GDP AND RECESSIONS[1]

1. INTRODUCTION

Absolute measurements of GDP tell you nothing except the size of the overall economy. It may also be the case that "recession" is not to be as feared as the BBC and CNN and the rest of the media would have us believe. It is important to understand the concepts involved if a reliable assessment of a country's competitiveness is to be made.

This is a short note about these two features arising from a sense of irritation about continuing doom and gloom in the media and an idea that the measurements of such doom and gloom (in fact the fluctuations economies experience naturally) are not well understood by the media. This is an effort to assist Pakistan's journalists involved in work on the economy and competitiveness in understanding what GDP means and to see if we need to be as concerned by the word "recession" as many would have us be[2].

2. RATIONALE[3]

For non-economists, "Gross Domestic Product" (GDP) is defined as "the total market value of all final goods and services produced within the country in a given period of time (usually a calendar year). It is also considered the sum of a value added at every stage of production (the intermediate stages) of all final goods and services produced within a country in a given period of time, and it is given a money value"[4].

It is fundamental to this discussion that the reader understands that GDP is a single figure (aggregate) measurement of a country's income at a point in time. Another way of considering GDP is to see it as a measure of the size value of the economy. Typically countries are ranked by their GDP and changes in the value of GDP - increases said to be "economic growth" and decreases said to be

[1] CSF is a joint initiative of USAID and the Government of Pakistan aimed at improving competitiveness and economic growth. CSF Economic Notes are short discussions of any issue that comes to mind related (however vaguely) to the economy of Pakistan and its competitiveness. They are the work of individual staff members and do not represent deep academic research, CSF's policies or those of its sponsors. This paper was prepared by **Geoffrey Quartermaine Bastin**, Senior Advisor to CSF in November 2008. Comments from colleagues gratefully incorporated, but the opinions and mistakes are my own.
[2] CSF works with journalists under the auspices of the Stanford University Innovative Journalism Program
[3] Again I should say this is NOT an academic discussion of the measurement of GDP, economic growth or business cycles. There is a huge literature on the subject; the aim here is to try and write a simple account without hedging every statement about with qualifications as economists love to do. But as my colleague Zain Kazmi says, GDP is a tricky creature, after WWII European GDPs were accelerating mostly because they had to rebuild everything. But would people like to do that again, to achieve high GDP growth. We doubt it.
[4] Wikipedia

"recession" are used by all and sundry to say things about the country's economic success. Thus a country like Pakistan might be said (a year of so ago) to be "successful" because its GDP was growing at 7%; when the rate of growth slows, e.g., to about 4% currently in Pakistan, people say "the economy is slowing down" and they get concerned. In this case, however, the GDP is still actually getting larger at a respectable rate. Remember that most developed economies think they are doing well growing at 3% annually.

People get much more concerned when instead of growing, the absolute size of the economy shrinks. This recession means that the country's income has actually got smaller. When this happens on a world scale (i.e., when growth in a number of important - large – economies slow to zero or the actual economies start to shrink "negative growth"), people get frightened.

One reason is that the media (especially the large TV networks) focus on the gloom and present their stories without reference to base data or to data shown over time. People get frightened because they don't understand the economics and they make decisions (for example, like delaying investment or firing staff or not buying consumer goods) that in themselves add to the downturn. This effect is called "self-fulfilling expectations" and is a major contributor to economic cycles.

This Note aims to examine some of these ideas and to try and put them in a context of rational economics easily understood by the lay person.

The approach taken is to look at the large developed economies (i.e., the USA, Europe) and compare them with a small developed economy, I have taken New Zealand because it is a long way from anywhere but is a (more or less) developed country with a "Western style" economy.

3. FACTS AND FIGURES

Let's take a look at some GDP figures and comparisons. The numbers are mainly for 2007 and are in US Dollars.

The combined EU countries have a GDP of $16.9 trillion, but the USA is the largest single economy in the world with a GDP of $13.8 trillion, New Zealand (ranked 51) has $0.13 trillion. So, the blunt GDP numbers make a very obvious statement – the USA is a BIG economy and New Zealand is a very small economy[5].

[5] People might wonder why I have selected New Zealand. I wanted a so-called developed economy, with a western culture, well isolated. Country comparisons are difficult, but New Zealand is as good as anywhere. That said, it is clear that a country with a population of 4 million does not behave in exactly the way a country of 180 million behaves.

And so what? Have we learned much from the comparison? Not much beyond the obvious – and the fact that simple comparison of GDP values tells us very little indeed.
But we <u>can</u> make the comparison more meaningful:

Consider "GDP by Purchasing Power Parity" (what each dollar buys in each country) which changes the picture a little bit (China is now ranked 2nd)[6]. The USA remains ranked No 1 (since it is the denominator), Germany is ranked 5, UK and France are ranked 6 and 7 (no aggregate for the EU). New Zealand is at 56

Still, we need to know more about what individual people experience in each country. After all, a small Caribbean island with a population of Bill Gates, Warren Buffet and Sir Richard Branson would have a GDP of $0.122 trillion – not so different from New Zealand (I'll say something about how this income is distributed on this island later), but the income per head (*per capita GDP*) is very different since New Zealand has a population of just over 4 million people.

Per capita GDP for the countries we are considering (aside from fictional islands) are as follows:

- USA $45,725 (12th)
- EU $33,889 (unranked – because it is a region, not a country),
- New Zealand $30,390 (26th).

Per capita GDP gives us a better way of looking at an economy than absolute GDP because it starts to say something about the standard of living of the people in the economy. By the way, Pakistan's per capita GDP is just over $3,000 and the country ranks 128. So even if growth rates of &% were achieved, the base is very low indeed.

Let's see what the economies were like in 1973 on the basis of Per capita GDP[7]:

Switzerland was ranked first, the USA was number 2, Germany was 6th and New Zealand was 9th[8]. So we can see that relative GDP measurements change quite considerably over time. One lesson is that analysts should consider the long-term data as well as the short-term in order to understand what changes have occurred.

Now to the question of who has what, because as we will see, there may be little point in having a large economy if all the income accrues to only a few

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[6] See End Note – PPP is a complicated idea, but essentially tries to identify the real price of an identical good in different countries to see the value (in terms of goods) gained from one unit of currency (usually US$)
[7] There was no science or logic in picking 1973 – it's the year for which data are presented on the 'Net. But it is a reasonably long time ago for us to see something interesting.
[8] Strangely the UK is not shown in this ranking.

individuals. Let's take our Caribbean island inhabited by three of the 500 wealthiest people in the world, Messrs. Buffet, Gates and Sir Richard[9]. They are all very, very rich by most standards. However, it turns out that whereas Buffet (ranked the world's wealthiest man) and Gates have similar shares of the island's GDP ($62 billion and $58 billion respectively), poor Sir Richard has only $3 billion. By comparison to his two fellow islanders he is desperately poor and may be employed serving tea by the other two.

So, ranking countries by income equality gives an additional feeling for the reality of what it is actually like to be there We do so using something called a "Gini Coefficient" – let's not go into that (the footnote covers the boring details), the Gini is a measure of income distribution or equality:

The higher the Gini, the less equal income is distributed: the USA Gini is 45, EU Gini is 30.7 (most developed European nations with better welfare systems and more equal taxes than the USA tend to have Gini indices between 24 and 36), New Zealand' Gini is 36.2[10].

So, the point is: despite a huge difference in the absolute size of their economies (USA is No1 and New Zealand is No 51), people in New Zealand are closer in terms of per capita GDP and are probably better off with regard to the way that income is distributed – New Zealand may "feel" that it is a better place to live in than the USA for most people. On the other hand, by comparison with 1973, New Zealanders might feel they had slipped badly having been overtaken by a very large number of countries.

Sir Richard Branson might actually feel happier with a lower income/net wealth in New Zealand than playing the pauper to Warren Buffet and Bill Gates in the Caribbean. *Or not.* It depends on a number of other factors, including the fact that a life a servant in the Caribbean (serving two guys who may be liberal with the tips and where the sun shines and the beaches are clean) could be better than a harassed business executive living in Auckland where it rains all the time and you have to listen to Maori music.

So some of the feeling of "being well off" or otherwise is clearly to do with a comparison with other places and other times. In 1973, the per capita GDP in New Zealand was $12,575 compared to the USA's $16,607 – New Zealanders

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[9] Wealth for these persons is taken for Forbes. I am obviously juggling numbers, because I am using their wealth as GDP not their incomes (which I don't know), but this is a thought experiment anyway, so I can do whatever I like.

[10] Years vary, but good enough. The Gini Coefficient is defined as a ratio with values between 0 and 1: A low Gini coefficient indicates more equal income or wealth distribution, while a high Gini coefficient indicates more unequal distribution.

might have felt quite close to Americans in lifestyle and consumption. Now they might feel less happy even though their incomes are more than double[11].

We also need to understand the composition of GDP and in addition the physical circumstances of the country. As I mentioned, a Caribbean island could be a better bet than a cold, rainy island miles from anywhere inhabited by more sheep than humans.

We now need to make a thought experiment: we assume (as economist always do) Country A with a per capita GDP of $30,000 and Country B with $15,000.

Prima facie, persons in Country A appear to be better off than country B. However, Country A's economy is primarily based on the export of crude petroleum, while Country B is a wonderful tourist destination (maybe that Caribbean island).

The majority of the population in Country A may (or may not) receive public services, welfare benefits and handouts from the government and they live in circumstances of poverty (one can think of the Port Harcourt area of Nigeria which has enormous oil wealth and a poor population – perhaps mentioning Balochistan would not be diplomatic); the people in Country B, however, work in a variety of service jobs in generally pleasant surroundings (beach resorts – Thai people working in Phuket or Sir Richard Branson serving tea to old Warren and Bill on that Caribbean island).

We also learn that Country A has a Gini of 50, while Country B's Gini is 25 (OK, it clearly wasn't the island because the Gini there is over 60!). The point is obvious – it's not how much income per head as a gross measure, but what the quality of the income is and where and how it is earned, and how it is distributed.

Now let's turn to recession – the absolute decline in the income of a country.

The first point is that we found that (possibly) New Zealanders in 1973 actually felt better off with a lower per capita GDP than they did yesterday with an income more than double – they felt than that they were in the Top 10 of the world's economies (fact pointed out to them by their media), but now they are down there with Israel and Malta and behind Slovenia! So it can be the case that a smaller GDP will not <u>necessarily</u> produce a feeling of dismay.

Of course it will do if it is seen in comparison with a previous good year (a slow down in the rate of growth – hey we are growing at only 4) and when (a) the media tell everyone they must feel badly, and (b) if steps are not taken to change the composition of the GHDP that remains.

[11] There is a LOT of what economists call "ceterus paribus" in this! We assume that one thing changes and other don not – "all things being equal" – which they never are and why economist usually make mistakes.

It turns out that what countries feel is very like what people feel about their relative wealth: Sir Richard – fabulously rich compared with even the richest Pakistani – feels impoverished if he thinks about his old friends Warren and Bill. Americans feel in crisis when their economy (aggregate income) declines in a (forecast) recession by 0.1% when their average per capita GDP is about 15 times that of Pakistan. If the American economy slumped by 50%, it would still be not far off the New Zealand economy (per capita) *when it is doing well*!

Now let's examine recent numbers for per capita GDP over, let's see, the last 10 years (from the Asian crash in 1997 – a ten year cycle):

Per capita GDP 1997-2007; Value (US$) and % Change

Year	USA		NZ	
	GDP US$ per cap	% change	GDP US$ per cap	% change
1997	28,890		17,916	
1998	31,168	7.89	14,633	-18.32
1999	32,693	4.89	15,206	3.92
2000	34,280	4.85	13,663	-10.15
2001	35,000	2.10	13,439	-1.64
2002	35,820	2.34	15,345	14.18
2003	37,123	3.64	20,289	32.22
2004	39,182	5.55	24,409	20.31
2005	41,275	5.34	26,955	10.43
2006	43,366	5.07	25,907	-3.89
2007	45,047	3.88	31,219	20.50

Source: UN Statistics Division

Now this is a very interesting set of data to consider. In this not so long period – certainly a period when most adults can remember what it felt like in the late 1990s - Americans' incomes (on average) grew by 56%! Looking at the New Zealanders (if they ever did) they found that from being about $11,000 better off in 1997, they were nearly $14,000 better off last year. Probably this gave them a feeling of superiority and happiness – we all like to be doing better than our poor cousins. Through the period the US economy grew at a fairly steady rate of 4.6% - good compared with most European countries and again some cause for that "feel good" factor that leads people to go out and spend, spend, spend! And spend they did! Let's not forget, by the way, that 2001 dented confidence a bit, so the economy grew at a slower pace in the three years preceding 2004.

As for New Zealand, stuck there alone in the South Pacific, the Asian crash hit this small country badly and it went into recession. *Badly!* New Zealander's incomes (on average) were 14% lower in 2002 than they had been in 1997. At the mid-point of the cycle, New Zealander's were nearly $25,000 worse off than their rich cousins in the USA. Let us not forget that we are not talking about a so-called developing or emerging economy, but a developed economy, about as old as that of the USA with the same cultural norms. What it must have f felt like to be a New Zealander during that first five years of the 21st century. In 1973 they were in the Top 10 of the world's economies. Now they were $25,000 worse of than the Yanks! Perhaps the world was coming to an end?

Not so. It turns out that New Zealanders are used to hard times and have the ability to radically transform their economy. New Zealand's economy was built upon on a narrow range of primary products, such as wool, meat and dairy products. As an example, from approximately 1920 to approximately 1940, the dairy export quota was usually around 35% of the total exports, and in some years made up almost 45% of all New Zealand's exports. Partly as a result, from 1970 to 1990, the relative New Zealand purchasing power adjusted GDP per capita declined from about 115% of the OECD average to 80%. However, the government of New Zealand accomplished major economic restructuring, moving an agrarian economy dependent on concessionary British market access toward a more industrialized, free market economy that could compete globally. This growth boosted real incomes, broadened and deepened the technological capabilities of the industrial sector. Growth resumed at a higher level from 2001 onwards due primarily to the lower value of the New Zealand dollar which made exports more competitive combined with strong commodity demand from the resurgent Asian economies. There is still a wide gap between New Zealand and the USA, but a small indeed isolated economy was able to restructure, find solutions and see a way back into economic growth.

4. LESSONS FOR THE PRESENT

Let's try and see what this means for the present world financial crisis and how it might be thought about bearing in mind that doom, gloom and low expectations are themselves feeding the crisis.

Major countries are said (by CNN Money) to be "facing challenges"[12]. But on the basis of current estimates they share an aggregate growth in GDP of just over 4%. It is true to say that some growth figures look bad – Iceland is effectively bankrupt thanks to the excessive optimism of its bankers – and Europe looks like it will struggle to avoid recession (UK GDP growth perhaps less than 1%). But growth is *growth*, not the end of the world. If the US economy avoids recession (the growth number used by CNN is 1.57%), then average per capita GDP in the USA will grow by more than $700 in 2008.

Let's assume a real disaster, the US economy shrinking in recession in 2009 by 10%. In such case (the media are going *wild*!) the US economy was back to the

[12] Brazil, China, Germany, Iceland, India, Japan, Russia, Saudi Arabia, South Africa, UK and USA

2004 level when – *wait a moment* – the incredible growth figure of 5.6% was achieved! The media are going wild in 2004 proclaiming the best year for the economy since the dark days of 1998 through 2001!

Would a 10% reduction in GDP hurt; well yes of course, but it still means annual per capita GDP of about $40,000 – higher than pretty much everywhere else! Americans would feel poorer and because of their poorly distributed wealth some (perhaps the majority) would suffer much more than others, equally the slowing of the engine of world growth would impact others perhaps worse in terms of their relative incomes. But we are talking adjustment and change and restructuring (which is what capitalist markets do), not the end of the world as portrayed by the TV presenter Rico Hizon and his friends on BBC's World Business.

In terms of historical GDP, even with a considerable recession (which is probably unlikely unless we all pay attention to the BBC, CNBC etc.), smaller economies in the developed world, especially the USA, deliver relatively enormous amounts of wealth to their populations. The issue is not GDP growth, but how that growth is perceived and how it is distributed when things get a little tighter – let's not buy a Mercedes Benz, we'll make do with a Ford – but , hey folks, it's still a CAR when most people on the planet are walking!

The lesson from New Zealand (let's not forget our sheepish friends Down Under) is that with the right policy mix and a willingness to restructure the economy (change the kind of income generating activities), you can get through, e.g. the 18% drop in income experienced in 1998 from 1997 and *then* climb back to very positive growth once you have dealt with the problems. Of course it isn't easy and I doubt that the New Zealander's felt happy about their crash, but they knew that they had faced really difficult times before and that they had survived, because you know what, if you are living in a small island in the middle of the South Pacific *you have nowhere else to go*!

What does the USA (and the other sufferers) have to do? Precisely what is on the Obama policy list: look carefully at the tax structure, try to redistribute incomes in a fairer way (because a fairer distribution of income probably leads to better investment decisions – since capital markets work better with more players), ease some of the transition (make sure the utterly useless, venal management of companies like GM and Lehman's get kicked out, but protect and support the employees) and <u>become more competitive</u> – exactly what New Zealand did. The encouraging thing is that somehow a significant majority of Americans appear to have understood this, hence *hasta la vista* the Republican Bush Empire and all who sail in her.

What about Pakistan? This is subject we will deal with in great depth in a forthcoming Discussion Paper. However, I shall finish with some thoughts which we might take further.

Pakistan's vaunted recent economic growth in GDP was based on consumption, not production. The composition of the GDP growth was in consumer goods (often imported) and financial services. Little or none of this growth benefited in any real sense the HUGE majority of the 180 million people. In the so-called "good times" of high economic growth Pakistan spent about 2.3% on health care. Military spending was about 3% of GDP (but remember most of the military budget comes in the form of donor assistance). Pakistan's competitiveness had dropped to 101 from 131 countries so that it now ranks along with the African countries rather than its Asian neighbors. The lesson is not that is that "*it's the economy stupid*", it is "*what is the economy doing, stupid, and for whom*?".

Pakistan is indeed facing far slower economic growth (so far no one has spoken of a recession), but that is indeed not the point. The point is that the economy does not in any sense provide what it should do to the majority of Pakistanis. Pakistan needs to become competitive not just in terms of the blunt GDP measure of economic growth – this paper has (I hope) shown that such a measure leads precisely nowhere - but in terms of its quality of life, security, access to essential services (of which health may be the most immediate one, education another) and productive base (i.e. skills, input costs, quality etc.).

A serious downturn in Pakistan's economy (which appears very likely indeed) provides not an end of the world scenario, but a unique opportunity (as in the USA and other developed countries) to face up to the challenges, identify the problems and (above all) provide solutions so that when the up-turn comes (as it inevitably will, Pakistan will be able to build on a solid base13.

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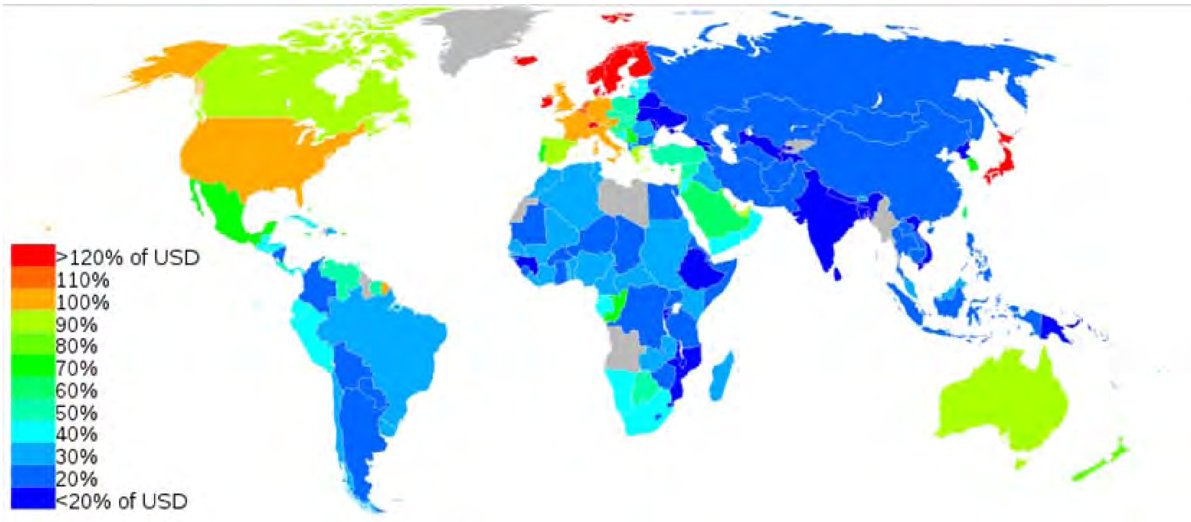
[13] Again as my colleague Zain Kazmi says, Pakistan's economy needs to be restructured and re-considered, but it would definitely be more difficult than New Zealand. Good point, comparisons with countries like Singapore and (in one infamous case) Maldives hardly says much about Pakistan.

END NOTE – Purchasing Power Parity (PPP)

PPP of GDP for the countries of the world (2003)



Source: Wikipedia

The US is the base country, so it is 100. The highest index value, for Bermuda, is 154, so the same goods are 54% more expensive in Bermuda than in the United States.

Using a PPP basis is arguably more useful when comparing differences in living standards on the whole between nations because PPP takes into account the relative *cost of living* and the *inflation* rates of different countries, rather than just a nominal gross domestic product (GDP) comparison.

The PPP exchange-rate calculation is controversial because of the difficulties of finding comparable baskets of goods to compare purchasing power across countries. One of CSF's staffers suggests that PPP seems to assign a relative value to an economy. Pakistan becomes not a 150 billion dollar economy but a 450 billion dollar economy in terms of what they can buy. In terms of an international market for goods, PPP has no relevance whatsoever. If one has $100 to spend on the international market it does not matter whether $100 dollars is worth $1 million at home (or $1) because on the international market it is still a hundred dollars. From an international perspective it seems a bit like cheating. Pakistan goes from being 47th largest economy in the world to the 26th.

Estimation of purchasing power parity is complicated by the fact that countries do not simply differ in a uniform price level; rather, the difference in food prices may be greater than the difference in housing prices, while also less than the difference in entertainment prices. People in different countries typically consume different baskets of goods. It is necessary to compare the cost of baskets of goods and services using a price index. This is a difficult task because purchasing patterns and even the goods available to purchase differ across countries. Thus, it is necessary to make adjustments for differences in the quality of goods and services. Additional statistical difficulties arise with multilateral comparisons when (as is usually the case) more than two countries are to be compared.

An entertaining example of one measure of PPP is the Big Mac Index popularized by *The Economist*, which looks at the prices of a Big Mac burger in McDonald's restaurants in different countries. If a Big Mac costs USD$4 in the U.S. and GBP£3 in Britain, the PPP exchange rate would be £3 for $4. I prefer a Cappuccino Index because I HATE Big Mac's, but the idea is the same.