

Alistair Marchesi

October | 08

1st year undergraduate Economics and Law student at the University of Western Australia.

Student ID#: 20259884

Email: marchesi.88@hotmail.com

Phone: 0430490727

Economic Scholars Essay Competition

An essay by Alistair Marchesi on discussing the sources of prosperity and its relevance to the Australian economy now and into the future.

Prosperity a word with origins in Latin and French means to do well, thus questions of the '*sources of prosperity*' rephrased is to ask what is it that makes us do well. Economically concepts of prosperity have long been encapsulated in the causes of economic growth that is itself defined as the increasing ability of an economy to satisfy the needs and wants of it's inhabitants over a period of time¹. Therefore within this essay the terms economic growth and prosperity will tend to be used as substitutes for one another. Not surprisingly the questions of what causes and how best to achieve prosperity have been widely considered throughout the history of economic thought to which academic contribution are of significant lineage. Great minds such as Adam Smith, John Keynes, Robert Solow and the present Nobel laureate Paul Krugman, to name but a few, have all pondered this question and made similar conclusions. This essay will therefore endeavour to provide a synopsis of the contributing elements to economic growth and hence prosperity and at the same make it's own conclusions of relevance to our society, Australia.

Geography and Climate

An initial determinant of a nations capacity for prosperity is largely driven by geographical factors including the topographical and geological properties of an area of land but also such factors as climate and the proximity to oceans and other landmasses. Obviously if the location of a nation's production and many of the inputs to that production are derived from within that location then it's nature will govern the extent of production, as such the mineral, forest and arable land endowments (to name but a few) determine, particularly in developing countries, that initial capacity for wealth creation².

The physical properties of the land are not however the only considerations, factors such as climate determining the prevalence of infectious disease, proximity to oceans and other nations that will affect trade flows all play a part in

¹ Parry, G & Kemp, S 2005

² 'Geography and Growth' (Snowden and Vane 2005, p652-4)

determining geography³. Hence those unique characteristics of any nations geography will largely determine the base from which their economy can develop. Interestingly however while geography is an important factor it's favourable endowment might, ironically, not be guaranteed to ensure sustained growth if for example those nations that initially begin with a strong resources base rely only on it's contribution and become complacent of the need to re-invest and develop over time. Such has not been the fate for Singapore a nation whose only good geographical endowments being proximity to foreign markets and deepwater ports has ensured through high levels of investment that it develop and remain competitive as a trade intensive and service based economy. The single factor of geography alone will never be enough to extend prosperity into the long term however if they are not accompanied with the other components discussed in proceeding paragraphs.

Human Geography

The previous concept of geography focuses of course on those physical '*earth*' variations between different places, but what of differing cultural and historical '*human geography*' how does this factor and its change over time impact on growth. Each group of people that occupy a certain area of the earth's surface (nations) bring with them their own cultural but also demographic variations such as population, whether there is a rural or urban majority, religious beliefs and historical stories. Differences in this composition will therefore effect the nature of inter and intra cultural relationships individuals have with one another determining the types of government formed and the effect on their constituents. When nations have a much larger population that forms a single executive then there will be a greater talent pool that should in theory improve the quality of those in office publicly and privately⁴. Cultural diversity within a nation however can potentially conflict with the attainment of equitable gains in prosperity particularly when there is animosity between groups. In these cases autocratic

³ The Economist, October 2002

⁴ Snowden and Vane 2005

governments have a greater potential to form through the support of one ethnic group such as in Iraq (pre gulf war II) and Zimbabwe that then accumulates wealth through redistribution rather than the growth of the whole⁵. Between nations a past history of discord caused by cultural differences will also potentially disappoint the prospects of growth if both are unwilling to embrace the mutual benefits of for example trade. Therefore the fact that both elements of geography differ everywhere on the earth's surface a foundation emerges as to how it has come to be that there remains such divergence in the prosperity of it's inhabitants.

Openness to Trade

Classical perceptions of wealth and prosperity were that it's accumulation by one individual was a 'zero sum activity' entailing a necessary equivalent loss by another, particularly in cases of colonization where one group would set about rapidly divorcing the endowments of another with little to no reciprocation. The continuing experience globalisation concludes is however quite the opposite with both sides potentially gaining via the mutual benefits of free trade. Hence individuals and thereby nations stand to benefit by allowing the composition of their output to follow the dynamic of comparative advantage. Unprecedented income growth for the inhabitants of such countries as South Korea bear direct correlation with their propensity to trade freely with others. Considering the comparison of their northern neighbour whose propensity is considerably lower the difference between openness and isolation is highlighted⁶⁷. Free trade results in several other positive externalities that are conducive to mutual prosperity such as greater sharing of technical information, the importance of which will be elaborated on later, and mutual interest that deteriorates the potential for conflict. Fundamentally therefore it is trade and it's associated degree of openness that

⁵ Collier 2005

⁶ The Economist, September 2008

⁷ Table 11.4 'A tale of two Koreas' (Snowden and Vane 2005)

provides a continuing impetus for efficiency, diffuses this efficiency and allows individuals to gain from doing what they do best⁸.

Institutions and Prosperity

This essay will suggest that while not a catalyst for growth the extent and quality of an economy's institutions are an essential factor in sustaining and maximising prosperity. Institutions are defined to be all those elements that ensure the creation, maintenance and protection of a market environment; judiciaries, financial systems and academic bodies all being examples. Failure to instil the products of strong institutions such as enforceable property rights, free capital flows, access to credit and not to mention research facilities will mean that potential cannot be developed and further improved upon through time and that there is in fact a disincentive for individuals attempting to do so⁹. Several African nations have fallen victim to this fate, despite terrific geographical endowments a failure to effectively implement quality institutions has resulted in a proliferation of corruption and rent seeking behaviour ensuring any opportunity is maligned¹⁰. The role of establishing such institutions beneficial for growth is primarily a responsibility of governments themselves being considered institutional factors. This is not however a reason to advocate 'larger' government and micromanagement of the economy, but rather a emphasis on providing a framework of integrity within which individuals feel confident and are able to pursue activities that will maximise returns¹¹. The message for Australia therefore is to relentlessly pursue the development of quality institutions and while it would seem that our record in the financial sector is to date strong¹² hazards have

⁸ 'Trade and Economic Growth' (Snowden and Vane 2005 p 647-52)

⁹ The Economist 2006

¹⁰ Collier 2005

¹¹ 'Institutions and Economic Growth' (Snowden and Vane 2005 p 635-47)

¹² Rush, D 2008

emerged in the erosion of property rights¹³ and a lax approach to investment in research and development¹⁴¹⁵.

Accumulation / Technology

As a component of the production process, capital undoubtedly plays an integral role in ensuring labour efficiency and rising output. Robert Solow famously quantified this link in his model that proportionately connected the level of income per worker to the amount of physical capital attributed to that worker¹⁶. Therefore Australia as a high-income nation can expect to have a higher ratio of capital per worker than compared to a low-income economy and such is true. What Solow ultimately concluded was that due to the advent of diminishing returns the level of income per worker would eventually converge such that regardless of increases in capital income would remain unchanged. His answer to maintaining rising incomes therefore was that it would be necessary in this state to shift capital utility onto a higher plain through improvements in technology that could fundamentally benefit productive processes. Consequently in the long run once capital per worker has been saturated the ability of an economy to raise incomes and sustain growth is dependent on its capacity for technological improvement¹⁷. Validation of this principle can be found with the advent of the first industrialised economy, Britain. Between 1700 and 1830 the inhabitants of Britain witnessed an unprecedented rise in their living standards, however over the same period the geographical endowments and fundamental institutions remained unchanged, the distinguishing variable was the process of industrialisation that embodied a new method of transforming inputs and the utilization of capital.

¹³ Stevens, M 2008

¹⁴ Horin, A 2008

¹⁵ The Canberra Times 2008

¹⁶ Snowden and Vane 2005

¹⁷ Solow, R 1957

The development of technology if done as a scientific and systemic process need not be confined to occasional moments of genius such as Watt's steam engine but as a continual process that shifts productivity further higher. For Australia then as a nation with already high capital to worker ratios the answer to future growth seems clear, invest in the processes of technological innovation. The theoretical problem with the development of technology is that despite the substantial fixed costs involved the final product would be non-rival and with free trade flows non excludable, hence there is a disincentive for smaller countries (Australia) to incur the costs of development and then have everyone else reap the rewards and a better solution therefore is technological improvement via imitation¹⁸. This author would suggest that in reality such a problem is overstated since the existence of property other exclusivity rights such as patents allow developers to achieve an gainful return domestically and internationally on their outlays. Furthermore the process of technological transfer is one that is subject to many barriers and often occurs through commercial transaction anyway. Developing technology if viewed in terms of the production of a good of sorts should be subject to the same microeconomic principles as any other firm, in which significant investment and augmentation in production achieves efficiencies of scale that suppresses average costs. This then suggests that Australia would be well served by developing a comparative advantage in technological advancement that will be of benefit not only domestically but also internationally as a supplier of an essential good.

Human Capital

Haven spoken of one aspect of capital accumulation, physical capital, the other side of the coin is the importance of the acquired skills and knowledge that informs the utilization of capital and labour resources, 'human capital'. Human capital was not explicitly referred to in the theory devised by Solow as discussed earlier however the realisation of its importance in sustaining long run prosperity

¹⁸ Snowden and Vane 2005 p 628-632

has been of great focus since. The work of Robert Lucas in this field has been of particular precedence he being one of the leading authorities in the study of sources of prosperity. Whereas the Solow model subjected physical capital to the restraint of any other variable factor of production in that it's continued augmentation results in diminishing returns, the divergent conclusions of Lucas was that accumulation of human capital through education and experience is not subject to such constraints. Specifically within a persons lifetime Lucas pointed out that achieving a specific percentage increase in human capital requires the same effort regardless of the level already held and that each progressive generation's endowed level is proportionate to that of the prior¹⁹. Such a suggestion is simultaneously exciting and yet intuitive, this factor of production not being subject to marginal limitations but also since the element of innovation is a human phenomena we can conclude that levels of human capital attained will be proportionate to the rate of technological process. Therefore if we take the work and findings of Lucas amongst others such as Romer and Krueger to be true and then follow the conclusion derived intuitively regarding the rate of technological progress it would seem that the accumulation of human capital through education and experience is the ultimate elixir for prosperity.

Economic Growth; a Consensus

As seen the sources of prosperity are varied but none the less interlinked as nations possess and utilise each factor in varying proportions. Broadly speaking the components spoken about, and those unfortunately neglected, can be categorized in two ways; exogenous factors of growth being those immobile considerations endowed upon nations and endogenous factors which are liable to change as the result of public policy and understanding. The importance of this distinction is that provides an obvious answer to those components of attaining prosperity that can be enhanced and those that reasonably can't. For example other than embarking upon a war of conquest or some other drastic expansion

¹⁹ Lucas, R 1988

geographical allotments are fixed, on the other hand developing better technology that increases yields from current reserves encompasses an endogenous change that we can direct. Thus the answer for encouraging and sustaining growth is to establish the framework of markets and ensure its integrity such that whatever comparative advantage does exist for a nation presents itself. This by definition requires a delicate search process that the mass of government cannot effectively provide if directly involved in the production process.

The Importance of Education

Conclusively, despite the acknowledgement that there are many contributing factors to achieving growth what the study on sources of prosperity to date seems to conclude is that ultimately there is one far superior, human capital accumulation. How do we as a society achieve greater levels of human capital; education and training that is applied to our economic activities, such as those this foundation espouses. Improvements in this field will directly impact upon efficiency in the production process and overall wealth of a nation's citizens but also produces external societal benefit. Better-educated individuals will tend to reduce the unwanted social costs of unemployment, poor health and the simplest example of rent seeking behaviour, crime. Not only this but there will also be the tendency for greater confidence of the individual to innovate and a propensity to demand better government. If the road forward is clear then what stands in the way of Australia creating an even better system of education and training to ensure our long-term prosperity; a rigid and outdated curriculum, underfunding or inefficiencies in the process of teaching? One can't be sure and it is the scope of another essay to discover the obstacles and deal with these issues, as a failure to do so will surely imperil our future prospects.

Finance and economics, 2002, 'Economic Focus Roots of Development', *The Economist* 5th October 2002, p 74.

Collier, P 2005, 'Africa: Geography and Growth', *Ten*, Fall 2005 p 18-21. Also available at www.kansascityfed.org

Finance & Development, 2006, 'Rethinking Growth', *The Economist*, March 2006 p 7-11.

Rush, D 2008 '*Latest Developments in Australian Regulation (and their impact on financial markets)*' speech to Risk Australia: Australian Prudential Authority, Sydney 18th September 2008.

Stevens, M 2008, 'Train Wreck: Treasurer's Pilbara access decision is completely off the rails', *The Australian*, 28th October 2008. Available from Factiva [31st October 2008].

Horin, A 2008, 'Rice was nice, but lets think twice about the price' *The Sydney Morning Herald*, 23rd August 2008. Available from Factiva [31st October 2008]

The Canberra Times, 2008, 'Chubb's blunt message on the future of education', *Canberra Times*, 11th September 2008. Available from Factiva [31st October 2008].

Parry, G & Kemp, S 2005, *Exploring Macroeconomics* 7th ed, Tactic publications, Perth, p 61.

Solow, M 1957, 'Technical Change and the Aggregate Production Function', *Review of Economics and Statistics*, vol. 39, no. 2, pp 468-493.

Lucas, R 1988, 'On the Mechanics of Economic Development', *Journal of Monetary Economics*, 22: p 17-19

Snowdon, B & Howard, V, 2005, *Modern Macroeconomics Its Origins, Development and Current State*, Edward Elgar Publishing Ltd.²⁰

²⁰ I should make special mention to the book entitled *Modern Macroeconomics...* that has been of immense help in understanding not only this subject but also the course content of my economics studies and for general perusal of the broad and complicated field of Macroeconomics.