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Weeks 3-4: Immigration and Wealth Creation

I. Migration and Labor Productivity
   A. If the place premium results are even close to correct, they imply that migration *massively* increases global wealth creation.
   B. Key intuition: When a Nigerian who produces $1000/year in Nigeria moves to the U.S., he starts producing 16x as much - $32,000/year, enriching *the world* by $30,000/year.
      1. If 15M Nigerians move, global wealth rises by $30,000*10M=$450B per year.
   C. Note: This is *not* the trivial point that increasing population increases the GDP of the receiving country. This is the deep point that moving population from low-productivity countries to high-productivity countries increases G*W*P – Gross World Product.
   D. What exactly is going on? For starters, we have comparative advantage. Migration allows specialization and trade.
   E. Why not just have trade in goods? Simple: Because *80%* of a modern economy is services, most of which *must* be traded locally. Consider:
      1. Restaurant meals
      2. Childcare and eldercare
      3. Construction
   F. Further issue: Comparative advantage aside, residing in a rich country almost certainly makes migrants more productive.
      1. You can think of this as the "multifactor productivity" from growth models.
      2. More plausibly, the productivity boost varies by job, but is positive for almost all jobs.
   G. The rise in worker productivity is obvious for agriculture and manufacturing, where we can readily measure migrants' pre- and post-migration productivity.
   H. What about services, where the change in output is less obvious? Since the main value of most services is saving customers' time, saving the time of richer customers is logically equivalent to an increase in service-sector productivity.

II. Immigration and GWP
   A. Standard trade models estimate the cost of trade barriers.
   B. Key result: The deadweight cost created by tax wedges is *non-linear*.
      1. If all the relevant "curves" are straight lines, deadweight loss is quadratic in the tax wedge.
      2. Hence, doubling the tax wedge quadruples the deadweight cost. Multiplying the tax wedge 10x multiplies the deadweight cost 100x.

C. What happens if we use standard trade models to estimate the deadweight cost of immigration restrictions?
    1. Alternately, to estimate the efficiency *gain* of eliminating restrictions.
D. Michael Clemens famously does this in his "Economics and Emigration: Trillion-Dollar Bills on the Sidewalk?"
E. The estimates are astronomical. From Clemens, with some relevant comparisons:

Table 1

Efficiency Gain from Elimination of International Barriers

(percent of world GDP)

All policy barriers to merchandise trade	
1.8	Goldin, Knudsen, and van der Mensbrugghe (1993)
4.1	Dessus, Fukasaku, and Safadi (1999)[a]
0.9	Anderson, Francois, Hertel, Hoekman, and Martin (2000)
1.2	World Bank (2001)
2.8	World Bank (2001)[a]
0.7	Anderson and Martin (2005)
0.3	Hertel and Keeney (2006, table 2.9)
All barriers to capital flows	
1.7	Gourinchas and Jeanne (2006)[b]
0.1	Caselli and Feyrer (2007)
All barriers to labor mobility	
147.3	Hamilton and Whalley (1984, table 4, row 2)[c]
96.5	Moses and Letnes (2004, table 5, row 4)[c]
67	Iregui (2005, table 10.3)[c,d]
122	Klein and Ventura (2007, table 3)[e]

F. In 2019, estimated GWP was $142T. So if open borders doubled global production, it would increase GWP by another $142,000,000,000,000 per year.
    1. Present value with 4% discounting: $3.6 quadrillion.
    2. Present value with 4% discounting and 2% continued global growth: $6.8 quadrillion.
G. Intuitively, the annual deadweight cost is huge because you are multiplying a huge loss to the world per worker times a very large number of workers.
    1. The NPV is mind-bogglingly huge because the world gets this annual gain forever.
H. Disclosure: To capture the full gain, billions of people have to move.

1. Hence, this is a long-run estimate, not a claim about what would happen the year after the world adopted open borders.
2. Though by the previous quadratic logic, halving the wedge cuts the loss by 75%.

I. Borjas' criticism: Analysis ignores moving costs, objective and subjective. If you assume Haitians are willing to pay hundreds of thousands of dollars to stay in Haiti, this wipes out the gains. However, this is crazy:
1. Attachment is a normal good.
2. People are less attached to unpleasant places.
3. A lot of attachment is to people, not places. Under free migration, you could bring your family, too.

III. Understanding the Productivity Gap
A. Why is labor productivity so much higher in rich countries than poor countries?
B. Proximate causes:
1. More capital
2. Better technology
3. Better management
C. What about human capital? The comparisons already try to account for pure differences in skill.
1. But migration could enhance human capital by reducing exposure to contagious disease, malnutrition, crime, political instability, and so on.
D. But what causes *those* differences?
1. Path-dependence?
2. Culture?
3. Politics?
4. Genes?
5. Other?
E. And will immigration endanger those differences? We'll return to this after the midterm.

IV. Migration and Innovation
A. Recall the effect of population on innovation.
1. Supply effect – more creative people.
2. Demand effect – more customers to incentivize creative people.
B. Further recall the non-rivalrousness of innovation.
C. From an innovation standpoint, migration effectively increases population.
1. Creative people can migrate to centers of innovation to realize their comparative advantage.
2. Since migration enriches migrants, their demand for innovation rises as well.
D. Think about how much Chinese and Indian talent were wasted during the 20th century alone.
E. Clemens' estimates, however, are totally static. So perhaps the true GWP gain has been understated rather than overstated.

V. Growth and Intra-Country Migration

A. In theory, migration increases wealth, and migration restrictions reduce wealth. But do we see this in practice?
B. Definitely. Consider the three most populous countries on Earth.
C. *China.*
    1. Under Mao, China had a strict internal passport system to keep farmers from migrating to cities.
    2. Deng and his successors relaxed this system.
    3. This liberalization, combined with rising agricultural productivity and opening of international markets, ultimately raised urbanization by over 40 percentage-points – more than half a billion people.
    4. Some of this would be "urbanization in place," but it's mostly migration.
    5. Without this migration, only a small fraction of Chinese would have enjoyed the vast gains of market reforms.
D. *India.*
    1. Though much less socialist than Maoist China, India also had highly socialist policies for decades, followed by liberalization and a large increase in growth.
    2. As in China, however, a key part of the subsequent economic growth has been migration from backward villages to relatively advanced cities.
    3. Indian urbanization went up by 10 percentage-points from 1980 to 2016. Since population rose by 600 M during this time (to 1.3 B), and rural fertility is much higher than urban, this again amounts to hundreds of millions of migrants.
E. *U.S.*
    1. Despite high initial urbanization, U.S. urbanization rose by another 8 percentage-points from 1980-2016.
    2. During this same time, however, housing and land-use regulation in the U.S. became very strict, leading to large increases in house prices in the most productive areas of the country.
    3. As a result, net migration in the U.S. now goes from high-productivity areas to low-productivity areas!
    4. Estimates of the economic *harm* of this reversal of normal migration patterns are massive.
    5. Moretti's estimates: "increasing housing supply in New York, San Jose, and San Francisco by relaxing land use restrictions to the level of the median US city would increase the growth rate of aggregate output by 36.3 percent. In this scenario, US GDP in 2009 would be 3.7 percent higher, which translates into an additional $3,685 in average annual earnings."
    6. Glaeser and Gyourko's lower bound estimate of the damage: 2% of U.S. GDP per year.

VI. Swamping and Diaspora Dynamics
A. Critics of immigration often fear "swamping" – even if immigration is good in moderation, it can easily reach dangerous levels.

1. Short-run burden on the welfare state
2. Congestion
3. Unrest

B. Borjas' dilemma:
   1. Either billions of immigrants *won't* come, so the Clemens model overstates the social benefits; or…
   2. Billions *will* come, leading to swamping, so again the Clemens model overstates the social benefits.

C. Paul Collier's model of "diaspora dynamics" seems to formalize the fear of swamping.

D. In this model, the *flow* of migrants depends positively on the *stock* of migrants, because people want to be around other people who share their cultural background.

E. As a result, migration starts slowly, then gradually snowballs.
   1. Puerto Rico is a nice example. When the Supreme Court opened the border in 1902, immigration started low, then snowballed.

TABLE 1-1. Puerto Rico's Net Emigration, 1900–2000

Years	Net Number of Out-Migrants
1900–1910	2,000
1910–1920	11,000
1920–1930	42,000
1930–1940	18,000
1940–1950	151,000
1950–1960	470,000
1960–1970	214,000
1970–1980	65,817
1980–1990	116,571
1990–2000	130,185

   2. You can see the same pattern at the city level.
   3. Collier takes the undesirability of this snowballing for granted, though he hesitates to say that serious problems have happened yet.

TABLE 1-4. Puerto Ricans' Residence, Selected Cities, 1950–2000

	1950	1970	2000
United States: Total	301,375	1,391,463	3,406,178
New York, NY	245,880	817,712	789,172
Chicago, IL	2,555	79,582	113,055
Philadelphia, PA	1,910	26,948	91,527
Newark, NJ	545	27,663	39,650
Jersey City, NJ	655	16,325	29,777
Paterson, NJ	—	12,036	24,013
Los Angeles, CA	—	10,116	13,427
Bridgeport, CT	590	10,048	32,177
Hoboken, NJ	—	10,047	4,660
Hartford, CT	—	8,631	39,586
Cleveland, OH	—	8,104	25,385
Boston, MA	—	7,335	27,442
Miami, FL	—	6,835	10,257
Lorain, OH	—	6,031	10,536
San Francisco, CA	—	5,037	3,758
Dover, NJ	—	—	2,413
Springfield, MA	—	—	35,251
Camden, NJ	—	—	23,051
Rochester, NY	—	—	21,897
Tampa, FL	—	—	17,527

Note: Figures are for Puerto Rican birth and parentage. Cities are in order of 1970 population.

Sources: U.S. Commission on Civil Rights, *Puerto Ricans in the Continental United States: An Uncertain Future* (Washington, DC: GPO, October 1976), 23; and U.S. Bureau of the Census, *2000 Census of Population and Housing*, Table DP-1, Profile of General Demographic Characteristics.

F. On further reflection, however, diaspora dynamics plausibly solves Borjas' dilemma.
   1. Swamping won't happen because immigration builds gradually, leaving ample time for families, business, and government to prepare.
   2. Massive gains will be realized in the long-run because vast numbers will come in due time.

VII. Ghost Towns and Zombie Economies
   A. Most First World countries contain large regions in long-run decline.
      1. Agricultural areas
      2. Rustbelt
   B. Given the depressed condition, you might expect wages to be *much* lower in these areas.

C. In fact, however, the wage gap is modest. Why? Because when economic conditions falter, people relocate to higher-wage areas of the country.

D. Labor-supply elasticity cushions the economic damage for affected populations – leavers *and* stayers.

E. The Case of the U.S., 1930-1990: The 902 slowest-growing counties – area the size of Mexico – lost 28% of their population even though the national population doubled in size.

F. Details:

Table 2-1. *Population Change in Assembled Regions, 1930–90*[a]

U.S. region	*Population, 1930 (thousands)*	*Population change, 1930–90 (percent)*	*Current population/ counterfactual at rate of natural increase*	*Region area (square miles)*	*Countries of smaller area,with examples (number)*[b]	*Area per capita income as percentage of national average*
Texaklahoma	835.8	−36.8	0.31	58,403	117 (Nicaragua, Bangladesh)	92.2
Heartland	1,482.6	−34.0	0.33	59,708	117	85.2
Deep South	1,558.2	−27.9	0.36	36,284	96 (Jordan, Austria, Sri Lanka)	62.6
Pennsylvania Coal	1,182.9	−27.9	0.36	2,972	43 (Trinidad and Tobago, Mauritius)	84.5
Great Plains North	1,068.0	−27.7	0.36	100,920	128 (United Kingdom, Ghana, Ecuador)	85.4
All U.S.	123,202.6	101.9		3,536,278	100.0	

G. Pritchett calls these declining regions “ghost towns.” Although the region suffers greatly, the inhabitants only suffer mildly. If conditions get bad enough, they exit.

1. Who really suffers? Landowners!

H. Letting people leave ghost towns helps society as well as the residents, because they can reallocate their labor to higher-productivity work.

I. Due to immigration restrictions, the same mechanism barely functions on an international level. Instead, when conditions in a nation deteriorate, the inhabitants have to stay and suffer.

1. This too hurts stayers, would-be movers, and society.

J. Pritchett calls these “zombie economies”: the economic rationale is gone, but the population lingers. Ghost towns aren’t pretty, but zombie economies are much worse.

K. Leading zombie economies:

Table 2-2. *How Large Is the Ghosthood?*[a]

				Ratios of the population to the current actual population if . . .				
				. . . the shock was as large as the realized population changes in the following three cases:			*. . . the labor force fell to restore GDP per capita to X assuming an elasticity of output per person to population of −0.4*	
Country or region	*Year of peak GDP per capita (GDP_{pc})*	*Ratio $GDP_{pc-2000}$/ $GDP_{pc-peak}$*	*Current population*	*Ireland 48% fall from 1841 to 1926 (percent)*	*U.S. ghost regions 28% fall from 1930 to 1990 (percent)*	*OECD lagging regions*[b] *(percent)*	*Previous peak GDP per capita 0.4 (percent)*	*GDP per capita implying 2% annual growth since peak (no divergence) 0.4 (percent)*
Zambia	1964	0.59	10,089	18	25	35	36	14
CAF zone	1970	0.44	3,603	27	37	51	24	11
Niger	1963	0.50	10,832	17	23	32	29	11
Chad	1979	0.50	7,694	30	41	57	29	17
Rwanda	1981	0.75	8,508	33	45	63	55	30
Bolivia	1978	0.87	8,329	33	44	62	72	34
Romania	1986	0.74	22,435	54	74	103	54	34

L. Related: The economics of evacuation. When one region *within* a country faces disaster, governments usually help people relocate to mitigate the damage. When a whole country faces disaster, however, other countries usually stop victims from relocating to mitigate the damage.

VIII. Brain Drain

A. Does immigration deprive developing countries of their “best and brightest”?

B. In a sense. Since legal migration is easier for highly credentialed workers, a disproportionate share migrate. For the poorest countries, this share is often very high.

C. But is this actually a net negative for people who stay behind? Probably not, due to remittances, international business connections, retirement, and beyond.

1. Collier mostly describes brain drain as something that could become a problem, but is rarely a problem yet.
2. Clemens on Filipino nurses.

D. The problem, if any, largely vanishes if low-skilled workers can migrate freely, too.

1. The case of Puerto Rico.