



University College London
Faculty of the Built Environment
The Bartlett School of Construction & Project Management

Research Associate: Economics and Finance of the Built Environment

INTRODUCTION

The UCL Bartlett School of Construction and Project Management is recruiting a research associate to support the School's research in economics and finance. The job will suit someone with a strong background in economics, finance, econometrics, computational modelling and/or statistics who is keen to apply their knowledge and skills to themes linked to the built environment, in developed and/or developing countries. We welcome applications from candidates with a strong background in economics and/or finance who is keen to apply their expertise to built environment research. The appointee will have a PhD in a related subject and their work will involve applying a wide range of research tools including statistical analysis – including analysis of Big Data, e.g. via application of social media analytics, econometrics, structural modelling, computational modelling, forecasting and economic analysis.

The successful candidate will play a key role in supporting existing research projects within the School and developing new ones in a range of themes connected to the built environment. This includes a wide range of themes, including (but not confined to) construction sector forecasting and analysis, infrastructure investment and finance, microeconomic/behavioural analysis of infrastructure and construction supply chains; housing and property market instability; construction markets (including labour markets) and innovation in the built environment, including digital technology adoption e.g. building information modelling (BIM).

The School is developing its strengths in the application of behavioural economics to a range of built environment themes and applications from candidates with specific interests in the real-world applications of behavioural economics and behavioural finance principles will be particularly welcomed. The research associate will work closely with the School's Economics and Finance team - led by Dr D'Maris Coffman and Professor Jim Meikle.

The UCL community

UCL is a world-class research and teaching institution based in London whose staff and former students have included 20 Nobel Prize winners. UCL is one of the world's premier universities; it was 5th in the world in the QS World University

Rankings 2014. In the UK's 2014 Research Excellence Framework (REF) assessment, UCL was ranked 1st in the UK in terms of overall research strength. Founded in 1826, it was the only university in England at that time which admitted students regardless of race or religion. UCL was also the first to admit women on equal terms with men. Today, UCL is an inspiring university in which to work and study. It continues to thrive on the diversity and creativity of its community.

UCL is in practice a university in its own right, although constitutionally a college within the federal University of London. With an annual turnover exceeding £600 million, it is financially and managerially independent of the University of London.

UCL currently employs approximately 8,000 staff and includes academic units as diverse as the Slade School of Fine Art, the Mullard Space Science Laboratory and the Institute of Child Health, which is associated with Great Ormond Street Hospital. In total, there are 54 Academic Departments and Institutes whose activities span the following: arts and humanities, social and historical sciences, law, architecture and the built environment, engineering sciences, mathematical and physical sciences, life and clinical sciences, and medicine. UCL's academic and research staff are a diverse international community with more than a quarter coming from 84 countries outside the UK.

The UCL student community comprises 12,600 undergraduates and 8,500 graduate students, of whom over 30% come from 130 countries outside the UK. UCL currently offers 270 undergraduate programmes and more than 210 taught postgraduate programmes as well as the opportunity to carry out postgraduate research in all of its subjects. Approximately 40% of the student community is engaged in graduate studies, with about 37% of these graduate students pursuing research degrees.

Quality of UCL's teaching and research

Two measures of the current quality of UCL's teaching and research are the results of the external teaching quality assessment reviews and the periodic Research Assessment Exercise (RAE).

The results of the UK's 2014 Research Excellence Framework (REF) assessment confirms the breadth as well as international excellence of UCL's research. As well as an overall ranking of 1st in terms of overall research strength, the range of UCL's research excellence was demonstrated by outstanding results in disciplines as diverse as biomedical sciences, architecture and the built environment, economics, law, philosophy and history. Another measure of UCL's research excellence has been its success in bidding for external competitive funds from the Joint Infrastructure Fund (JIF) and the Science Research Investment Fund (SRIF). With the addition of required matching funds, JIF and SRIF are allowing UCL to invest more than £350 million into state-of-the-art infrastructure for cutting-edge research and teaching programmes.

Location and working environment

Based in Bloomsbury, UCL is a welcoming, inclusive university situated at the heart of one of the world's greatest cities. UCL's central campus is within easy reach of Euston, Kings Cross and Marylebone mainline stations, the new Eurostar terminal at

St.Pancras and the following Underground stations – Euston Square, Warren Street, Goodge Street and Russell Square. Road connections to the M1 and M40 motorways give easy access to the north and west road networks. There are also good public transport links to Heathrow airport.

About the Bartlett

The UCL Bartlett Faculty of the Built Environment is devoted to the study and design of the built environment, and is building up its strength in the application of Economics and Finance to Built Environment themes, including construction, infrastructure and sustainability. The Bartlett is one of the world's largest and most successful centres of built environment research and teaching. It was ranked first in the UK in the REF assessment, with over 75% of its research activity recognised as being in the top two categories of 'world leading' and 'internationally excellent' in the 2008 RAE and the 2014 REF.

The Bartlett is unique in offering a multi-disciplinary approach to the study of the built environment. With the ability to combine the disciplines of architecture, planning, economics and finance, project management, energy and environment studies and environmental design –staff and students can make full use of a network of diverse academic expertise within the Bartlett and across UCL. The Bartlett is at the forefront of debates shaping the future of our built environment. Most of its staff are involved in policy advice, practice and/or consultancy –thereby establishing an active link between theory, practice and policy. Situated in the heart of London, the Bartlett is able to draw on the capital's numerous experts and facilities in the field of the built environment. As well as its proximity to the many commercial organisations that lead in the development, design, construction and management of built environment projects, it is also close to the key policy-makers in Whitehall and Westminster, the global financial centre that is the City and the emerging international technology hub around Old Street.

The Bartlett has just over 1,400 students, divided between 800 graduates and 600 undergraduates. The Bartlett's staff and students represent many nationalities, and the atmosphere is lively and cosmopolitan. The schools are housed in three closely adjacent buildings in and around UCL's central campus in Bloomsbury.

The Bartlett has studios, workshops, computing and environmental laboratories, and an extensive library: about 35,000 books and 375 periodical subscriptions on built environment themes. The Bartlett focuses on the full range of issues affecting the future fabric of cities, and frequently uses London as a unique laboratory for studying urban built environments.

About the Bartlett School of Construction and Project Management

The Bartlett School of Construction and Project Management is one of the world's leading academic centres of excellence in construction economics and project management. It is now extending its research and teaching into other areas of economics and finance including infrastructure economics and finance, behavioural economics, energy and the environment, sustainability, urbanisation and real estate/housing research. The School's teaching, at both the undergraduate and postgraduate levels, is heavily informed by its research which covers a variety of economic, financial and management issues including infrastructure economics and finance, construction market trends in developed and developing economies,

microeconomic analysis of projects (focussing on the impacts of transaction costs, asymmetric information, principal-agent problems and behavioural bias in projects and supply chains), real estate finance, housing and property market instability, social network analysis, project finance, public private partnerships, urbanisation and sustainability, supply chain management, and the economic analysis of innovation in the built environment – including economic analysis of IT solutions for the built environment (e.g. building information modelling (BIM)). There are strong links with other leading academic centres of excellence within and beyond the Bartlett, UCL and the UK.

Academics within the School have built relationships with a wide range of major organisations working on built environment themes – including commercial construction companies and consultancies (for example, AECOM, Arup, Land Securities, Bouygues, Laing O’Rourke, PA Consulting and Vinci), infrastructure owners (for example Anglian Water, Network Rail, Transport for London, the Highways Agency), financial corporations (for example KPMG Global Infrastructure, Meridiam) and government departments (including HM Treasury; the Cabinet Office; Business, Innovation and Skills; Department of Energy and Climate Change; Department for Communities and Local Government; the Department for Environment, Food and Rural Affairs; and the Office for National Statistics).

The School also has a formal strategic relationship with the European Investment Bank (EIB); EIB staff make significant contributions to the design and delivery of the new MSc programme in Infrastructure Investment and Finance.

The School has increased rapidly in size since 2002. It usually has 250-300 students and around 40-50 faculty members. The School’s research, knowledge transfer and teaching are developing rapidly into a wider range of themes relating to the economics and finance of the built environment. In recent years, the Economics research and teaching within the School has moved in new directions towards a stronger application of economic principles such as information economics, transaction cost economics and behavioural economics to the analysis of construction, infrastructure and projects/enterprises more generally.

The School’s research is also developing into new areas. It is already a centre of excellence in construction economics and this expertise is extending into analyses of construction in developing and emerging markets. Research on transaction cost economics applied to construction projects is being extended into the analysis of other projects – including infrastructure supply chains. Transaction cost research is being complemented by new research applying insights from information economics, game theory and behavioural economics to the analysis of projects. This research also links to other expertise within the School in the areas of social network analysis, supply chain mapping and relationship management. New economics research projects cover themes relating to behavioural economics and finance, energy, the environment, sustainability, urbanisation and property bubbles. Other key research areas include the investment and financing of social and economic infrastructure projects, including project finance, private finance initiatives and public-private partnerships.

To consolidate and develop its research strengths in areas related to the economics and finance of the built environment, the School is looking for a Research Assistant/Associate with strong quantitative skills in areas relating to economics and finance. We welcome applicants with good statistical, econometric and/or

computational modelling skills alongside expertise in the areas of behavioural economics, infrastructure economics and finance and/or construction economics.

JOB DESCRIPTION

Summary of Post

- Title:** **Research Associate: Economics and Finance of the Built Environment**
- Dept:** The UCL Bartlett School of Construction & Project Management
- Grade:** The appointment will be on the UCL Scale Grade 7. Salary will be in the range £34,056 - £41,163 per annum (including London Allowance) dependent on skills and experience.

Responsible to: The Research Associate will report to Dr D'Maris Coffman—Senior Lecturer in Economics and Finance of the Built Environment, and will also work closely with Professor Jim Meikle – Professor in the Economics of the Construction Sector.

Main Purpose of the Job:

To carry out research, knowledge transfer and policy development in areas related to economics and finance of the built environment.

Main Duties and Responsibilities

The Research Associate will be expected to:

- Apply innovative research tools to the economic analysis of the built environment;
- Collaborate with research teams and support the School in attracting research funding;
- Make significant contributions to research in economics and finance, applied to the built environment and construction;
- Demonstrate impacts on policy and practice via involvement with policy initiatives and knowledge transfer/exchange;
- Contribute to the school's activities in the dissemination of research findings at conferences and via journal and other publications;
- Show the necessary curiosity, critical skills, written/oral presentation skills to enable them to excel as a researcher;
- Show initiative and independence of thought in developing research strategies and hypotheses;
- Generate and disseminate original research in collaboration with supervisors, disseminated through internal and external conferences and papers in top international journals;
- Network and liaise with other researchers within the School, UCL and externally;
- Avoid actions which may bring themselves, the supervisor or UCL into disrepute;
- Conform to Fire, Health and Safety regulations of the School and UCL;
- Actively follow UCL Policies including Equal Opportunities.

Also, the appointee may from time to time be expected to:

- Work with colleagues to contribute to teaching and other academic activities within the School;
- Promote the School's knowledge transfer and policy development initiatives;
- Represent the School at relevant international conferences and workshops;
- Carry out any other duties commensurate with the post.

PERSON SPECIFICATION

Knowledge and Qualifications

Essential

- A PhD in economics, finance, statistics or computing;
- Experience of econometric analysis, structural modelling and/or computational modelling e.g. in PhD dissertation research;
- Proven track record in analysis of large data sets;
- Strong interest in real-world applications of economic theory (standard and behavioural);
- Demonstrable experience of statistical software packages (including STATA, EViews and/or similar programs) and/or programming packages (e.g. R, Matlab, C++);
- Knowledge of research techniques, including economic analysis, data analysis, econometrics, computation modelling and/or statistics;
- A solid grounding in economics or finance supported by a good knowledge of construction economics, microeconomics, macroeconomics, industrial organisation and/or energy/environmental economics;
- Knowledge of leading edge research in, or applicable to, *one or more* of the areas listed below:
 - construction sector forecasting and modelling;
 - microeconomic analysis of built environment projects – for example embedding insights from information economics, transaction cost economics, game theory and/or behavioural economics;
 - construction markets – in developed economies and/or developing/emerging markets;
 - infrastructure economics, infrastructure investment and finance;
 - innovation in the built environment, including building information modelling (BIM) and other digital technologies, and sustainable construction;
 - other themes relating to the economics and finance of the built environment.

Desirable

- Practical and relevant work experience – e.g. in the construction, infrastructure and/or housing sectors and/or related professional services or in an academic department working on related themes.

Candidates should be highly numerate with the following knowledge, skills, aptitudes, qualifications, experience, and personal qualities:

Skills and abilities

Essential

- Strong background in economics and finance;
- Demonstrable and practical experience/ skills in mathematics/statistics and an ability to understand complex data;
- High levels of numeracy and computer literacy, preferably with software or programming skills;
- Excellent written and verbal communication skills;
- Enthusiasm for applying economic and financial theory to real world problems;

- Confidence in learning and developing new quantitative skills in econometrics, structural modeling, computational modelling and programming.

Desirable

- A creative problem solver;
- Quick in acquiring new skills and knowledge;
- Ability to analyse and discuss data and evidence;
- Ability to present complex information effectively to a range of audiences;
- Experience in business research and/or case study research;
- Capable of working individually and proactively, as well as collaborating as part of a team;
- Ability to interact effectively with different personalities.

4. *Qualifications*

- A PhD in economics, finance, econometrics/statistics, computational modelling or related areas.

5. *Personal Qualities*

- Commitment to high quality research;
- Intellectual curiosity;
- Ability to show initiative in developing new research initiatives;
- Ability to think creatively;
- Commitment to continuous professional development;
- Commitment to UCL's policy of equal opportunity;
- An ability to work harmoniously with colleagues of all cultures and backgrounds.

APPOINTMENT DETAILS AND HOW TO APPLY

Further particulars, including a job description and person specification, can be accessed at the bottom of this page.

To apply for the vacancy please click on the 'Apply Now' button below.

If you have any queries regarding the application process, please contact Dr D'Maris Coffman email: d.coffman@ucl.ac.uk

For further information about the post, please contact Dr D'Maris Coffman email: d.coffman@ucl.ac.uk or Professor Jim Meikle email: j.meikle@ucl.ac.uk