The Australian

Direct support to those industries with a future

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A MAJOR report released today by Rio Tinto shows just how foolish ACTU president Ged Kearney is to dismiss mining as merely "digging things out of the ground".

And just how wrong-headed the Gillard government is to focus on locking resources into the industries of the past rather than freeing them for those of the future.

The report, by my former colleagues Brian Fisher, long-time head of the Australian Bureau of Agricultural and Resource Economics, and Sabine Schnittger examines the technological revolution in mining.

The report's findings (available at www.baeconomics.com.au) are striking: automation is comprehensively transforming mining. Within a decade, that transformation will lead to a "mine of the future" in which myriad robotic devices, controlled from vast distances, undertake functions ranging from tunnelling to blasting, sorting and transporting ores.

Most of those devices are already entering widespread use; with billions of dollars of investment pouring in, the next stage will see them integrated into fully co-ordinated processes, linked through powerful sensors, communications paths and data processing systems.

And with that transformation in full flight, the Australian mining services and technology sector, which produces specialist equipment and applications for the mining industry, already employs nearly as many people as the assembly of motor vehicles and is emerging as a world leader in its own right.

The mining revolution is of fundamental importance to our prosperity. A study by Port Jackson Partners estimates Australia's commodity export revenues could grow significantly faster than gross domestic product for the next two decades, with total commodity exports reaching $480 billion in real terms by 2030 from a base of $210bn in 2010. If these projections come to pass, commodity exports would increase to more than 20 per cent of GDP.

But that expansion cannot be taken for granted.

Australian mining competes with projects overseas. These include the planned expansion of the Carajas Mine in Brazil, which contains the world's largest reserves of iron ore; in thermal coal, the expansion of the Cerrejon mine in Colombia, as well as the Ovoot Tolgoi project in Mongolia and the East Kutai project in Indonesia; and for coking coal, the Zambeze project in Mozambique and the expansion at Mongolia's Tavan Tolgoi, one of the largest deposits in the world.

Not one of those projects will face a carbon tax. Nor do they face the distortions associated with the Fair Work Act and a union movement rapidly reverting to bloody-minded militancy. Given these projects' low cost base, their ultimate impact on prices could be greater than even the expansion in supply would suggest.

This makes it crucial Australian mines increase their productivity. So does the fact that for many minerals, we are reaching the point where ore bodies are more difficult to access, meaning more effort is needed to find and produce a unit of output: Geoscience Australia reports that merely between 2002-03 and 2006-07 the depth of metres drilled by Australian miners increased 64 per cent, reflecting the need for companies to drill deeper in their exploration efforts.

And the productivity imperative is made all the more pressing by the grim reality that the present boom has not abolished commodity price volatility. On the contrary: according to a recent World Bank study, world commodity markets are experiencing longer booms followed by greater, though not necessarily longer, busts. And when the next bust occurs, it is the low-cost suppliers that will feel the least pain.

Little wonder our big miners are pushing ahead with ambitious automation programs. After all, mining is a capital intensive business: the Productivity Commission estimates capital costs make up 42 per cent of total costs for iron ore and 43 per cent for coal mining. End-to-end automation promises significant improvements in the efficiency with which that capital is used.

In underground mining, for example, robots can work in situations, such as immediately following blasting, where there are significant delays before humans can approach a site.

Moreover, automated equipment functions more predictably and precisely than do human operators, avoiding unnecessary wear and tear, facilitating maintenance and reducing both the frequency of catastrophic failure and the dangers it poses when it occurs.

But it is not only capital that will be better used. Mines are dusty, dirty and dangerous places, typically located in remote areas with few amenities and little else by way of employment. Attracting and retaining the skilled workers mining needs has always been difficult; it is even harder now, with two-income families the norm and lifestyle expectations based on our major cities. By dramatically reducing the human presence at the mine, while concentrating control at centres in the cities, end-to-end automation will allow mining companies to tap much wider labour markets, helping address workforce shortages that now impede expansion, and improve safety and quality of life for their employees.

However, these gains will not come easily or cheaply. Manufacturing Minister Kim Carr seems blissfully unaware of the fact, but mining companies account for a quarter of total business investment in research and development, and their outlays are increasing rapidly. And it is not only the traditional mining companies that are pushing the technology frontier.

Rather, a wide range of specialist companies has emerged, with industry magazine HighGrade estimating the top 100 Australian-owned providers of specialist mining services had exports of $6bn in 2010.

That growth can and should continue adding to our national wealth. But it won't if the skilled labour and capital it requires remain tied up in firms such as Ford and Holden, that can't stand on their own two feet. Which is why Julia Gillard is hopelessly muddled when she says we shouldn't be "forced to choose between mining and the rest, nor between a strong future for manufacturing and a strong economy as a whole".

Because that is precisely what is required: to allow growth to occur, capital and labour must move from less productive to more productive uses.

And that is what market forces would ensure, were it not for Gillard's bailouts.

But Gillard and Carr are stuck in a time warp. Based on a confused glance back, not a confident look forward, theirs is a losers' strategy that mindlessly perpetuates yesterday's industries at the expense of tomorrow's.

That suits Labor's union cronies, protecting their membership base. Yet it is difficult to think of a worse policy. For it will waste the boom years, while leaving us fully exposed to an eventual bust. And by throwing away the opportunity Fisher and Schnittger so carefully analyse, it makes future Australians all the poorer.

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