Geography 349
29 November 2010

# Notes from the weekend's grading

## Export-base theory and economic multipliers

Leichenko [2000] appropriately noted the shortcomings of export-base theory. However, the next time you read a local news item about Boeing or Microsoft, see how the author cites the "multiplier effect" of those firms' local hiring or layoffs. When a regional economist or economic geographer is asked to project the size of a regional economy in the medium term – like 5-10 years – one of the main tools we use is an estimate of employment or output of the region's key export-oriented sectors (where "exporting" is any sales to entities outside the region). Then we apply a multiplier, generated through our own or earlier empirical study, and come up with a quick-and-dirty estimate of regional employment or output.

There are different **bases for a multiplier effect of exports from a region**. The first two below are the most important, especially in the medium (1-10-year) run.

1. The first is the **demand for local inputs** into the exported products, called indirect demand. The size of this multiplier depends on how much of those inputs and services (like banking and design services) are sourced locally. For example, as Boeing becomes only an assembler of aircraft, relying on other companies in other places to make all the components, the indirect multiplier effect of our region's exports of aircraft falls. (Note: it is the fact that the components are made in other places that is important here. If the components were made in this region, the multiplier effect is not substantially affected by which company engages in that production.) We can use an input-output study, if available, to tell how much of which components or raw materials go into a million dollars worth of exports.
2. The second is the **household consumption demand** of local workers and managers of the firms that are exporting, sometimes called induced expenditures. Since personal consumption expenditures are 70% of the US economy, and since people tend to consume locally, this is a very important multiplier. This multiplier is higher when wages are high, when the local area is large enough to have lots of spending opportunities, and when people don't buy everything online.
3. Analogous to the returns to local labor, above, are the returns to local capitalists. To the extent that the export activity is profitable, and to the extent that the profits flow to local owners, and to the extent that they spend or reinvest those profits locally – to that extent, **export profits** are the basis for a local multiplier. Wall Street investment banks pay out most of their profits to their partners every year – and every year there's a huge uptick in the demand for luxury products in New York City.
4. Another multiplier results from **construction** of new buildings and public infrastructure to allow for major export expansion – those jobs add to the regional economy. However, this is not something that you can plan on, year after year, the way you can say that if Microsoft ships $20B worth of Windows Vista in a year, you know how much local material and labor content went into that.
5. Finally, endogenous growth theory recognizes something like a multiplier – the **spillover effects** from the development of new technology and skills in an export sector. The people who created the new technology and the employees who gained those new skills may go to work in other firms, and maybe even start whole new product types. People often prefer to stay in the same region, even when they change employers or start a new firm, so these spillover effects tend to stay local. These spillover effects, which are a type of multiplier, are almost impossible to measure and predict.

## The product life cycle (PLC) and sub-national regions

When I presented the PLC in class, I noted that there's an **intra-national analog**. New products and services are often (but certainly *not* always) developed in regions with an abundance of engineering or other specialized labor, where firms locate their headquarters and their development operations, often in proximity to one another. Prototype production often occurs nearby. Sometimes, those firms will establish manufacturing plants or service centers for mass production of that product or service in regions with lower-cost labor, and distribute the products from there.

Even when we focus on international exporting, there can be an **interregional impact** of the international product life cycle: certain regions may have advantages in the design and development of new products. Other regions have advantages in the production of more standardized products. Of course, over the past 30 years, production often moves from the site of development to an *offshore* site (meaning another

country, where the product is not in great demand but where production costs are low enough to offset the costs of transportation), for importation back to the innovating country.

## "Policy implications"

I often use the phrase "policy implications of X," where X may be a particular theory or theoretical framework, or an empirical generalization, or the findings from an empirical study. This phrase means government policy that seems to be suggested by X. Examples of government policy include:

- programs to encourage exporting, such as the US Government's Export-Import Bank, which provides loans to exporters who provide credit to their foreign buyers, but need to pay their workers and suppliers in order to make the products;
- programs to encourage companies' investment, such as a tax credit for (some proportion of) money spent on certain types of productive investment;
- programs to encourage research, such as the Federal funding that provides $1.4B to UW researchers in FY10, based on individual researchers' research proposals that are reviewed and critiqued by other researchers around the world;
- programs to support education, such as Federally insured student loans, or state governments' (dwindling) support for public higher education.

## Notes toward Paper 2

Include more **data** in Paper 2 than most of you did in Paper 1 – not a series of photocopied tables, but highly relevant numbers that support your arguments or conclusions. Be sure to note the dates and sources for these numbers.

Separate from "data," be sure to give **source information** for anything you write that is not your own deduction, opinion, or calculation. (For example, don't write "Northern Mexico has seen a dramatic increase in manufacturing employment over the past 20 years" without citing a source (or two).) Pay attention to the date of your information – older sources can be valuable, for explaining the way things *were* – don't state something as a current situation and then cite a source from 1995. Older sources are also useful for presenting theoretical material: most (but not necessarily all) of the theory that you'll find useful has been developed before 2000, so a 1990 reference would generally be okay.

There's a difference between what I call "data sources" and "reference sources." The former refer to the ways in which you got empirical (actual, real-world) information to illustrate or prove your point; the latter is the full set of sources from which you gained ideas, arguments, or data. When I asked about Leichenko's data sources, I was referring to her use of the US Census of Manufactures and the US Department of Commerce's Regional Economic Information System. A researcher can rely on such **secondary data** (collected by some other entity), and/or a researcher can engage in **primary data collection** – for example, you could call a number of firms and ask them a set of questions about their exporting; or you could count the number of container ships going in and out of Puget Sound during a month in 2007 and the same month in 2009.

**Use the phrase "based on"** rather than "based off of." Think about the metaphor – you're saying that some result is based on the foundation of some characteristic, like a house is based *on* its foundation. An earthquake can cause a house to be based *off of* its foundation.

Some of you may not be familiar with the word "**syntax**," which I use in the grading rubric for these papers. Syntax is the way words are put together to create phrases, and the way that phrases are put together to create sentences. It is that phrases you may possibly make together without syntax good make sense bad and the reader can confuse writing – get it? When I write in the margin of your paper, "awk" [for "awkward"], or "rephrase this," or "I can't parse this sentence," I'm pointing out some syntactic problem.

## Notes toward Test 2

For the second test, be prepared to **assess your own progress** toward my learning goals for you, *and* your progress toward your own goals as you expressed in RP1.