

Research Assessment Exercise 2020
Impact Overview Statement

University: City University of Hong Kong |

Unit of Assessment (UoA): 18 – Planning and Surveying (land and other) |

Total number of eligible staff of the university in the UoA: 8 |

(1) Context

City University of Hong Kong aspires to be a leading global university. In celebrating her 25th anniversary since inauguration as a full university, it reached 52nd in the International QS rankings. The Surveying UoA (the Unit hereafter) is one of the three pillars (in addition to Civil Engineering and Architecture) of the Department of Architecture and Civil Engineering (The Department hereafter). The Department is one of the eight academic units within the College of Engineering (The College hereafter). Among the forty-eight faculties of the Department, eight are within the Unit. The members of the Unit have their teaching and researches primarily on the soft side of engineering within the built environment context. |

(2) Approach to impact

The Unit posits to excel in niche research areas in which her members have already established strength and international visibility. These areas collectively address management in construction in general and with particular foci on decision analysis, dispute and contract management, construction safety and health, value management, stress management, facility management for the elderly and urban studies. Furthermore, the Unit aims to be an integral part of the Department's aspiration to develop research programs that address the challenges created by global rapid urbanization and well-being of the construction industry. Our strength has been the ability to develop and execute research agendas that fill the needs of the industry in a timely manner. |

(3) Strategy and plans

In terms of research strategy, the Unit shares the following objectives in common with the Department:

- to develop and promote a vibrant research culture that enhances our international reputation;
- to publish research work regularly in quality journals and disseminate it in appropriate forums;
- to develop cross-institutional and cross-disciplinary research;
- to make innovative and significant research grant applications;
- to encourage the transfer of knowledge generated through research to practical use, whether by other researchers, industry or government, with the aim to benefit society; and
- to provide our postdoctoral and PhD researchers with world-class research facilities and insightful supervision, in addition to opportunities to develop their research profiles.

In addition, the research outputs duly illustrate the topicality of the studies in the areas of system optimization, dispute management, health and welfare of construction professionals, safety at work, facilities for the elderly and urban economics. These outputs collectively

represent a portfolio that effectively implements both qualitative and quantitative methodologies. In addition to the contributions to the respective body of knowledge of the niche areas, the research endeavors offer solutions to practical problems and thus contribute to the well-being of the industry. Novel and pioneering efforts in these areas include:

- 3.1 Market concentration analysis
Professor Cheung pioneered the use of concentration analysis to examine the level of competition of certain construction contracting markets. This work provides the methodology to measure market competition in the wake of the enactment of the Competition Ordinance in Hong Kong in 2015.
- 3.2 Bias in dispute decisions
In response to the popular use of multi-tiered dispute resolution (MTDR) in construction contract, Professor Cheung examined the issue of bias in repeated dispute decisions under a MTDR setting. This study timely reminds the backfire in protracted resolution process design.
- 3.3 Integrated stress management model
Dr. Leung developed a research program to advise construction professionals and workers in handling stress arising from their work. In addition to the extensive journal publications so derived, a research book entitled “Stress Management in the Construction Industry’ was published in 2015.
- 3.4 Facilities for the elderly
Aging population is a global issue. Dr. Leung commissioned a series of studies that examine the ways enhanced facilities management practices can improve the quality of life of the elderly. Special attention was directed towards people with dementia in care and attention home.
- 3.5 Safety helmet design
Dr. Fung introduced the use of chin straps on safety helmets with the aim to prevent rolling off of helmets. This helmet design initiative was adopted by the Labour Department of Hong Kong SAR.
- 3.6 Property pricing model
Price of property has been one of the hottest issues arising from rapid urbanization. Dr. Chang studied the relationship between a bundle of transportation and location factors with the commercial land supply and demand. This study is first of its kind.
- 3.7 Capitalizing on the advance in Artificial Intelligence (AI)
AI has emerged as one of key advancements in recent decades that affect how businesses are to be conducted. Dr. Lam applied artificial intelligence model to predict construction output. In comparing with other econometric methods, predictions by AI models are more reliable. |

(4) Relationship to case studies

[The impact case submitted reports a study on the impact on the construction industry with the introduction of Hong Kong’s first-ever Competition Ordinance. The impact case is in fact an expanded version of Item 3.1. The Unit accords all members maximum freedom to set their research agenda that suits their respective strength and specialization. It can be said that the novel efforts listed in item (3) can each be presented as a stand-alone case study.

Moreover, the common thread among these efforts is the overriding aim to contribute to the well-being of the industry. With due regard to the constraints embedded in an institutional setting, the Unit has been successful in harvesting illustrative cases in addressing practical problems from both academic and industrial perspectives. In addition, the research approach taken ensures that the deliverables are having global applications. |