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Course Calendar: ECGA 6470: Economic Growth & Development

Spring 2013

Final final Exam (I hope): May 13th 2-4pm in 204 Dealy or 6:30pm in conference room E-530 Dealy

Case study procedure clarified and some tips: *many of you have done a wonderful job on your case study, thank you, now is the time to put all your charts, tables and research to work. Before the exam starts, hand me your case study Figures/Tables/References, all numbered and with your name on them (stapled in order I hope).*

- See below for case study question and review sheet. Focus your written answer on Table C-2 or C-3, if your country over performed since 2000, answer growth surge skeptics: will it last another 10 years, or end badly as most growth surges do? If your country underperformed since 2000, use it peers/twins/comparator countries that outperformed to make an argument on how to get your country back on track (you want its performance to be above average, giving its income level in 2012).
- Bring a printed version of your Figures, Tables and references to the final exam, but just the ones that will help make your argument in one. No notes, lists of points etc. Make sure charts are legible in black and white (or color), mark countries and points of interest in pen or pencil if necessary, be sure to clearly number all charts and Tables and use author (date) format for references.
- You can include a list of Charts and Figures on the front of our exam case study material this will help you and me during the exam. Along with references this is the exception to the not lists/notes rule. Again, make the focus the Figures/Tables/References you will refer too. You turn this in at the beginning of the exam, I return it to you when you finish the first part of the exam.
- The [IMF WEO April 2013 Chapter 2 and/or 4](#) is legitimate source supporting your argument. If you have not found other papers/forecasts there are several papers on growth surges, [Berg and Ostry \(2011\)](#) argue low inequality is good for growth (along with trade openness, and don't forget the [levers for growth](#)). Part of the pessimism of Easterly et al. comes from an 1993 paper by him, [Kremer, Pritchett and Summer \(1993\)](#) where they argue most terms of trade driven growth surges don't last using arguments similar to [Collier and Goderis, 2007](#) regarding the corrosive effects of resources windfalls aid on local institutions. Perhaps the classic paper is Growth Accelerations by [Hausmann, Pritchett, and Rodrik, 2005](#). These papers lack real models of the growth process, but might give you some interesting indicators to focus on, in lieu of papers discussing your country in particular. Beware of correlations however, that most Asian countries have more equal distributions of income so arguing equality is good for growth could just be a proxy for Asian economies, which often do growth longer and faster, though this growth may or may not have anything to do with greater initial equality.

Here are [review questions for the Final Exam](#). Below are guidelines for an optional presentation, if you have time. This is a good way to get feedback on your case study Tables and Figures, which you should bring with your to the exam (along with references, but not notes or outlines). See if you have any merger partners in S&W [borders and growth](#), or overlap with other students in class, here are the presentations for April 24th: [Brittany Borg Malaysia](#) [Brandon Payne, Ethiopia](#) [Shannon Pullaro, Argentina, Finance and Growth](#) [Finance and Inequality, Berg et al., 2011 Inequality and sustainable growth](#) [Burkina Faso twins](#) [inequality and growth diagram \(benabou model\)](#)

Final exam schedule so far (if your time is not here, let me know): **Wednesday May 1st 4-6pm (1) 7:30-9:30pm (6)** Wednesday May 8th 4-6pm (one person) Thursday May 9th 1:30-3:30 204 Dealy (3) Monday May 13th 1:30-3:30 204 Dealy (2) 5:30-7:30pm 530 Dealy (Econ conference room). Presentations? Please send slides at least 24 hours in advance and confirm time/place.

Case study growth diagnostics and policies: For many developing countries, in fact some of the poorest in the world, the last decade has been a pleasant surprise. Prior to the crisis, growth in China and India grew rapidly, an average of 8.5% per capita 2002 to 2007, and 6.9% average from 2008 to 2013 (IMF forecast, [April 2013 WEO](#)). This was part of the reason many low income countries and the BRICs experience relatively rapid growth despite the crisis. One reason we compute the post 2000 growth rates is that this boom in Asia spread to Africa and Latin America in part because of commodity prices increases and in part because of debt relief and aid increases (motivated by the debt crisis of the 1980s

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& 1990s and fear of another post crisis slow down). But as the [IMF WEO April 2013 Chapter 4](#) points out not all low and middle income countries did well, despite this generally favorable environment. So what happens next? This is the question you will need to answer in your case studies. There are basically two scenarios, depending one whether your country was above or below the blue line, post 2000. If your country was above the blue (or had a growth survey as defined in Table 4.1), the question is will it last? There are three schools of thought on this sort of sustainability:

A-the end is near: [Dani Rodrik](#), [Paul Collier](#) and [Bill Easterly](#) think the party is over, growth is slowing in China and India (due to a lack of sustained reform) and unless fundamental institutional change takes place this low income boom will soon end, perhaps in a debt or financial crisis as in the 1990s (see Table 4.3, page 7, WEO 4-2013).

B-Growth seems poised to continue, especially in SSA (look at Figure 2.15, all the dark blue). See Chapters 2 and 4 of the WEO outlook and for Africa. In the EU Ireland is recovering (Chapter 2) and Poland never stopped growing, despite its proximity the EU. [Dambasi Moyo](#) thinks Africa and the “frontier markets” will keep going.

C- It does not matter, growth is inclusive (raising education, exports and life expectancy) and countries have levers for growth even if institutions are less than perfect (look at Ethiopia, Mozambique and Cambodia—the last two have nice little case studies in Chapter 4 of the WEO, see Figure 4.14 and 4.15). For discussion of inclusive growth, see the IMF jobs report cited by [Rodrik as “growth diagnostics”](#) at the IMF.

What if your country missed the post 2000 boom and is below the blue line? This is where your peers, twins and comparator economies come in. What did they do differently? What special constraints does your country face? Is it landlocked with bad neighbors (as in Burkina or Malawi—which are actually above the blue line). Or it is caught in a poverty trap (Madagascar, Haiti and?) related to climate and/or the burden of disease. Or are the problems largely self-inflicted as is the case with South Africa.

Class presentations: Please follow [WBI-VC slide formatting guidelines](#) closely, adding [Cochrane’s quick summary slide](#) is always a good idea. You only have 15 minutes to make your key points to the class. Similarly, what you can write about in 45 minutes on the exam is limited. Nothing wrong with lists of points, especially points that make use of a Table or Figure. All Figures/Tables should be clearly numbered and have the data source at the bottom. For slides, please try to follow WBI-VC guidelines.

Presentation/case study shortcuts: see if your country has an Article IV report for the IMF, or a recent PRSP from the World Bank or IMF, you can often

All class presentations and Figures/Tables used for should include:

1. Table C-3 (not Figure c-2) as shown below for Rwanda, if you sort on the above/below the blue line growth rate, you can avoid the “above/below” column. You can add some comparator countries too, or report them later with your Doing business slides. This Table with Rwanda replaced by your country, with its peers, twins and comparators (optional) makes is clear what you twins/peers are how you selected them, more or less, and what they have done since 2000.
2. Perhaps the same [Doing Business](#) Tables you used for exercise 8.1, or better ones if can find them. Paste them in, when using snapshots of pdf slides be sure to list source including page number. You can use the Doing Business Figure/Table number if it is not too confusing (e.g. Figure 1.4) or change it to fit your sequence. Given how fashionable institutions (and financial access) are these days, you have to mention them, especially the reforms (changes in institutions) Easterly claims is essential for continued growth.
3. Reference to and a summary of “growth diagnostics” study for your country, if there is one. These may or may not overlap with your own arguments. List the growth constraints they identify, were they correct. You can use the steady state predictions of the Jones data the same way, have problems of deficient education, TFP, etc. been addressed, or have policy levers the key (exports, the real exchange rate, industrial policies, etc.).
4. If your country is a LIC (or even if it is not) glance at the WEO April 2013 Chapter 4 (or Chapter 2) to see how your country/region is doing. We are at a post 2008 turning point, some countries will continue to well, others may stumble as growth in the big three (China, India and the EU) slows.

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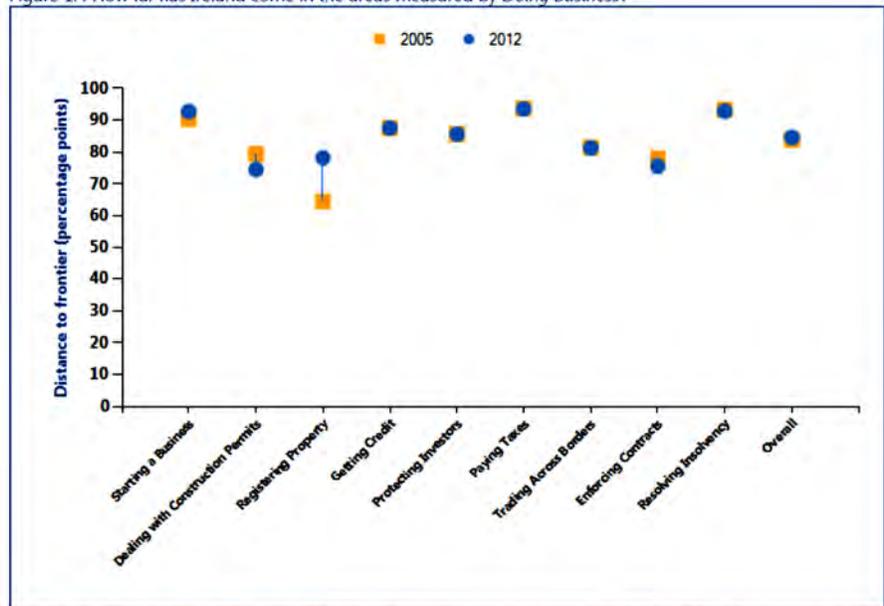
5. A Povcalnet poverty/inequality chart or a growth incidence curve (GIC) if you can. Typically you can find this by typing “growth incidence curve Ethiopia” for example (w/o quotes into google). If you cannot find a GIC, you can make one as with [Malaysia, in this spreadsheet](#). include trends in the Gini coefficient. For OECD countries, as a last resort, use [OECDstats](#), they will have relative poverty and Gini coefficients, with trends in poverty (if not inequality).

6. A list of author(data) format references as the last slide. Course readings can be referred to without citing them, but references specific to your case study should be included. If you only used a publication as the source of a Figure, and have complete citation below that Figure or Table, you do not need to include it in the references.

For the case study exam sections: Printed slides with titles OK for figures, but watch out for slides that rely on colors to read properly. Bring only tables, Figures and a list of references. too you bring to the exam, except no slides 6-6-6 slides, no words, lists, bullet points, etc. only Figures, Tables and a list of author(data) format references at the end. Try to list only references and include only Tables and Figures you will reference in your essay (of course this is hard to predict, but this probably means about 10 Figures/Tables and about five authors max, unless you are a very fast writer....). If English is not your first language, you can ask for extra time..

HW 8.1 (due Tuesday April 16th end of day): If you did any of these as part of your exam, just cut and paste into a word file/ (a) discuss how you determined your peer/twin/comprator economies—or PTC (for example, my twins come from Jones Appendix C data, here is group in 1960, here is group in 1997, or I chose 1980 as a base year Use your PTC list to construct Table C-3 (as in the [example for Rwanda](#) here and below, see footnote 2 next page for instructions). (b) Use the IFC_WB DB equivalent of Figure 1.4 to identify changes in institutions in your country over time. (c) Copy and paste/special a “comparator” Table for one or more of the indicators you identified in part b (Figure 1.4) as problem areas (“far from frontier”) or areas of change, or example for Ireland “registering” property would interesting. Referring to your Figure by number briefly define what this indicator means and why it may be a concern (or not)? [Do these IFC-WB economies](#) overlap with your list at all? If not, should you change your group or does your group make sense as it is?

Figure 1.4 How far has Ireland come in the areas measured by *Doing Business*?



Note: The distance to frontier measure shows how far on average an economy is from the best performance achieved by any economy on each *Doing Business* indicator since 2005. The measure is normalized to range between 0 and 100, with 100 representing the best performance (the frontier). The overall distance to frontier is the average of the distance to frontier in the 9 indicator sets shown in the figure. See the data notes for more details on the distance to frontier measure.

Source: *Doing Business* database.

As discussed in class answer 7.1 below before class a 27th, click on the chart below to access the [spreadsheet and full Table C-2](#), see also the [lecture notes on convergence](#). Two helpful new reports (search for your top 3 countries) include the just being released IMF World Economic Outlook: [hopes realities and risks](#), April 2013, see especially [Chapter 4](#) “Breaking through the frontier: can today’s dynamic low income countries make it?” and the *The 2013 Human Development Report – “The Rise of the South: Human Progress in a Diverse World”* – “examines the profound shift in global dynamics driven by the fast-rising new powers of the developing world and its long-term implications for human development.” 7.1 Are your countries above or below the blue line? Table and Figure C-2 divides all the large countries into two groups, those above the line are growing faster than warranted given their income level in 2000, those below are underperforming given their starting position (this is what absolute convergence means). You be able to fine your countries and label it in Figure C-2 (but be careful, if you remove countries from the excel figure, the blue line may move, if this happens don’t worry, and just find your country in Table C-2 here or on the spreadsheet (Table C-2 lists all the countries in the WEO and adds the blue line in the form of blue growth rates that gradually trend up).¹ Please create a table with your peer countries and your case study country. Are the peer countries you have selected above and below the blue line in Figure C-2?

Table C-3: Twins& Peers for Rwanda (1960 & 2000 base year)

	1	2	3	4	5	6	7	8	9
Country	1997 % of U.S.	1960 % of U.S.	2000 Rank	2000 % of U.S.	blue line	2000- 2013	above below	Pop	Above Below
Guinea	4.3%	3.8%	20	2.5	3.6	0.5	-3.0	11	below
Burundi	1.9%	4.3%	2	1.2	3.6	1.8	-1.8	9.0	below
Niger	2.1%	3.7%	6	1.4	3.6	2.5	-1.1	16	below
Malawi	3.3%	3.1%	9	1.6	3.6	3.0	-0.6	17	below
Burkina Faso	2.7%	3.2%	19	2.3	3.6	3.0	-0.5	18	below
Botswana	19.5%	5.0%	98	25	2.9	2.6	-0.2	1.9	on line
Uganda	7.2%	5.2%	15	2.2	3.6	3.5	-0.1	37	on line
Rwanda	2.9%	3.9%	10	1.6	3.6	5.2	1.6	11	Above
China	9.7%	4.4%	55	6.7	3.4	9.7	6.2	1360	above
Mozambique	4.6%	7.8%	4	1.3	3.6	5.4	1.8	23	above
Ethiopia	2.1%	2.2%	5	1.3	3.6	5.9	2.3	91	above

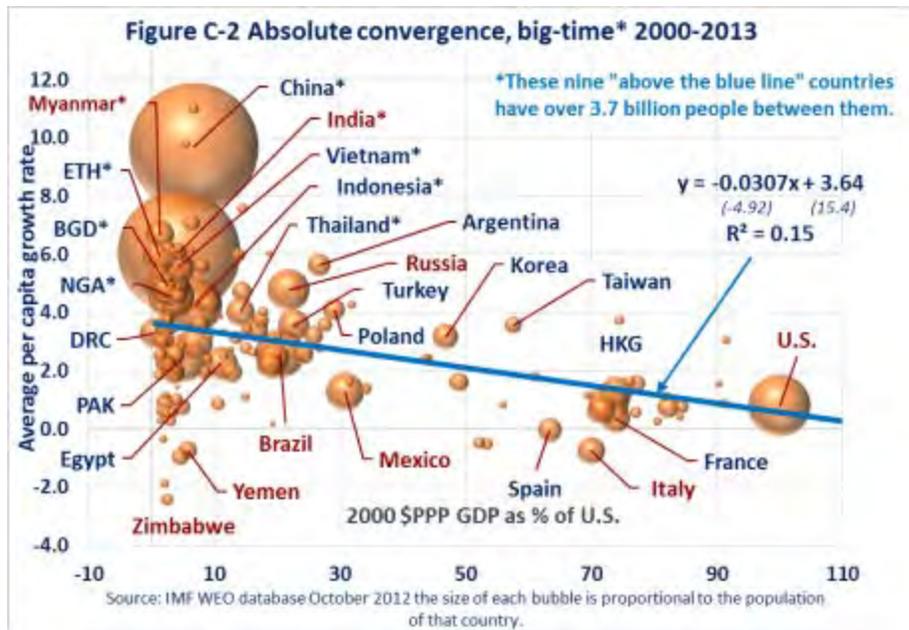
Source: Cols 1 and 2 Jones, 2001, Appendix C, IMF WEO October 2012, accessed 3-25-2013.

Columns 3-8 are trend line and data per capita income as share of \$U.S. per capita income in \$PPP 2005 current or constant 2005 prices.

Where did this table come from? Answer, just click it or download it here, http://class.povertylectures.com/FigureandTableC-2withRwandaMDG_PAN_examples.xlsx

If all of you countries are above or below the blue line, please adjust your group of peers so you have a mix of over and underperforming countries, with at least two countries in each group. Peers can include countries that are similar geographically or in size (population) but it is best to have countries that were close to your country in whatever base year you have chosen. For African countries for example the 2000 base year used for Figure C-2 and Table C-2 may be appropriate for. You can submit 7.1 either a part of your revised data inventory or as a separate assignment (everyone should do one or the other or both). A sample answer to 7.1 (for [Rwanda, taken from this spreadsheet, 1960 peers](#)) is shown below. As it happened the only above the line countries in the original group was Rwanda and China, two countries which are not really comparable (though it is interesting that they had similar per capita incomes in 1960). To have a few comparable above the line countries, I added Mozambique and Ethiopia, both post conflict, landlocked economies in Africa. Perhaps we have too many under the line countries, but they can be dropped later. I pasted this file directly from excel, if necessary a row can be eliminated without going back to the spreadsheet.

¹ Twin economies are ones that start out at the same level of income, peer economies are comparable now, for example Rwanda and Ethiopia are landlocked post conflict economies in Africa. They also happen to be twins, Ethiopia was the poorest country in the world in 1960 according to Jones, 2001 Appendix C. What are comparator countries then? I am not sure, ask the [IFC-World Bank Doing Business](#).



Midterm instructions (also on turnitin.com under each question). All questions due April 6th: Midterm essay questions 1-4 each turned in separately, same text for all 4 essays: Submit answer to Midterm Question 2 here, be sure to start each section of your essay with the question, 1a, 1b etc. include case study section if you want to, but also turn it in with the Midterm case study sections of your exam, be sure to include a Table with peer or twin economies, paste Figures and Tables in clearly marked sections of midterm relevant to your case study even if you also turned them in with question 2 for example. Make sure your main country and your name are on every page. Be sure to include your Peer/twins table with name of country, above or below blue line, per capita income and/or population. Include a brief description of how you selected your peer/twin economies. Be sure to include data sources for each Figure/Table, only include Figures/Tables you refer to in the text, you can also paste in Tables/Figures from other sources, as long as those sources are clearly labeled, a url is not a source, you must have author, date, title, organization, city as well as the url. From excel or pdfs, be sure to include source when you do this. Use standard citation format as in Jones, 2001 or Barro and Sala-i-martin, 2005 include full references to readings outside the course, do not include Figures, Tables or references you do not refer to in your answer.

Midterm Case study questions: Include clearly marked sections of midterm relevant to your case study even if you also turned them in with question 2 for example. Make sure your main country and your name are on every page. Be sure to include your Peer/twins table with name of country, above or below blue line, per capita income and/or population. Include a brief description of how you selected your peer/twin economies. Be sure to include data sources for each Figure/Table, only include Figures/Tables you refer to in the text, you can also paste in Tables/Figures from other sources, as long as those sources are clearly labeled, a url is not a source, you must have author, date, title, organization, city as well as the url.

Just in case you have not seen it, Paul Collier answered our midterm question in a [2008 TED talk](#) and in a paper he wrote with [Benedict Goderis in 2007](#), all we can do is hope they are wrong (Collier also hopes he is wrong, see also this [Political Economy of Natural resources](#) summary). We also finally figured out the Madagascar problem, a poverty trap, like Haiti, this time driven mainly by the burden of disease (but also the lack of a green revolution) for a sort of dramatic perfect storm see Nathan Myhrvold's otherwise [sort of crazy malaria video](#) (for a much more rationale approach to Malaria see Bill Gate's [Malaria and Education TED talk](#)).

March 6th: Brief answers to 2.1, 2.2A and 2.4 (+ 2.6 PhD students only) from [Problem Set #2](#) due in class or preferable on [turnitin.com](#) class ID 6158090 Ethiopia. You can take figures from lecture notes or pdf articles². The take home midterm will be posted (here is [last year's midterm](#), for your information, this year's will be quite different but cover roughly the same material. The case study question will reference your "peer group" countries. Everyone should prepare some standard diagrams for their country, to be used in a 15 minute presentation toward the end of the semester. You can change countries before the midterm is due, but after that it will be increasingly difficult. [turnitin.com](#) class ID 6158090 password Ethiopia.

² To use charts or figures from pdf use edit, "take a snapshot" then paste special enhanced metafile. Be sure to cite source of all copied diagrams, tables pictures. To use hand draw figures and equations, borrow a copy card from someone and scan your HW or midterm using the department copier, send it directly to my computer using the scan address book (or send it to someone in the IPED or Economics Office and ask them to email it to you). Then check this pdf to make sure it is legible and turnitin.com using the class ID and password Ethiopia. This way your HW and/or midterm is always available and cannot get lost or misplaced.

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February 27th: At 7:15pm, in or near 112 Dealy, we will review peer group calculations one more while trying some Spanish wines & pizza in honor of mad man [XSIM](#) of Bsim (here with [trophy](#), and here posting some [growth data](#) used in Robert Barro & XSIM as well as for the [two million regressions](#) article we will review). Here is the [“peer group” spreadsheet](#) we looked at last week, please try to refine and if possible create a Figure for your peer group countries. Try to get a final figure as we did for MDG: don't worry if you get messed up, you can always download this file again. You may want to start in 1960, 70, 80 or 1990, a few countries do not appear in the PWT until 1993 (latest year you have to start). In April we will update this data to 2012 using the April 2013 WEO data base. We will discuss growth accounting, cross county growth regression and the empirical evidence on convergence. If you have time, please take a look at Krugman's [Myth of Asia's Miracle](#), Young's the [Tyranny of Numbers](#), [Jones Chapter 2](#) growth accounting section 2.3 starting on page 43; the beginning of [BSim Chapter 11](#) (lightly); and Hsieh, [Chang-Tai, and Peter Klenow, 2010](#) Development Accounting and perhaps just the first few pages of [Duade, 2012](#) (if you have not already) . Also very helpful eventually are [Bosworth and Collins, 2003](#) and [Bosworth and Collins, 2008](#). Last but by no means least; take a quick look at [Arndt, Jones & Tarp, 2006](#) Aid and Development, the Mozambican Case which uses growth accounting....

Midterm due Friday March 29th on turnitin.com (pdf or word version) if possible. If necessary you can scan your copy to my office computer using the department copy machine (the office has a copy card, or I can lend you mine, scanning does not use any copies, press scan and then choose my name from the address list). Later I can check file, let you know if it is legible and then you can submit to turnitin.com)

February 20th here are the slightly updated [lecture notes on growth models](#), including a link to the growth accounting and development paper (the source of the India charts at the end). Finally, if you have time take a quick look at [Chapter 4 of Eclipse](#) (here [pages 83-96 of Chapter 4](#)). To wish Mario Monte and Italy good luck with its upcoming elections, we tried [two wines from Northern Italy](#)....

February 13th Before class review the [growth models lecture 3 notes](#) but not the [AK model with government handout](#) and take a look at 2.3 in [Problem Set #2](#) and [Chapter 3 of the Jones](#) book (but see the [Jones Chapter 3 spreadsheet](#) which has the key pages and the answer to exercise 1 in page 75 for example). Mainly do a quick data inventory for your country, and see if you can answer 4.1 to 4.4, or at least 4.1 and 4.2 before class next week. Turn in a short typed summary of you data inventor (#4.1 and 4.2) for February 13th, but mainly get started by choosing a country or countries and looking at where they were in 1960 vs 1997 vs. 2010 or 2012 (we will discuss how to do this, but these questions will get you started). Finally, if you have time take a quick look at [Chapter 4 of Eclipse](#) (here [pages 83-96 of Chapter 4](#)).

4.1 Pick a country and do a quick data inventory. You will need per capita GDP from the World [Bank WDI](#) or the [IMF WEO database](#) and the [PWT 7.1 per capita GDP data](#). Also see if your country has income share or poverty rates available at [povcal.net](#) – what years are available? Eventually you will need to get these series into a spreadsheet along with per capita income in \$2005 PPP or U.S. prices (current or constant prices). We will discuss how to splice these series together to get a long per capita income series, perhaps 1950 to 2010 or 2012 (if you country existed in 1950). You also need to compare your countries performance to some benchmark economy (U.S. or German or Japanese per capita income for example, but see the twins discussion below). Is your country included in the Bosworth and Collins, 2003 [growth accounting](#) spreadsheet?

4.2 What was the Hall and Jones, 1998 steady state y^* for your country in 1997? (use this Jones [spreadsheet](#) to compute your countries steady stage, following the instructions to replace one of the Mexico rows). It now includes some African, some Asian countries and of course Haiti. Is your country's (or countries') problem a low steady state, or a being below its steady state in 1997? *Optional: draw a poverty trap diagram for Haiti, labeling the various critical levels or with \$ of income per person, taken from the [Jones spreadsheet](#).*

4.3 Use the 1960 ranking of your country in the [Jones data Appendix C](#) to find some “twin economies” for your country (peers who had about the same income your country did in 1960, relative to the U.S. See the Duade paper on Latin America below. What are Latin America's “twin economies” see [Duade, 2012](#).

4.4 Take a look at this spreadsheet which has [beta and sigma convergence diagrams](#) for three Arab Spring countries. Why is one of the sigma convergence diagrams wrong? What are some twin economies for these Middle Eastern economies?

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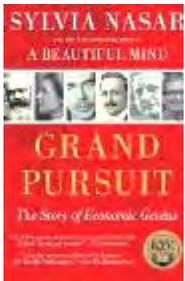
Did their incomes converge or diverge from those of the U.S. between 1960 and 1997 (using the [Jones Appendix C data](#))? What about your country?

4.5 See if you can find some existing growth policy case studies for your country or similar countries if possible. In particular check for a growth accounting or “growth diagnostic” paper covering your country (see [Dani Rodrik’s list](#) for a growth diagnostic list) exercise for your country and if possible (see [Christain Daude’s 2012 paper on Latin America](#) for example and [Ardnt et al. 2011](#) find poverty is stuck at 55% between 2003 and 2008 in Mozambique despite strong economic growth, a fact they attribute to slow productivity growth in agriculture... Africa is still waiting for its green revolution... at least in Mozambique (recall that Mozambique was the site of a famous “failed reform” program in the 1990s aimed at revamping its Cashew marketing board).

Readings relevant to case study: *The OECD has two great papers on LatAm “middle income traps” on that focuses on exports (“the product space”) and a couple on growth accounting, Anna Jankowska1, Arne Nagengast1, José Ramón Pereal, 2012, “The Product Space and the Middle-Income Trap Comparing Asian and Latin American Experiences” [Development Centre Working paper #311](#) and Christain Duade, 2012, Development Accounting Lessons for Latin America, [Development Centre Working paper #313](#) For more wonderful growth accounting, see Jones Chapter 3 or Arndt, Jones and Tarp, 2006, Aid and Development: The Mozambican Case, [University of Copenhagen Discussion Paper 06-13](#).*

Growth lecture notes: [Lecture 2 Growth Theory to Growth Strategy](#), [Lecture 3 Growth Models: convergence of growth theory, if not rhetoric \(and countries\)](#). See also [Agenor Chapter 12](#) and [Agenor Chapter 13](#).

For Wednesday February 6th: Please turn in answers to problems 1.3-1.4 in class, typed, same format with handwritten corrections, equations, diagrams discussed above, be sure to use the question itself to start your answers. If you have questions regarding the problem sets, please ask in class the week before.



Special event: 3pm Wednesday Jan 23rd Economics Department Guest speaker Sylvia Nasar speaks on long run growth, the West versus the rest (among other things) 3pm please join us if you can in Walsh Auditorium). Click the cover at left to read a sample of the book, check back here for photos and the chapter on Amartya Sen.

Key readings, handouts and lecture notes ([lecture 2](#)) : [Problem set 1A](#) (make sure it says 1A); Three [Growth Models handout](#) (with the three Sachs et.al. poverty trap diagrams); [Sachs et al. 2004](#); Charles Jones and Paul Romer, [The New Kaldor Facts: Ideas, Institutions, Population, and Human Capital](#) *American Economic Journal: Macroeconomics* 2010,2:1, 224–245, this link should work on campus, if not use [Jones and Romer \(2010\)](#).

Wednesday January 23rd: Before class if you can please take a look at questions 1.1 and 1.2 (due the following week) that might save us both a lot of time. [Sachs et al. 2004](#) discusses three poverty traps and explains Africa’s stagnation from 1970 to 2002. Fortunately things began to change in Africa about 2002, just as this article was being written (data comes out with a lag and lots of noise). There is a lot of reading for question 1.2, but most of it covers the same ground. For a summary of institutions argument, see [Aghion and Howitt Chapter 11](#) For more on AJR’s arguments see [Understanding poverty and prosperity](#) and the short 2003 [Finance and Development](#) article, then lightly the first 10 pages of [Acemoglu et al. 2004](#). [Jones and Romer, 2010](#) along with (lightly) Jones [Chapter 1](#) and [chapter 2](#). The [three growth models handout](#) should be helpful for question 1.1. The growth rates [Appendices](#) in Jones are also helpful, the rule of 70 is not there, but lots of useful tricks with natural logs.

Wednesday January 30th please answer questions parts a and b of 1.1 and 1.2 plus 1.3 a to c from [Problem set 1A](#) typed printed two sides if possible, figures and equations drawn in by hand. If you have trouble with the diagrams answer the Africa “take off” part and ask in or before class about the diagrams (you can make corrections and fix the diagrams in class, as long as most of the answer is typed. Since you cannot type in class, it will be clear what you added or fixed

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during the discussion. PhD students need to know the growth models, Masters students should be able to use and interpret the model diagrams (so draw them carefully, and ask if you are puzzled).

Important: if you can, please add footer or header to every page of your problem set with your name and the question number, e.g., 1.3a and 2.1c etc. Then start each question at the top of new page, this way they can be separated and I can grade one question for each person. Even better, staple the answer to each question, as in 1.1, separately.

For Wednesday February 6th: Please turn in answers to problems 1.3-1.5 in class, typed, same format with handwritten corrections, equations, diagrams discussed above, be sure to use the question then answer (by section). If you have questions regarding the problem sets, please ask in class the week before.

February 13th Pick a country and check your growth rates pull data on growth rates to check beta and sigma convergence and to find a control group for your country. Not every country will have all of this information, but starting your search early will tell you whether you can focus on one country, or a couple. One advantage of starting early is we can distribute our efforts around the globe and issues (aid and growth, institutions and growth, globalization and growth, etc.). *Please find some existing growth policy case studies for your country or similar countries if possible.* In particular check for a growth accounting or “growth diagnostic” paper covering your country (see [Dani Rodrik’s list](#) for a growth diagnostic list) exercise for your country and if possible (see [Christain Daude’s 2012 paper on Latin America](#) for example and [Ardnt et al. 2011](#) find poverty is stuck at 55% between 2003 and 2008 in Mozambique despite strong economic growth, a fact they attribute to slow productivity growth in agriculture... Africa is still waiting for its green revolution... at least in Mozambique (recall that Mozambique was the site of a famous “failed reform” program in the 1990s.

Growth provocations...foreign aid & authoritarian growth miracles.... Growth models were more or less abandoned during the 1960s well into the 1980s³ as being too technical and empirically irrelevant. Today growth accounting of one sort or another may determine who dominates the new world order, as in [Eclipse](#), or at who will commandeer the worlds resources, as in Winner Take all. Are we on the eve of a new world order? Perhaps not: in the first 15 minutes of this [Economist talk](#) Bill Easterly offers an “authoritarian regime” variation of institutions and growth argument: institutions (private property, rule of law, etc.) do not just determine the level of national income, as in AJR, 2001, changes in authoritarian regimes (reforms in China) lead to changes in GDP growth but at a diminishing rate. China’s authoritarian growth boom is coming to an end, Easterly argues, partly because reform has slowed and partly because authoritarian growth booms never last that long anyway (he mentions Togo, but Egypt early in the 20th century may be a better example—see photos from [Grand Pursuit](#) below). Dambasi Moyo of *Dead Aid* fame disagrees. She argues authoritarian regimes can grow forever, perhaps even better than democracies (who seem to have lost their edge). As long as the get the “fundamentals” right (her first answer is quick lesson in growth accounting). She also mentions how Africa’s relatively low debt to GDP ratios averaging 40% look good compared to OECD (Greece and the U.S. for that matter are near or over 100% debt/GDP ratios). But why is debt so low in Africa? She goes on to argue, here “Winner take all” argument that China’s (and India’s) appetite for Africa’s (and Latin America’s) resources is boundless (like Shanta, she mentions Rwanda, world champion reformer..). The 4th quarter 2012 rebound Chinese growth lends support to Dambasi Moyo’s view, that China is staging a comeback. But these are long run arguments: Chinese growth in 2012 was “just” 7.8% lowest in 13 years. One the other hand, China’s boom has lasted over 30 years, a long run by any measure. A new China growth outlook” case study would be great, see the Fall 2012 roundtable on China in the [Journal of Economic Perspectives](#) and of course we have [Eclipse](#) (chapter 4 is required, but most of Subramanian’s argument is here but most of the argument is here). Also of interest is Moyo’s new book *Winner Take all* (have not read it) which you can [preview here](#). Toward the end of the [Economist talk](#) Dambisa Moyo says “there is not a single country that has achieved long term growth and reduced poverty in a meaningful way by relying on aid, not one...” Of course this statement is carefully parsed, to provoke while misleadingly suggesting aid is not helpful for growth & poverty reduction.... We can turn this question around: are there successful growth and poverty reduction stories that started with massive inflows of aid? We cannot look at postwar Europe in this course, but the post conflict countries in Africa ([Mozambique](#), Uganda, Rwanda,

³ It was 1986 before R.E. Lucas’ student Paul A. Romer “resurrected” growth theory by rediscovering the “<http://class.povertylectures.com/Romer-86IncreasingReturns.pdf> theory of long run growth” (that is constant returns technologies, aka endogenous growth theory. This paper was followed by Lucas’ own 1988 classic the [Mechanics of Economic growth](#), an accounting exercise published, of all places, in the *Journal of Monetary Economics*. Where Lucas’ famous “it is hard to think about anything else” line appears as he ponders the differences between India and other countries “Is there some action a government of India could take that would lead the Indian economy to grow like Indonesia’s or Egypt’s? If so, what, exactly? If not, what is it about the’ nature of India’ that makes it so? The consequences for human welfare involved in questions like these are simply staggering: Once one starts to think about them, it is hard to think about anything else.”

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Ethiopia among others—see [Chapter 4 of the 2004 UNDP BCPR](#) report did much of the research for, along with South Korea, Bangladesh, India and Indonesia all received massive foreign aid flows early on... and the low debt/gdp ratios she discusses in Africa now are largely due to debt relief (even in Nigeria). Gleneagles and HIPC and PEPFAR were massive aid programs that seem to have made a big difference (though Chinese FDI and high commodity prices—do in part to demand from China and India, as well as QE 1-3). My undergraduates are watching “[Give us the Money](#)” about Bob Geldorfs and Bono’s campaign for aid and debt relief (starting with the Live Aid concert to benefit Ethiopia—highly recommended, too bad ours is a graduate class....). Dambasi recent talk at LSE on [Winner take all](#) is also excellent (but 1 hour 20 minutes—or see [her on the Daily Show](#) if you only have six minutes—she makes her anti-aid quip more carefully) as it happens her native Zambia is one of the most important beneficiaries of Chinese trade with Africa (see Figure 5, in [African Pulse, September 2012](#)). Within the growth and development literature there much controversy over the impact and role of aid, but as an anti-dote to Dambasi-Easterly view, [Arndt, Jones and Tarp \(2010 p. 24\)](#) argue “...we conclude that the bleak pessimism of much of the recent aid-growth literature is unjustified and the associated policy implications drawn from this literature are often inappropriate and unhelpful. Aid has been and remains an important tool for enhancing the development prospects of poor nations.” (note that this statement is not inconsistent with Moyo carefully parsed statements and to be fair the impact of Aid is less than [Arndt et al. 2012](#) hoped as well...).

Interesting and some topical case study countries: every country is of interest in its own way, but try to stay above 15 million people* (a billion even better) and make sure basic data is available, the IMF WEO or World Bank WDI is basic data source, but povcalnet.org and the WB/IFC doing business web page is helpful as well, and for history, it is should be one of the PWT 7.1 countries. Former Soviet bloc countries are OK, but most data starts in 1990 and even then plunges during the conversion to capitalism (why? This is an interesting question) but even 20 years is enough. Here are some interesting countries, in no particular order: Ethiopia, Mozambique, Ghana, Kenya, Rwanda, Angola, China, Vietnam, Cambodia, Bangladesh, India, Ireland, Poland, Peru, Costa Rica, Brazil, Mexico, Chile (normally Mali, Niger – the later was the fastest growing country in Africa last year would be good case studies, but it is probably best to avoid countries entering a period of political instability, including most of the Arab Spring countries, Egypt, Tunisia, Algeria but not perhaps Morocco or Oman. Venezuela, Argentina, Nigeria, Sudan the DRC are all borderline cases... going through difficult time. Many countries in Africa just got debt relieve and more aid during the past decade, they are good subjects. *There are exceptions to the too small rule, Botswana has only about a million people, but grew rapidly until HIV-Aids hit; perhaps study it with Zambia and South Africa—Acemoglu and Johnson, 2012 *Why Nations Fail* discusses the history of many countries, including Mexico, Zambia and others, this might be a good place to start. Burkino Faso is another, the World Bank chief economist may come to speak to us.

Course readings ftp: type [ftp.povertylectures.com](ftp://ftp.povertylectures.com) into any web browser (chrome or explorer or firefox), user name: econ6470 password: Fall2011. See below for what the reader looks like in chrome or firefox (similar in explorer as well). For Jones chapters, see core readings/book excerpts. Try this link as well, <ftp://ftp.povertylectures.com/Growth&DevelReader/>

Index of /Growth&DevelReader/ see [ftp.povertylectures.com](ftp://ftp.povertylectures.com)

Name	Size	Date Modified
[parent directory]		
CoreReadings/		1/28/11 12:26:00 PM
CountryStudies/		1/28/11 12:31:00 PM
ECGA-6470WebpageApril2007.pdf	7.2 MB	2/25/09 10:52:00 AM
ECGA-6470_PrintedSylabus.doc	175 kB	1/16/08 4:09:00 PM
ECGA6470WebPageFeb07.pdf	21.5 MB	1/31/07 1:23:00 PM
Growth Data Sets/		1/28/11 12:48:00 PM
GrowthClassics/		1/28/11 12:49:00 PM
McLeod Permanent ECGA 6470.doc	52.5 kB	1/16/08 3:48:00 PM
NotesPresentations/		1/28/11 12:50:00 PM
WBPublications/		1/28/11 12:53:00 PM

[Three Growth Models handout](#) Three growth models with diagrams [Barro’s AK Model with Government](#) [Chapter 3, Ex 1 page 75 spreadsheet](#) [Jones Table C.1 Excel file](#) optional [Eviews Workfile](#)

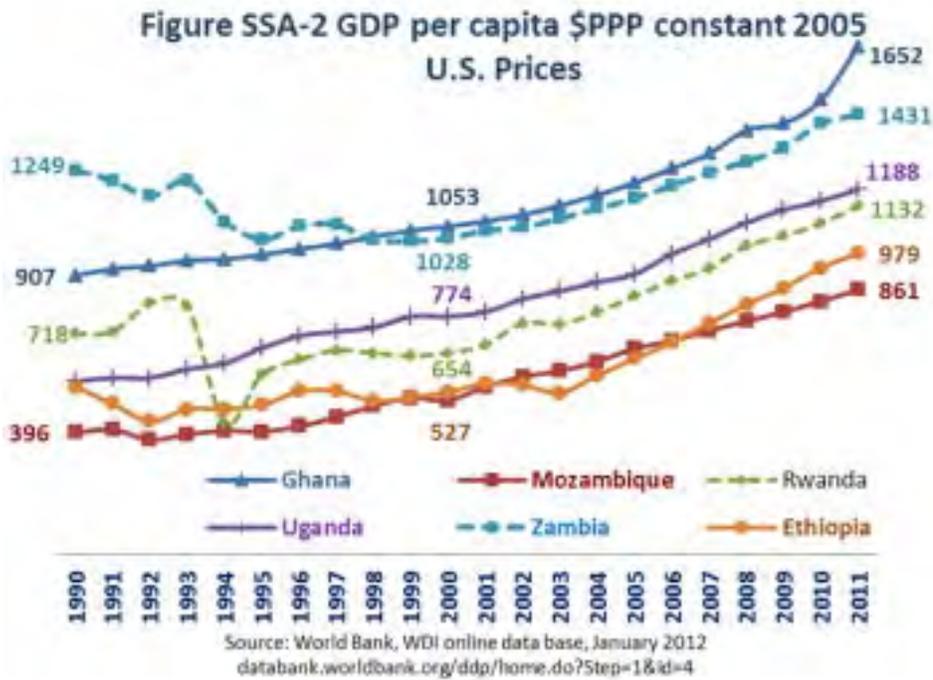
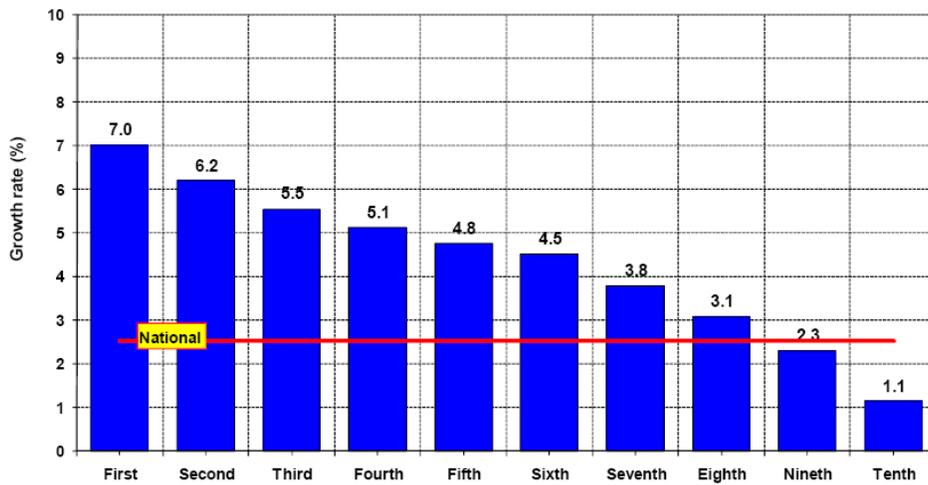


Figure 10

Figure 2.4: Annual growth rate for per capita income in Brazil, by percentile, 2001-2007



Source: Estimates based on Pesquisa Nacional por Amostra de Domicílios (PNAD) - 2001 and 2007.

Source: Barros et al. (2009).

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The greatest American economic thinker of the last century was a Yankee tinkerer, teetotaler, and TB survivor. Trained in mathematics but desiring "contact with the living age," Irving Fisher invented the rolodex, the consumer price index, and the economic forecast. By the 1920s, Fisher (*bottom, left*) was America's economic oracle, wellness guru, and stock picker, his celebrity rivaling that of Alexander Graham Bell (*right*).



In a postgraduate year in London, Joseph Alois Schumpeter rode, fenced, dressed, and talked like one of the Viennese aristocrats he wished to be taken for. He spent most of his time at the British Museum writing a book criticizing economic theory for ignoring how the economy evolved over time.



After marrying impulsively, Schum-peter rushed off to Egypt, the miracle economy of the Belle Epoque, to make his fortune as a lawyer and money manager. In Cairo, he found inspiration for his greatest work, *The Theory of Economic Development*.

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Here are two versions of the same Figure, the top one can be edited, but is fragile, and will change shape & layout depending where you paste it. In fact if you past this version into a power point the fonts will change, so create a picture using “paste/special/ windows metafile” (or and graphics format....). Stable and flexible.

Figure 1.1 Growth Convergence post 2000

(source: WEO April 2013 database)

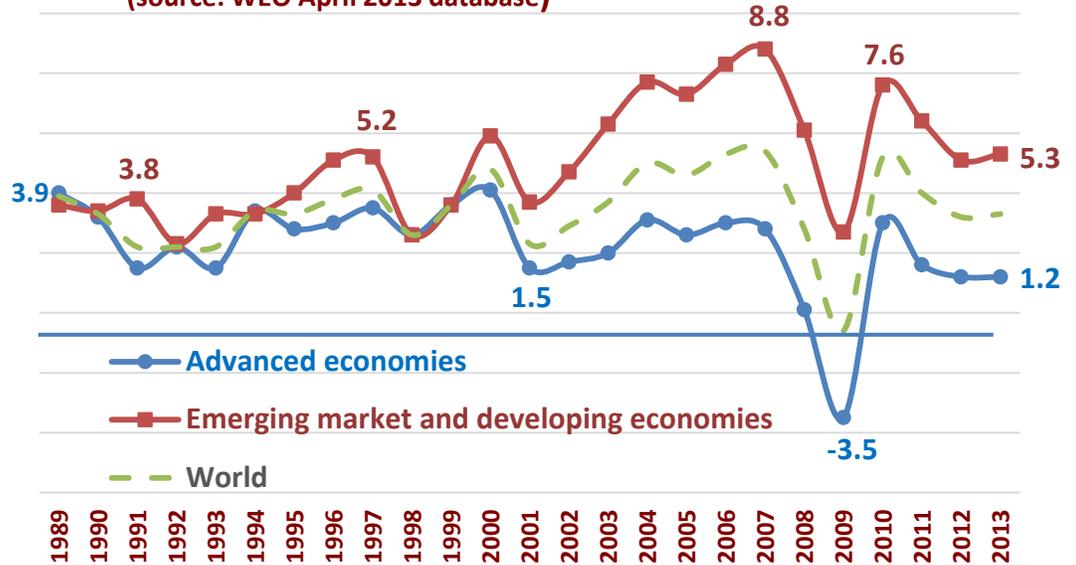


Figure 1.1 Growth Convergence post 2000

(source: WEO April 2013 database)

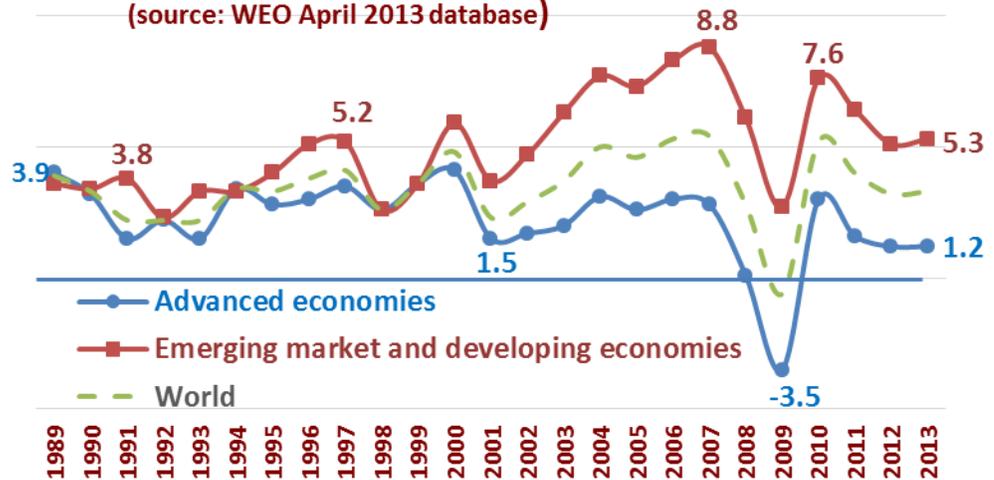
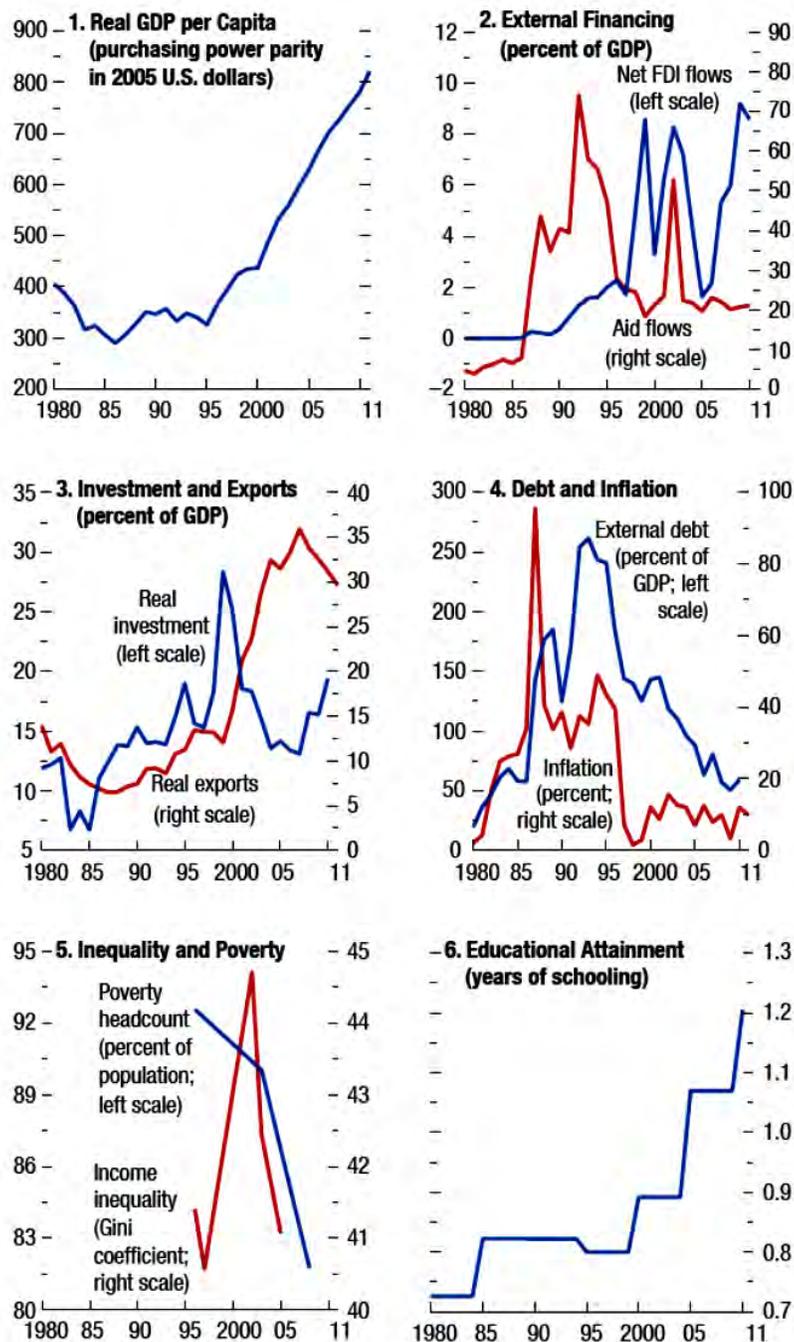


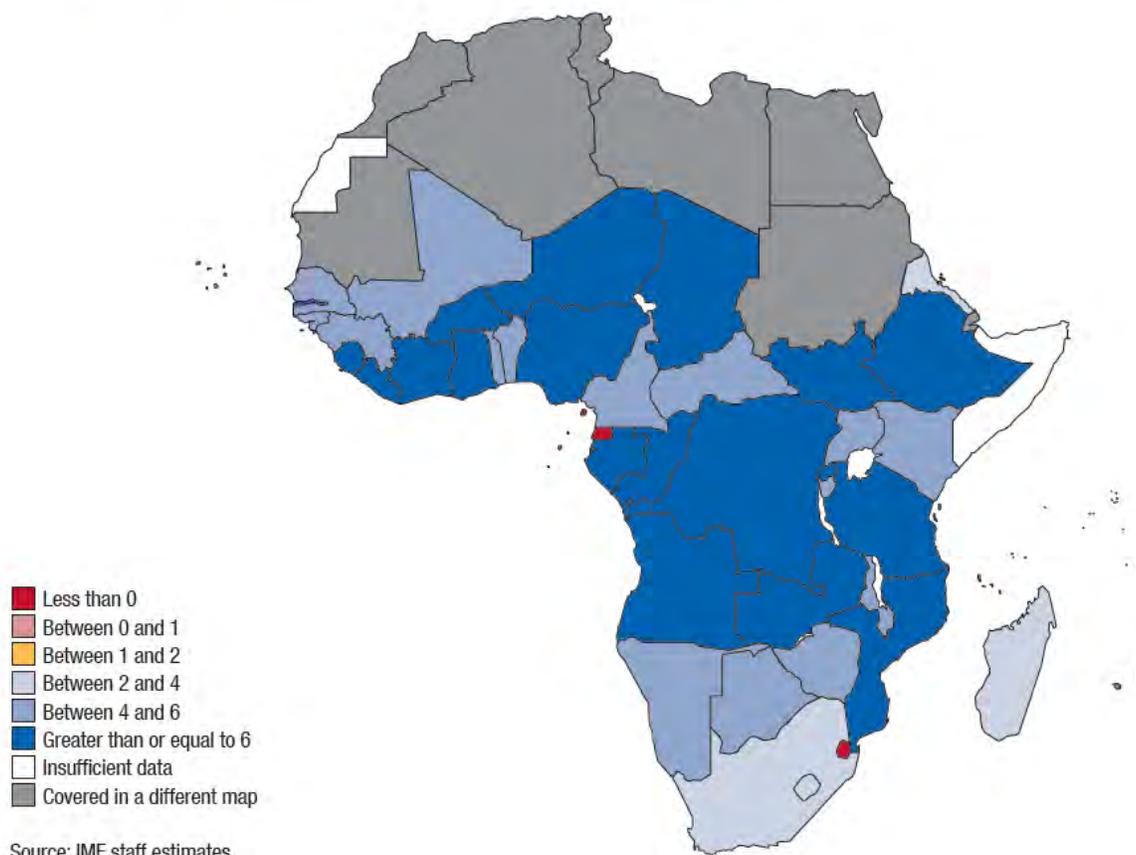
Figure 4.14. Mozambique's Growth Experience since the 1990s

Mozambique's experience highlights the benefits of undertaking policies and measures that attract private investment financed by foreign direct investment (FDI). It also reveals the challenges arising from commodity-based growth, whereby lasting structural reforms will be needed for broad-based improvements in productivity, growth, and living standards.



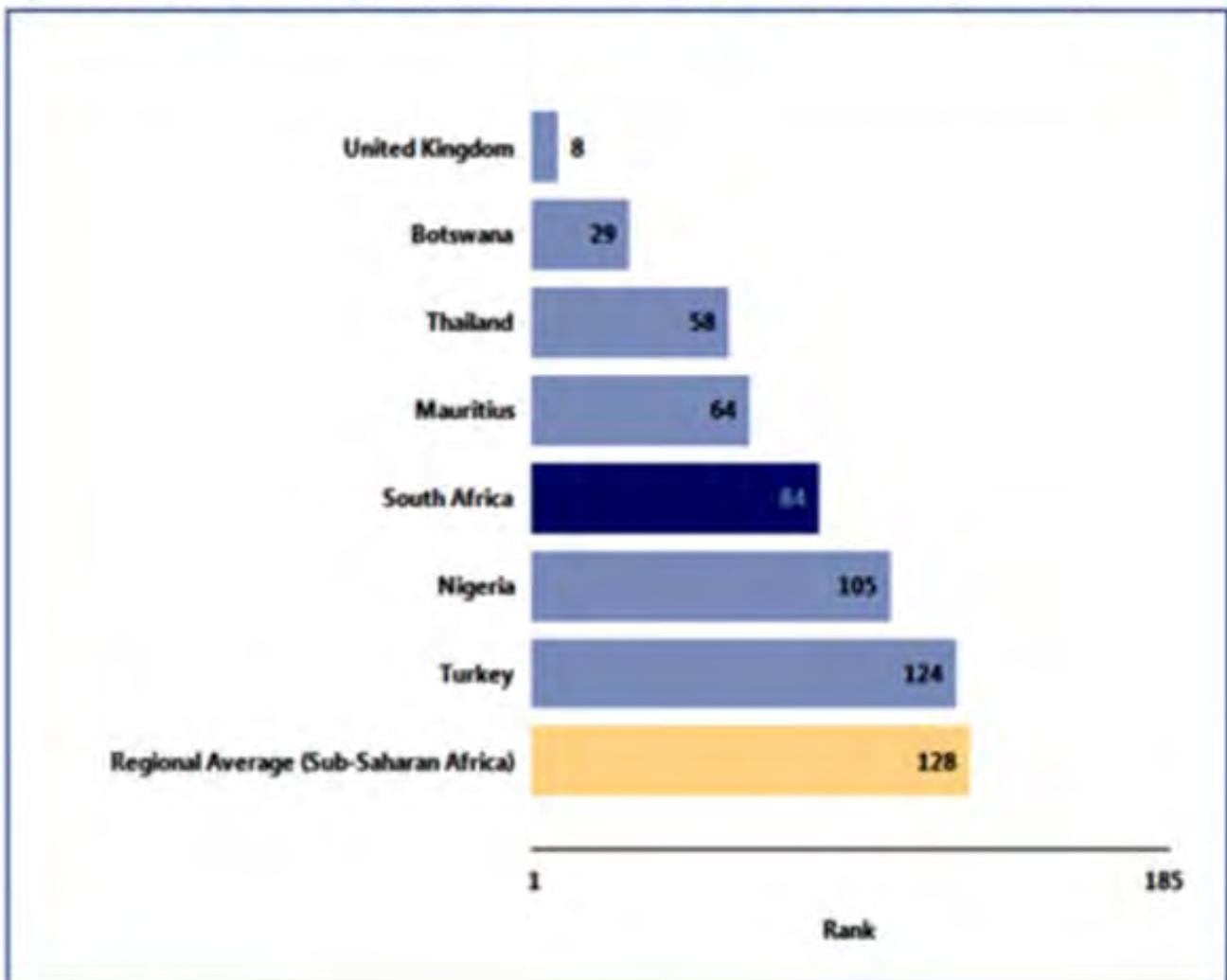
Sources: Barro and Lee (2010); IMF, Balance of Payments Statistics database; IMF, World Economic Outlook database (October 2012); Lane and Milesi-Ferretti (2007) updated to 2011; Penn World Table 7.1; Solt (2009); World Bank, World Development Indicators database (2012); and IMF staff calculations.
 Note: Indicators are defined in Appendix 4.1.

Figure 2.15. Sub-Saharan Africa: 2013 GDP Growth Forecasts
(Percent)



Source: IMF staff estimates.

Figure 11.1 How South Africa and comparator economies rank on the ease of resolving insolvency



Source: Doing Business database.