

VALUATION OF PROPERTY ASSETS: AN INTERNATIONAL RESEARCH AGENDA

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ABSTRACT

Over the past decade, there has been a significant growth in real estate research throughout the world. While many countries are characterised by differing histories of real estate education and research reflecting variations in political systems, land tenure, culture and economic development, the past ten years have witnessed a dramatic increase both in the volume of research and the opportunities for presentation and publication of findings.

To date, there have been few reflective studies of the nature and scope of property research; consequently, we argue that it is useful to map the research terrain by analysing contributions to research conferences. We argue that, as not all contributions have been published, the conference provides a broader overview of the main areas of real estate research activity than would be possible from a similar study of contributions to academic journals. Similarly, the conference provides comprehensive coverage of research undertaken in the valuation specialism which is the specific focus of this paper.

This paper presents initial findings from a comparative analysis of valuation papers presented at the RICS Cutting Edge (RICS CE), European Real Estate Society (ERES) and Pacific Rim Real Estate Society (PRRES) conferences over the period 1993 to 2001. The emerging themes and characteristics of a global valuation research agenda are discussed together with the implications for future research.

Keywords: Property valuation, conference contribution, valuation research agenda

INTRODUCTION

This paper focuses on the global convergence that appears to be emerging within the field of real estate research, particularly in relation to the pricing of property assets. The aim of the paper is to identify and analyse common themes in research activity over the past decade. The paper extends the work of the authors into the contribution of real estate research conferences over the past decade (Adair et al, 2000, 2001a, 2001b).

A multi-dimensional rationale is advanced for undertaking such evaluative research. Firstly, it is an established and rigorous form of activity in related academic disciplines such as urban economics. Secondly, it reflects a maturation of the participating community whereby the track record of valuation research activity is evaluated in terms of its contribution to knowledge. Thirdly, the exercise facilitates an audit of developments within the discipline, current achievements and more importantly, future research directions. This activity is even more crucial for a vocational discipline as current research should reflect the cutting edge of applied knowledge moulding developments in both the curriculum and practice. The need for significant improvements in valuation practice has been recognised in a study undertaken by Investment Property Forum/Investment Property Databank (2000) which highlights the need for more rigorous risk assessment measures within the valuation profession. It concludes that the profession employs an inadequate range of techniques to measure and control these risks. In contrast, risk management has been a significant area of research endeavour across the academic real estate community for over a decade. Clearly there is a need for a greater dialogue between the research and practice communities.

EVALUATIVE RESEARCH STUDIES

The past two decades have witnessed a dramatic increase in evaluative studies of research activity encompassing the analysis of publications in order to rank individual researchers or academic institutions and their contributions to journals (Newell *et al*, 2001; Ong *et al*, 2001), to disciplines (Cox and Gustavsson, 1990) and to conferences (Johnson *et al*, 1996). A fuller discussion of the literature is contained in Adair *et al* (2000).

Within the valuation discipline, several recent papers have addressed the issue of a research agenda. Crosby (2000) identifies several issues where research might influence the operation of practice; namely, the harmonisation of international valuation standards; valuation methods focussing on the application of finance models within real estate appraisal and the relationship of business value and property value; behavioural aspects of valuation; communication with clients and client influence including valuation variation and accuracy, and reporting a distribution of values versus the single point estimate. In a similar fashion, Baum *et al* (2000) identified a number of issues in need of further research. Their study confirms that commercial property valuations may be distorted by the influence of clients as well as by the valuation process. Most importantly, they highlight a widespread practice in which valuations undergo a process of negotiation with clients. This confirms earlier work by Levy and Schuck (1999) in NZ. The question is posed as to whether such practices are appropriate and do they add to the information content of a valuation or does the practice suggest bias. In conclusion, Crosby (2000) emphasises the significance of research as a prerequisite to providing clients with more sophisticated valuation services.

In relation to the research output analysed in this paper, the RICS CE, ERES (Adair *et al*, 2000, 2001b) and PRRES conferences can be traced back to the early 1990s. The RICS CE developed from an attempt to define a property research agenda and highlights the need for more effective research in order to meet the changing demands placed upon the profession. The conference seeks to raise awareness of the role and importance of research, to provide a more focused framework for research activity and to stimulate a debate regarding future directions. PRRES was established in 1993 to provide a formal focus for property researchers, educators and practitioners in the Pacific-Rim Region. In

a similar vein, the mission of ERES, also formed in 1993, is to create a structured and permanent network between real estate academics and professionals across Europe. Both PRRES and ERES provide an open forum for the exchange of ideas and the dissemination of research relevant to applied decision-making in real estate finance, economics, appraisal, investment and asset management.

For the purposes of this paper, a brief overview of the characteristics of each of the three conferences is presented. RICS CE is slightly different as it is a national conference while ERES and PRRES conferences have a regional focus. The breakdown of participating authors' country of origin is therefore confined to ERES and PRRES. A summary of papers presented at ERES and PRRES conferences between 1993 and 2001 (Figures 1 and 2) indicate a profile of an increasing number of papers over the nine year period, with an average of nearly 80 papers presented at the PRRES conferences.

Figure 1: Papers Presented at ERES Conferences: 1993-2001

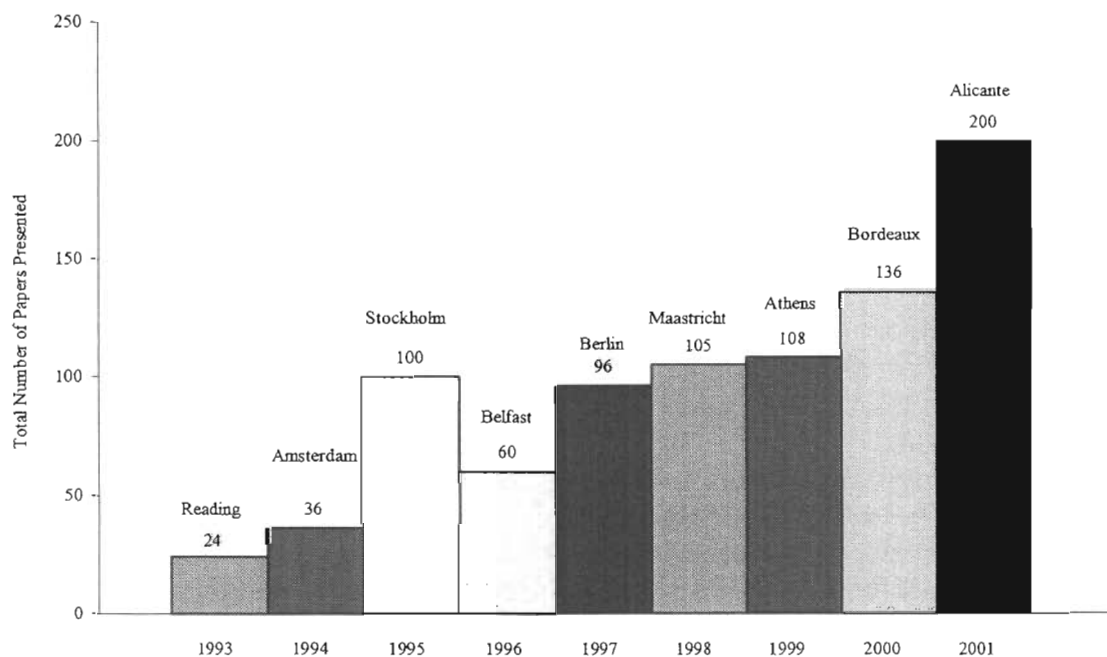
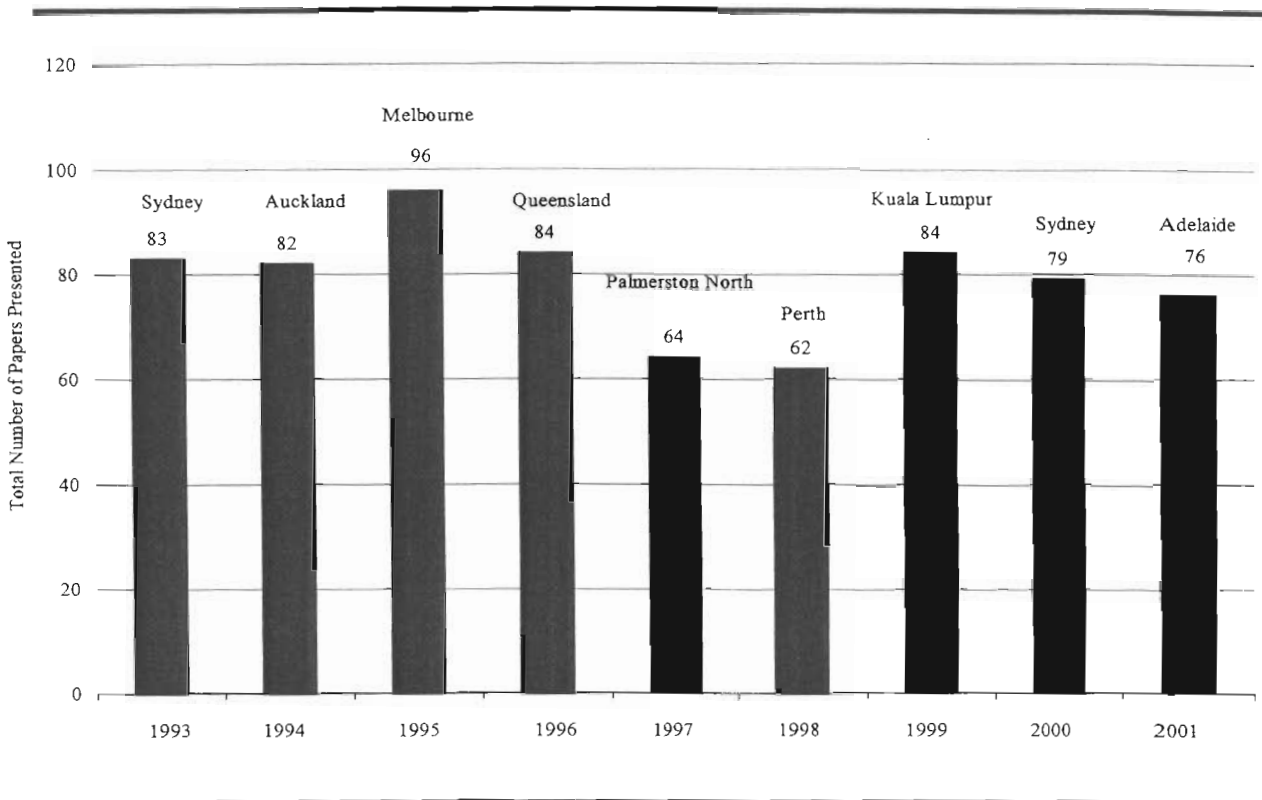


Figure 2: Papers Presented at PRRES Conferences: 1993 - 2001



Tables 1 and 2 outline the contributing institutions, by country of origin, to the ERES and PRRES conferences. The rankings of institutions are based on the unadjusted and adjusted number of articles produced. The unadjusted figure represents the number of appearances in articles at the conference irrespective of co-authorship. The ranking of institutions by adjusted number of papers refers to the total number of appearances after dividing co-authored articles equally among multiple authors. In terms of the unadjusted number of articles presented at the ERES conferences, the leading five countries of origin over the entire period 1993-2001 are the UK (80), the Netherlands (14), Sweden (11), Spain (10) and the United States (9). The leading five countries based on adjusted papers presented at the ERES conferences over the period 1993-2001 are the UK (55.44), the Netherlands (12.00), New Zealand (6.50), Sweden (5.49) and Germany (5.00).

Table 1: ERES: Contributing Institutions by Unadjusted and Adjusted No. of Valuation Articles

Rank	1993-2001	Unadjusted	Rank	1993-2001	Adjusted
1	United Kingdom	80.00	1	United Kingdom	55.44
2	Netherlands	14.00	2	Netherlands	12.00
3	Sweden	11.00	3	New Zealand	6.50
4	Spain	10.00	4	Sweden	5.49
5	United States	9.00	5	Germany	5.00
6	New Zealand	7.00	6	Spain	4.98
7	Australia	6.00	7	Australia	4.00
8	Poland	6.00	8	Italy	4.00
9	Germany	5.00	9	Poland	4.00
10	Italy	5.00	10	Ukraine	4.00
11	Canada	4.00	11	United States	3.98
12	France	4.00	12	France	3.00
13	Ukraine	4.00	13	Russia	3.00
14	Greece	3.00	14	Slovenia	3.00

Analysis of the PRRES conferences (Table 2) indicates that the leading participants are Australia, New Zealand and the UK in terms of both unadjusted and adjusted numbers of valuation papers presented. Hong Kong, Malaysia and the USA also play a significant role.

Table 2: PRRES: Contributing Institutions by Unadjusted and Adjusted No. of Valuation Articles

Rank	1993-2001	Unadjusted	Rank	1993-2001	Adjusted
1	Australia	109.00	1	Australia	88.50
2	New Zealand	36.00	2	New Zealand	31.58
3	United Kingdom	29.00	3	United Kingdom	17.00
4	Hong Kong	10.00	4	Malaysia	7.50
5	Malaysia	9.00	5	Hong Kong	7.00
6	USA	7.00	6	USA	3.16
7	Singapore	3.00	7	Fiji	2.00
8	Fiji	2.00	8	Sweden	2.00
9	Sweden	2.00	9	Singapore	1.50
10	Thailand	2.00	10	Thailand	1.00
11	Italy	1.00	11	Italy	1.00
12	Jordan	1.00	12	Jordan	1.00
13	South Pacific	1.00	13	South Pacific	1.00
14	Ukraine	1.00	14	Ukraine	1.00

ANALYSIS OF RICS CE, ERES AND PRRES VALUATION PAPERS

The comparison of valuation output across the RICS CE, ERES and PRRES conferences 1993-2001 (Table 3) distinguishes methods papers from process on the basis that their primary focus is on valuation techniques. In many cases, the distinction between methods and process is a finely drawn one. In relation to PRRES, there were 166 appraisal papers presented whereas the corresponding total for the nine years of ERES is 129 papers and for the RICS CE 123 papers. Two-thirds of both the PRRES (112) and the ERES papers (85) address issues relating to valuation methods, with valuation process papers accounting for the remaining one-third (PRRES 54 papers; ERES 44 papers).

The valuation methods papers show a striking similarity across the three conferences with the dominant focus on investment methods (41 papers at PRRES, 36 at ERES and 23 at RICS CE) followed by computer assisted valuation (38 papers at PRRES, 28 at ERES and 13 at RICS CE). In relation to the valuation process category, a broadly similar pattern emerges with the dominant topic focus on decision-making (40 papers at PRRES, 23 at ERES and 32 at RICS CE) followed by bases/concepts (16 papers at ERES, 17 at RICS CE). It may be argued that the high levels of similarity across certain valuation topics reflect the growing interest at a global level in these leading areas of research activity.

Table 3: Comparison of Valuation Papers at RICS CE, ERES and PRRES Conferences

Valuation Category/Topic	RICS CE 93-01	ERES 93-01	PRRES 93-01
Methods: Investment	23	36	41
Methods: Cost/Profit	5	4	6
Methods: CompAssisted Valuation	13	28	38
Methods: Environmental	8	2	11
Methods: Comparison	5	6	3
Methods: Statutory	5	9	13
ALL METHODS	59	85	112
Process: Accuracy	14	4	5
Process: Decision-making	32	23	40
Process: Bases/Concepts	17	16	5
Process: Reporting	1	1	4
ALL PROCESS	64	44	54
TOTAL	123	129	166

Valuation methods papers

Across the investment valuation methods papers presented at the RICS CE conferences, the two main linked themes are the pricing of specific lease terms and the application of alternative techniques to the valuation of investment properties. In relation to the

former, nearly half the papers in the investment methods group address specific issues of pricing lease terms, most usually break clauses and upwards only rent reviews. Alternative pricing methods are often employed to price lease terms; for example, option pricing. Such approaches include papers on arbitrage and actuarial approaches, fuzzy analysis and more explicit DCF.

These papers illustrate the influence that techniques developed in financial markets other than property are having on the research agenda in this area. A number of these papers are from academics whose background is more financial than traditional real estate appraisal. However, it is also interesting to note that in many cases, the papers are jointly authored with colleagues from a more traditional UK property background. This suggests that any theoretical application of alternative models is being informed by the applied specific knowledge of property markets.

Analysis of the investment valuation methods papers presented at the ERES conferences highlights several areas of leading edge activity. The elaboration of traditional and more contemporary investment valuation techniques within specific European countries highlighting the economic, legal, technical, social and cultural contexts in which valuations are set and more importantly the principal differences which distinguish practices across countries. A related subset of papers addresses the application of property pricing within the context of international investment; for example, three papers on taxation aspects of cross-border valuation, the comparison of US and European valuation approaches and the application of US techniques within the Netherlands. The internationalisation of authorship is amply demonstrated by the fact that while most of these papers are produced by nationals of the countries to which they relate, many are written by authors from other European states. More contemporary approaches include the role of explicit DCF; for example, in particular countries such as France and Italy; and a real value approach.

The role of uniform valuation instructions in risk mitigation, professional information papers, the application of professional guidance notes in the valuation of development land and valuation rules for performance measurement highlight the increasing international research focus on the importance and integrity of valuation standards at national, regional and international levels. This subset of papers is particularly interesting as it highlights the growing awareness of the importance of harmonised standards in enhancing the valuation product both for the valuer and the client.

The investment valuation papers presented at the PRRES conferences encompass a number of common themes; namely the enhancement of existing techniques and the application of alternative methods, risk analysis, capitalisation rate analysis, pricing of lease terms, explanation of variables and ground rental modelling. The enhancement of existing techniques and the application of alternative methods focus primarily on the utilisation of finance based approaches to the pricing of real estate; for example, more explicit cash flow analysis, capital asset pricing models and pricing techniques for securitised properties. Papers examining the pricing of lease terms, incentives and the analysis of capitalisation rates also utilise more explicit statistical approaches to identify and price key determinants within the valuation. A similar picture pertains in relation to risk analysis where more finance based statistical techniques are employed to enhance the pricing of risk in development and investment decision-making.

The second largest category of valuation methods papers presented at the RICS CE, ERES and PRRES conferences is computer assisted valuation (CAV). Key themes at the RICS CE focus on neural networks or geographical information systems (GIS) and how they influence values and valuation. The principal themes at the ERES conferences comprise the valuation of land and buildings for rating assessment/taxation purposes; in particular, the application of computer assisted mass appraisal (CAMA) within specific countries such as Estonia-Latvia, the Netherlands, Poland, and Russia and leading edge developments within this field. Corresponding papers at the PRRES conference encompass the mass appraisal of property primarily for taxation purposes; the application of GIS to enhance pricing techniques; explicit pricing of externalities; and the application of artificial intelligence/artificial neural networks. Across each of these areas, papers address enhancements to existing techniques and their application within defined case study locations.

Valuation process papers

The analysis highlights the growing interest in research into the valuation process. Decision-making is the dominant theme encompassing a wide range of topics. The PRRES conference focuses on issues related to negligence within the valuation process; external impacts on the valuation; frameworks or paradigms within which valuations are undertaken; transitional economies and behavioural issues. Papers on negligence issues cover international comparisons of the valuers' legal liability related to inaccurate valuations, international comparisons of the role of expert witnesses and uncertainty within the valuation process particularly in volatile market conditions. The evaluation of external impacts on the valuation process focus on economic and market cycles, public sector policies relating to water and land rehabilitation and the influence of farm management on rural land values. The frameworks or paradigm papers address the quantification of subjective value factors, the role of quantitative analysis and general systems theory in order to improve valuation decision-making. The papers on transitional economies encompass urban reforms and the evolving real estate market in China. Of particular interest is institutional influences on property pricing and land reform impacts on valuation processes. Finally, behavioural papers focus on the influence of clients on valuations and extend the growing international literature on this aspect of the subject.

A dominant decision-making topic at the ERES conferences is the increasing internationalisation of practice, the development and changing role of professional valuation associations, the diverse cultural contexts of European valuation and factors influencing the education of valuers across several countries. Although these papers are diverse in nature, they address current leading edge areas relating to standardisation of terminology, measurement practice, education and the future of professional associations in Europe. This is also an important theme at the RICS CE conferences.

The second most important topic within decision-making research activity at the ERES conferences relates to behavioural valuation, the dominant topic at the RICS CE. In relation to this specific topic, there is considerable overlap across the two conferences reflecting the input of a number of UK researchers working in the area. Behavioural valuation encompasses potential distortions in the commercial and residential valuation process. A wide range of topics is included focusing on confirmation bias in valuer behaviour, distortion effects in the evaluation of comparables due to price knowledge and market knowledge anchoring, appraisal smoothing and the descriptive processes of

valuers. Overall, the research establishes the links between valuers' decision-making strategies and the outcome of the valuations.

The second valuation process topic at the ERES conferences relates to bases/concepts. A major subset addressed is the development of harmonised valuation standards across the European countries to assist cross border pricing of property. The implications of the diversity of existing valuation practices are considered in relation to the development of harmonised European valuation standards.

The decision-making papers presented at the RICS CE have been analysed in terms of four emerging themes; namely, behavioural valuation, data quality, valuation of leisure properties and general topics within the decision-making process. The primary topic, behavioural valuation, is discussed above. The second area relates to the quality of data employed in the valuation process; in particular, the need for greater data consistency. The potential role of a National Evidence Valuation Database (NEVD) is examined in terms of providing high quality data for investment valuation purposes. Barriers to data sharing within the surveying profession, in particular the valuation of commercial property have also been considered.

CONCLUSION

The analysis of nine years of RICS CE, ERES and PRRES conference papers indicates that interest in valuation is significant, as measured by the number of papers delivered and the wide diversity of topics represented. The increasing internationalisation of research authorship and output is evident across the three conferences in relation to the number of American, European and Pacific Rim researchers who are now collaborating on real estate research. Common valuation themes predominate across the three conferences which generate greater interest than more regional or local areas of research activity.

The main threads of valuation research encompass investment valuation methods, lease pricing, alternative finance based approaches, computer assisted appraisal, behavioural influences, valuation standards and valuation accuracy. The common themes point to an emerging valuation research agenda which is drawing upon developments in related areas of knowledge such as finance and computer based modelling. However, there are signs that appraisal research is widening its base. For example, there is evidence that in the investment methods and lease pricing areas, there is increased involvement of academics from other disciplines, such as finance, in these multi-authored papers.

Furthermore, the analysis indicates that the future valuation research agenda will be more international in character and will differ significantly from that of the past. Issues related to investment such as the securitisation of property assets and the pricing of the different elements of cash flows from property are likely to become part of an appraisal agenda.

The RICS CE, ERES and PRRES conferences have provided a significant stimulus in developing and consolidating an emerging real estate research culture at a global level and as a vehicle for disseminating and testing research ideas, leading to wider dissemination in published output. The challenge facing researchers, educational providers, practitioners and professional bodies is to harness the increasingly rigorous

and internationally evolving valuation research agenda to the benefit of the discipline at the global and local levels.

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