

INTA 3304 International Trade & Production
INTA 6011 International Trade & Technology Transfer

Fall 2023

Habersham 136

T,Th 2:00-3:15

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Meetings: T,Th 12-1:30 or by appt.

This class is about three fundamental arenas in which economic development takes place. The first is economic production. In particular, this class will look at longer-term trends in economic production by different countries, including their relative wealth and status in the world economy. The second is trade. This class will look at different facets of trade as it interacts with production and technology transfer, including trade barriers and agreements. The third arena is technology transfer. This class will look at technology transfer models and the issues involved in actually bringing about tech transfer.

This semester the class will have a special focus as it is now part of the US Department of State's Diplomacy Lab program. The Diplomacy Lab program is one in which different people or offices in the State Department put out requests for help from professors and their students to help them with some kind of problem or challenge they face. The topic for this class is one from the Office of the Science and Technology Advisor to the Secretary. They want us to examine the dynamics that drive the success of regional innovation hubs (sometimes referred to as technology clusters). More precisely, the class will focus on "The Impact of Innovation: Understanding the dynamics driving Regional Innovation Hubs" and generate a report for the Science & Technology Advisor at the State Department.

Below is the Diplomacy Lab statement.

Science, technology and innovation have tremendous potential to support and uplift communities. Areas with concentrations of innovation are often able to create wealth and opportunity, although the advantages are not always shared equally. As the U.S. works to ensure we retain our technological competitiveness internationally and promote equitable outcomes domestically, we want to better understand what dynamics drive the success of regional innovation hubs. In particular, this research would identify the metrics which would lead us to consider an area as a regional 'tech hub' or cluster, what dynamics led to its emergence and how communities experience the costs and benefits of that growth.

This project will seek to answer questions like: How do regional innovation hubs emerge? What can be done to promote their growth in a way that is inclusive, ensuring

that all members of the community are able to access their advantages? How can the U.S. support this growth both domestically and internationally?

The exact deliverable can be flexible. The ideal format would likely be a 10-20 page report with an executive summary. The report should include a high-level overview of the dynamics involved as well as illustrative case studies and policy recommendations.

There is a wide array of academic literature on the topics of what makes regional innovation hubs or technology clusters. An example, not exclusive and not an endorsement, could include:

- <https://www.nber.org/digest/sep20/world-war-ii-rd-spending-catalyzed-post-war-innovation-hubs>

- <https://www.brookings.edu/blog/the-avenue/2023/02/09/how-research-universities-are-evolving-to-strengthen-regional-economies/>

This research would likely entail a review of academic literature on the dynamics involved, consideration and evaluation of current innovation hubs, and analysis of what can be done to promote responsible, equitable growth.

Below is the proposal I submitted and was accepted.

The Diplomacy Lab project will be the dominant component of the class and the report will be the final project for the class. When I have taught this class the past four years, I have spent a significant amount of time on the topics of innovation and tech hubs or clusters. This Diplomacy Lab project provides a rationale for the class to focus more sharply on those topics. To prepare the report, the class will begin by ensuring the students understand relevant foundational knowledge of political economics: trade, investment, financing, taxation. From there the class will move to an understanding of innovation and what are alternative explanations or theories of how innovation occurs. The class will then assemble a sizable sample of attempted and realized regional innovation hubs in the USA and elsewhere to have examples of both failures and successes. For the elements of the sample, information about the hubs, guided by the theories, will be assembled. From that sample, the class will provide both statistical summaries and in-depth case studies of a subset of the sample. From this information a set of policy recommendations will be generated and the final report will be produced. I will be involved in all steps.

Organization of the class in terms of products

There will be a final project that corresponds to what the people in the Office of the Science and Technology Advisor to the Secretary have requested.

A 10-20 page report with an executive summary. The report should include a high-level overview of the dynamics involved as well as illustrative case studies and policy recommendations.

There will be interim products leading to that report.

1. A review of the academic literature concerning the causal factors and dynamics regarding the creation and sustainment of regional innovation hubs
2. A review of the academic literature concerning the impact of those hubs on the prosperity and distribution of benefits within the regions encompassing the hubs and the broader national effects
3. A set of metrics by which innovation hubs can be identified and evaluated
4. A dataset of attempted and realized innovation hubs based on the variables, the metrics gleaned from the literature reviews
5. A set of representative case studies illuminating alternative pathways by which successful hubs can be created and unsuccessful hub attempts can be avoided
6. A set of policy recommendations regarding how successful innovation hubs can be fostered

I expect integrity in your work.

Intended learning outcomes of the class

The powers-that-be have determined that there needs to be a learning outcome for this class that comes from a list of “blessed” learning outcomes. The enumerated item below is the outcome most appropriate for this class, and it is my goal that the class will achieve this outcome.

1. Students will be able to demonstrate knowledge of principal contemporary global challenges in the field of international affairs

However, I have additional learning outcomes that I also hope and intend for the class to achieve.

- Students will demonstrate methodological literacy to analyze national and international political economic phenomena.
- Students will demonstrate effective use of oral and written communication to increase knowledge and to make cogent arguments regarding regional innovation hubs.
- Students will demonstrate the ability to effectively collaborate in teams.

Schedule:

Aug. 22 **Introduction to class**

Aug. 24 **Meeting with Dr. Allison Schwier and subsequent discussion**

Read: Bernstein, *A Splendid Exchange* [optional]

Aug. 29 Introduction to basics of political economy

Aug. 31 Models of world development

Read: either Henrich, *The WEIRDEST People in the World* up to page 152
or Morris, *Why the West Rules for Now* up to page 171

Sept. 5 The US Govt's interest in regional development using hubs

Read: <https://crsreports.congress.gov/product/pdf/IN/IN11925>
<https://www.eda.gov/news/press-release/2023/05/12/biden-harris-administration-launches-first-tech-hubs-funding>
<https://new.nsf.gov/funding/initiatives/regional-innovation-engines>

Sept. 7 Technology transfer and innovation and development

Read: Wahab, et al. article
Ramanatham article

Sept. 12 Regional Innovation Hubs/Technology Clusters

Read: <https://www.nber.org/digest/sep20/world-war-ii-rd-spending-catalyzed-post-war-innovation-hubs>
<https://www.brookings.edu/blog/the-avenue/2023/02/09/how-research-universities-are-evolving-to-strengthen-regional-economies/>

Sept. 14 Theories underlying the push for innovation hubs

Read: <https://www.mckinsey.com/industries/public-sector/our-insights/building-innovation-ecosystems-accelerating-tech-hub-growth>
<https://www.worldscientific.com/doi/10.1142/S0219877023500104>

Sept. 19 Explanations for what works and what does not work

Read: Taylor, *The Politics of Innovation*, Chapter 6
Due: *Review concerning causal factors and dynamics*

Sept. 21 Metrics for identifying and evaluating establishment of innovation hubs

Read: https://link.springer.com/chapter/10.1007/978-981-19-1866-7_4

Sept. 26 Making a database of innovation hubs

Due: *Document containing list of metrics*

Sept. 28 Identifying a sample of innovation hub attempts and successes

Oct. 3 The track record of innovation hubs vis-a-vis the surrounding region

- Oct. 5** **Visualization of Economic and Political Data**
- Using Tableau (tableau.com)
- look at online support
- Oct. 12** **Report on the innovation hub dataset 1**
- Oct. 17** **Robert Bell talking about innovation hubs in NATO**
- Oct. 19** **Theories regarding the impact of innovation hubs on society**
Read: <https://www.sciencedirect.com/science/article/pii/S0148296320308389>
<https://journals.sagepub.com/pb-assets/cmscontent/lec/hubs%20and%20rural%20and%20regional%20development.pdf>
- Oct. 24** **Metrics for evaluating impact of innovation hubs**
Read:
- Oct. 26** **Evidence regarding the impact of innovation hubs on society**
Due: Review concerning impacts of hubs
- Oct. 31** **Report on the innovation hub dataset 2**
Due: Dataset of innovation hubs
- Nov. 2** **Case studies of successful innovation hubs in US**
- Nov. 7** **Case studies of successful innovation hubs in other countries**
- Nov. 9** **Case studies of unsuccessful innovation hubs**
- Nov. 14** **What distinguishes success from failure: hub establishment**
Due: Case study reports
- Nov. 16** **What distinguishes success from failure: societal impact**
- Nov. 21** **Development of policy recommendations**
Due: Policy recommendations document
- Nov. 21** **Preparation of project report**
- Nov. 28** **Preparation of project report**
- Nov. 30** **Preparation of project report**
Due: Final report document

Dec. 5 Presentation of project report

Allocation of points:

Review concerning causal factors and dynamics	10%
Review concerning impacts of hubs	10%
Document containing list of metrics	5%
Dataset of innovation hubs	15%
Case study reports	15%
Policy recommendations document	10%
Participation in final report document	20%
Participation in class discussions	15%

Note that participation is more than physical presence in the virtual classroom.