CASA dissertation plan submission form

Please use your UCL information (e.g. email)

Email address *

philip.wilkinson.19@ulc.ac.uk

First Name *

Philip

Last Name *

Wilkinson

Student Number *

19040435

Select your programme *

MSc Smart Cities and Urban Analytics ▼

Potential supervisor. Note, academics have different capacity for supervision. *

Adam Dennett ▼

Have you contacted this supervisor *

◯ Yes

⊙ No

Do you have a 2nd choice supervisor *

Elsa Arcaute ▼

Are you planning to collaborate with a partner or apply for an advertised project (listed below) *

⊙ Yes

◯ No

◯ I've found my own partner

What project are you applying for *

World Bank: Healthcare access in Vietnam: A climate vulnerability study (Jun Rentschler, Paolo Avner, GFDRR, World Bank) ▼

If you have your own partner, who are they

If you have picked a partner or listed project what makes you suitable for their project (100-200 words)

Whilst although I have had no previous experience with similar topics, to this project I would bring a hardworking attitude, with the ability to pick up and learn things quickly. I am confident in both R and python programming languages necessary to complete this task, with grades yet to be confirmed in both introduction to programming and GIS. The two grades that I have received so far have both been distinctions, with a previous score of 82 in my undergraduate dissertation, using network analysis, showing that I can work on a longer term piece of work at a high academic level.

I am also interested in using the skills developed on this course to positive social effect, which I believe this work would fulfil that. I have previously had experience as a consultant for 180 degrees which acts as a consultant for charities, helping them to achieve their core mission.

Have you read the mark scheme on Moodle *

☑ Yes

Have you read the dissertation handbook on Moodle before completing the rest of this form *

◉ Yes

What is the proposed title of your project (insert industry title if selected industry project) *

Healthcare access in Vietnam: A climate vulnerability study

What is the proposed research question - see handbook *

Which parts of Vietnam and its population are most vulnerable to climatic shocks in the form of floods affecting access to healthcare?

What are your proposed objectives - see handbook *

There are several objectives with this research:
1) Establish an accessibility measure for hospitals in Vietnam
2) Based on this measure see which areas have low access to healthcare provision
3) Forecast how floods may disrupt the transport network
4) Relate the disrupted transport network to hospital accessibility
5) Show which areas are most vulnerable to climate shocks
6) Use this information to help inform mitigation and response policies

Provide 400-500 words of background for the research *

Climate change is new well accepted and is evidenced by increases in global average air and ocean temperatures and rising of the global sea levels (IPCC , 2007). This is expected to worsen over the next century as our greenhouse gas emissions continue to increase, leading to mange changes in the global climate during the 21st Century (IPCC , 2007). Such changes are likely to impact both human and natural environments. In this sense, developing countries are expected to the worst affected by climate change due to a lack of resources for mitigation, adaptation and recovery.

Vietnam has seen significant economic growth over the last 20 years, however it ranked as one of the highest countries in terms of its exposure to negative effects associated with climate change, which is likely to significant affect this trajectory (McElwee, 2017). While the country is exposed currently to 19 different types of natural hazards and disasters, flooding is one of the top three (McElwee, 2017). This is to the extent that Vietnam was ranked fourth globally in terms of the population exposed to floods. This is because of features such as a high population density, long coastline and vast areas of floodplains (Nguyen, et al., 2017), leading to significant numbers of the population exposed to risks (Bangalore, et al., 2019).

In particular, climate change affects, such as flooding, are likely to influence healthcare provision and effectiveness in countries all around the world (Ghazali, et al., 2018). The effect of this will depend on a countries ability to respond to climate change and associated events, and developing precautions and procedures to reduce the risks for the population (Ghazali, et al., 2018). However, in Vietnam, several studies have highlighted deficiencies in climate change adaptation (McElwee, 2017), and general healthcare responses to natural disasters (Van Minh, et al., 2014). This means that several aspects of healthcare and climate change must be explored but in particular, one of the ways in which flooding can affect health outcomes is by restricting access to medical facilities through cutting of routes. Therefore, in being able to identify the potential risks of flooding on access to medical facilities, policies and adaptive measures can be put in place in an attempt to reduce the impacts of flooding on populations. This is especially impact because of the lack of evidence in low and middle income countries regarding the relationships between weather and natural disasters and health outcomes (Rocklov, et al., 2014).

Provide a 300-500 word methodological outline *

The methodology proposed largely follows the methodological outline proposed in the project plan on the dissertation topics sheet. Firstly, A geo-referenced dataset of all healthcare facilities in Vietnam will be used, along with the OSM street network, to calculate travel times to hospitals for a given area, which will be used as an indicator of healthcare accessibility. Such information will then be combined with population density maps to calculate what share of the population can access a hospital within a range of times given different transport options, which could be combined with demographic data to see which demographics have the lowest access to hospitals and healthcare. This could also be extended to account for the size and type of the hospital that they have access to. Such information will then inform what areas are seen as underserved in terms of access to healthcare by the time they have to travel and what sort of hospital they have access to.

Once this has been achieved, then using natural hazard maps (in this case flood maps) climatic shocks can be simulated that disrupt the street network across Vietnam. The effect on the street network can then be fed back into the original analysis to see how such affects may influence healthcare accessibility. This will be done through a network analysis of the street network to identify which routes will be isolated or cut off, and how this will affect travel times from one area to the nearest healthcare facility. This will be used to identify population groups and regions that may be particularly vulnerable during climatic shocks and natural disasters. The purpose of this would be to ultimately help inform policy in Vietnam and other countries as to how to mitigate or respond to such events when access to healthcare can become difficult.

List the sources of data you are considering using *

The World bank data on healthcare facilities in Vietnam
The World bank natural hazard maps
OSM street maps

Are you planning on conducting any field work *

○ Yes

◉ No

○ Maybe

If yes or maybe, outline which UCL forms you will need to submit. Consult:
https://www.ucl.ac.uk/safety-services/a-z/off-site-working

Do you think you will need UCL ethics committee approval at this stage. Follow the link within the dissertation handbook. More information on ethics will be provided in a later lecture. *

○ Yes

○ No

○ Not sure yet, might do

◉ Not sure yet, but don't think so

What ethical considerations will consider within your research, even if you don't need formal approval (100-200 words) *

In my research I would consider the potential implications of my findings, and how that may influence policy decisions in Vietnam. I would make sure that I acknowledge sources where used throughout my work and state clearly any assumptions made throughout.

Are you aware of the penalties for poor academic practice or academic misconduct. Consult the UCL academic manual, Chapter 6, section 9. *

◉ Yes

Have you joined the slack dissertation channel *

◉ Yes

Do you have access to the CASA0004/0010/0012 Moodle page *

⦿ Yes

◯ No

Are you aware of the submission deadlines of 5pm 24th August for the digital version on Moodle and 5pm 1st September for the hard copies in the CASA office *

⦿ Yes

Bullet point (or list) an action plan for March for this project *

- Delve deeper into the existing literature surrounding the question and the methodology
- See what information is contained in the datasets and what tools I am likely to need
- Consider what areas of the literature I will need to explore
- Consider a timeline for the final project

Do you have anything else to add

I did not contact the primary supervisor as this was a last minute decision to take this topic and I was unsure who would supervise this.

References:

Bangalore, M., Smith, A. & Veldkamp, T., 2019. Exposure to Floods, Climate Change, and Poverty in Vietnam. Economics of Disasters and Climate Change, Volume 3, pp. 79-99.

Ghazali, D. et al., 2018. Climate Change Impacts on Disaster and Emergency Medicine Focusing on Mitigation Disruptive Effects: an International Perspective. International Journal of Environment Research and Public Health, Volume 15.

IPCC , 2007. Climate Change report 2007, Valencia: IPCC.

McElwee, P., 2017. Vietnam's Urgent TAsk: Adapting to Climate Change. In: Current history. s.l.:s.n.

Nguyen, Q., Miller, F., Bowen, K. & Sinh, B., 2017. Evaluating capacity for climate change adaptation in the health and water sectors in vietnam: constraints and opportunities. Climate and Development, 9(3), pp. 258-273.

Rocklov, J. et al., 2014. Local research evidence for public health interventions against climate change in Vietnam. Global Health Action, Volume 7.

Van Minh, H. et al., 2014. Primary healthcare system capacities for responding to strom and flood-related health problems: a case study from rural district in central Vietnam. Global Health Action, Volume 7.

If you are applying for an industry project you might not be successful, what is your plan B title. If you have proposed your own project or secured your own partner (that is not from the CASA list) you do not need to complete any plan B questions

Identifying and predicting the development of innovative clusters in the UK

What is your plan B research question

How can we identify and predict the development of clusters of firms, and what are the impacts for the surrounding areas?

What would be your plan B objectives

The objectives would be
1) Review existing work in the identification of clusters of firms
2) Identify which SIC codes are most representative in the patent network
3) Identify how different SIC codes interact within the patent network and compare this to spatial distribution of firms to identify clusters
4) Compare this to companies house data to look at start ups to attempt to identify the development of clusters
5) Use this to then help inform policies that could foster the development of clusters

What data would you use for the plan B project

The data for patents would come from the OECD patent data sets
This will be supported by companies house data on firms in the UK

Give a brief description of the project (100 words)

The project would seek to extend and build on the current extensive literature surrounding agglomerations. This would do so by firstly isolating the industrial classifications that are likely to patent and the linkages between these industrial classifications. This would then be used to detect communities of knowledge exchange between these firms, which can then be compared to how such communities are reflected geographically. This can then be used to identify different clusters in the UK by industry classification. Such information can then be compared to the development of start-ups in the same industries to see whether these exhibit similar characteristics to help identify the emergence of clusters and hence what policy could potentially do to support this development.

This would be achieved through network analysis methodology, with Dr Elsa Arcaute as a potential supervisor having already talked to her about this topic.

Do you think you will need UCL ethics committee approval at this stage for the plan B idea. Follow the link within the dissertation handbook. More information on ethics will be provided in a later lecture.

○ Yes

◉ No

○ Not sure yet, might do

○ Not sure yet, probably not

Are you planning on conducting any field work for the plan B project

○ Yes

◉ No

○ Maybe

If yes or maybe, outline which UCL forms you will need to submit. Consult:
https://www.ucl.ac.uk/safety-services/a-z/off-site-working

What ethical considerations will consider within your plan B research, even if you don't need formal approval (50 words)

In this work I will readily consider the use of company information from companies house, in being used to identify the individual firms and where they are located.

ROUND 2: What project are you applying for

Choose ▾

ROUND 2: If you have picked a partner or listed project what makes you suitable for their project (100-200 words)

ROUND 2: What is the proposed title of your project (insert industry title if selected industry project)

ROUND 2: What is the proposed research question - see handbook

ROUND 2: What are your proposed objectives - see handbook

ROUND 2: Provide 400-500 words of background for the research

ROUND 2: Provide a 300-500 word methodological outline

ROUND 2: List the sources of data you are considering using

ROUND 2: Are you planning on conducting any field work

◯ Yes

◯ No

ROUND 2: If yes or maybe, outline which UCL forms you will need to submit. Consult:
https://www.ucl.ac.uk/safety-services/a-z/off-site-working

ROUND 2: Do you think you will need UCL ethics committee approval at this stage. Follow the link within the dissertation handbook. More information on ethics will be provided in a later lecture. *

◯ Yes

◯ No

◯ Not sure yet, might do

◯ Not sure yet, but don't think so

ROUND 2: What ethical considerations will consider within your research, even if you don't need formal approval (100-200 words)

Google Forms