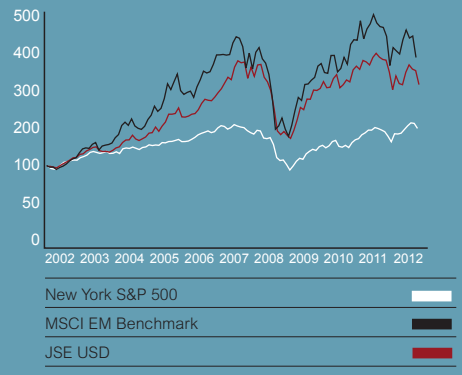
Why is capital so much more productive than labour in South Africa?

The SA Economy since 1995: Capital Excellence yet Indifferent Output Growth and Declining Employment

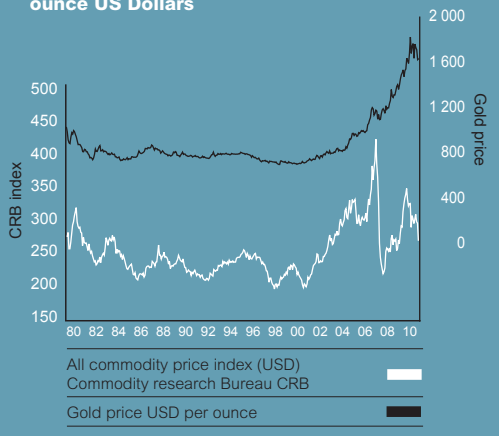
Explaining the exceptional returns provided by JSE companies in the new South Africa and addressing why SA business has become more capital and less labour intensive.

Cumulative returns USD 100 invested on 1 January 2003



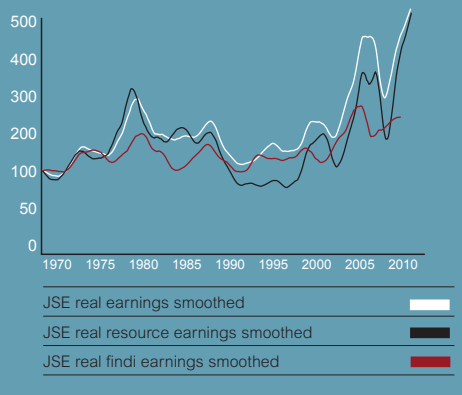
Source: I-net Bridge and Investec Wealth and Investment

Commodity Prices (The Commodity Research Bureau CRB Index) and the Gold Price per ounce US Dollars



Source: I-net Bridge and Investec Wealth and Investment

JSE real earnings since 1970



Source: I-net Bridge and Investec Wealth and Investment

JSE listed companies have an impressive record of generating wealth for their shareholders. We show how they have done so through their excellent management of the capital they have invested. We show also that such impressive performance has been associated with tepid growth in Real Value Added by the SA economy and declines in formal employment[1].

How well run are companies listed on the JSE and do they create shareholder value? Have they been able to improve their economic performance over the past 18 years since SA became a democracy and SA businesses could freely trade with the world and engage helpfully with global financial markets and also list their shares on the major stock exchanges? How do their returns on capital invested compare to those of companies in other countries? Can shareholders in JSE listed companies hope to benefit from more favourable recognition by global and local investors of the inherent quality of their holdings? How does uncertainty about government economic policies influence risk appetite and market valuations of companies? We answer these questions below.

Reviewing the recent history of the JSE. Measuring the outstanding returns provided by the JSE for shareholders especially since 2003.

Shareholders in JSE listed companies have enjoyed outstanding returns over the past ten years. The JSE All Share Index has kept up with the average Emerging Equity Market[2] average and outperformed the S&P 500 by a very large margin as we show below. A hundred dollars invested on the JSE in January 2003 would now have compounded to USD371 by the end of May 2012 including dividends reinvested in the market. The same USD100 invested in the S&P 500 would have grown to USD176, less than half the gains in USD realised over the same period by the JSE.

It is the economic performance of a company that will determine its value to shareholders. We will focus on the returns realised by JSE listed companies on the capital they have invested on their shareholders behalf. An examination of the history of JSE reported earnings over the longer run, from 1970 to the present, provides a very interesting perspective for this analysis. In the figure below we show inflation adjusted real JSE All Share earnings per share since 1970. These earnings per share are also broken down into earnings per index share reported by Resource Companies and earnings per share for the Financial and Industrial Index. The JSE by market value has been about equally divided between resource and other counters.

JSE average real earnings per share declined in real terms between 1980 and 2003. Index earnings per share did not recover their 1980 levels until approximately 2004 – 05. Earnings per index share were boosted in the mid seventies and early eighties by dramatic increases in the price of gold that began the decade at $35 per ounce and averaged $600 in 1980 and 1981. Then SA mines produced 600 metric tons of gold compared to the less than 200 tons they produce today. JSE listed companies, particularly resource companies, were hard hit by the deflation of underlying metal and mineral prices that occurred through the mid eighties and nineties as we show in the figure below. This deflationary backdrop made it very difficult for JSE listed mining companies to deliver growth in real earnings or provide good returns on capital invested.

Financial and Industrial Index earnings per share did not suffer as badly from the commodity price deflation of the nineties, but they also only recovered from their depressed levels of the nineties in the past decade. It is surely encouraging for investors in JSE listed companies that real earnings reported today now exceeded their previous pre global recession peak levels. FINDI real earnings, while having recovered from the recession of 2008 – 09 are still below their previous peak real levels.

The benefits of political change for economic freedom and efficiency in SA

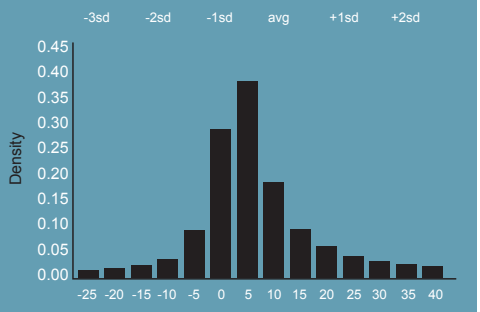
A further factor that made it difficult for SA companies to deliver earnings and returns on capital were the economic sanctions imposed on SA business undertaking global operations and realising potential economies of scale and specialisation only possible with a footprint well beyond the South African economy. Successful SA companies with restricted opportunities to expand their core business activities tended to invest excess cash in acquisitions of unrelated businesses. Their shareholders encouraged them to do so. They were subject to very strict controls on their offshore portfolio investments and had few alternatives to invest in shares other than those listed on the JSE.

1 *JSE listed companies operate globally as well as in SA. Our discussion of returns on capital apply to all the operations of these listed companies not only to those that would be represented in South African national Income Statistics to which we refer when we discuss Value Added and Employment statistics.*

2 *Represented by the Morgan Stanley (MSCI) EM benchmark*

Why is capital so much more productive than labour in South Africa?

South Africa industrial/service firms



Source: Credit Suisse HOLT

The global average CFROI is 6% which also equates to the long-term real cost of capital. Firms who generate a CFROI of 6% are generally value neutral. The average CFROI for South African companies is an attractive 9.2% with a median of 8,2%. Note the long-tail and skew towards value creating returns. Historically, 63% of CFROI values for JSE listed companies were above the global average of 6%, which is an impressive result. 30% of CFROI results were above 12%, which generally gets rewarded with an enterprise value to book multiple of 2. Relative to the rest of the world, listed South African companies are generating impressive economic returns on capital!

This opportunity set for SA companies and their shareholders changed comprehensively with SA democracy in 1994. SA entrepreneurs and managers were no longer treated as pariahs by potential partners or investors outside South Africa and were much more free to expand their businesses offshore. SA wealth owners and their agents, the pension and retirement funds, were also allowed increasing freedom to invest directly offshore. The opportunity to add value for shareholders improved for SA business with much improved economic and political freedom. The discipline imposed by more open capital markets was also tightened given the much wider opportunities their shareholders gained to invest outside South Africa. We are able to demonstrate that South African companies generally have registered much improved and impressive returns on the capital they have invested.

An Economic Return on Capital Based Analysis of the JSE

If a company can generate a return on capital that beats the opportunity cost of the capital it employs, it will create shareholder value. The market will in time award the successful company a value that exceeds the value of the cash invested in the company by its management over time. This would clearly be value adding for its shareholders. The strategic imperative for such a firm should be to maintain its profitability and grow. If a company is unable to invest its shareholders capital at least as well as the shareholders could do for themselves by holding shares in other similar companies, it will be destroying shareholder value and should minimise reinvestment. A company that meets its cost of capital is value neutral, and its management team should focus on the hard and exacting chore of improving operating returns instead of growing its asset base.

In general, firms that create shareholder value trade at market values in excess of their book values; firms that destroy shareholder value trade below their book values; and firms that meet their cost of capital trade at their book values. The books of a company will record all the cash invested in the company by its management over time.

The aim of a sound return on capital measure should be to minimise accounting distortions and estimate the underlying economic return on a company's investments. To measure the economic performance of a company and to calculate its (internal) return on capital, we employ CFROI®, which is a real, inflation-adjusted cash flow return on operating assets. Because the measure is real, it is comparable across time and over borders. In other words, a South African company can be compared to itself in different inflationary environments, and to companies in countries with lower inflation. This makes CFROI a very powerful benchmarking and economic return measure.

The opportunity cost of funding the projects undertaken by a company is its real cost of capital. It is the real return required by investors in the company given the many other alternative uses of their savings open to them. This required return reflects the market's appetite for risk and the company's mixture of debt and equity funding. When the internal rate of return generated by the company exceeds this required market determined rate of return appropriately risk adjusted, the company will be adding economic value by getting more out of the resources it employs than they cost. The market place is very likely to reward such achievements by attaching a higher value to the company to the great advantage of its shareholders.

Measuring the return on capital realised on the JSE

To answer whether South African companies are value creators, we generated a distribution curve with historical CFROI values dating back to 1982 for publicly listed, non-financial companies. Note that this is a real return – fully adjusted for inflation. The sample includes industrial, service and resource companies. It excludes the financials sector.

Distribution curve of the historical CFROI values for South African companies

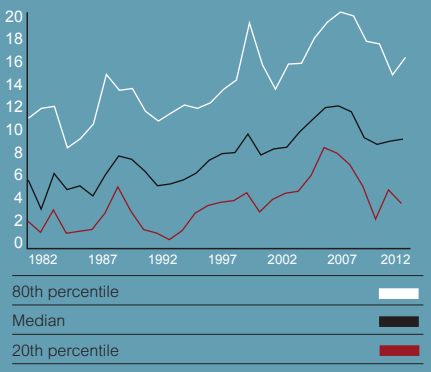
The global average CFROI is 6% which also equates to the long-term real cost of capital. Firms who generate a CFROI of 6% are generally value neutral. The average CFROI for South African companies is an attractive 9.2% with a median of 8.2%. Note the long-tail and skew towards value creating returns. Historically, 63% of CFROI values for JSE listed companies were above the global average of 6%, which is an impressive result. 30% of CFROI results were above 12%, which generally gets rewarded with an enterprise value to book multiple of 2. Relative to the rest of the world, listed South African companies are generating impressive economic returns on capital!

How returns on JSE listed capital have evolved

What about the evolution of those economic returns? In the next chart, the median CFROI is plotted from 1982. To eliminate outliers, i.e., companies with exceptionally high or low returns on capital, we show the trends for companies within a band around the median return, excluding the top and bottom 20% of performers. Bands for the 20th and 80th percentiles give an indication of how the range of returns on capital has developed over time. We show that the economic return on capital has improved spectacularly over time, with today's median firm reporting a very healthy CFROI of 10%. Until 1994, the average South African company was sporting a CFROI at or below the global average of 6%.

Why is capital so much more productive than labour in South Africa?

Time series of South African CFROI – medians and bands about the median



Source: Credit Suisse HOLT

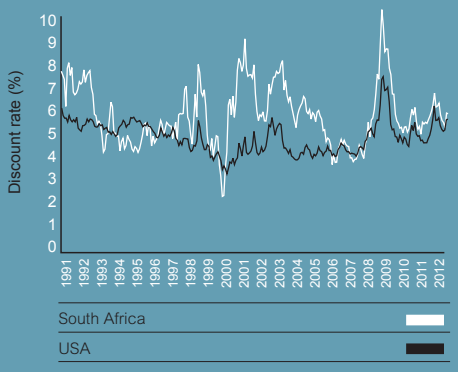
Since 1994, the CFROI has sloped upwards and remained well above 6%. The new South Africa has been a value-creating South Africa! Note that at the peak of the commodity super cycle in 2007 – 2008, the median CFROI was a stunning 13%. The top and bottom quintiles have also sloped upwards, indicating greater value creation for the best firms and less value destruction for the worst firms. Presently, 20% of South African firms are generating economic returns on capital above 15%. 20% of today's companies are generating a value destroying CFROI of 4% or less.

The returns required by the share market of JSE listed companies – measuring their real cost of capital

Investors expect higher returns when taking on more risk, so it seems logical to assume that South African investors demand better economic returns on the cash they invest. What is the cost of capital for South African companies and how does it compare to the economic return on capital generated by South African firms?

The market-implied real cost of capital for various countries is measured on a weekly basis by Credit Suisse HOLT. That is the calculation of the required rate of return or discount rate implicit in the observed relationship between economic performance as measured by HOLT and the market value of a company. Excessive multiples (market/book value) and market values imply that risk appetite is high and the expected cost of capital (the discount rate) is undemanding. The risk premium is low. When multiples are low and market prices depressed, risk appetite is low and the expected cost of capital high. That is the market is attaching a high discount rate to expected performance when it values the company. Results of this exercise for the USA and South Africa are shown in the next plot.

Global standard firm discount rates: South Africa and USA



Source: Credit Suisse HOLT

Real cost of capital for South Africa and the USA

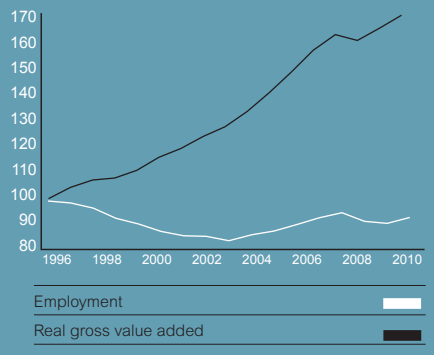
The average real cost of capital as demanded by the market and implied by market prices and cash returns (the implicit real discount rate applied in the share market when it values companies) for the US since 1950 is 6% but since 1991 it declined to about 5%. Note how low it dropped during the Dotcom bubble and how it remained at a risk denying rate of 4% for much of the Noughties. As a rule of thumb, a discount rate below 5% indicates euphoric risk appetite, and a discount rate above 7% indicates a high degree of investor pessimism and bearishness[3].

Since 1991 the median real cost of capital, the required market returns of investors in JSE listed companies has been 6,1%, which is 110 basis points above the US over this period but still well below the CFROI reported by the majority of South African companies, who are indeed creating value for shareholders. In 20% of the time since 1991, the real cost of capital has been above a risk averse 7% in South Africa and reached 9,4% after Lehman Brothers went bankrupt!

Capital and Labour in South Africa. Returns on capital are necessary but not sufficient to the purpose of faster economic growth

These excellent and improved returns on capital have unfortunately been realised with significant declines in the numbers of workers employed. While the return on capital has improved the production process in South Africa has become more capital and less labour intensive. In the figures below we show some very unpleasant truths of SA economic life by demonstrating the relationship between real value added and the numbers employed by non-financial SA corporations. As may be seen the numbers employed per unit of output by SA business has declined dramatically over the years with the secular decline only partly restrained by the cyclical upswing between 2003 and 2008.

The SA Economy: Real Value Added and Employment 1995=100

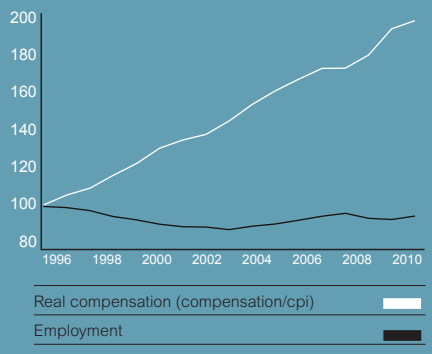


Source: SA Reserve Bank and Investec Wealth and Investment

3 *Holland, David and Bryant Matthews. "Market-implied Returns: Past and Present." Credit Suisse Global Investment Returns Yearbook 2011; February 2011, Credit Suisse Research Institute, pp 25-29.*

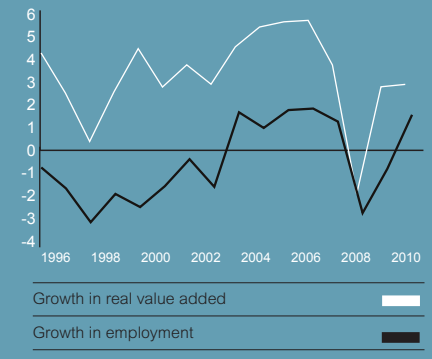
Why is capital so much more productive than labour in South Africa?

Total Real employee compensation and employment 1995=100



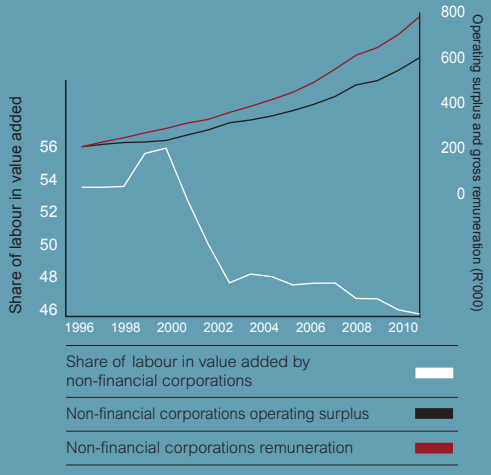
Source: SA Reserve Bank and Investec Wealth and Investment

Growth in real value added and employment



Source: SA Reserve Bank and Investec Wealth and Investment

Share of Labour in Gross Value Added. (LHS) Gross compensation of employees and Gross Operating Surplus of non-Financial Corporations (R million)



Source: SA Reserve Bank and Investec Wealth and Investment

The share in value added captured by employees has trended lower over the period (see below). What has changed significantly is the fewer numbers employed per unit of output. In other words fewer workers have been employed by formal business and government organisations and corporations to produce significantly larger output of goods and services at significantly improved levels of remuneration per worker employed.

Share of Labour in Gross Value Added. (LHS) Gross compensation of employees and Gross Operating Surplus of non-Financial Corporations (R million)

Real compensation per employee between 1995 and 2011 increased at an average annual rate of 4,23% while real value added has grown by 3,27% p.a. over the same period. The relationship between growth in output and growth in real compensation does not accord with economic theory very obviously. For example as we show below during the recession of 2008 – 09 when output growth turned negative real compensation per employee rose strongly and employment fell Those employees who have kept or gained jobs have clearly made significant real gains over the period. The average real compensation of those employed doubled over the period 1995 – 2011 as we also show.

Returns on capital have improved significantly – economic growth remains unsatisfactorily slow

While output has grown over the years the pace of growth itself has remained subdued. Non-financial corporations have grown their value added at an average rate of only 3,64% p.a. over the period 1995 – 2011. For a developing economy this represents unsatisfactorily pedestrian growth. We have shown that the returns on capital realised by JSE listed companies have improved consistently over the years and that they compare very favourably on this measure with their global peers. Despite these very good returns on capital invested and appreciation by shareholders, it may be fairly concluded that SA business has remained somewhat reluctant to increase output and to invest in additional fixed capital accordingly. They have also been very reluctant to provide additional jobs.

We have shown that the cost of this capital, in the form of the returns required by global investors has not declined over recent time. Thus while capital has become more productive it has not become less costly for firms to employ in ways that might have driven the substitution of capital for labour to the large degree measured. Perhaps the freer availability of capital (from internal sources that is additional cash retained, given improved returns on capital) may have played some part in encouraging more capital intensity. As might easier access to the transfer of best practice technology from sources much more keen to do business in South Africa have encouraged a higher degree of capital intensity. Such best practice is likely to have evolved in economies where labour is more expensive.

The availability of relatively lower cost SA labour, as indicated by very high levels of unemployment and underemployment, might have worked to counter such forces. That it has not done so and the extreme degree to which capital has been substituted for labour by highly profitable, successful and expanding SA business must surely have its explanation in government policies that discourage employment and labour intensive entrepreneurship. It seems impossible to come to anything but this obvious conclusion from the facts of the labour market.

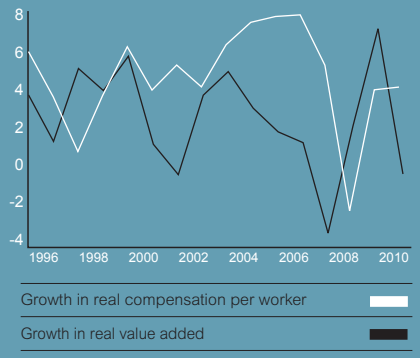
These policies have been imposed on business in the interest of the Trade Unions who represent workers in employment. Their numbers may have declined in all but the public sector but their real levels of compensation or cost to employers and so the basis upon which Unions can levy and collect dues from members (mostly in shops closed to non-union members or where all employees are obliged to pay union dues) have increased consistently in ways that are to some degree independent of the business cycle itself as we have shown.

The conclusion one comes to is that labour in SA has become uncompetitive in an increasingly global economy to which SA business has become exposed. Hence the reluctance of SA business to employ more labour. Business, as judged by improving returns on capital, has become if anything more, not less globally competitive over the years. They have become more competitive in the market for global capital.

Business would surely have been able to have become more competitive and grown faster and invested more with more encouraging incentives to employ labour. One senses that formal business in SA has learned to cope very comfortably with a more closely regulated labour market, and consequently higher paid labour. That is with a labour market that is well designed to protect established workers rather than to encourage young workers to enter formal employment. SA business has been able to deliver competitive rates of return on capital invested by employing fewer better paid workers, more carefully selected workers, assisted by improved equipment and improved resource management. The social and political case for changes in policies to encourage entrepreneurs to compete with established business by adopting more

Why is capital so much more productive than labour in South Africa?

Growth in real compensation per formal sector employee and growth in total real value added



Source: SA Reserve Bank and Investec Wealth and Investment

South African companies should continue to focus on generating world beating returns on capital while government focuses on minimising the risk premium between South Africa and investor friendly environments such as the US. And in particular to remove artificial constraints on employment growth in SA that is such an urgent requirement of economic policy. This positive feedback loop between government and business is essential to reinvestment, growth, job creation, skills development and the generation of tax revenue, which would help all of society prosper.

employment intensive methods of production is an overwhelmingly strong one given the availability of young potential workers who struggle to gain entry level jobs.

It takes infusions of capital, labour and technology to raise GDP over time. SA business is proving itself capable of realising returns on capital sufficient to attract extra capital from global markets. Adapting proven technologies is another growth stimulant now easily available to SA business. The potential for SA business to transfer abundant labour from low productivity employment or unemployment would add greatly to the growth potential of SA business and the SA economy. But this requires changes in policies for the labour market over which business appears to have little influence.

The role of government in reducing the real cost of capital

We have shown that listed South African firms create value and sport impressive economic returns on capital. Returns have been improving. Over the long run, stock market valuations depend on the economic returns generated in the form of return on cash invested, on the sustainability and improvement of such returns, on reinvestment, and on the risk-adjusted returns required by investors that we have also described as the market-implied cost of capital. While companies do all they can to generate shareholder value, government should do all it can to ensure a favourable environment for business activity in SA to reduce as far as possible the uncertainty and risk premium demanded by investors.

The right business friendly policies that are expected to be maintained with a high degree of certainty is highly value adding for shareholders and very good for the economy. It reduces required returns and increases market values and by so doing encourages firms to grow faster and invest more in machinery and the people they employ. The wrong policies, especially those about which there is considerable uncertainty, is shareholder value destructive and undermines economic development.

Investors don't like uncertainty and prefer transparency in government and corporate policy. If global risk appetite is diminished, then shareholders in all countries will suffer. But those with the least uncertainty when it comes to corporate governance, government policy, inflation, and tax policy will be perceived as safe and suffer less. There are immense benefits to aligning policy with uncertainty reduction. A lower real cost of capital will increase market values, and make marginal investments more attractive. This fuels growth and reinvestment, which create more jobs and tax revenue. A 1% drop in the cost of capital translates into a 20% increase in equity values! The re-rating of South African risk from 2001 until the peak of the super cycle in 2007 is impressive as evidenced by the drop in the cost of capital relative to the US. Improving CFROI coupled with decreasing cost of capital leads to remarkable multiple expansion.

South African companies should continue to focus on generating world beating returns on capital while government focuses on minimising the risk premium between South Africa and investor friendly environments such as the US. And in particular to remove artificial constraints on employment growth in SA that is such an urgent requirement of economic policy. This positive feedback loop between government and business is essential to reinvestment, growth, job creation, skills development and the generation of tax revenue, which would help all of society prosper.