

## **The Future of Work and Leisure**

**Speech by Hon P J Keating**

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- In the new economy, physical assets are less important, except for locationally specific real estate, the land on which it sits is in inelastic supply.
- The value of land accounts for a relentlessly increasing supply of total wealth. It is something which is inherently uncreated.
- Thomas Piketty, the French economist illustrated that almost all the increase in developed economy, 'wealth to income ratio', is explained by rising property values. And almost all of that rise is explained by rising land values.
- Real estate now accounts for over half of all national wealth.
- With a potentially infinite supply of private bank credit and the highly inelastic supply of locationally specific urban land, there is no equilibrium price of urban real estate or of land.
- And to compound that, real estate development occupies a very large and growing share of total investment.
- A more real estate and land intensive economy is inevitable.
- In capitalism in the age of robots, in the high-tech world of limitless automatous possibilities, the rising relative price of the most physical thing of all – land – is likely to continue.
- And as property values increase, so too will property rents.
- Investment in machines:  
By investment in machines I mean, all forms of equipment, including robots, the information systems and software and the apps, in which industries need to invest to produce their goods and services.

- The dollar cost of this investment is falling rapidly, under the impact of technological factors.
- As there is not unmet need in these categories of investment, real interest rates have fallen as a result.

And, as the demand for investment has fallen, the reward on savings has fallen with it.

- Apple employs only 80,000 people with a market cap of \$1 trillion.

Facebook has an equity value of \$500 billion but employs only 5,000 people.

Facebook acquired WhatsApp for \$20 billion – a company that employs just 55 people. Its software was developed by just 32 engineers.

- Whereas General Motors at its peak employed 800,000 - whose car manufacturers had to invest in factories and steel mills to build the car making machines. The electro-mechanical age was replete with capital and labour.
- With modern information technology, we have wealth accumulation without capital investment or savings.

Brands and intellectual property rights are also key.

Building a new Facebook would not take many engineer hours, but Facebook's \$500 billion of equity value is underpinned by brand, and its network externality effects.

- Software replication effectively has zero cost.
- Eventually we will be able to automate almost every activity (sewbots and robots) which today we call 'work' and for which people receive income.
- Labour, of course, must inevitably shift to activities which cannot be automated.

Employment is likely to be dominated by low wage, face to face services, whose productivity growth is slow, with ever rising inequality.

- In a world of ever-increasing automatous possibilities, we only need a very small number of very clever information technology literate people to write all the code we need for all the robots, all the apps and all the

computer games.

- We need only a minuscule fraction of the global population to drive inexorable progress towards ever more profound artificial intelligence and super intelligence - combinations of hardware and software equal to humans in almost all aspects of intelligence.
- The end point of these trends is a world in which we have automated everything that can be automated.
- In a world where all current goods and services can be produced at ever collapsing prices, the relative value of 'inherently uncreated' desirable things, such as locationally attractive land will almost inevitably increase.
- Education for life and citizenship:

For many years in most developed economies, public education policy has tended to reflect an instrumental and narrowly economic philosophy: better education and skills deemed desirable because they will raise the productivity growth rate, provide the skills which business needs, and offset rising inequality of outcome. But in a world where rapid productivity growth can be driven by a very small number of highly talented people, where still higher productivity growth should not be the key objective, and where better skills alone will not solve the problems of rising inequality, this focus is severely misplaced. Arguable instead we should refocus education around three objectives:

- equipping as many people as possible to lead fulfilled lives even when humanity's need to work has largely disappeared;
- the challenge of ensuring that inevitable inequalities of outcome do not create ever more severe inequalities of opportunity between income groups and regions;
- empowering people to be equal and active citizens, equipped as best possible to distinguish fact from fiction, to respect other people's arguments, and to understand the complexity of the challenges we face, in a world where one disadvantage of ever more powerful information technology is the impetus it has given to fake news and the manipulative reinforcement of initial prejudices.

- Facing our real, our permanent problem:

As John Maynard Keynes put it in his 1930 essay "*Economic Possibilities for our Grandchildren*" once the problem of production is solved, "*for the first time since his creation, man will be faced with his real, his permanent problem, how to use his freedom from pressing economic cares, how to occupy the leisure, which science and*

*compound interest will have won for him, to live wisely and agreeably and well*".

I think we are clearly *en route* to "solving the production problem" so completely, that driving further productivity growth should no longer be a primary objective of policy. But resolving the challenges created by a world of limitless production in return for little necessary work, will likely prove far more difficult than achieving rapid technological advance, and many standard theories and policy assumptions will provide little useful guidance.

At least in the rich developed world, however, it must surely be possible to meet the challenges: after all the fundamental problem is simply an embarrassment of technological riches.