**UQ Summer Research Project Description**

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| **Project title:** | **Empirical Security-Bid Auctions** |
| **Project duration:** | 10 weeks |
| **Description:** | Every year, hundreds of public and private organisations around the world sell the rights to control projects (assets) that are worth millions of dollars. For instance, governments allocate the rights to exploit natural resources (e.g., oil, gas, and timber), construct and operate public infrastructure (e.g., ports or highways), and use their national electromagnetic spectrum. Likewise, corporations sell the rights to control companies via take-over operations, and entrepreneurs compete for resources from venture capital firms. In all these examples, sellers can use either standard cash auctions, or auctions in which the payment received is conditioned on the revenue generated by the project once it is implemented. Contingent payments are viable whenever the project to be allocated generates verifiable cash flows over which is possible to contract. When this is the case, sellers can use financial instruments (securities), other than cash, to secure the payment from winning bidders. |
| **Expected outcomes and deliverables:** | In this project, it is expected that the student gets involved in the collection of data for oil-lease in the US, Australia, and Europe. The aim is to construct a data base that permits to test empirically the incentives of bidding firms to join auctions when securities are utilised. Once the collection of the data is done, it is expected that the student conducts empirical analyses using reduced-form and structural estimation techniques. |
| **Suitable for:** | The project is suitable for a student with a background in economics, finance, applied mathematics, or computer science. Preferably (but not necessary), students who have taken intermediate microeconomics as undergraduates The successful candidate must be proficient with Matlab. Ideally, the candidate has also knowledge of R and Python. |
| **Primary Supervisor:** | Dr Allan Hernandez-Chanto  [a.hernandezchanto@uq.edu.au](mailto:a.hernandezchanto@uq.edu.au)  Dr Dong-Hyuk Kim  [Donghyuk.kim@uq.edu.au](mailto:Donghyuk.kim@uq.edu.au) |
| **Expected Project Commencement** | November 15, 2022 |
| **Number of students project could accommodate** | One student |