

Economics and Econometrics is not just about inflation!

Have you ever wondered why we have firms? Possibly not, but do you wonder why bank charges are what they are, or why cellphone and data charges are what they are? Maybe, instead, you have wondered why queues at public clinics are so long? Maybe, you wonder if a tax on sugar will reduce diabetes, or, instead, you would like to know how high the price of soft drinks would have to be to reduce diabetes? Most probably, you have wondered why so many South Africans are unemployed? Or, more practically, what can be done so that more South Africans are working?

This past year, universities faced protests related to fees for higher education. Probably, during that time, you were wondering why tertiary education is not free? Maybe, you are curious about who would benefit from such a realignment of government expenditure priorities?

Asking and answering abstract and practical questions such as the above are the hallmark of economic science. However, offering answers to some of these questions may require further insight. For instance, how much higher must we make the price of soft drinks so that we reduce diabetes by 20%? Additional understanding can be gained via the collection and examination of evidence, which leads us to econometrics.

Econometrics is the foundation underpinning evidentiary analysis, and, in the past few years, that analysis has become ever more graphical. Although what one can learn from a graph or illustration might not be the complete story, it helps to inform us, and helps us develop and/or revise our thinking (and modelling) to explain what we observe.

Visualization of Data Informs Economics

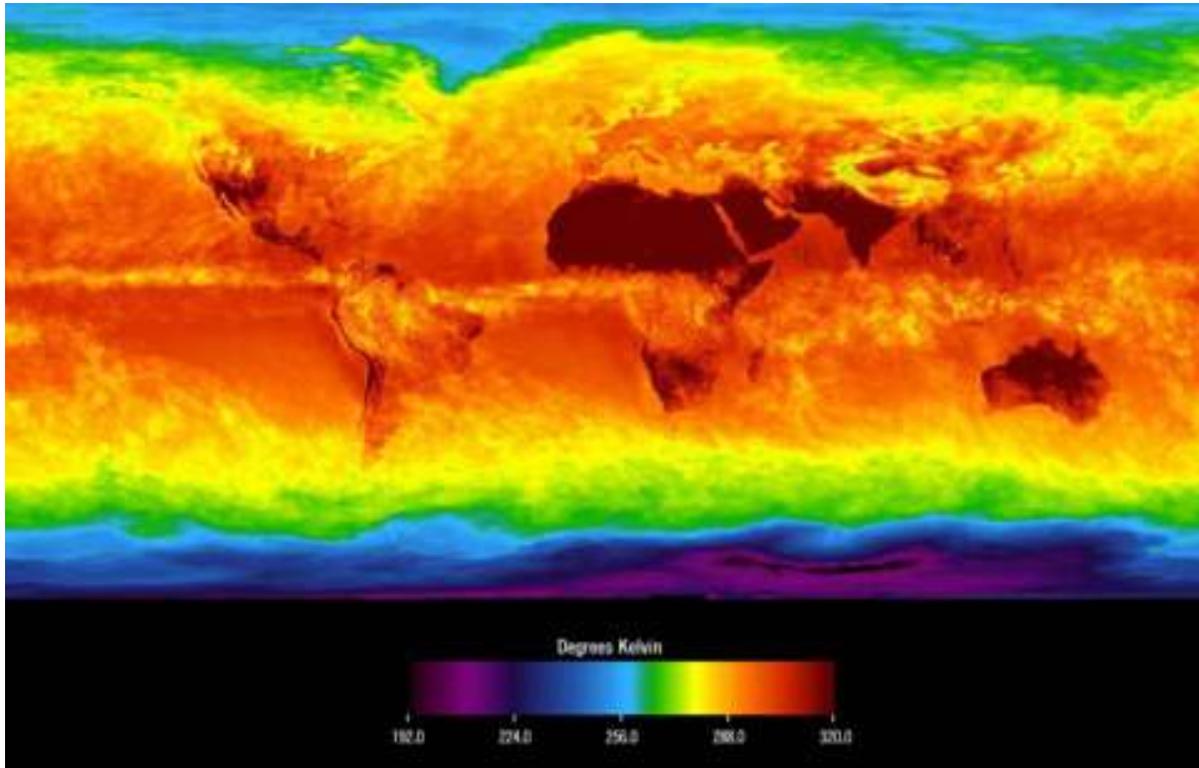
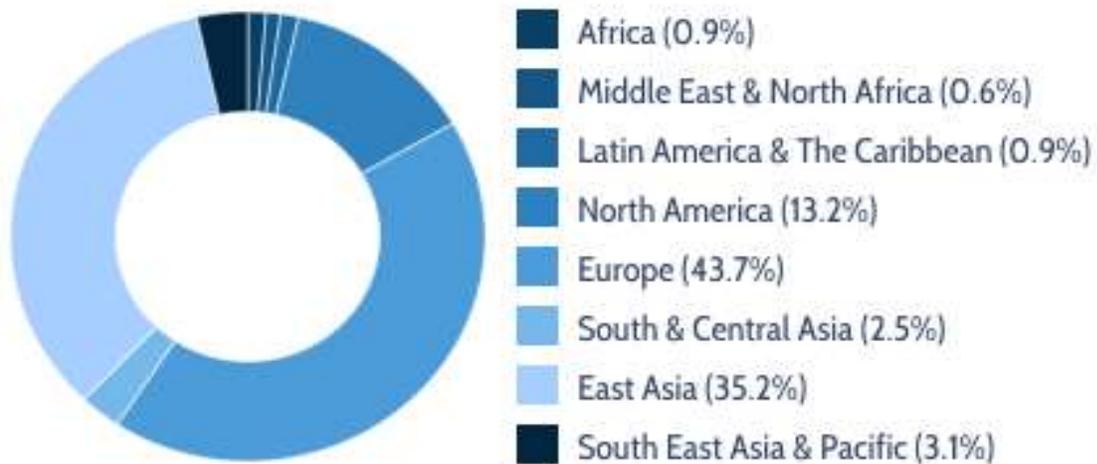


Figure 1. World Solar Energy Potential (<https://growthecon.wordpress.com/maps/>) :

As can be seen in Figure 1, which maps solar energy potential. Africa has immense opportunity that has not been met, See Figure 2. Thus, we might want to ask if there are ways to better tap that potential? We might also need to understand what drives current energy investment decisions and behaviours, in order to figure out what might be done to change those behaviours.

Solar Installed Capacity by region



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Figure 2. Installed Solar Capacity by Region

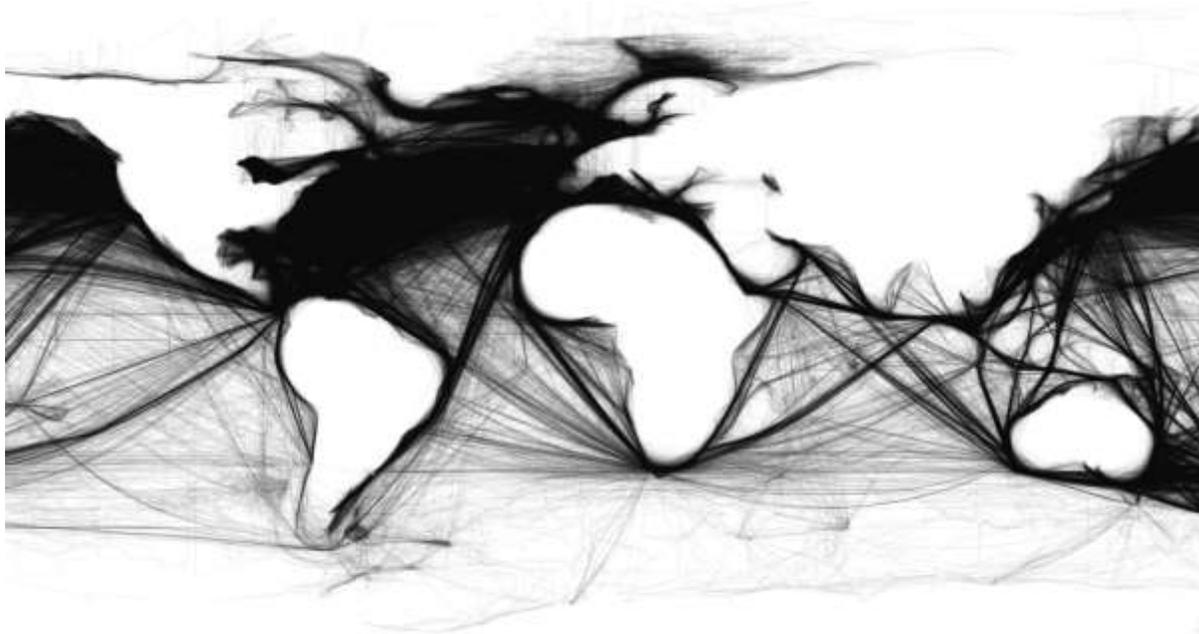


Figure 3. Sea transportation, 1980-2007. Source: Ben Schmidt (<http://benschmidt.org/>)

The preceding illustration (Figure 3) depicts sea transportation, or international trade, between 1980 and 2007. At first blush, there is a correlation between international trade and economic development. Understanding how important that

correlation is, as well as whether trade leads to increased development or development leads to more trade (or both) are important questions in economics.

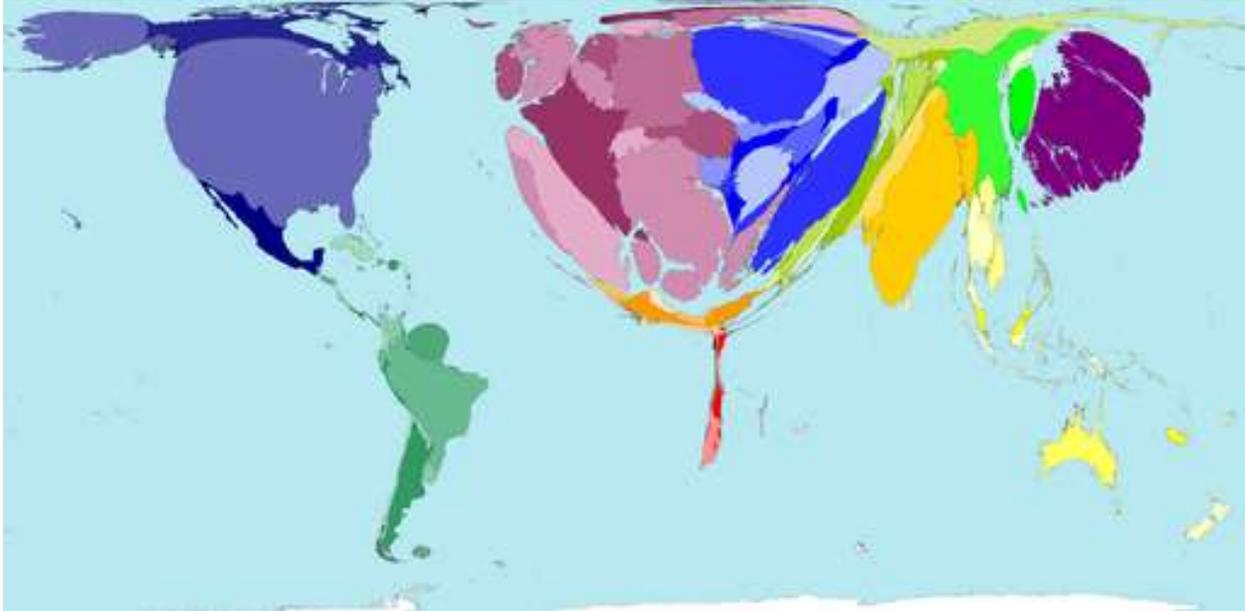


Figure 4. World distribution of tractors
(<http://www.worldmapper.org/display.php?selected=121>)

In Figure 4, we see the distribution of tractors around the world. Clearly, it no longer looks like the world we normally imagine. Unfortunately, there is a strong correlation between food production (and, therefore, food security) and the number of tractors. Does this mean that making more tractors and selling them in Africa will increase food security in the region? No, it is not that simple, but the evidence is compelling, and requires us to ask additional questions. For example, why are there so few tractors in Africa?