Blockchains: opportunities, risks and experience in developing countries

Start date 28 April 2018
End date 28 April 2018

Venue Madingley Hall
Madingley
Cambridge

Tutor Dr Nicholas Duncan

Course code 1718NDX058

Director of Programmes Emma Jennings

For further information on this course, please contact Public Programme Coordinator, Clare Kerr
clare.kerr@ice.cam.ac.uk or 01223 746237

To book See: www.ice.cam.ac.uk or telephone 01223 746262

Tutor biography

Dr Nick Duncan works in the field of the social psychology of organisational ethics and development. He has directed both commercial and NGO organisations with activities in over 20 countries. Nick has specialised over the last 15 years in corruption, anti-corruption and organisational ethics as a practitioner and researcher. Nick has led OCI, Ford Foundation, Aga Khan and World Bank programmes during this period. He has a degree in international marketing, an MA in development economics and completed his PhD in the Centre of Development at the University of Cambridge. Nick has published, given papers, and lectured worldwide on these subjects. Nick has recently published ‘Positive Social Identity: The Quantitative Analysis of Ethics’ based on his recent research. Nicks’ current work focusses on the analysis and measurement of organisational ethics. A recent thread of research explores the impact of blockchains on both ethics and moral norms and also their potential in development settings. Nick mixes teaching styles and methods including lectures, audio-visual, discussion, and case work.
Course programme

09:30 Terrace bar open for pre-course tea/coffee

10:00 – 11:15 A brief history of Blockchains and Crypto-Currencies
   a) The origins and motivation for blockchains
   b) Current scale of blockchain based activity world-wide and in developing countries and predictions for the future. Diffusion internationally. The Marginal Cost of Trust
   c) Major corporations and private blockchains
   d) Market share and size and the power of the app: implications for DC’s
   e) Identity and regulation
   f) Stability and self-organisation: Voluntary association
   g) Potential and the problem of hyperbole.
   h) Discussion: What are the areas appearing to offer potential and risks for blockchains in developing countries?

11:15 Coffee

11:45 – 13:00 The unusual economics of blockchains and its potential impact on International development policy
   a) Libertarianism and Self-organisation and public good
   b) Institutional economics: hierarchy and authority
   c) Proof of Value/Reputation
   d) Ethical uncertainties of blockchain organisations (incl. transparency, privacy, monetisation/tokenisation, corruption, inequality/polarisation)
   e) Fund-raising: Initial Currency Offerings and volatility and vulnerability, Crowd funding

Discussion: What is the likely relative enthusiasm for this economic-technology among different stakeholders

13:00 Lunch

14:00 – 15:15 Blockchains and the state in the developing world
   a) Cutting out the government/public sector – a parallel state. The maintenance of institutions as necessary for government to function
   b) Anti-corruption
   c) Property rights and shared resources – commons
   d) Cartels in clearing – separation of interests

Discussion: Implications of the politics and economics of blockchains (stakeholders) on law and regulation
15:15 Tea

15:30 – 16:45 **Emerging Use Cases in International development**

Diffusion and implementation experience:
- a) Nation state: bitnation (applications incl. Pangea and ID tools)
- b) Aid disbursement
- c) Humanitarian crisis - statelessness
- d) E-governance (title to land)
- e) Spontaneous order
- f) Altcoins
- g) Provenance (diamonds and Logging)
- h) (Micro) finance
- i) Identity based applications (incl. voting)

‘End-specific’ Alt coins (oppressive regimes, eco, race, Fake news)

Discussion: How do the economics and politics of blockchain technology explain why these have emerged and why they may be successful or otherwise

**conclusion**

16:45 Day-school ends
Course syllabus

Aims:

1. To introduce blockchains and their place and potential influence in international development
2. To enable a critical analysis of economic and social and regulatory models of blockchains
3. To become familiar with a broad range of contemporary use cases in development settings

Content:

The course begins with a summary of the phenomenon of blockchains and cryptocurrencies and their emerging value to international development
The course will then introduce with only a modest level of complexity, the technology of blockchains. Crypto-economics is introduced and discussed in terms of its implications and past ‘aid and trade’ policies. The latest developments of regulation, both national and international, and in the case of developing countries are introduced as are some of the legal and regulatory consequences likely to affect developing countries particularly. The impact of blockchains on the state is addressed in some detail, introducing their potential influence on the role of the state within the economic development process. We will review the potential role of blockchains from the perspective of state development and the politics surrounding their introduction.

Presentation of the course:
Talk (incl. ppt/web projection) and discussion

As a result of the course, within the constraints of the time available, students should be able to:

1) Understand the basics of blockchain technology and how it is likely to affect the political economy of development for both donors and recipients.
2) To understand the major social, legal and economic risks and opportunities of the emergence of blockchains
3) To be equipped to evaluate the potential strategic spaces for the uptake of blockchains and their possible consequences.
Reading and resources list

Listed below are a number of texts that might be of interest for future reference, but do not need to be bought (or consulted) for the course.

<table>
<thead>
<tr>
<th>Author</th>
<th>Title</th>
<th>Publisher and date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Melanie Swan</td>
<td>Blockchain: Blueprint for a New Economy</td>
<td>O’Reilly, 2015</td>
</tr>
<tr>
<td>Sinclair Davidson, Primavera De Filippi, Jason Potts</td>
<td>Economics of Blockchain</td>
<td>Public Choice Conference, May 2016</td>
</tr>
<tr>
<td>Marc Pilkington, Rodica Crudu, Lee grant</td>
<td>Blockchain and Bitcoin as a way to lift a country out of poverty</td>
<td>SSRN 2016</td>
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Additional information

Venue

Details of how to find Madingley Hall can be found on our website: http://www.ice.cam.ac.uk/who-we-are/how-to-find-the-institute

Refreshments

Tea and coffee and lunch will be provided. If you have any specific dietary requirements or allergies and have not already advised us, please inform our Admissions Team on ice.admissions@ice.cam.ac.uk or +44 (0)1223 746262.

**Note** Students of the Institute of Continuing Education are entitled to 20% discount on books published by Cambridge University Press (CUP) which are purchased at the Press bookshop, 1 Trinity Street, Cambridge (Mon-Sat 9am – 5:30pm, Sun 11am – 5pm). A letter or email confirming acceptance on to a current Institute course should be taken as evidence of enrolment.

*Information correct as of: 25 January 2018*