



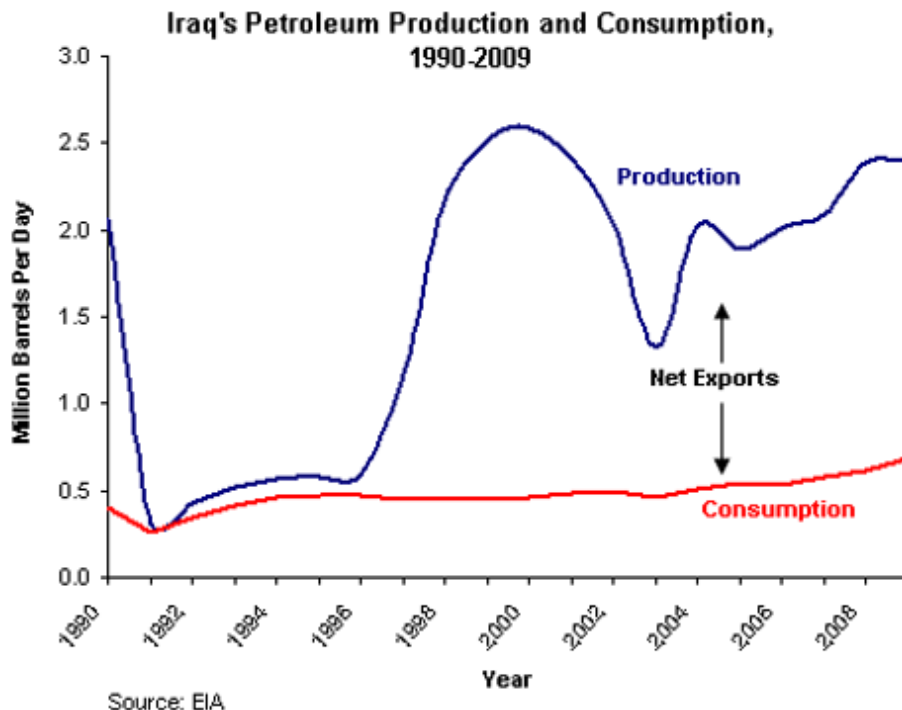
A gentle correcting cough for Dr Saleri

Posted by [Heading Out](#) on March 24, 2011 - 8:16am

On March 9, Dr Saleri (who debated Matt Simmons at CSIS in February 2004, on Matt's concerns expressed in what became "Twilight in the Desert") had an opinion piece in the [Wall Street Journal](#) in which he said:

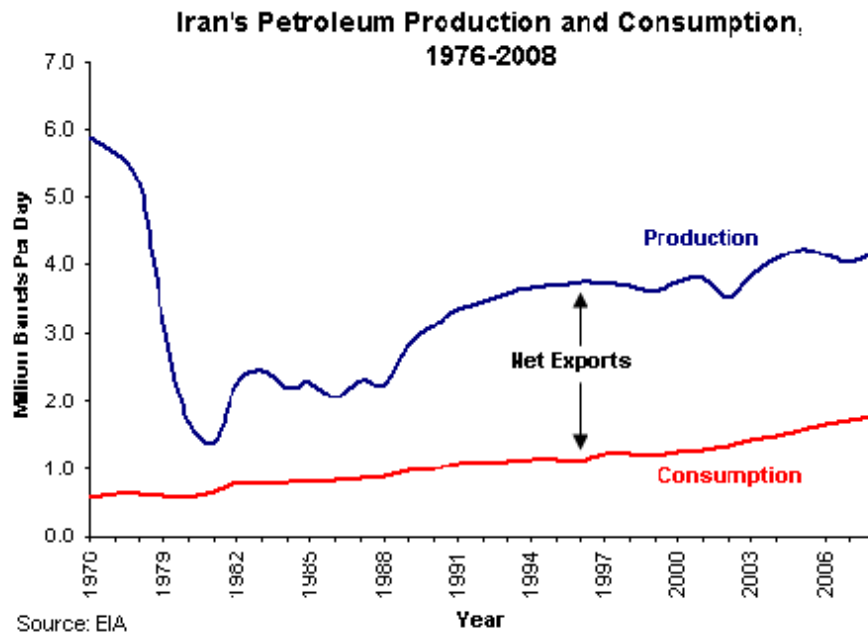
"In the context of global liquids production, the civil strife in Libya represents a minor disruption (less than 2% of the total, approximately 85 million barrels of oil per day). Nor is there any evidence to suggest that even a protracted scenario of instability will result in a sustained reduction of crude supplies. Iraqi oil production dropped by 30% at the start of the second Iraq war in 2003, and then it quickly bounced back to the prewar level of two million barrels of oil per day. Currently, Iraqi oil production stands at 2.6 million barrels of oil per day, with much higher levels projected during this decade."

Since I [recently commented](#) that neither Iran nor Iraq had bounced back to pre-revolutionary levels, I will let you decide who is correct. Here is the [EIA plot](#) of Iraqi production since the 1990 invasion of Kuwait.



I would suggest that the figure shows that Dr Saleri is being a bit of an optimist. It is interesting to note that the pre-invasion of Kuwait production level of [3.5 mbd in 1990](#) collapsed to a level of 300,000 bd as a result of that invasion and has not been re-established 20 years later.

The results for Iran are similar.

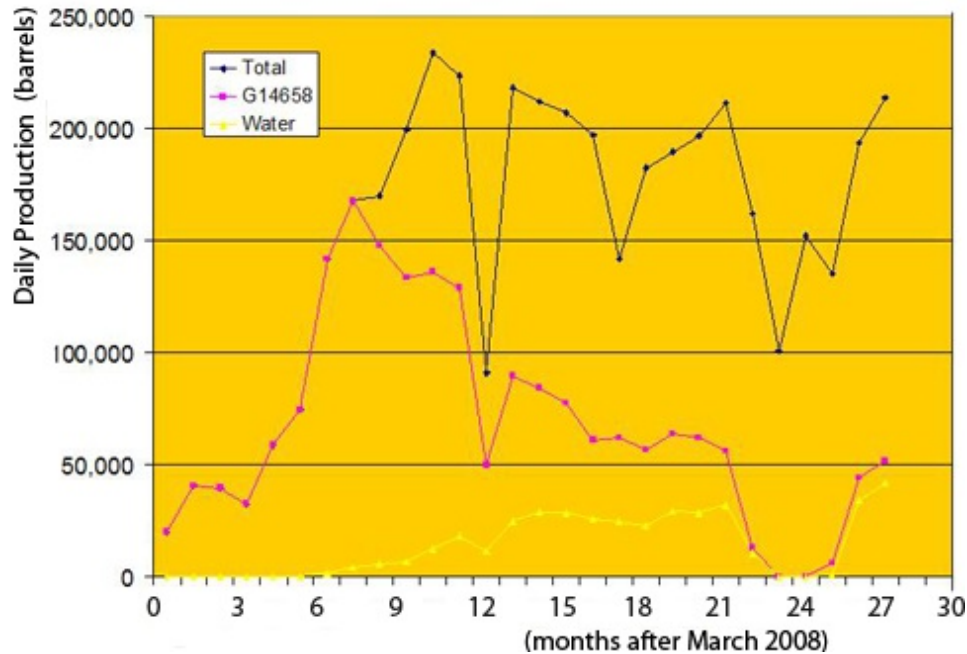


Prior to the 1979 revolution that deposed the Shah, Iran was producing nearly 6 mbd of oil. It has not returned to those numbers since.

Based on these two examples, I continue to believe that it would be foolish to anticipate, as Dr Saleri would suggest, that we pretend that Business As Usual will continue. The popular protests are continuing in a growing number of states, and whether those countries go through civil war or merely social re-adjustment, it is likely that more money will be spent on their rising populations. This will leave less money for investment in fossil fuels, at a time when sustained production requires increasing levels of investment in exploration to find the needed new resources.

With the short-term loss of Libyan oil plus the anticipated increase in demand this year, the world is looking to find 3 million barrels/day of production to maintain adequate supply in the face of demand. Reduction in production from countries with other priorities will likely make that number larger. It does not matter what resources are in the ground if the producing countries do not, either through will or ability, increase production this year to meet those shortfalls.

Dr Saleri points to technical progress allowing an increase in oil production from the United States – while that is true, it is a relatively small gain when placed against the coming need. And one has to recognize that, for example, the inability of Thunder Horse to live up to its anticipated production of 250,000 bd. warns that not all technical progress will provide the reward that was promised. The plot below (h/t Darwinian) shows the total flow of liquids from Thunder Horse over the last two-and-a-half years (the top line) and the amount of that flow which comes from the main field (the red line) - and then the amount of water being produced, which is the lower yellow line). The difference between the red and the black in the latter part of the plot is because of increased draw from secondary fields due to the premature collapse of production from the main field.



Plot of Thunder Horse production from [Darwinian at TOD](#)

There are other technologies - micellar flooding was a popular topic back in the last Energy Crisis, and the use of horizontal wells that can control flow through the formations well enough that the fluid can be subsequently recovered (mandated because of its cost) may make this a viable option in the future.

But it is not an option that will yield a significant volume of new oil today. And this is the point that Dr Saleri skates around. It is a realism that the OPEC nations would have us ignore in their current response (under an Iranian chair) that supply [is, and will remain, adequate](#). Tankers take weeks to deliver cargo, so losses are not always immediately evident. The summer driving season is still a couple or three months away, although demand has not shrunk this year the way it usually has. Thus the likelihood of significant shortfall may still be a month or more away from public awareness. (Other than through the approach to \$4 a gallon price for gasoline in the United States, and similar relative experiences elsewhere).

However, in conclusion, perhaps it is time that Dr Saleri read Dickens. My [first post](#) on The Oil Drum, (though Prof G later moved it up) and one of my first when I then started [Bit Tooth Energy](#) recalls a remembrance of my youth and Dickens' character Mr. Micawber. Since it is now about six years since that first went up, let me repeat some bits of the post.

When I was young I was fascinated by a small china statuette that my Grandparents had of Mr Micawber. He is a character, and a sympathetic one, in Charles Dickens's book "David Copperfield", in the course of which he goes into debt. His explanation of his financial condition can be compared to the coming world experience as we now live through Hubbert's Peak. You might, in today's phraseology, call this the Money quote:

'My other piece of advice, Copperfield,' said Mr. Micawber, 'you know. Annual income twenty pounds, annual expenditure nineteen nineteen and six, result happiness. Annual income twenty pounds, annual expenditure twenty pounds ought and six, result misery. The blossom is blighted, the leaf is withered, the god of day goes down upon the dreary scene, and - and in short you are for ever floored. As I am!'.

In this case consider that our expenses, i.e. the world use of oil, went up last year to around 83 million barrels every day (mbd). (A barrel is 42 gallons). Now as long as our supplies (income) can match this outlay then we are in happiness. This was, in relative terms, where we ended last year.

However this year our expenses are going to go up. It is a little difficult to predict exactly how much but current predictions are for this to be around 2 mbd. Let us equate this to the old English sixpence (which was back then worth about a dime. Twenty pounds being worth about \$100).

We follow the Micawber example if our income, world oil supply, is equal to or greater than our expenses, and then we can stay happy. But here is the rub.

.....while our income (supply) is nearly at a peak (twenty pounds), our expenses (demand) are still going up by this sixpence a year. So that some time this year expenses will have gone from twenty pounds to twenty pounds and sixpence..... (the considerable needs in China and India ...drive this increase.)

.....And if we are now at the peak of production, then our income cannot increase above twenty pounds and and may indeed fall back below twenty pounds, while our expenses will continue to increase to twenty pounds and sixpence. It is not the absolute size of the market that will now drive, but the relatively small fluctuations that take us out of balance.

The result is misery, and we are forever floored.

It is the small volumes that hold us in balance that are critical, rather than the relative small percentage of the change. If demand is growing at 1.4 mbd a year, and Libya loses us 1.6 mbd for only two years, then together they take demand on remaining supply up over 3 mbd this year and 4.4 mbd next year. If the world surplus is 3.5 mbd, and [Saudi internal demand is rising at nearly 10% p.a.](#) with the country holding to a 12 mbd total cap, then we are going to be in Mr Micawber's unhappy predicament within 2 years. Let us hope that we have at least that long.



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