

Order at Sea and Landlocked Countries in Africa: Economic Benefits

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Introduction

- A major concern in recent development literature has been the impact of geography on development.
- A major one is the existence of access to the coast, suggesting that landlocked countries are at a real disadvantage.
- Those that have thrived benefits from surrounding markets eg Switzerland – not open to African countries.
- Collier (2007) in *The Bottom Billion* as traps that countries fall into and have difficulty getting out of. The first of these is the conflict trap, the second the natural resource trap, the third landlocked countries with bad neighbours and the fourth, bad governance in a small country.
- The fact that being landlocked is seen as a trap, given that landlocked countries can also fall into the ‘other’ traps is a good indicator of the challenges they can face.
- It is also an indicator that landlocked countries are likely to have suffered disproportionately from the lack of security at sea and the prevalence of piracy.

Introduction

- Sachs suggests that being landlocked reduces half a percentage point off the growth rate
- 30% of the people living in bottom billion countries living in landlocked countries it is a major problem.
- It is also an overwhelmingly an African problem with around 30% of Africa's population living in landlocked, resource poor countries
- This paper considers the likely economic benefits for landlocked countries in Africa of improved order at sea.

Landlocked Problems

- Being landlocked can be a major barrier to development
- **Transportation problems:** capital cities that are in landlocked countries have been found to incur higher transport costs.
 - Interestingly these do not appear to be dependent on distance, but how much the coastal neighbour spent on transport infrastructure (Venables,...).
 - It makes it difficult to compete in global markets for any goods that need lot transport, such as manufacturing.
- **Poor growth spillovers:** Landlocked countries are likely to be dependent on neighbouring countries for markets and in Africa many of the neighbours are likely to be poor and some involved in damaging conflicts.
- **Bad neighbours:** Transportation problems do reflect the behaviour of neighbours and in Africa this can be a real concern, both as a result of direct bad behaviour, corrupt transits, delays and lack of infrastructure, but also indirect in lack of governance and security.

Landlocked Problems

- All of which are made much worse by insecurity and conflict
- It is not just being landlocked that tends to mean a country performs poorly, it is often a combination of factors, the most important one in Africa, being a lack of natural resources to exploit.
- Given the problems above, landlocked countries will have real problems with products for which transport costs are important, but if they are resource rich they have products for which the transport costs will be less important.
- Within Africa there are a relatively large number of countries that are both landlocked and resource poor.
- Snow et al (2003) considered the relative performance of landlocked countries in the HDI rankings, finding them to be towards the bottom of the table and doing worse than other countries in the same region, and with African landlocked countries making up most of the worst performers.

African Landlocked

- **Table 1 African Landlocked Countries**

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- AFRICA – SOUTHERN

- *Botswana

- Lesotho

- *Malawi

- Swaziland

- *Zambia

- Zimbabwe

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- AFRICA - CENTRAL AND EASTERN

- *Burundi

- *Ethiopia

- *Uganda

- *Rwanda

- AFRICA – WESTERN

- *Burkina Faso

- *Central African Republic

- *Chad

- Niger

- *Mali

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- Notes:

- *Included countries.

- Lesotho and Swaziland excluded as small surrounded by South Africa.

- Others excluded because of data issues.

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Landlocked Costs

- Comparing the landlocked countries with their maritime neighbours in their rank on average, showed some interesting patterns .
- Despite the low levels of human development throughout western Africa (including in maritime countries), the western African landlocked countries still have a substantially lower level of human development than their maritime neighbours.
 - While Zimbabwe and Swaziland did better than their maritime neighbours, this was largely due to the very poor level of Mozambique, which had been involved in civil war.
- Decomposing the HDI into its components the education, life expectancy and GDP per capita indices. Landlocked:
 - lagged their neighbours more in GDP than the other indicators.
 - GDP per capita of each landlocked country relative to its maritime transit neighbours was an astonishing 69% (WDI 2002).
 - had grown at an average of 25% less than their maritime transit neighbours over the previous decade

Landlocked costs

- Landlocked countries usually had a higher level of export value per capita than their maritime transit neighbours.
 - On average, the landlocked countries exported 60% less value per person than their maritime transit nations.
- Landlocked countries suffered from very low levels of foreign direct investment,
 - Mean FDI for landlocked 1/49th of the maritime transit nations.
 - Only two landlocked nations (Chad and Uganda) had a higher inflow of FDI per capita than their individual maritime transit neighbours
 - on average, a landlocked country received 17 times less FDI per capita.

Landlocked Growth

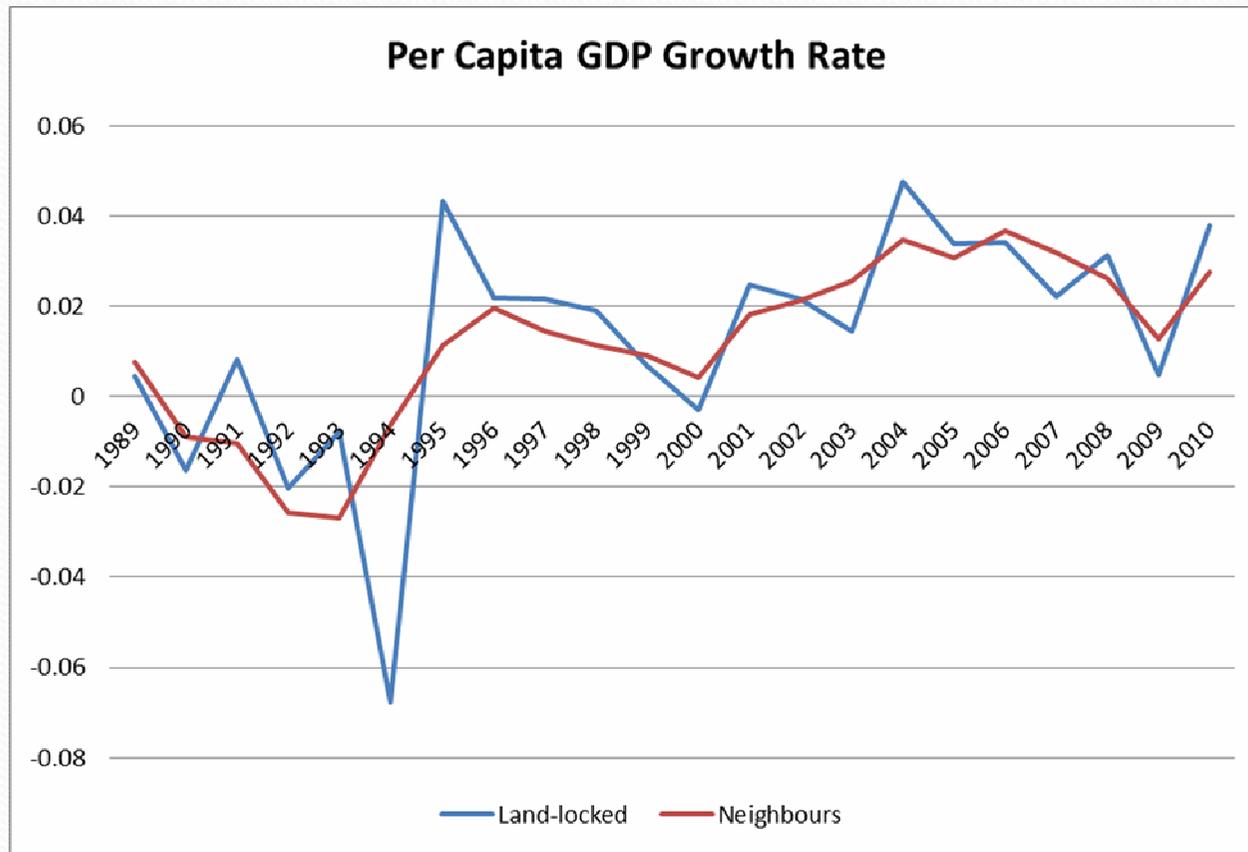
- Looking at the sample of African countries collected for this paper using data up to 2012
- Landlocked countries had an average growth in per capita GDP of 1.23%, between 1988 and 2010, while their maritime neighbours grew at 1.20%,
- Landlocked countries do now seem to be growing faster, but they do remain smaller, with per capita GDP of 1471 compared to 2190 for their maritime neighbours.
- This might be expected –growth not absolute values and maybe catch-up

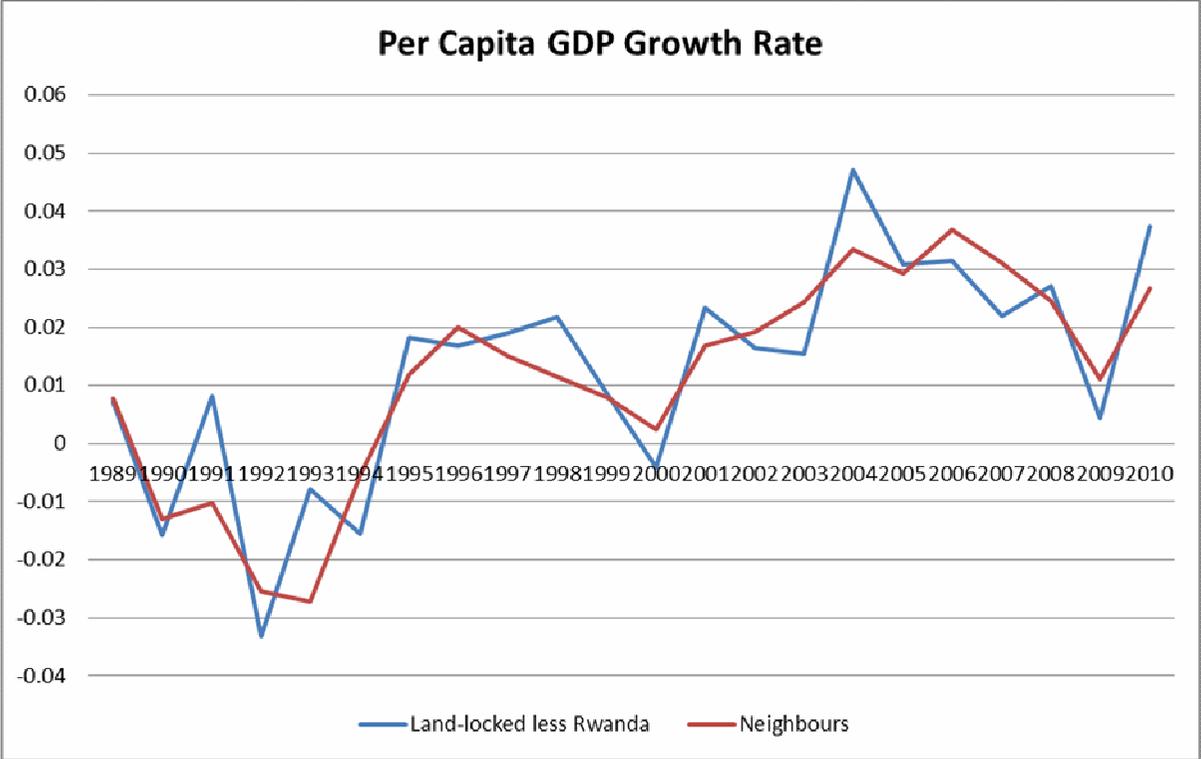
Landlocked Growth

	Ave Growth in Per capita GDP	Per capita GDP		
Landlocked	1.23%	1471		
Non-Landlocked	1.17%	3001		
Neighbours of Landlocked	1.20%	2190		

Landlocked Growth Patterns

- To get some idea of the pattern of growth of African landlocked and non landlocked next figures plots their values over time.
- This is done with and without Rwanda because of spike it introduce to the data, which might make trends less clear.
- It also does not include DRC because of data problems.
- Striking patterns





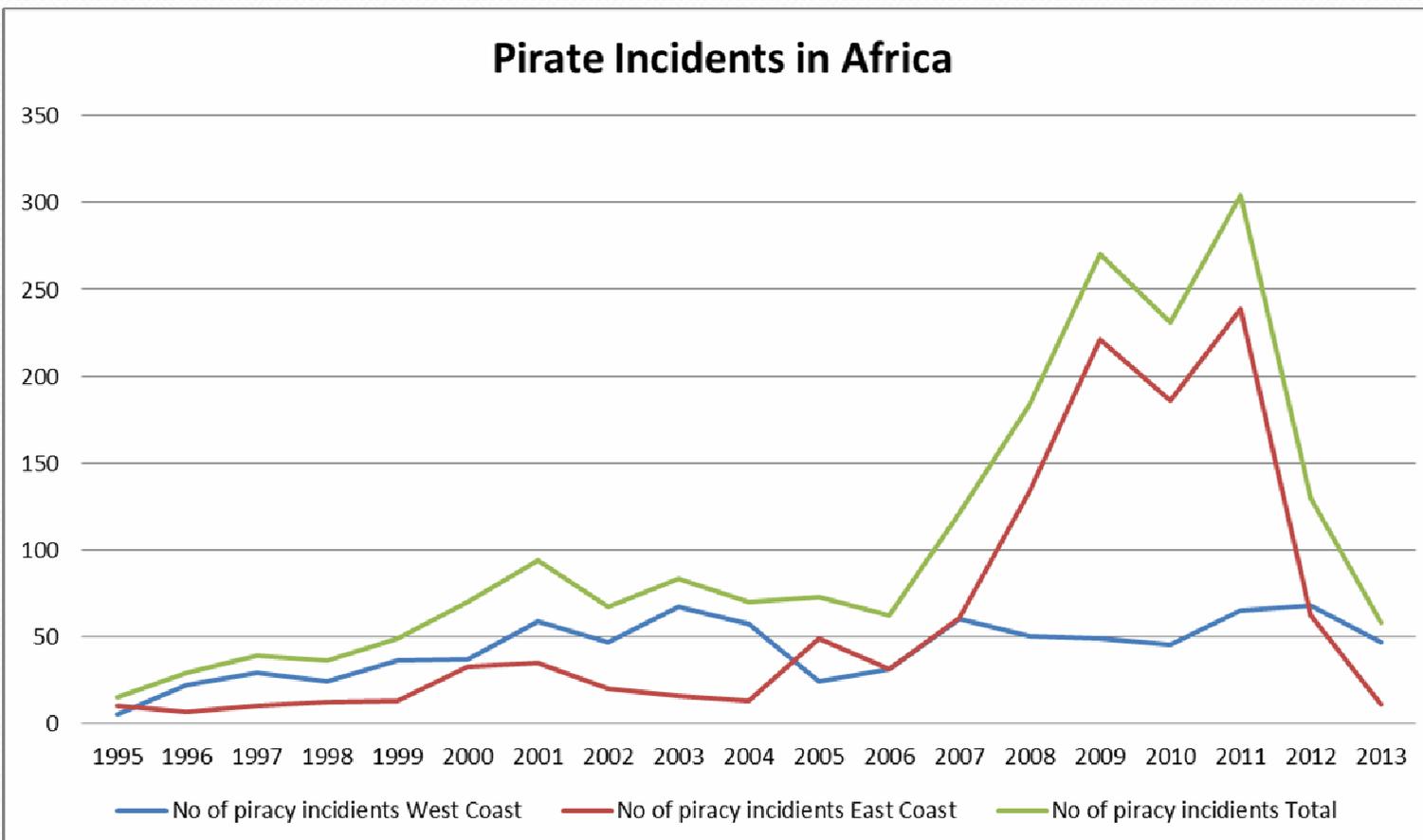
Relative growth paths

- Landlocked are considerable smaller as noted above, with more variation in growth rates -higher variance
- Their growth path does seem to follow the pattern of their maritime neighbours, following changes in direction
- A number of attempts have been made to estimate the impact of being landlocked on economic growth
 - Radalet and Sachs (1998) find that being landlocked slows the growth rate by 0.7% and
 - MacKellar, Wörgötter et al.(2000) estimate an even higher figure, 1.5%

Maritime Security

- As have seen there has been marked change in maritime security over the last couple of decades
- The next figure shows the evolution of instances of piracy
 - have grown over the nineties,
 - accelerating from 2006
 - declining markedly in 2012.

Pirate Incidents in Africa



Empirical analysis

- Consider simple analysis of economic growth and piracy using dynamic model
 - Simple –lot factors not considering
 - Note only to 2010 miss decline in piracy
- Allows the growth rates to be determined by other growth rates and the lagged log levels, which if significant suggest a long run relation in the data.
 - In this case the general model in column 2 shows them to be insignificant.
- When only growth rates considered neighbour growth and change in piracy activity variables are both significant and of the expected sign.

	Coeff	t	Coeff	t
neighbour growth	0.75206	3.45	0.59519	4.16
change in piracy actions	-0.00031	-1.84	-0.00037	-2.9
landlocked growth	-0.0556	-0.88		
neighbour	0.038256	0.49		
piracy	2.21E-05	0.19		
constant	0.128316	0.22	0.021062	5.41
R-squared		0.591		0.5656
Adj R-squared		0.4632		0.5199

Empirical Analysis

- This suggests:
 - a significant and sizeable increase of landlocked countries growth when their neighbours grow (1% increase gives 0.5%)
 - a significant decline in response to a growth in piracy incidents, but small (100 reduces by) 0.3%
 - Note relatively low explanatory power of the models
- Results are only indicative and some further work is needed, but they do suggest that there are benefits to the landlocked countries of an improved security environment,
 - directly through the reduction in piracy
 - indirectly through the improvement in the economic performance of maritime neighbours,
- So fortunes of Landlocked seem tied more to the neighbours with access to the sea, implying order at sea in assisting the latter will also have more effect on former.
- Neighbours had more impact than general increase in economic activity on the continent

Economic Benefits of Order at Sea

Expected benefits

- **Improved transportation and lower cost:** In principle the change in the security at sea should improve the landlocked countries 'access to the sea and reduce their transport costs for exports. This is of course dependent on what else is happening in the neighbouring countries.
- **Improved growth spillovers:** the improvement in security should reduce the costs of the maritime countries and allow them to reduce security spending. This with their reduced costs and improved access should assist them in growing and provide a further boost to the landlocked countries
- **Improved neighbours:** The reduction in piracy may lead to an improvement in the behaviour of the neighbours to a landlocked country as they are no longer under strain. There is of course no guarantee for this and no guarantee that any good changes will happen in the short run.
- **Improved general security:** the improved security situation should benefit all, leading to increased aid and FDI but again there is no guarantee. So clearly the impact is an empirical question.
- **Multiplier effects /cumulative causation effects**

Military spending

- Estimating a panel growth equation that allows for military spending, following Dunne and Tan (2013) gave the results:
 - significant negative short run effect of military burden on growth for the non-landlocked countries
 - Significant long run effect for the landlocked ones,
- suggesting an improvement in security allowing reduced military spending will allow an immediate positive effect for the maritime, but not the landlocked, as might be expected.

Conclusions

- Landlocked countries have real economic disadvantages
 - Heavy dependence on neighbours
 - Impacted on by changes in piracy
- Security effects economic growth
 - directly by events and
 - indirectly through impact of event on neighbours
- Clear economic benefits of order at sea, but more is needed
- Africa some of the worst performing landlocked countries
 - Combination of factors at work

Conclusions

- Recognising interdependency landlocked and neighbours is important
- Solutions (pretty obvious) include:
 - Improve security environment
 - Improve own infrastructure (including inland)
 - Increase spillovers with all neighbours
 - Improve neighbour policies
 - Improve coastal access
 - Improve other transport access
 - Improve rural development
- Not always in own hands but there are things they need to get right domestically

Conclusions

- Important roles for international and local institutions
- Recognise landlocked are also potentially important to their neighbours -interdependence
- Improve regional cooperation and international support
- Recognise part of wider issues
 - 'order at sea' important to all and not just piracy –organised crime/trafficking
 - security and peace are important to all –conflict takes 2% GDP pa and has larger effects on neighbours
- Landlocked countries have thrived –eg Switzerland and success stories in a growing African economy are possible