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# Macro Radar

Cognitive Science Meets Economic Analysis

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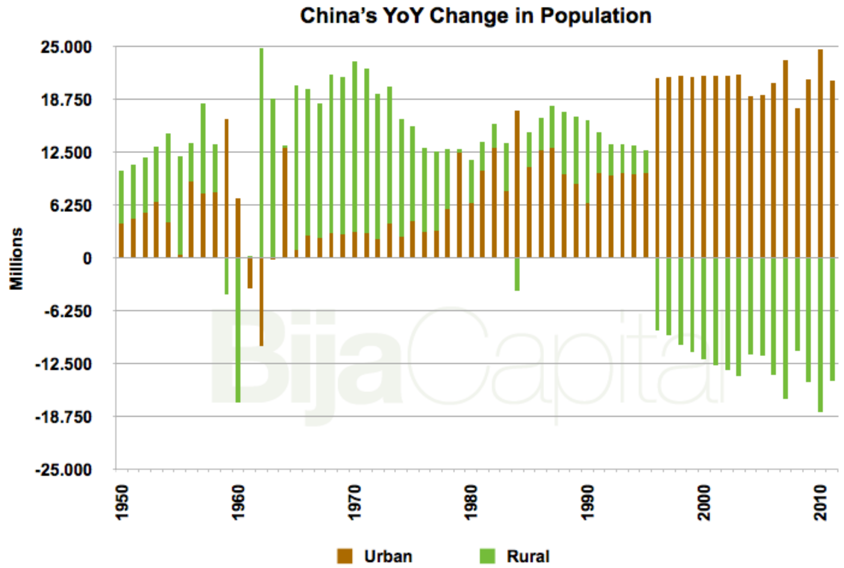
## China's Slowing Urbanization

1996 marked the beginning of one of the most ambitious projects ever attempted. It has affected interest rates, immigration, currencies, agriculture, the environment and so much more. It has lifted millions out of poverty and pushed wealth to all corners of the globe (even if only to a select few). It has dramatically altered the landscape of the global economy, and yet very little has been written about it, or its impact. We believe its impact is about to be felt for a second time, but in the opposite direction.

### 1996: Urbanization Begins

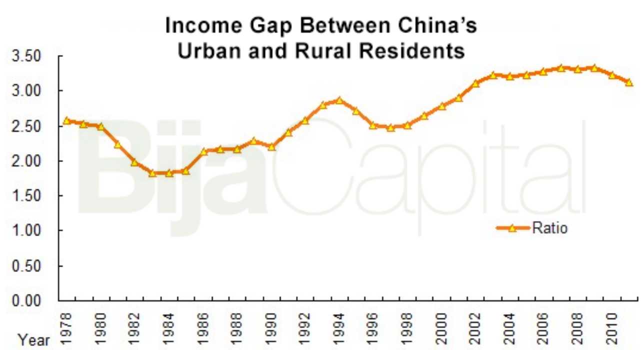
The project I'm referring to is the urbanization of China. Even without knowing anything about the chart above, it is clear that something changed in 1996. That "something" was the shift of roughly 22 million people per year into urban areas. To put that into perspective, 22 million people is equivalent to the populations of Manhattan, London, Paris, Berlin, Stockholm, and Sydney, *combined*. So why does it matter?




### Urbanites Live Large

According to the NBS of China, the disposable income of Chinese urbanites is more than three times greater than the net income of their rural counterparts. (Note: They don't compare disposable to disposable.) As a result, they drive more cars, own more refrigerators, install more air conditioners and use roughly four times more electricity.

They also eat differently, consuming far more sugary foods and a lot more meat. Since humans are roughly seven times more efficient at converting corn into calories, when a person switches from eating corn to eating beef, they actually increase their demand for corn by 700%. What that means is that a spike in the urban population is like a total population increase on steroids. (Don't forget, since urbanites are no longer living off their own land, they compete for jobs, globally.)



So the reason it matters when another 22 million people per year become urbanites is that they go from essentially not existing to the rest of us, to suddenly appearing and competing for food, raw materials and jobs. Multiply that by 17 years and you have an urban population that has increased by 374 million people and now totals 715 million; roughly equal to the entire population of Europe.

**Commodities Take Off**

As was the case in the previous urbanizations of such a grand scale, demand for commodities skyrocketed. For the first time in history, the tropical emerging markets had an opportunity to become wealthy. However, that window won't be open forever and, in fact, may have already begun to close.

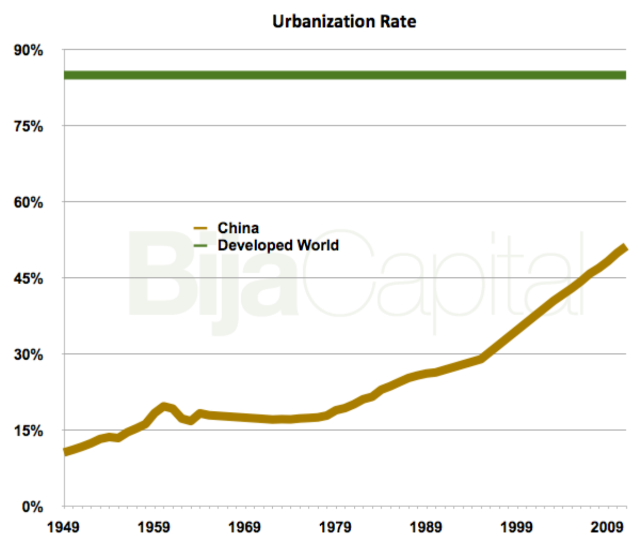
Commodities, like all markets, are driven by the balance, or imbalance between supply and demand. What makes commodities unique is how inelastic both sides of that equation can be. Typically, run ups in price are driven by a sudden collapse in supply, such as an oil embargo or a drought. Until demand shifts to other similar commodities, prices remain high.

This time though, the spike in price was demand driven. Normally demand spikes are either very limited and short-lived or slow in building. Not so this time around. Because the shift to urban areas was orchestrated, it was also unnatural.

There are two implications of this. Firstly, the shift was more orderly. Secondly, it has been more persistent. The supply side has been increasing production of every commodity from corn to steel, and the Chinese have been active participants on that side as well. (EX: In 2004, fully 1/3 of steel imports into China went toward building steel production plants.)

**China Plays Catch Up**

Here's why we have this on our radar right now. Most economists note the chart at right, which shows that China is still only approximately 50% urbanized while the developed world is at 85%. If they continue at the current pace, that would bring them up to the average in 2036 and would mean another 600 million people yet to come "online."




**Why the Economists Are Wrong**

However, we believe there is a flaw in that argument; one that could prove very costly for commodity producers and have a profound impact on the global macro landscape, again.

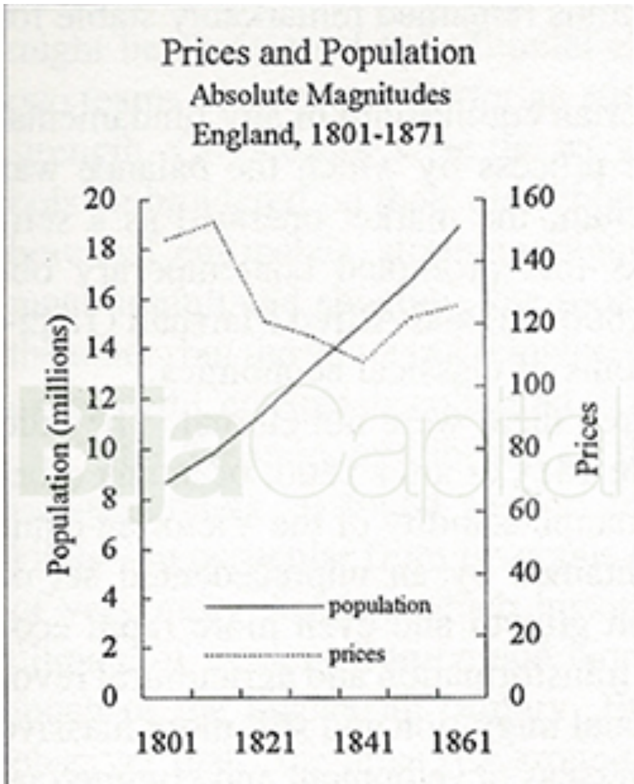
The flaw in the argument is that it's not so much the notional growth of a population that matters for prices (see Prices and Population chart, next page), but rather the rate of growth (see The Victorian Equilibrium chart, next page)[1].

That is why we believe China's urbanization is so important once again. However, now it will have the reverse affect. It will likely drive commodity prices lower; potentially a lot lower.

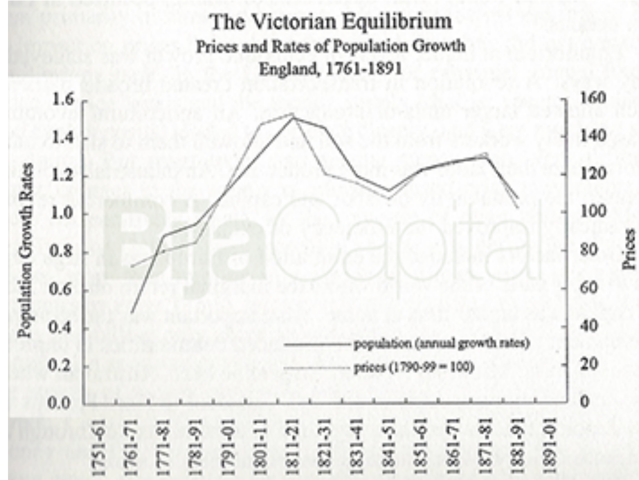
**The Party's Over**

The chart on the next page (Chinese Urban Growth) shows the impact that those 22 million per year has on the overall urban population growth rate and how it diminishes over time. It's simple math. Keep the

[1] These graphs can be found in a book called *The Great Wave: Price Revolutions and the Rhythm of History* by David Hackett Fischer.

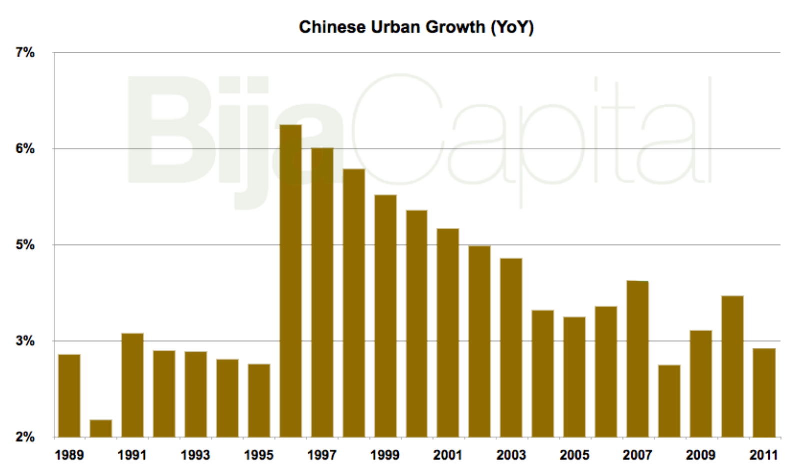


Source: The Great Wave by David Hackett Fischer, page 167



Source: The Great Wave: Price Revolutions and the Rhythm of History by David Hackett Fischer, page 167

numerator roughly constant at 22 million, but increase the denominator every year and eventually it has a smaller and smaller impact on a percentage basis. In 2008, not only did we experience a global financial crisis, but China's urban growth rate returned to where it was before the project began.




Why would a diminishing growth rate have a big enough impact for us to care? The reason is that the supply side is still rushing to catch up. What they don't realize is that they already have, yet the land grab and push into farming continues unabated. Never mind the fact that we already produce enough food to provide 5,000 calories per day for every man, woman and child on the planet. Due to China's 50% urbanization rate, farmers and investors believe the future is in food.

It gets worse.

Not only is China's urban growth rate back to normal, but it's overall population growth rate is now one-third what it was back in 1996 (see graph above). Turns out urbanites don't procreate as rapidly as their rural counterparts either.

**Implications**

We have this on our radar because the slowing overall and urban population growth rates will likely alter the global macro landscape for some time to come; just as it did on the way up. Generically speaking, it makes us bearish inflation, bearish tropical emerging markets, bearish commodities and commodity producers, bearish farmland, but potentially more bullish growth.

The real money is made (and lost) when correlations break down, because it is correlations that lead to position leverage. We anticipate a continuing breakdown in correlation among the traditional "risk on" assets, with equities and commodities being just two of many. Investors be aware, that breakdown will likely lead to a wider dispersion of returns among fund managers as well; especially among those who trade the same instruments and asset classes, and share the same mandate.

## About the Author

For nearly three decades, Stephen Duneier has applied cognitive science to investment management, and life itself. The result has been top tier returns with near zero correlation to any major index, the development of a billion dollar hedge fund, a burgeoning career as an artist and a rapidly shrinking bucket list.

Mr. Duneier teaches Decision Analysis in the College of Engineering at the University of California Santa Barbara. Through Bija Advisors' publications and consulting practice, he helps portfolio managers and business leaders improve performance by applying proven decision-making skills to their own processes.

As a speaker, Stephen has delivered informative and inspirational talks on global macro economic themes, how cognitive science can improve performance, and the keys to living a more deliberate life, to audiences around the world for more than 20 years. Each is delivered via highly entertaining stories that inevitably lead to furthermore conversation, and ultimately, better results.

Stephen Duneier was formerly Global Head of Currency Option Trading at Bank of America and Managing Director of Emerging Markets at AIG International. His artwork is represented by the world renowned gallery, Sullivan Goss. He received his master's degree in finance and economics from New York University's Stern School of Business.

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