

THE SEARCH FOR A VALUATION THEORY
"The time for a tested and adopted valuation theory has arrived"

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ABSTRACT

This paper makes the observation that where a valuation is used as an assessment of risk there is no research-backed theory of valuation that explains the methodology used and which is validated by a hypothesis.

In fact what exists is a paradigm¹, a collection of generally accepted concepts drawn from practitioners field practice that is subsequently adopted by academics in their teaching. With no research backed theory it cannot be claimed that valuation is a creditable proxy for price.

This paper supports that which has previously been advocated that price theory is an appropriate proxy for valuation theory, where a valuation is used as an assessment of risk.

What this paper advocates is the need for a hypothesis to validate the theory.

THE PROBLEM

The absence of a working theory manifests itself into a professional and academic dilemma and the question of credibility.

The problem is compounded from a misunderstanding between concepts, doctrines, and various economic theories. The problem is heightened through a misunderstanding of the role of the courts when attempting to resolve a dispute involving real estate interests.

Halbert C. Smith articulates this dilemma for us in his paper in 1986²;

"This paper points out some inconsistencies in appraisal practice stemming, in some cases, from inconsistencies in underlying theory, and in some cases from applications that are inconsistent with theory. The identification of inconsistencies in appraisal practice is not meant to be a wholesale attack on traditional appraisal approaches. Quite the contrary; the inconsistencies are identified with the premise that their correction would strengthen these procedures. The corollary is, of course, that their continued occurrences weaken appraisal and the appraisal function. They may lead to inaccurate value conclusions, disparities among appraisals, and lowered public confidence in appraisers. Most of the alleged inconsistencies cited in this paper can be easily corrected intellectually. Indeed, some already have been, and the corrections are slowly filtering into practice."

Smith goes on to state

"The purpose of this paper is to point out some inconsistencies in appraisal practice. These inconsistencies in some cases stem from inconsistencies in the underlying appraisal theory, in some cases from incorrect interpretation of the theory, and in some cases from applications that are inconsistent with the theory. Whatever the source may be, inconsistencies result from a breakdown in logic, and they may lead to inaccurate and disparate appraisals.

Since it is difficult, if not impossible, to "prove" that an appraiser's estimate of value is incorrect, it is incumbent upon appraisers and appraisal scholars to develop and apply the most logical, consistent system of value estimation ,

¹The definition of a Paradigm is that adopted by D Achour-Fischer in her paper is the valuation paradigm a paradigm in which reference is made the Kuhnian of the word by Kuhn.

² Smith Halert C Inconsistencies in Appraisal Theory and Practise, Journal of Real Estate Research 1986

possible. Lapses in logic and consistency weaken both appraised values and the public's confidence in the appraisal function."

Dr Austin J Jaffe and Dr Kenneth M Lusht 'The Concepts of Market Value: Its Origins and Development'³ in which they also highlight the dilemma, as previously referred to;

'The term "market value " is understood in many ways: as a symbol, norm, opinion, inference, expectation, prediction, event, ideal. Out of this thicket of meanings, no meanings, no unifying ideal has emerged despite years of effort by the appraisal profession and the courts. The official definitions are clumsy, lax, unrealistic, and self-contradictory, obviously the products of tired committees and overworked jurists. If there is a single concept common to all of them, it remains to be clearly articulated'

The authors see the dilemma as a one that demands resolution;

'When a group of individuals cannot decide upon its own purpose, it is to be expected that the group might have difficulty convincing others that its body of knowledge deserves the acclimation of a "profession ". Clearly, the lack of a theory of value precludes a precise measure of worth.

One of the manifestations of the problem is that the 'Spencer' doctrine is quoted incorrectly, as theory .Whipple⁴ in his book has done much to expose the inappropriate use of this doctrine that adopts the definition of 'fair market value' and the concept of '*willing .buyer willing seller*', where a valuation is used for the assessment of risk. To arrive at an outcome as designed by the legislation the courts had to make some assumptions. One assumption was that the market is fair. That is if all parties did not enjoy perfect knowledge they had at least equal knowledge. This is to assume normative economics, what it should be as opposed to what it is in reality. For the courts to meet the requirements of most statutes, this is a proper assumption, but not one that should be transposed where a valuations prime purpose is a risk assessment in an imperfect market.

Debt funding is a large component of the cost of real estate. The raising of funds for debt on real estate is also a large activity of the financial markets. Supporting the decision to lend debt as part of the risk assessment is a valuation. In the case of default by a borrower of such funds, the provider of the debt can only recover funds by the sale of that asset in that market of which the property is a component part. That market will be, in economist terms, imperfect, not 'fair'.

Therefore there is a need for such a theory to explain the methodology use if that valuation is used as an assessment of risk, and the reality of risk is recognized.

The credibility of the profession is further eroded, as there has been no sustained attempt to measure the accuracy of the price prediction models used in valuation.

THE QUESTION

The question that this paper seeks to answer is;

Is there a hypothesis that can measure the relationship between price variation and market behaviour that supports the adoption of price theory as a suitable proxy to valuation theory?

³ Jaffe A J and Lusht K M The Concept of Market Value: Its Origin and Development Published paper, Institute for Real Estate Studies College of Business Administration The Pennsylvania State University 1985

⁴ Whipple R T M PhD, FAVLE, Professor of Valuation and Land economy Curtin University W A Properly Valuation and Analysis The law Book Company Limited 1995.

The need for the valuation profession to adopt a theory of valuation is stated in the following by Lisey, Langley and Mahoney⁵;

"Theories impose order on our observations, explaining how things we see are linked together. Without theories, we would have only a mass of meaningless observations. The choice is not between theory and observation but between better or worse theories to explain our observations."

Others have stated the definition of a theory as;

"In short, theory is a way of abstracting or simplifying events in the real world in order to make the real world easier to understand. The purpose of theory is to make sense out of confusion. Theory helps economists to explain and make predictions about events in the real world, even though the theory abstracts away from many actual characteristics of the real world."

Economists are interested in explaining why and how consumers and producers in general make buying and selling decisions in a market. For this reason economists are interested in market behaviour, they study the behaviour of the group of consumers in the market and firms that are collectively in a market. They can ignore the tremendous number of unimportant or irrelevant influences on some specific individual's consumption decisions or some specific firm's production, pricing, or hiring decisions. They use theory in order to concentrate on and isolate the most important determinants of buyer demand and producer supply and to analyse the effects of changes in these important determinants. Economists construct theories that concentrate on these determinants of buyer and seller behaviour, and they ignore the many other variables.

Economic theory, therefore, provides a formalized structure or method of analysis for answering economic questions⁶

The prediction of price is an act of forecasting an economic event. Where risk or error is likely or present the prediction must be based on positive economics.

The next question is, is there a valuation theory that meets the above criterion that is universally adopted, has been tested by empirical research that can offer an explanation of methodology supported by a hypothesis.

It has been suggested by a number of notable writers that price theory is an appropriate theory to adopt as a basis of a valuation theory. What is missing is a hypothesis to test the theory.

If we accept the Cornell University's definition of a hypothesis as 'a specific statement of prediction' then the following is offered as a preface to a hypothesis.

There is a correlation between a shift in price range in a real estate market and economic change. Within a price range, price if treated as a dependent variable, allows price change to be explained by a change in the composition and intensity of the attributes. If this is correct, price can be decomposed and if price can be decomposed, price can be composed, or price can be predicted and predicted within a range of tolerable commercial risk.

⁵ Lipsey R G, Langley P C, Mahoney D M Positive Economics for Australian Students Weidenfeld & Nicolson 1985

⁶ Maurice S C & Phillips O R Economic Analysis Theory and Application 6th edition 1992 Irwin

Therefore a hypothesis must also establish the accuracy of prediction models requiring the predictions to consistently fall within a commercially tolerable range.

Such a study is also likely to suggest that there is a correlation between the margins of error and level to which the market is imperfect. The logical extension is that the greater the volume of transactions in a definable real estate market, then a greater level of accuracy is possible.

THE SEARCH FOR A VALUATION THEORY HIGHLIGHTS THE DEBATE AND THE PROBLEM

Jaffe A and Lusth K M ⁷ provide a concise appreciation of the evolution of value theory. From their research they state; .

"First, the survey indicates, without question, that value theory in economics retains a central place in the development of economics as a science. Second, this survey as well as most economic histories on the topic demonstrate that the development of the concept of value has taken a very long time to unfold. The gems have been costly to obtain in that an exorbitant amount of writing has occurred on this single topic alone. Third, it is apparent that the history of economic thought is filled with suggestions that economists themselves grew weary of attempting to settle the difficult conceptual and practical issues of value. Fourth, the thrust of much of the inquiry has occurred in two areas: the labor and cost of production theories and the demand-oriented utility theories. Fifth, it appears as if the best minds in economics have settled many of the issues dealing with the concept of value; despite the fact that several remain for future debate.

Regarding the theory and practice of appraisal, the good news is that the underlying economic basis of the standard and revised methodologies are solid. This survey provides conclusive evidence that the three approach methodology did not casually develop. It has also stood the test of time because the appraisal methodology captures several elements of the value theory debate. The bad news is that the debate has produced some answers which, in the authors' view, do not seem to be currently implemented in real estate appraisal practice.

There are several links between real estate appraisal and economic theory. A poor understanding of economics can lead to unfounded conclusions regarding the practice of valuation. Theories are only be useful if they can be tested and verified or tested and rejected. In the practice of real estate appraisal, some ideas seem to hold on despite the theoretical and in some cases, empirical evidence that the belief cannot be justified. With the development of new measurement tools, appraisers will have increasing opportunities for better valuation results. A good understanding of economic theory about the meaning of value may be requisite to better valuation in the future. "

S F Fanning, T V Grissom and T D Pearson establish a link between value theory and valuation theory and appraisal theory⁸. Therefore we need to examine where

⁷ Jaffe A J and Lusht K M The Concept of Market Value: Its Origin and Development Published paper, Institute for Reat Estate Studies College of Business Administration The Pennsylvania State University 1985

⁸ Fanning S F, Grissom T V, & Pearson T D, Market Analysis for Valuation Appraisals, Appraisal Institute, 1994

the value theory or theories surfaced.

The conflict that the debates witness is between two schools of economic thought. Each has inherited a number of titles the first can be referred to in value theory as;

Just Price, Cost of Labour, Cost of Reproduction, Fair Market Value. All of these are represented by Normative Economics. The definition of Normative Economics is what it should be. There is a perception early valuation theory was extrapolated from legal doctrine and if this was correct then such a theory would fall into the definition of Normative Economics. These theories are linked to an early concept that first emerged from the Greek Senate B.C. referred to as just price.

While the other can be referred to as;

Exchange Value or Market Value each supported by Positive Economics and Price Theory. Positive Economics can be described as *what does happen or that which occurs in reality*.

A more concise definition of both normative and positive economics can be gained from Lipsey R G, Langley p G, Mahoney D M ⁹

"Positive statements are about what is, was or will be; they assert alleged facts about the universe in which we live. Normative statements are about what ought to be. They depend on our judgments about what is good or bad, and they are thus Inextricably bound up with our philosophical, cultural and religious positions."

Many who have to predict price are often unknowingly confronted by these two value theories. The adoption will depend on the purpose for which the valuation is commissioned. The adoption of either theory will dictate the choice and weighting of methods in the assessment.

The debate that has occurred in the USA has had it's parallel in Australia. However the quality and vigour that has occurred in the USA is far greater than that which has occurred in Australia.

Gaylon E Greer and M D Farrell¹⁰ give a succinct history of value as a concept in economic theory .They trace the development in a similar manner to that of Jaffle A J and Lusht K M. They, Greer and Farrell, group the schools of economic thought in the following historic sequences;

- Classic
- Austrian or Marginal Utility
- Neoclassical

Both Greer and Farrell, and Jaffle and Lusht identify the evolution of the two different value theories through these schools of economic thought. Greer and Farrell trace the evolution down to 'market value' definition verses '*most probable price*'¹¹ as propagated by Richard Ratcliff. Ratcliff's concept recognises that a valuation is a prediction of price that acknowledges the imperfect nature of real estate market, that is all parties do not enjoy perfect or equal knowledge. These authors also recognise that the 'Defenders of the traditional definition find solace in its having been generated by the courts'. The legal definition incorporates the word and concept of a 'fair' market.

⁹ Lipsey R G, Langley p C, Mahoney D M Positive Economics for Australian Students Weidenfeld & Nicolson 1985

¹⁰ Greer G E and Farrell M D, Contemporary Real Estate Theory and Practice Dryden Press, 1983

¹¹ As promoted by Ratcliff, Richard U, Valuation for Real Estate Decisions The Forward, Democrat Press 1972

Greer and Farrell linked Alfred Marshall and Irving Fisher, both from the Neoclassical School of economic thought, with the emergence of 'The Three approaches'. Greer and Farrell provide an interesting insight as to the dilemma that has beset the industry. When the property profession in the USA were adopting neoclassical theory into their appraisal practise in 1927, this theory was being repudiated by Richard Chamberlin's thesis Theory of Monopolistic Competition in 1933 and Joan Robinson's Economics of Imperfect Competition. This observation of a failure to recognise the discrediting of an economic theory identified the disorientation of valuation theory through a lack of comprehension of new economic thought. This provides an insight into the cumbersome nature of professional bodies that are inhibited or retarded in the ability to maintain a parallel pace with intellectual development that allows them to test and adopt new thinking that may provide a more appropriate transition from the abstract to reality.

The debate and history of valuation theory in Australia has been dominated and crippled by such attempts to link valuation theory with legal rulings. The 'Spencer' case as promoted by Dr. J F N Murray and Rost and Collins is a classical case for such a distortion. The status of the 'Spencer Case' as a statement of valuation theory cannot withstand intellectual examination if the concepts adopted or developed by the courts are used for any other purpose than that which the court itself is petitioned for.

The inability of the valuation industry to reconcile this case to its true position is through a lack of understanding of the role of the judiciary. The profession would appear to have attributed some authority to the courts that the courts do not have and would not seek. This perception distorts a proper appreciation of the task of a Valuer when engaged in commercial decisions that are determined by market forces. Due to this lack of understanding, the evolution through debate of a philosophically sound valuation theory failed to take place.

This position has been encouraged by the gross lack of market information, which creates a difficult working environment for the Valuer to arrive at an assessment in which he or she is confident. However, the definition that Valuers often „choose, fails to reflect the reality of that environment. But by adopting a value definition based on the concept of a 'fair market' the Valuer has a defence. This defence is reinforced by judicial opinion that a valuation is an informed opinion borne of an art and not that of a scientific discipline.

What has been stated in the past as a valuation theory has in fact been methodology, largely transported from the courts as transcribed from Justices in their deliberations. This is evidenced by the Australian publication Valuation Principals and Practise¹² This publication devotes two paragraphs and relies on a code of ethics and 'Considerable judicial commentary provides a framework for reviewing and critically analysing valuation theory.' Of all the cases researched¹³ none report that the courts adjudicated on theory .

There was an early attempt to define a theory by Dr. J F N Murray who debated the issue at some length in Principles and Practice of Valuations¹⁴. Murray in this publication devotes considerable time to the issue of valuation theory.

Murray suggests, the adoption of the concepts of a valuation theory, developed by the courts arose from the need to;

¹² Published by the Australian Institute of Valuers and Land Economists Valuation principals and Practise, 1997.

¹³ Alan A Hyam, OAM, LRVLE (Val and Econ) Barrister-at-Law Court Decisions for Examination Study The Australian Institute of Valuers and Land Economist

¹⁴ Murray J F N Principles and Practise of Valuation first published 1949 final edition 1974 by Commonwealth Institute of Valuers

"administrate a country which is dependent upon process of valuation which are acceptable by the courts the commercial world and the individual. The existence of such a potent factor, as well developed theories of valuation, which meet with wide acceptance and which are founded upon, or endorsed by, judicial decisions and dicta, has been overlooked in all expositions of the theories of value and price.

And then

"The logical approaches to the determination of the value of property in specific circumstances have been fortified by Court decisions and dicta, and so principals of valuation rest not only upon their inherent validity but are backed by all the weight of authority and precedent. "

This perception is further reinforced, again discussed, by Rost and Collins

'The concept of value accepted for statutory purposes and for most other purposes is that authoritatively formulated by the High Court of Australia in Spencer V. The Commonwealth'.¹⁵

This thinking was again adopted in 1997 by G McNamara in an article in the Valuer & Land Economist 34 No.5 February, pages 429-449,

"Harmonization of World Standards." In which McNamara states, "Regarding the harmonisation of valuation standards, it is fair to comment that unlike other professions, the strong influence over the decade and throughout the world of the British legal system, has promoted a relatively uniform approach to the valuation/appraisal discipline. Except for some deflection in the American scene, valuation techniques have developed in a relatively compatible manner"

This thinking was challenged by Professor Dominique Achour-Fischer in a paper presented at the World Valuation Congress Melbourne April 1999. Here the professor reminds the valuing profession that;

"Around 80% of the body of knowledge (articles, textbooks, standards and reports) in our valuation/appraisal discipline come from the "deflected" American scene.

The rest of the world, as defined by the author, seems to exclude some minor countries such as Canada, Mexico, most South American countries, Japan, China and thus some thousand property academics and valuers world wide who, unforgivably, apply the general US "deflected" approach and, sacrilegiously, shirk the "strong influence of the British legal system. .."

Most of the techniques from the "deflected branch " came into use almost 100 years ago and were developed at a fairly sophisticated level more than 50 years ago (L.W. Ellwood, 1947). They have been taught in Universities and Business Schools for more than 25 years and have integrated modern financial models and theories for at least 15 years. Whereas, even in the last decade, most textbooks and articles produced under the "strong influence of the British System " still largely rely on elementary treatments that were dropped from US and Canadian Universities curriculums at least 15 years ago.

¹⁵ Rost R O and Collins H G Land Valuations and Compensation in Australia Australian Institute of Valuers reprint 1996

The point of this article is not to insist on the existing general methodological gap but to illustrate that even the application of apparently similar techniques is far from being "paradigmatic". The areas of divergence between the US-influenced and the UK-influenced spheres are quite numerous but we intend to limit the discussion to some of the tenets of the income approach to valuation."

The following writers, academics, and professionals articulate early need for a theory. Their observations demonstrate the history of the dilemma that, as stated above, still confronts the profession. As with any early intellectual development of most schools of thought, the early scholars bring forward much of the weight and sway of the debate.

What is Positive Economics.

Positive Economics is predicated on the scientific search for truth where a positive statement can be made, 'what it is' as opposed to 'what it should be'. Positive Economics is concerned with the need to advance our economic knowledge and the understanding of market behaviour. It's objective is to develop theories that fit into a positive and verifiable state.¹⁶

Those Who Advocated Positive Economics as Underpinning a Working Valuation Theory

The supporters of positive economics appear to be putting the proposition that any valuation theory that requires forecast of an economic event, a prediction of price, must be based on the theory of positive economics, and therefore by implication price theory as defined by micro economics.

James C Bonbright

James C Bonbright was a Professor of Finance at the Columbia University 1937, at which time he wrote Volume I and II of *The Valuation of Property A Treatise on the Appraisal of Property for Different Legal Purposes*. His treatise was on research into the legal and economic theories of property valuation. The work was and still is a high standard of scholarly excellence. This work is quoted extensively by Wendt but not mentioned at all by Ratcliff, and gains only one mention by Murray.

The purpose of quoting Bonbright here is that Bonbright was well aware of the confusion as witnessed by the debate. In the following text that is his conclusion he articulates the dilemma;

'Market Value or Exchange Value';

"The fact that "value" itself is a word of many meanings is now generally recognized in the law as in other professions, and is indicated by the judicial use of adjuncts distinguishing between "market value, " "value to the owner, " "real value, II "intrinsic value, II "physical value, " "replacement value, II etc. What is less frequently recognized, however, is the fact that even "market value, " or "exchange value, " is a multi-significant phrase, requiring much closer definition than it has generally received in order to constitute even a tolerable standard of legal appraisal. Even the economists have not agreed upon its meaning, while to the courts it has been taken to mean, on occasion, almost anything that the unadorned word "value" might mean.

According to the formal definitions of most economic textbooks, the market value (usually termed the "exchange value" of any object of wealth is

¹⁶ Lipsey R G, Langley p C, Mahoney D M *Positive Economics for Australian Students* Weidenfeld & Nicolson 1985

measured by the amount of money for which the wealth in question could actually be sold. As to the conditions under which the assumed sale would take place, most definitions are silent,. hence the market value of any given property is indeterminate without reference to stipulated conditions. But some economists prefer to use (market) value in an imputed sense, to mean an amount arbitrarily determined by multiplying the price of some conventional unit of a given commodity, as fixed on the market place, by the number of units of that commodity represented by the wealth to be valued. This definition, like the more usual one, is not sufficiently determinative to preclude many possible answers to the question, what is the present market value of this property?

Our own preference, at least in the field of appraisal, is for the previous definition of market value, under which a valuation of property means merely an attempt to estimate the price for which the property could be sold by some stipulated seller to anyone else the conditions of the assumed sale being left for selection by reference to the purpose for which the valuation is being made. So defined, market value will not qualify as a basis of legal appraisal save in a rather limited number of cases. But no alternative definition of value will serve as a jack-of-all-trades. The use of "market value" as the verbal basis for settling all varieties of legal disputes represents a uniformity of mere words rather than one of principle. The multiformity of value standards is only concealed, not avoided, by the accepted legal definition of market value as the price at which the property would be exchanged between a 'willing buyer' and a 'willing seller.' "

Paul F Wendt Contribution

Paul F Wendt¹⁷ made a significant and major contribution. Wendt encapsulates the early and influential contribution to the debate by others in his book Real Estate Appraisal he states;

'economists have abandoned arguments concerning the meaning of the term value and consider the word to be synonymous with the term market price. ,

Wendt observes a turning point in 1953 where the accepted value theory gave way to price theory. This event is marked by a paper delivered at the annual meeting of the American Economic Association entitled 'The Value of Value Theory'. The paper was by Richard Ruggles, which dealt exclusively with the evaluation of price theory.

In 1974, Wendt identifies the influence of economist on appraisal theory. He nominates Alfred Marshall, Irving Fisher as being largely concerned with techniques to establish value. He nominates Gusttav Cassel, who shortly before the First World War, was one who held the view that "*a special value theory was unnecessary in economic science and should be replaced by a theory of price.*

Wendt identifies this debate between the proponents of 'warranted market value' and 'market price'. Wendt nominates Hurd from his book Principals of City Land Value, 1903 as the first published proponent of 'exchange value being considered the best test of value. He then identifies Fredrick M Babcock, 1932, in his book Valuation of Real Estate as a proponent of 'warranted or justified market value'. From his publication of Valuation of Real Estate, 1932. Wendt refers to Babcocks's ;

¹⁷ Wendt Paul F, Professor of Real Estate and Urban Development, publications include Real Estate Appraisal, Housing Policy, The search for Solutions, Real Estate Investment Analysis and Taxation

"effort to develop a unified body of theory which was handicapped by two factors; (1) his basic distrust and consequent rejection of market prices as a reliable indicator of real estate values; (2) the acceptance of multiple value concepts by the courts of law and by valuation experts.

Wendt next observation of Babcock dilemma encapsulates the debate.

"Babcocks attempt to resolve the first difficulty by drawing a distinction between market price and market value. The latter concept implies the existence of the willing buyer willing seller, while the former refers to actual transaction prices in the real estate market.

The second problem proved a major obstacle in the development of a unified body of appraisal theory. Because of the many value concepts in common use, Babcock was forced to conclude that the method of valuation would vary with the purpose of appraisal. He made a strong plea for emphasis upon a concept of warranted market value and deplored the variety of meanings attached to the word value."

It is this position of Babcocks that other appraisal writers adopt. These include other Americans such as Arthur May and George Schmutz who have debated the issue of a value definition. It is one that Murray adopted here in Australia. Wendt implies that these writers influenced the American Institute of Appraisers to initially adopt this position. The adoption by the American Institute of Appraisers at this point appears to have encouraged the definition of market value to be just that, the value that the market is likely to decide.

Wendt indicates that there is a change post world war two. This change is initially lead by Percival V Bowen¹⁸ who criticised the view that all appraisers should exercise their judgement in adjusting market prices to some 'warranted' or 'justified' value level during the depression years. Bowen went on to state;

"The time may come when we can scientifically appraise what value should be. Until that time comes, I believe we should limit ourselves in the public service to appraising of what market value really is"

Robert H Armstrong supported this view in 1950 he called attention to the dividing influence of such abstractions as "normal" "stabilised" "mortgage loan"

Wendt records the following extract from the Appraisal Journal for January 1946;

"Why not speak of market price obtainable under such circumstances instead of the market value -and use value only in conjunction with descriptive words that express the underlying assumptions made by the speaker. "

Wendt goes onto observe that post World War Two literature increasingly emphasised market value as the central concept. It is here that Wendt records the influence of Ratcliff in 1965 by his publication of Modern Real Estate Valuation, Theory and Application.

Wendt states his position;

"that market value, more specifically described as the most probable

¹⁸ Bowen Percival V Shall Values Be Based on Present Past or Future Appraisal Journal 2 January 1934

selling price, and investment value represent the two major concepts of value which the appraiser must be concerned. "

It is here that the influence of Ratcliff has its impact. It is interesting to note that Wendt observations are a decade later .

"Post-World War II appraisal literature has increasingly emphasized market value as the central appraisal concept. In an earlier work the author recommended that market value should provide the central concept about which appraisal theory should be developed and that the market-comparison technique, based upon market selling prices, was the most logical and simple technique for establishing the values of real property. Writing a decade later, Ratcliff argued that "almost every variety of problem faced by real estate investors and requiring an investment decision calls for an estimate of the Most Probable Selling Price of the property. " Ratcliff takes pains to distinguish between this concept, which he refers to as V_p and the conventional definition of "fair market value II cited in the text of the American Institute of Real Estate Appraisers, which he identifies as V_c . He says: "The price which actually clears the market may have little relationship to what a sophisticated buyer might have been willing to pay if it had been necessary, or a sophisticated seller might have been willing to take for his property if no better offer had come along. ...It follows this line of reasoning that V_p and V_c could be the same but that it is very unlikely. II Ratcliff's criticism of the concepts of fair and warranted value embraced in the AIREA is closely similar to those expressed by Bonbright as early as 1937 and the author's views in the 1956 edition of Real Estate Appraisal.

The fair market value concept is highly subjective in nature and often results in estimates of hypothetical values as distinct from actual prices in the market place. However Ratcliff's notion that market value or the "Most Probable Selling Price " represents the only significant value concept appears to disregard the idea that the same property may have a higher value to one investor than to another, which is the foundation of onbright's concept of "value to the owner. " The market at any time presents a range of differing values for different investors for the same property. The values reflecting the different tax positions and preferences of investors can be termed investment values, since they are used primarily to guide investment decisions. The most probable selling price represents the classical meeting place of marginal buyers and sellers in the market, but this may differ from other investment values as calculated by individual investors."¹⁹

Importantly Wendt refers to other value concept having a justifiable place in appraisal practice and states the following;

"there are innumerable specialised concepts specified in the law or in administrative practice, in many cases supplemented by instruction as to the method to be employed in reaching a valuation estimate."

Wendt goes onto state;

"It is not without good reason that one of the cardinal principles of appraisal theory is that any estimate of value must first be predicated upon a statement of purpose. "

Richard U Ratcliff

The numerous references are witness to the impact of Ratcliff's enormous contribution to valuation theory .His concept of 'Most Probable Price' greatly enhanced the intellectual

¹⁹ Authors Notes, here again this evidence contradicts Murray's assertions of Bonbrights position which Murray claims as support for his own position

credibility of the appraisal process. A synopsis of Ratcliff's approach to the appraisal process is encapsulated in *The Appraisal of 25 N. Pinckney*. The following extract is quoted as the central focus of Ratcliff's position in the debate of 'market value';

"Even though insurance or court cases might require specialized value definition, Ratcliff argues that the great majority of cases requires that the appraiser predict the transaction price at which the property would probably sell. Market value is a price for which the term 'market value' is used to accommodate common practice and acceptance. Therefore, market value is synonymous with the definition of most probable price and terms at which a transaction would occur, as defined by Ratcliff

The fundamental concepts of value and price which are central to appraisal are at the heart of the social science of economics. Economic goods are valuable because of their utility (productivity) and scarcity. Thus in analyzing the value of a parcel of real estate, the starting point is with its inherent utility the characteristics and qualities which can make it productive and desirable, and for which people are willing to pay. [Thus, an appraisal starts with analysis of the real estate and its alternative uses.

Economics is a behavioural science, descriptive of the economic behaviour of people under various conditions. It is the appraiser's task to predict how people, both buyers and sellers, will behave with respect to the subject property when it is exposed for sale. People make values and determine prices. People's perceptions affect offers and acceptances, and so bargaining position and changing market moods become significant externalities"

Ratcliff stakes his position on the concept of 'The Most Probable Selling Price' and that its definition is supported by the reality of market behaviour.

Ratcliff concept of Appraisal Theory is based on the following hypothesis²⁰

"In contrast, the New School takes the pragmatic view that above all, appraisal must contribute to the decision-making of the client. Its basic premises are:

1. The end product of valuation must relate to the problem or the impending decision of the client, which gave rise to the appraisal assignment.
2. In most appraisal assignments, the client requires a prediction of the probable selling price of the subject property if exposed to the market.
3. The prediction of market price is economic forecasting.
4. The price forecast must necessarily be based upon evidence of past human behaviour within the real estate market environment.
5. For purposes of the price forecast, the basic methods are:
 - a. Statistical inference -the statistical processing. of relevant past market behaviour.
 - b. Real estate markets simulation-the construction of a predictive representation or model of expected real estate market reaction to the exposure of the subject property for sale under current market conditions.
6. The appraiser's findings are not certainties and therefore require a probabilistic expression.

²⁰ Ratcliff, Richard U, *Valuation for Real Estate Decisions* page ix *The Forward*, Democrat Press 1972

Thus the New School discards the notion of value measurement in favour of the concept of market value appraisal as a process of behaviouristic analysis, as economic forecasting under conditions of uncertainty. It holds that the purpose of appraisal is to predict an economic event-the price outcome of the hypothetical sale of the subject properly expressed in terms of probabilities as a guide to the client in the use of the value findings."

It is the last paragraph that is an expression of a valuation theory in that 'appraisal as (is) a process of behaviouristic analysis'.

S F Fanning, T V Grissom and T D Pearson link three theories as process. The following is an extract from their publication 'Market Analysis for Valuation',²¹

Appraisal is concerned with the estimation of value, which may be approached on three distinct theoretical levels: value theory, valuation theory, and appraisal theory.

Value theory and valuation theory is traditionally defined by economics. Value theory is concerned with establishing the basis of an asset's worth. It identifies why real estate has worth. Valuation theory focuses on the techniques or methods through which value is measured, estimated, or forecast. Elaboration of the three approaches to estimating value has been the principal domain of valuation theory. Appraisal theory is the logical process linking valuation theory to value theory, as applied to a land parcel put to a specific use. Appraisal theory refers to a procedure in which an individual identifies a problem, formulates a hypothesis, collects and classifies data, applies a methodology, and develops a conclusion

The American Institute of Real Estate Appraisers

The American Institute of Real Estate Appraisers supports those who seek a positive economic explanation as a valuation theory in their third edition 'The Real Estate Appraisal',

'Contemporary Value Theory

Appraisal methods and techniques owe much of their foundation to all schools of economic thought, and they continue to develop as economists build on value theory. Older economic theories, while rarely rejected completely, often are not relevant to changing conditions and contemporary events. New theories are often needed to provide additional, up-to-date insights.

Thus, value theory is still developing, but whether a new school of systematic thought is emerging is not clear. Economists today usually place little credence in Ricardian rent theory, which treats land income as a residual, unearned surplus. The relationship between cost of production and value is no longer regarded as absolutely fixed; it is now viewed as a general, long-term tendency. In modern value theory, land is regarded as an equal agent in production with labour, capital, and co-ordination. Its value is determined in its own market, not in those of the other agents as classical theory implies. Land income is neither residual nor exploitative. It is determined by the land's productivity in relation to the demand for that productivity.

This brief history of value theory demonstrates that the concept of value has always had significance, but that it has been interpreted differently at various

²¹ Fanning S F, Grissom T V, & Pearson T D, Market Analysis for Valuation Appraisals, Appraisal Institute, 1994

times. Current appraisal theory of real property value builds on historical interpretations and recognises that value theory changes in response to external influences. Much of current value theory derives from classical and marginal utility schools of thought and from neo-classical economics, which combined supply costs and demand utility into a unified concept. Appraisers today recognise that the interaction of supply and demand affects property value. However, they also recognise that supply and demand are affected by numerous other influences in the market. "

Since these writers there have been many who have refined the debate and highlighted the continuing dilemma. Some have questioned the accuracy of the methodology, but no research-based theory has been tested or adopted. The debate suggests there exists a strong argument to dismiss value theory, in preference to price theory, except for statutory valuations.

IS PRICE THEORY SYNONYMOUS WITH VALUATION THEORY

As with other modern economist Lipsey, Langley and Mahoney in their publication Positive Economics for Australian Students recognise Positive Economics, Micro Economics and Price Theory as a contemporary central economic theories that are interrelated and ones that explain the reality of market behaviour and allows their interpretation.

Over the decades authoritative real estate writers have urged the adoption of a valuation theory based on Positive Economics and one that, as a theory will, as in Ratcliff's words explain the function of 'economic forecasting'. As Jafle and Lusth put it, theories are only useful if they can be verified. Therefore the theory needs a hypothesis to test its validity.

The question here is 'What is Price Theory', and does the behaviour of a real estate market comply with price theory?

An economy is made up of interrelated markets. The accepted description of a modern market economy is that the allocation of resources is a result of many independent decisions made by market participants, consumers (site users), producers (site providers), all transacting through the medium of markets. On this, initial test real estate markets meet this criterion.

Real estate markets are part of an integrated modern market economy and are subject, as other markets are, to influence by economic events and changes. Therefore price theory should be able to be used to explain price behaviour in real estate markets.

Real estate, in market economy terms, is classified as a Capital Asset. Gaylon Greer and Michael Farrell in their book Investment Analysis, refer to real estate as;

*'land and the physical structure that constitute real estate can best be thought of as an intermediate product, one that derives its value from its contribution to production of another product, in contrast to a final product which is consumed for its own sake. Its value stems in part from its contribution to the desirability of occupancy rights. Demand for real estate assets, as is the case for all intermediate products, is said to be a derived demand.'*²²

The advantage or disadvantage that market participants enjoy when negotiating price, can be recognised by price behaviour. The structure of a market is determined by the relative positions of supply and demand, elasticity and optimisation. The inter-play of these factors will determine whether market participants can be categorised as a price taker or a price

²² G E Greer & M D Farrell Investment Analysis of Real Estate Decisions Dearborn Financial Pub Inc

maker. Economists appear to have created some consensus that the level of flexibility to determine price between these two positions of price takers or price makers, will provide four definable market price behaviour categories, which describes the structure of a market.

They are perfect (or pure) competition, monopoly, monopolistic competition, and oligopoly. Most evidence will suggest that real estate market fall into the monopolistic competition, and oligopoly categories.

Manner of Identifying a Particular Real Estate Market Category

The sheer volume of transactions in property is enough to provide evidence that real estate markets exist. The analysis of transactions allows the identification of market behaviour that then permits its classification.

To commence this process there is a need to establish a definition of a real estate market. For the purpose of convenience it is appropriate that the definition stated previously is restated here and examined.

A real estate market is deemed to exist where;

1. No buyer or seller acting alone can noticeably influence price
2. There is a sufficient number of properties in a geographic location which constitute a
3. recognised category of real estate which reflect some homogeneous features and common site use as perceived by both buyers and sellers.
4. Any buyer or seller wants to and is able to act in self interest.
5. The economic laws of supply and demand largely prevail.
6. Transactions are negotiated freely.
7. That a price range can be attributed to that category and within that category price variation exist
8. That a significant number of transactions allowing the identification of price range and price variation within that market and range and witnessing the existence of that market.²³

The Existence of Risk in a Real Estate Market

A recognition of the 'Imperfect Market' and 'Real Estate Market Efficiency' concepts will assist in a clearer understanding of the characteristics of a real estate market and their comparisons with other market that are supported by price theory .

Imperfect Market Concept

This concept was best described by P. Rowland²⁴ *"The concept of a perfect market is one in which all the relevant information about the properties and their financing is freely available," in which all investors have the same rational expectations, in which all investments in one class are identical" If real estate markets were perfect, every investor would be assured of equal success as all would base their bids for properties upon the same information and expectation"*

This concept of an 'imperfect market' in property is elaborated by Tony Torney²⁵ in a recent paper submitted for examination in which he states

"Compounding the inherent imperfections of the property market are the

²³ Unpublished lecture notes by J Lawson Subject Valuation Techniques and Property Evaluation Lecture 81997 Graduate Diploma Property

²⁴ Rowlands P J Property Investment and their Financing The Law Book Company 1992

²⁵ Torney A LLB (Hons) Development Decisions paper RMIT 1994

uncertainties derived from the physical nature of the asset and the uncertainties in the property market which challenge its participants. These uncertainties largely stem from changes in the national and international economic conditions, money flows in each economy which affect inflation and interest rates, unknown levels of demand and supply,. changes in legislation affecting property ownership," community and political changes such as a rise in environmental concerns and the result of alterations and amendments to planning codes and development controls

Real estate market efficiency is an economic concept by economists to describe the allocation of resources by a market reacting to information. Much of this concept is discussed in a recent article in the Journal of Real Estate Literature. This states ²⁶

"An efficient market implies that all market prices fully and instantaneously reflect all relevant information. For markets to be fully efficient there must be no costs associated with obtaining information or executing trades. In an efficient market 'prices reflect information to the point where the marginal benefits of acting on information (the profits to be made) do not exceed the marginal costs'. If prices reflect all information, then assets markets will allocate scarce resources and funds to their most productive use. In such a market, price serves as an accurate signal for current allocation of scarce capital. Funds flow to the most productive investments -those yielding the highest risk - adjusted return. Hence information efficiency of financial markets is necessary to achieve allocation efficiency."

The article goes on to state,

"In real estate markets, information efficiency implies that the distribution of market prices accurately reflects the spectrum of the characteristics and risks associated with each asset. In other words, any errors associated with pricing real estate assets are random as in financial markets, if the real estate market is efficient, the distribution of prices is useful for directing investment decisions."

Pyhrr and Cooper²⁷ make the following observations of the;

"imperfect conditions that characterise real estate, highly stratified markets; heterogeneous products; poor information follow; poorly educated and unknowledgeable investor and industry participants; unorganised market with slow adjustment to supply and demand," high degree of government control"

The Role of Price in the Measurement of Market Behaviour.

Property rights are traded by negotiations and the vast majority are traded in private. The price that will trigger these transactions is expressed as either a rental price or a sale price. The price agreed will reflect the relative strengths of each party to the negotiations, directly influenced by the interaction of supply and demand. If a reasonable number of transactions occur in a market that is well supported by both buyers and sellers, it could be referred to as a mature market or one with depth or one with resilience.

A cluster of transactions, represented by prices, is a 'snap shot' of where the market participants, at that time, recognise where supply and demand meet within a price range.

²⁶ Gatzlaff D H, Tirtirouglu D, Real Estate Market Efficiency: Issues and Evidence Journal of Real Estate Literature, American Real Estate Society, Volume 3, Number 2, July 1995

²⁷ Pyhrr, Cooper, Wofford, Kapplin, Lapidus discuss this with reference to real estate in their book on page 11 in Real Estate Investment Strategy Analysis Decisions 2nd edition 1989 Wiley

Any adjustment to price within that range is a function of the market participants response to a variation in the intensity or composition of the attributes of each individual property that is a component part of that market.

Price Range

The price range of that market is largely a function of a macro economic activity manifesting itself in micro economic behaviour in which the laws of supply and demand prevail.

This economic behaviour plots the market position of a particular category of property in a regional real estate market within a price range. A shift in the price range will be as a direct result of a change in economic conditions. This could be referred to as a time factor.

Price Variation

As property cannot be identical and will vary in the mix of attributes and their intensity there will be within the price range of a real estate market, price variation. This variation is a result of the different perceptions of values that market participants put on variations between individual properties. To understand why price variation occurs is to comprehend that property is multi-dimensional and dynamic, that no two properties are identical, each property will have different attributes and will therefore induce a variation in price.

Elementary Theory of Price

From a review of three publications on basic economics²⁸ it would appear that there exists a common acceptance amongst economists that microeconomic theory is concerned with the explanation of a market's behaviour and its determinates, leading to their prediction. From this explanation price theory emerges.

The basic market fundamentals adopted by most modern day economists involve a recognition of the existence of the following components or characteristics can be explained by price theory; scarcity, demand and supply, forgone opportunity, elasticity, optimising behaviour and marginal decisions. We need to establish if there evidence that these elements exist and interact with each other in real estate markets.

Demand and Supply

Demand and supply is referred to by economist as market forces. Demand in real estate markets is represented by the site user. The provision of real estate space is demand driven. The demand determinates are found in economic change at both a macro and micro level, these determinates will determine the intensity of demand. Changes in site use are driven by changes in external trading patens and fundamental changes in an economy. Supply is demand sensitive.

The early formation of a real estate market is formed around category of site use. This is driven by the locational choice of end users. Locational choice is influenced by the location's comparative advantage to a site user. This is a demonstration of demand, elasticity and optimisation.

The pattern of urban development reflects basic economic forces. One such force is specialisation of function. Residential users tend to segregate themselves by social and economic class, resulting in distinct neighbourhoods with highly stratified levels of housing quality. Within commercial, industrial retail precincts there is also notable clustering of like uses. Agricultural activity in rural area will demonstrate a similar pattern of clustering.

²⁸ Maurice S C & Phillips O R Economic Analysis Theory and Application 6th edition 1992 Irwin; Ward, Hocking, Maxwell & Bonnici EconomicsI 2nd Edition, Harper Collins 1992; Lipsey, Langley & Mahoney Positive Economics for Australian Students 2nd Edition Eidenfeld & Nicolson London 1985

Market directed specialisation and segregation of users is best demonstrated by the choice of industries of location. Agglomeration in industrial real estate comes close to defining some logic in locational choice as it explains why demand is localised and retained by existing local activity. Agglomeration offers the ability to gain a comparative advantage. The above has been expressed as the concept of the rent bid relationship that after research by others has become referred to as the 'rent bid curve'.

Equilibrium results in real estate markets when economic variables offer no incentive to change. Greer²⁹ states that in a real estate market 'equilibrium denotes a stable, balanced or unchanging system. Equilibrium price, therefore, is the price at which there will be sufficient quantity of a product to satisfy desires of all consumers at that price, but with no surplus remaining of the market. It represents a consensus of value. In the context of our example, it is the rental rate that results in zero vacancies. ,

A dominate demand determinate in residential markets is changers in interest rates.

Scarcity

Is a concept that resources are finite, this demands choice and the search for alternatives.

One of the unique characteristics of real estate is that no individual site can be reproduced with the same attributes. Locational choice and its cost are based on the recognition of scarcity or specialisation. In the locational choice decision the costs of the most desirable location will force the consideration of alternatives. As with most markets substitutes are a feature of real estate market that will provide alternatives such as location and building configuration.

Forgone Opportunities

Every choice has an opportunity cost and is expressed as a cost of alternatives.

The decision to sell, purchase or retain, or lease real estate has an opportunity cost. The decision to purchase the family home is a decision to invest as opposed to consume other goods or services.

The purchase of a development site has an opportunity cost. The decision by a manufacturer to lease as opposed to buy has an opportunity cost, the forgoing of potential capital appreciation opposed to the rapid turnover of working capital and the multiple utilisation of capital assets at a higher return.

Marginal Decisions

The influence of small changes in economical variations on the decision making process.

In real estate decisions, marginal decisions are being made continuously. The locational decision is heavily influenced by the 'cost of friction', that is whether the benefit of a more central location and its inherent higher occupational cost is out weighed by the cost of transport. The 'rent bid' model is a good example of this.

Elasticity in Real Estate Markets

Elasticity is used by economist to measure the sensitivity of price in relation to a change in both demand and supply.

In real estate markets, there is elasticity in price sensitivity when there is a change in demand and or supply. In the development of new estates, industrial, retail or office, to

²⁹ G E Greer Investment Analysis of Real Estate Decisions 4th Edition Dearborn Financial Pub Inc

attract demand in the early stages of the marketing of the units of accommodation a discount will be offered. This could be referred to as induced demand, but it is still sensitive to price adjustment.

Elasticity in industrial rentals is a function of vacancy level and the nature and intensity of the attributes associated with and individual site. The use of scatter plots the statistical use of mean and standard deviations can be used to identify the elasticity of a price range. It is likely that both of these models can be used to measure risk in a given real estate market where sufficient transactions are present.

Substitutes

One of the most evident existences of elasticity in the price/substitute equation in real estate accommodation is the supply of alternative accommodation and the ability to alter building configuration and design. Substitution can occur by location, building category and type.

Optimisation

The definition of optimisation has been modified to reflect the reality of economic behaviour since Adam Smith first advanced the theory or concept of 'economic man'. Maurice and Phillips³⁰ categorise optimisation into constrained optimisation and unconstrained optimisation. Further categorise constrained optimisation into constrained minimisation or constrained maximisation. They then repeat the same for unconstrained optimisation and classify this behaviour into two further sub-groups of, unconstrained maximisation and unconstrained minimisation.

Ratcliff described the modification of this description as the behaviour of satisfying. Ratcliff used this term to describe the economic behaviour of man in the real estate decision making-process. He observed that in the real estate process the decision makers would compromise so that the objective was attained within the limitations of economic reality. Ratcliff observed that decisions were not made on the highest and best site use. This term and concept is still used by Valuers and appraisers throughout the Western economy which fails to reflect economic reality.

The reality of this situation is that decision makers will compromise so that they can attain an economic result that falls within financial acceptability. The attempt to optimise, gain the greatest financial reward, will often jeopardise the objective and fail to secure any economic benefits to the stakeholders.

In real estate market behaviour there are many demonstrations of optimisation and satisfying. By way of example is locational choice, the attempt to gain a competitive advantage, for which the site user will pay a premium. The best example of this optimisation is agglomeration, the grouping of like industries for mutual benefit. Some of the individual site locations will be more advantageous than others but the general location is the determining factor and this is satisfying.

³⁰ Maurice S C & Phillips O R Economic Analysis Theory and Application 6th edition 1992 Irwin

SUMMARY – THE NEED FOR RESEARCH

Research is needed to test a hypothesis if a correlation exists between a shift in price range in a real estate market and economic change. Further if within a price range, price when treated as a dependent variable, can be explained and measured by a change in the attributes, within that price range, if these attributes are treated as independent variables.

If this is correct, as suggested previously, price can be decomposed and if price can be decomposed, price can be composed, or price can be predicted. If this can be achieved then the purpose of a theory can be met, that is, a theory is able to explain reality.

The question that this paper poses is;

Is there a hypothesis that can measure the relationship between price variation and market behaviour that supports the adoption of price theory as a suitable proxy to valuation theory?

Part of this research should also include a test as to the accuracy of price prediction models. The level of accuracy will determine if they are an acceptable proxy to a transaction. Such a study is also likely to suggest that there is a correlation between the margin of error and level to which the market is imperfect.

Therefore one of the intentions of this review is to suggest an examination if price theory can be used as a proxy for a valuation theory. This will be achieved by demonstrating if the behaviour of a real estate market is compatible with component parts of price theory .

This will create a need to demonstrate that real estate markets can be identified, measured and interpreted. From which an accurate prediction of price can be made. At the same time allowing the accuracy to be tested. This will require recognition that within any real estate market category , price range exists. That shifts in that price range, are a result of economic changes. Finally, that within that price range, price if treated as a dependent variable, can be explained and measured by a change in the attributes, if these attributes are treated as independent variables.

If we accept the Cornell University's definition of a hypothesis as 'a specific statement of prediction' then the following is offered as a preface to a hypothesis.

That if a correlation exists between a shift in price range in a real estate market and economic change, and within a price range, price if treated as a dependent variable, price change can be explained by a change in the composition of and intensity of the attributes. If this is correct price can be decomposed and if price can be decomposed, price can be composed, or price can be predicted and predicted within a range of tolerable commercial risk.

Therefore a hypothesis must test the accuracy of market sensitive prediction models requiring the predictions to consistently fall within a commercially tolerable range.

The intention of this paper is hopefully to create a recognition that there is a need to abandon outdated valuation theories that fail to recognise reality in favour of a theory based on empirical research that is superior in that the theory explains the methodology and recognises the inherit risk of real estate markets.