

Final Exam: Answer FE-1 and F-2 or FE-3 in the exam book provided (list of references and key equations Figures can be pre-printed, no sentences or outlines for answers please).

Question FE-1 Population, migration and economic growth: A) in the standard Solow-Swan model rising population growth lowers growth and reduces long term per capita income. Show this graphically and explain the intuition behind this result (what are we holding constant to get this result). B) A drop in the fertility rate on the other hand creates a demographic dividend as in GMR (2016) where the dependency ratio falls. How did this happen in Bangladesh and China, Rosling's Bangladesh Miracle video). As in Chapter 8 of J&V 3rd edition: parents started investing more in the education of fewer children. C) How do manufacturing exports contribute in both cases (see Mubarak and Heath, 2015 and Lucas, 1993 *Making a Miracle*) How does trade facilitate long production lines and learning by doing, as with liberty ships...see also Lucas 1993. D) Despite the fact that China, Indonesia, and Vietnam all joined the WTO(when?) many question the direction of causality between trade and growth (R&R has been cited 4,500 times) E) PhD students write down a model where increased trade restrictions reduce growth (Basu and McLeod, 1993 or Mileva and McLeod and the class handout) and a model where trade reduces growth (see R&R, 2000 for a similar models one with tariffs and one with RERs). What is the key difference in these models?

Question FE-2 Manufacturing jobs, services or transfers? a) Discuss what Rodrik calls the problem of premature de-industrialization. How does PDI in some sense reflect the success of Asian exporters? How can or are Asian countries helping to mitigate this problem (see Justin Lin's 2012 "flying geese" paper). How can recovery in Europe and the United States help mitigate this problem) what are the threats to both of these developments (in China) B) Can India "skip" manufacturing export led growth and go directly to services exports? C) How did African growth miracle take place w/o manufacturing exports? Is this growth sustainable? Why does China matter here too? C) What does the WB concept note suggest can be done about lack of manufacturing growth. Baldwin proposes transfers, discuss a model where transfers increase growth, what are the proglm

Question FE-3: Migration, Diversity and Economic growth a) Following Bove & Elia (2017) distinguish between diversity, polarization and How did years of mass migration affect U.S. growth? Following Bove distinguish between diversity, polarization and ethnic fractionalization? How has India, Europe and the U.S. overcome this problem and turned diversity into an advantage (for now, thank you France...) b) PhD students: write down a model following Peri and Shih where migration leads to higher productivity, with and without a research sector. What are the limits of research driven TFP (Jones and Romer, see Jones, Chapter 6 & 7)

References

- Bove, V and E Landro (2017) *Migration, diversity, and economic growth*. *World Development* 89 227-239.
- Dehejia, Rajeev Harsha, and Arvind Panagariya. Trade liberalization in manufacturing and accelerated growth in services in India. *National Bureau of Economic Research*, 2014.
- Jensen, Robert (2012). " Do Labor Market Opportunities Affect Young Women's Work and Family Decisions? Experimental Evidence from India ," *Quarterly Journal of Economics* , 127(2), p. 753 - 792.
- Heath, Rachel and A. Mushfiq Mobarak (2015) *Manufacturing growth and the lives of Bangladeshi women*, *Journal of Development Economics*, 115 (2015) 1–15 <http://faculty.yale.edu/mushfiqmobarak/papers/garments.pdf>
- Lin, Justin Yifu. "From Flying Geese to Leading Dragons: New Opportunities and Strategies for Structural Transformation in Developing Countries". *Global Policy* (2012), 3: 397– 409.
- Rodrik, D (2015) *Premature deindustrialisation in the developing world*, Voxeu.
- Dani Rodrik, 2016. "Premature deindustrialization," *Journal of Economic Growth*, 21:1,pp1-33 NBER version

Sequeira, S., Nunn, N., & Qian, N. (2017). Migrants and the Making of America: The Short-and Long-Run Effects of Immigration during the Age of Mass Migration (NBER w23289).

Old trade question for references See the [updated Trade and Growth Lecture notes](#) and the fixed [Open Economies](#) handout. Even skeptics of trade's ability to increase economic growth such as Rodrik admit that export processing zones and a weak RER has been "levers for growth" for many countries, including China and Vietnam. A) Despite a strong correlation, it has been surprisingly difficult to demonstrate a causal link between trade and growth.¹ Briefly, discuss the ways in which trade stimulates growth referring to learning by doing, FDI and migration from rural to urban areas, use China, Indonesia and Vietnam as examples, when did each join the WTO? The original Asian "tigers" grew very rapidly, but had less TFP growth (or did they? Please check the new PWT [Masters students briefly describe a model in which trade reduces or increases growth](#) (we discussed [several models in class](#), including the classic Sachs and Warner paper, as updated by *while PhD students write down equations for two growth models one in which higher tariffs raise growth and one in which higher tariffs increase growth*, providing an intuitive explanation of both outcomes (see Rodriguez & Rodrik 2000 (R&R) or Sachs and Gallup, 1999 or Basu and McLeod, 1992 or [Mileva and McLeod 2011](#)). What is the difference between tariffs and a weak RER? In your view does the success of Asian exporters validate low inequality and industrial policy? Recall the consensus view of integration presented by Rodrik in Growth Strategies. How did Asian economies capture the best of free trade and self discovery (industrial policy). B) Briefly summarize this 2nd & 3rd round evidence in response to such as Warner, 2003 [R&R's \(2001\)](#) argument that trade does not increase growth.

Optional Population & Growth question References (texts urls on Syllabus):

Bloom, D., and D. Canning. 2004. "Global Demographic Change: Dimensions and Economic Significance." In Global Demographic Change: Economic Impacts and Policy Challenges, proceedings of a symposium, sponsored by the Federal Reserve Bank of Kansas City, Jackson Hole, Wyoming, August 26–28, 9–56. <http://www.populationmedia.org/wp-content/uploads/2008/07/david-bloom-population-and-economics.pdf>

Kremer, Michael (1993) "Population growth and technological change: one million BC to 1990." *The Quarterly Journal of Economics* 108, no. 3 (1993): 681-716.

World Bank/IMF (2016) [Global Monitoring Report 2015/2016](#) (pdf) Development Goals in an Era of Demographic Change. Washington, DC: World Bank. License: CC BY 3.0 IGO

¹ Meaning how and why trade can be a "policy lever for growth" (or not) sometimes. Why does reducing barriers to trade increase growth and lead to convergence in some models, while in other models reducing trade barriers reduces growth. Illustrate this discussion with reviewed in class R&R, 2000 or Sachs and Gallup or Basu and McLeod, the handout version, or McLeod and Mileva, 2011). For example, Sachs and Warner (1995) test four barriers to trade. Sachs and Gallup (2001) and Frankel & Romer, 1999 look at distance as a barrier to trade. Later Warner, 2003 focuses on tariffs only. Basu and McLeod (1992) add a tariff to an endogenous growth model. McLeod and Mileva, 2011 at focus on the real exchange rate as barrier to trade... Describe a trade and growth model where barriers to trade reduce growth and one where it increases LR growth. Give an intuitive description or a model discussing/showing why barriers to trade increase or reduce growth in each case.