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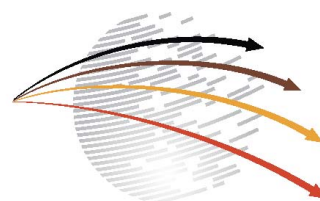
Provocateur Briefing Report

Forum on Development and Mitigation

DEVELOPMENT FOCUS

Employment

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M A P S

Mitigation Action Plans & Scenarios

From 27-29 January 2014, over one hundred professionals working mainly in the climate change mitigation field, in Southern contexts, gathered at the Cape Town Waterfront for the Forum on Development and Mitigation (www.devmitforum.ercresources.org.za). The event was hosted by the Energy Research Centre of the University of Cape Town, the Centre for Policy Research in New Delhi, and the international Mitigation Action Plans and Scenarios Programme. As a feature of the Forum nine South African development experts, the 'Development Provocateurs' were invited to participate in the event and write a short reflective piece afterwards. These briefing notes considered the discourse at the Forum from the perspective of each Provocateur's particular area of expertise, looking at shared priorities, disconnects and other points of contact.

This briefing note responds from the perspective of 'Employment' by Anthony Black. The full set of briefings have been compiled into a compendium, available at www.devmitforum.ercresources.org.za and www.mapsprogramme.org.

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EMPLOYMENT

A central theme of the Forum was to address the problem of the climate change mitigation and development debates taking place in separate silos. Most of the participants were working primarily on climate change mitigation but were clearly aware of development issues and were keen to foreground these. The key issue is the existence of actual or potential trade-offs between mitigation and development (in this case specifically, employment). There are 'win-win' areas which clearly should be pursued and as one commentator mentioned, policy makers should be sure to eliminate 'lose-lose' policies, which are inimical to both mitigation and development.

There was also, rightly, an emphasis on the importance of specific national contexts. For example, Brazil and South Africa, are two countries with some important similarities in terms of their development paths. They are both large, upper middle-income countries, which followed import substitution industrialization policies. Both are resource rich and both have very uneven income distributions, although Brazil has recently made important progress in reducing income inequality. But from an emission standpoint, they are very different. Brazil has a high percentage of renewable energy and its main contributor to high emissions intensity has been deforestation, which is now being successfully curbed. South Africa is emissions intensive because of the important role of energy intensive, heavy industry and mining as well as being highly dependent on coal fired electricity.

South Africa: High emissions intensity and high unemployment

The Forum was well located in the sense that South Africa is a country where there is a co-existence of high emissions intensity and very serious development problems. The country has the dubious distinction of being one of the most emission intensive economies in the world (in terms of emissions per unit of economic output). It also has one of the highest unemployment rates in the world. The official unemployment rate is 25% but if discouraged workers are included, it ranges up to 40%. This is a social, economic and political disaster which is not on the distant horizon, but of pressing and immediate concern. Other countries may have less severe unemployment problems but the issue of unemployment and underemployment is widespread across the developing world and is, of course, also a problem in the developed world.

There was relatively little mention of unemployment at the Forum and even less discussion of what a green *and employment intensive* growth path might mean. There was mention, for example, that some forms of green energy are more labour intensive than others. The point has been made that in national contexts such as the US, green stimulus is

more employment generating than other forms of economic stimulus (Barbier, 2010). But what is required is a truly integrated mitigation and development strategy and this means aligning the two objectives as far as possible to shape (or reshape) the growth path of the economy. This is not to imply that there are no trade-offs between achieving mitigation and employment objectives. In some cases there are trade-offs, but there are also important instances where there is potential alignment between achieving the two objectives.

In the South African context pro-employment policies need to be an absolute priority. While government might (and frequently does) undertake policies inimical to employment growth, it is unlikely to deliberately adopt policies which can be shown to impact negatively on employment. In my view, the co-existence of high unemployment and high emissions intensity is not just a coincidence.

South Africa's history of segregation and apartheid has had profound implications for its development path. I will focus on just two outcomes here. Apartheid spatial planning has had long-lasting implications for the development of South Africa's cities, in particular in the establishment of black townships at long distances from the urban core and employment opportunities. Another outcome was an economy heavily based on mining, mineral processing and heavy industry, and subsidized by cheap electricity as well as other incentives. This was the so-called 'mineral energy complex'. The deliberate neglect of black education contributed to this outcome by hindering forms of manufacturing development which required higher levels of skill on the part of the mass of the labour force. These features contribute to both high emissions intensity and low employment intensity and the point is that both are structural outcomes of particular policy choices over many decades.

In his input on urban transport at the Forum, Philip van Ryneveld mentioned the case of transport and the low density of South African cities. Workers commute long distances which is very costly in terms of money and time. It also makes searching for employment, both in the formal and informal sectors, more difficult. Effectively, this urban structure constitutes a tax on employment. So more compact cities and massively better public transport would reduce emissions intensity but would also contribute to greater employment intensity. Traffic congestion is also worsened by the spatial layout of South African cities and it is quite possible that traffic congestion in Gauteng, and to a lesser extent Cape Town, will impose a larger cost on the South African economy over the next decade than the current energy constraints. So major interventions not only to upgrade public transport but also to restructure the spatial fabric of South African cities will be reducing emissions intensity and increasing employment intensity.

What about heavy industry? This sector has been massively subsidized historically; and to a surprising extent this has continued after 1994. Electricity subsidies in the form of low-priced, long-term contracts with BHP Billiton's aluminium smelters are reportedly approximately R3bn per year (ESI-Africa, 2013). The company employs about 3000 workers. That works out at an electricity subsidy of R1 million per employee per annum. These kinds of subsidies for heavy industry have encouraged South Africa to become an exceptionally emission intensive economy (but not a very employment intensive one). The country is mineral rich and does have a comparative advantage in mining. But it does not follow that beneficiation in the form of mineral processing should be subsidized as has been the case both pre- and post-1994 (Black and Hasson, 2012).

South Africa has paid a heavy cost for the long-term subsidization of electricity. It has encouraged the over expansion of heavy industry with negative effects on both employment and emissions. There is now an enforced shift towards the proper pricing of electricity, resulting ironically from the historical under-pricing of electricity which, unsurprisingly, placed

the country on an energy intensive growth path. The rise in electricity prices to fund new generation capacity is almost certainly having a far greater impact on limiting the growth of electricity consumption (and emissions) than the host of interventions to encourage green energy investments. Painful as they may be, higher electricity prices have already had the effect of decoupling electricity consumption from economic growth in major urban centres. For instance, if one looks at the data on electricity consumption for Cape Town, it is quite striking that consumption in Cape Town has declined in absolute terms since 2008 in spite of the fact the metropolitan economy has been experiencing solid economic growth (Barnardt, 2014). This is mainly as a result of higher prices but also reflects changes in the economic structure. These changes include the relative decline in manufacturing relative to services.

These are two major components of South Africa's growth path which received insufficient attention at the Forum. A few examples can illustrate this point. The roll out of electric cars should clearly be supported with the necessary infrastructure. A case can also be made for subsidies for the purchase of electric cars in high-income countries. But subsidies to purchase electric cars makes little sense in the South African context if one takes account of the fact that such vehicles will be purchased primarily by high-income consumers. There will be little development impact. Furthermore, electric cars are likely to be fully imported (the South African market is too small to support domestic production) so the employment effects will probably be negative. From a development and employment point of view it makes far more sense to rather develop low-income housing close to areas of employment and subsidise public transport.

A second example is that of carbon taxes which are high on the mitigation agenda and are being seriously considered by National Treasury. Again this is an important policy initiative which in principle should be supported. However, while carbon taxes are being considered other branches of government are promoting 'beneficiation', one outcome of which would be in direct contradiction to the objective of a carbon tax. Beneficiation in effect means the further processing, smelting and refining of South African minerals within the country. These processes are emission intensive and capital intensive. Aluminium smelting alone accounts for over five percent of South Africa's electricity consumption. What tends not to happen is the next (and more labour intensive) stage: the *fabrication* of steel, aluminium and basic chemicals into metal and plastic products. So the economy needs to become more employment intensive and less emissions intensive and it follows that policies to encourage employment intensive growth are relevant for reducing emissions intensity.

Towards an integrated mitigation and employment agenda

The paper presented at the Forum by Caetano and Thurlow (2014) uses sophisticated CGE modelling to assess the implications for development of a carbon tax in South Africa. The results show a small fall in the rate of employment growth, which can be partly mitigated, depending on how the tax is recycled. One hopes the model's conclusions are wrong because it will be difficult politically to introduce a tax that impacts negatively on employment growth in a country with such high unemployment. Intuitively it does sound wrong. In the distorted economy I have outlined above, one might expect that a tax on emissions would be positive for employment as long as it is recycled in the right way. For instance, by shifting resources away from heavy, capital intensive industry (e.g. aluminium smelting) to support for more labour demanding sectors (e.g. support to small scale farmers, creating a wage subsidy or large scale subsidies for training) one could expect more rapid employment growth if one leaves aside short-term adjustment problems.

So those working on climate change mitigation need to integrate policies more closely with the development agenda. And those working on development issues need to be far more aware of the mitigation agenda. There is much scope for educating development economists and other development specialists to be more aware of the green growth and climate change mitigation agenda and therefore hopefully to build these considerations into the foundations of policy rather than

as an afterthought. I also think that researchers and policy makers working on employment issues can learn from what is happening in the mitigation field. The Stern Review referred to climate change as the “greatest and most wide ranging market failure ever seen”. Obviously labour markets do not work very well either. In the climate debate, there is plenty of innovative thinking on subsidies, taxes, incentives and regulations to address this market failure and reduce emissions intensity. For some reason, one does not see this level of innovation in the employment debate which seems stuck between arguments over Keynesian growth policies versus austerity on the one hand and the regulation or deregulation of labour markets on the other.

The point that green industries can create jobs was made at the Forum. It has also been made in the South African context, for example, in the major study on ‘Green Jobs’ conducted by the Industrial Development Corporation in collaboration with other institutions (Maia et al., 2011). These claims are frequently exaggerated. Producing wind turbines and solar panels is not hugely labour absorbing and may well be less labour absorbing than mining coal. Of course, labour absorption can be increased by protecting local manufacturers against cheap import competition. In South Africa, some green industries have been declared to produce ‘designated’ products, meaning that if purchased by government or government agencies, they must meet local content requirements. This is fine but insofar that it raises costs, it will make these green technologies less competitive in comparison to conventional sources and slow the rate of adoption. One example, where there is significant potential employment is in the roll out of solar water heaters (SWHs) in low-income housing. Installation and maintenance is labour absorbing and studies have shown SWHs to have positive developmental impacts through saving energy costs and providing health benefits and improved amenities to low-income households. But the energy (and emissions) savings are quite limited and the evidence seems to show that an even simpler intervention such as installing ceilings in low income housing has a larger developmental impact and is strongly preferred by these communities.

Is climate change mitigation a separate agenda? The majority view was that the mitigation and development agendas should not be separate. Most speakers correctly emphasised the need to mainstream mitigation concerns in the broader development/growth debate. The experts attending the Forum were primarily working on mitigation but were highly knowledgeable about development issues. The development community is certainly not nearly as well informed about the mitigation agenda, which raises the need for more interactions where mitigation experts comment on development proposals. The example of beneficiation raised above is highly current in South Africa at the present time and needs to be analysed by both mitigation and development analysts.

So my suggestions for a research and policy agenda would be to explore options and measures which are aimed at tilting the playing field in favour of inclusive growth which is both labour demanding and green. One example could be – what would be the impact (on emissions and employment) of steering incentives currently directed to heavy, capital intensive industry into light, job creating manufacturing or rural development?

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