *International Journal of Production Economics*, 135 (1):320-332. [https://doi.org/10.1016/j.ijpe.2011.08.006].
- Quillian, L., Lee, J.J. & Honore, B. 2020. Racial discrimination in the U.S. housing and mortgage lending markets: a quantitative review of trends, 1976–2016. *Race Social Problems*, 12:13–28. [https://doi.org/10.1007/s12552-019-09276-x].
- Reagan, S. 2021. The law of haunted houses: a comment on stigmatised properties following Wang v Shao. *UBC Law Review*, 54:455.
- Rodrigues S.D. & Galdi G. 2017. Investor relations and information asymmetry. *Revista Contabilidade and Finanças*, 28(74):297-312. [https://doi.org/10.1590/1808-057x201703630].
- Roehrich, J.K., Lewis, M.A. & George, G. 2014. Are public-private partnerships a healthy option? A systematic literature review. *Social Science and Medicine*, 113:110-119. [https://doi.org/10.1016/j.socscimed.2014.03.037].
- Ross, T.R., Anderson, E. & Weitz, B. 1997. Performance in principal-agent dyads: the causes and consequences of perceived asymmetry of commitment to the relationship. *Management Science*, 43(5):680-704. [https://doi.org/10.1287/mnsc.43.5.680].

- Rowley, J. & Slack, F. 2004. Conducting a literature review. *Management Research News*, 27(6):31-39. [https://doi.org/10.1108/01409170410784185].
- Rutherford, R.C., Springer, T.M. & Yavas, A. 2005. Conflicts between principals and agents: evidence from residential brokerage. *Journal of Financial Economics*, 76(3):627–665. [https://doi.org/10.1016/j.jfineco.2004.06.006].
- Salvador, A.L. 2011. The regulation of dual representation in NFL. *Texas Review of Entertainment and Sports Law,* 13(1):63-83.
- Schmidt, J. & Keil, T. 2013. What makes a resource valuable? identifying the drivers of firm-idiosyncratic resource value. *Academy of Management*, 38(2):206-228. [https://doi.org/10.5465/amr.2010.0404].
- Scott, P.J. & Lizieri, C. 2012. Consumer house price judgments: new evidence of anchoring and arbitrary coherence. *Journal of Property Research*, 29(1):49-68. [https://doi.org/10.1080/09599916.2011.638144].
- Selmeczi, A. 2011. From shack to the constitutional court: the litigious disruption of governing global cities. *Utrech Law Review*, 7(2):60-76. [https://doi.org/10.18352/ulr.162].
- Shapiro, S.P. 2005. Agency theory. Annual Review of Sociology, 31:263-284.
- Simbao, R. 2013. Walking the other side. *Third Text*, 27(3):407–414. [https://doi.org/10.1080/09528822.2013.796204].
- Spence, M. 1973. Job market signaling. *Quarterly Journal of Economics*, 87:355–374. [https://doi.org/10.2307/1882010].
- Spence, M. 2002. Signaling in retrospect and the informational structure of markets. *American Economic Review*, 92:434–59. [https://doi.org/10.1257/00028280260136200].
- Spies, B. 2013. What is sole mandate, should I issue sole mandate? [Internet: https://www.ooba.co.za/resources/sole-mandate/; date of access: 7/07/2016].
- Staelin, R. 1986. Salesforce compensation plans in environments with asymmetric information. *Marketing Science*, 5:179-198. [https://doi.org/10.1287/mksc.5.3.179].
- Stiglitz, J.E. 2002. Information and the Change in the Paradigm in Economics. *American Economic Review*, 92(3):460-501. [https://doi.org/10.1257/00028280260136363].
- Stroebel, J. 2014. Asymmetric information about collateral values. *Journal of Finance*, 71(3):1071-1111. [https://doi.org/10.1111/jofi.12288].
- Taj, S.A. 2016. Application of signaling theory in management research: addressing major gaps in theory. *European Management Journal*, 34(4):338-348. [https://doi.org/10.1016/j.emj.2016.02.001].
- Tau-Sekati, P. 2012. South Africa's property sector worth a whopping R4.9 trillion. [Internet: <a href="https://www.bing.com/search?q=Tau-Sekati%2C+P.+2012.+South+Africa's+property+sector+worth+a+whopping+R4.9+trillion.&cvid=0f2eff51c5e34529b960eea3b616c0b6&aqs=edge..69i57.170j0j9&FORM=ANAB01&PC=U531; date of access: date of access: 7/07/2016].
- Temba, S. & Busisiwe, T. 2021. Rhetoric in societal conflict: apartheid in South Africa. *African Journal of Emerging issues*, 5(5):50-59. [https://www.ajoeijournals.org/sys/index.php/ajoei/article/view/199].
- Tranfield, D., Denyer, D. & Smart, P. 2003. Towards a methodology for developing evidence-informed management knowledge by means of systematic review. *British Journal of Management*, 14(3):207–222. [https://doi.org/10.1111/1467-8551.00375].
- Tupangiu, L. 2017. Information asymmetry and credit risk. *Finance Challenges of the Future*, 17(19):153-157.
- Van Slyker, D.M. 2006. Agents or stewards: using theory to understand the government-non-profit social service contracting relationship. *Journal of Public Administration Research and Theory*, 17:157–187. [https://doi.org/10.1093/jopart/mul012].

- Vandermerwe, S. & Rada, J. 1988. Servitisation of business: Adding value by adding services. *European Management Journal*, 6(4):314-324. [https://doi.org/10.1016/0263-2373(88)90033-3].
- Varian, H.R. 1989. Price discrimination. *Handbook of Industrial Organization*, 1:597-654. [https://doi.org/10.1016/S1573-448X(89)01013-7].
- Verstraete, J. & Verhaeghe, P.P. 2020. Ethnic discrimination upon request? real estate agents' strategies for discriminatory questions of clients. *Journal of Housing and the Built Environment*, 35:703-721. [https://doi.org/10.1007/s10901-019-09721-8].
- Villanova, D. 1987. The extended self, product valuation, and the endowment effect. *AMS Review*, 9:357-371. [https://link.springer.com/article/10.1007/s13162-018-0132-0].
- Von Hoffman, A. 1998. Like fleas on a tiger: a brief history of the open housing movement. Harvard.
- Vosselman, E.D. & Van der Meer-Kooistra J. 2006. Efficiency seeking behaviour in changing management control in inter-firm transactional relationships: an extended transaction cost economics perspective. *Journal of Accounting and Organizational Change*, 2(2):123-143. [https://doi.org/10.1108/18325910610675970].
- Wafford, L., Troilo, M. & Dorchester, A. 2010. Managing cognitive risk in real estate. *Journal of Property Research*, 27(3):269-287. [https://doi.org/10.1080/09599916.2010.518482].
- Wang, L., 2021. Research on supply chain governance strategy: game value analysis based on incomplete contract theory. 5th International Workshop on Advances in Energy Science and Environment Engineering, 257. [https://doi.org/10.1051/e3sconf/202125702016].
- Wathne, K.H. & Heide, J.B. 2000. Opportunism in inter-firm relationships: forms, outcomes, and solutions. *Journal of Marketing Research*, 33(4):431–441. [https://doi.org/10.1509/jmkg.64.4.36.18070].
- Wiley, J.A., Waller, B. & Brastaw, R. 2013. Two sides of dual agency: evidence from homebuyers and transactions. *Journal of Property Research*, 30(1):47-66. [https://doi.org/10.1080/09599916.2012.717538].
- Wilhelmy, A., Kleinmann, M., Melcher, K.G. & Gotz, M. 2017. Selling and smooth-talking: effects of interviewer impression management from a signaling perspective. *Frontiers in Psychology*, 8(740):1-17 [https://doi.org/10.3389/fpsyg.2017.00740].
- Wilkie, W.L., Carl, F., Mela, C.F. & Gundlach, G.T. 1998. Does "bait and switch" really benefit consumers? *Marketing Science*, 17(3):273-282. [https://doi.org/10.1287/mksc.17.3.273].
- Xiong, C. & Cheung, K.S. 2021. Understanding sellers' agents in the residential property market. *International Journal Of Strategic Property Management*, 25(3):179-189. [https://doi.org/10.3846/ijspm.2021.13724].
- Xu, M., Qin, S., Dust, S.B. & Direnzo, M. 2019. Supervisor-subordinate proactive personality congruence and psychological safety: A signaling theory approach to employee voice behavior. *The Leadership Quarterly*, 30(4):440-453. [https://doi.org/10.1016/j.leagua.2019.03.001].
- Yavas, A. & Yang, S. 1995. The strategic role of listing price in marketing real estate: theory and evidence. *Real Estate Economics*, 23(3):347–368. [https://doi.org/10.1111/1540-6229.00668].