Article

Cross-sectoral state co-ordination, skill regimes and economic development: lessons for South Africa from Finland, Ireland and Malaysia

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Abstract

This article focuses on two inter-related prerequisites for 'developmental states' relatively ignored in other analyses – attaining high levels of cross-departmental co-ordination and ramping up human capital formation. The article also argues that most developmental states attain economic success because they move beyond narrow orthodox macro-economic stabilisation strategies to a more mature basket of interrelated micro-economic policies (such as industrial, innovation and skills policies) which seek to move the national economy up the value chain continuously towards higher value-added manufacturing and business services. This latter factor requires high levels of horizontal co-ordination between complementary policy elements such as education and training, industrial development, science and technological innovation, employment and economic growth.

This argument is illustrated via a comparative analysis of the development trajectories of Finland, Ireland and Malaysia over the past three decades. These case studies are raised not as exemplars to be slavishly emulated by South Africa, but as cases which raise interesting comparisons, particularly around the role of horizontal co-ordination and skill formation. They differ amongst themselves with regard to the relative strengths of the manufacturing and financial sectors, the extent of value addition, export orientation, and human capital formation. The conclusion briefly touches on the inability of South Africa to learn from these development trajectories and meet these critical preconditions for success.

Introduction

This article offers a new take on the 'developmental state' debate which is currently under discussion in South Africa. The article contends that effective cross-sectoral 'horizontal' co-ordination – particularly at the interface between human resources development (HRD) and other micro-economic reforms – is central to successful developmental states. The article shows how cross-sectoral or horizontal co-ordination has been the central element in the economic success (in very different ways) of three different countries – Finland, Ireland and Malaysia. These countries were chosen for a variety of reasons, the most important being their rapid economic growth since the 1980s. Additionally these countries have also all focused on the developmental of human capability, showing how such ramping up of education and training has provided a critical underpinning to economic success. These are important co-ordination and human capital lessons from which other developing nations can learn. Indeed South Africa provides the perfect contrast – a country with immense developmental potential but which is currently failing to attain the same level of success.

Theoretical influences: evolutionary economics

There is a significant international literature which specifies the relationships between the emerging new global economy, the knowledge and skills it requires, and the changed roles expected from education and training. Most influential in this regard is the literature on new forms of work organisation, the 'national system of innovation' thinking, and the field of evolutionary economics which has grown rapidly in the past two decades to challenge the conservative orthodoxies of neo-liberal economics and the 'Washington Consensus' (Lundvall and Borras 1999, Nelson 2006). Two criticisms of neo-liberal orthodoxy dominate this new literature. Firstly, the success of the newly industrialised 'developmental states' of the Pacific Rim over the past three decades did not arise because of the policy prescriptions of neo-classical economics. These economies succeeded because of strong state intervention in the economy, primarily through the establishment of effective non-market institutions which through appropriate industrial, technology and human resources developmental strategies acted to steer these market economies along very successful growth trajectories. This growth did not occur because of unregulated market economics.

Secondly, neo-classical economics postulates an extremely 'thin' institutional environment – particularly with regard to state and state-civil society institutions. The neoclassicist view is that if the market mechanism is allowed to work unrestrained by government, fewer institutional props will be needed to ensure progress and growth. Nelson maintains that this overly spare institutional picture fails to recognise the complexity of market relations, in particular, their embedding in 'broader social and institutional structures and the elements of cooperation and trust required if markets are to work well' (Nelson 2006: 6).

It is significant that the primary focus of evolutionary economics is the study of the firm as a social as well as economic organisation, and in particular, the role played by learning within the firm in the new global economy. This is because the greatest value-added in production is increasingly generated by the dynamic capabilities of firms and their ability to absorb new technologies and work organisational techniques, introduce new processes and product, and operate in newly diversified fields of the economy. Competitiveness is also directly related to the need to compete on the basis of quality and not purely in terms of cost of production inputs (Lundvall and Borras1999).

An important tendency in the economic innovation process globally is the shift towards greater knowledge intensity in production – where the basis for new economic rents is not so much found in the material production sphere as it is in value-adding activities such as design, branding and marketing. Tangible resources such as land, technology and capital have become increasingly widespread. Because of this, the new competitive advantage lies with the intangible resources of firms. This impacts across the globe in a highly uneven way with intangible activities such as design, R&D, branding, marketing, logistics and financial services being concentrated in the industrially developed countries and tangible activities – actual production – being contracted out to a large band of middle-income developing countries such as China, India, Mexico, South Korea and Singapore – countries with low wages and highly developed process manufacturing competencies (Kaplinsky and Morris 2001: 101).

Theoretical influences: defining horizontal co-ordination

Another key theoretical influence has been the public governance literature on horizontal co-ordination which is vast and will not be reviewed in detail here. Kraak (2011) has applied a horizontal co-ordination perspective to the South African context and this article will further develop these arguments in its analysis of Finland, Ireland and Malaysia. Horizontal co-ordination is understood to be the management of a set of activities between two or more organisational units within the state, ‘where the units in question do not have hierarchical control over each other and where the aim is to generate outcomes that cannot be achieved by units working in isolation’ from each other (Bakvis and Juillet 2004: 8). Horizontal co-ordination in most instances is required in recent times to achieve multi-sectoral policy objectives which span across a range of discrete national government departments, most of which usually function as silos, with none taking ultimate responsibility for the attainment of the collective (multi-sectoral) policy objectives under consideration. The literature on horizontal co-ordination has been influenced by government attempts the world over to resolve increasingly complex social problems through improved co-ordination. The new ideas about horizontal co-ordination is largely an Anglo-Saxon phenomenon, although the key mechanisms have been well-established in most Scandinavian systems. In the United Kingdom, Blair’s incoming administration in 1997 began speaking of the need for ‘joined-up’ government. In Canada, Australia and New Zealand, the chosen term has been ‘whole-of-government’ initiatives.

The need to manage these ‘joined-up’ interdependencies across boundaries poses serious difficulties for the traditional conceptualisation of government. It needs to move from a ‘pre-occupation with intra-organisational imperatives to a commitment to the building of inter-organisational capacity’ (Williams 2002: 105). This requires capabilities that emphasise relationships, interconnections, interdependencies and holistic thinking. Williams maintains that these capabilities contrast sharply with the ‘prevailing discourse of classical organisations that are underpinned by notions of rationality, linear thinking, task differentiation and functionalism’ (Williams 2002: 105). Traditional departments are based on hierarchical structures and on accumulated wisdom often resistant to change from outside. Departments often pursue agendas that are permissible in terms of their legal jurisdictions and which satisfy departmental interests, but which do not benefit government as a whole, leading to policy gaps, duplication and contradiction (Kavanagh and Richards 2001: 1). Administrative silos are the unfortunate and inevitable result of these characteristics of traditional government.

Developmental states

The analysis in this article presents a comparative overview of the role played by cross-departmental co-ordination and skill formation regimes in the economic evolution of each of the selected countries. It posits the argument that national skills regimes require considerable cross-departmental co-ordination to be successful as a key underpinning of developmental states. The article does not seek to present a comprehensive overview and comparison of the full socio-economic contexts across the four countries reviewed – Finland, Ireland, Malaysia and South Africa. Nor does it seek to select a detailed developmental model which should be emulated by South Africa (see Hart 1994 for the dangers of such an emulative approach in the case of Malaysia and South Africa). Its main purpose is to put cross-departmental co-ordination and upskilling at centre stage in the debates about a developmental state.

The analysis presented in this article suggests that five developmental objectives are key prerequisites for developmental states. These include the need for national economies to:

- Go beyond orthodox 'neo-liberal' macro-economic stabilisation strategies, particularly once stabilisation of financial markets has been achieved;
- Continuously move up the value chain towards higher value-added and more knowledge-intensive forms of production;
- Define a medium- to long-term 'Vision' or 'Developmental Plan' aimed at creating a globally competitive economy;
- Develop relations of social inclusion and trust between the key stakeholders in a joint commitment to building a competitive and more knowledge-intensive economy;
- Build state institutions and structures which effectively manage the inter-relationships between the differing components of the developmental strategy. This will require strong horizontal co-ordination between various departments within the state, and between the state and the wider society.

Attaining these five preconditions has been at the heart of the economic success achieved by Finland, Ireland and Malaysia over the past two decades. Furthermore, strategies around the development of human resources have played a particularly important role in this economic success, but not as stand alone strategies. Rather they have served as integral components of a wider basket of micro-economic reforms including innovation, industrial, science and technology, and education and training strategies. Indeed, a key feature of industrial policies in the current period in Finland, Ireland and Malaysia is their prioritisation of innovation, human capital formation, R&D and technological upgrading. In short, industrial strategies today are primarily about HRD, that is, about building innovation and the knowledge economy.

Moving beyond orthodox macro-economic stabilisation

Finland, Ireland and Malaysia have all been faced by dramatic 'shocks' over the past two decades – both economic and social –which provided the initial trigger for what have become fundamental transformations in each of these societies and economies. For example, Finland suffered a devastating recession in 1990 which saw unemployment rocket from 5 to 17 per cent. Inflation soared and government debt reached 60 per cent of GDP (Dahlman et al 2006: 2). Matters were made worse by the disintegration of the Soviet Union which drastically cut Finnish exports. Government tried to intervene by increasing taxes and cutting discretionary spending during the recession. This made the recession even worse because it reduced domestic demand even further. The economy began to shrink – falling output, declining exports, collapsing asset prices (house prices decreased by half) and a wave of damaging bankruptcies which caused huge credit losses to banks (Kiander 2004: 6). Real GDP growth plummeted from 5 per cent in 1989 to –0.3 per cent in 1990 (Dahlman et al 2006: 3).

Ireland's financial market crisis in the mid-1980s was very similar. The crisis was brought on by greatly increased government spending just as the economy entered a recessionary phase. Other indicators of crisis included large-scale borrowing to finance government debt and unemployment at 17 per cent (O'Donnell 2008: 74; Hardiman 2002: 7-8). The Irish economy by the mid-1980s was in a 'vicious cycle of decline and there appeared to be no solution' (House and McGrath 2004: 43).

Malaysia faced major societal ruptures nearly two decades earlier than those experienced by Finland and Ireland. Its social crisis was triggered by the ethnic riots of 1969 which arose because of strong feelings of resentment amongst indigenous Malays (*Bumiputera*) towards the relative wealth of Chinese and Indian Malaysians. A major reform package introduced in 1970 and termed the New Economic Policy (NEP) sought to correct these injustices. The NEP was very successful, particularly because it was supported by a highly interventionist state in the 1970s and early 1980s. However, by the mid-1980s, conditions changed and Malaysia experienced a severe recession. It too submitted to the wave of market deregulation which was sweeping the world. The recession forced government to retreat and to rethink its overall macro-economic framework.

Macro-economic stabilisation

Major macro-economic stabilisation policies were pursued by the respective governments as a consequence of these financial crises. Stabilisation entailed widespread market deregulation and the privileging of monetary policies as the primary lever of state involvement in the economy. In each case, these measures were very effective in curbing high inflation, large-scale government debt and recession. In Finland, for example, private consumption and investment began to grow again from 1994. Exports grew far faster than domestic demand which led to remarkable improvements in the current account which went from a deficit of 5 per cent of GDP to a surplus of 7 per cent by 2000 (Kiander 2004: 19). The commitments to free trade led to a rapid increase in foreign investment and the participation of multinational corporations in Finland's new growth surge. By 2006 the share of foreign ownership on the Helsinki stock exchange was 50 per cent, making it one of the most internationalised globally (Dahlman et al 2006: 29). Unemployment dropped from a high of 17 per cent over the 1991-1994 period to seven per cent in 2006 still high by Scandinavian standards.

In Ireland, as part of the national agreements forged with business and labour in 1987, the state cut back on public expenditure, resulting in what Kirby describes as 'expansionary fiscal contraction' because these cutbacks led not to recession but to a return to modest growth (Kirby 2008: 18). Another element of the agreement was to retain Ireland's relatively low wage structure, which some commentators have viewed as the single most important determinant of Ireland's competitiveness. These low wage rates alongside low corporate taxes – a blanket rate of 12.5 per cent on the profits of all foreign companies – had been instrumental in encouraging a huge inflow of foreign direct investment after 1987. More than 1500 foreign firms relocated to Ireland, concentrating on sectors such as electronics, computer technologies, pharmaceuticals, health and medical products, and chemicals. These investments led to a massive boom in exports from Ireland in manufacturing as well as in financial and business services. Growth in GDP fluctuated between 6-10 per cent between 1994 and 2002 (2008: 18). In Malaysia, the financial crisis of 1985-87 resulted in a new focus which emphasised greater private sector involvement in the economy in partnership with the state, to be encouraged through further deregulation of the economy, liberalisation of trade and the privatisation of certain state-owned enterprises.

Stringent monetary policies were unavoidable in the three countries under review. The corrective measures adopted were effective, ushering in a new era of growth in each of the selected countries. However, government did not rely on monetary policy alone to rescue their respective national economies from the depths of recession. In all three contexts, a clear shift in government intervention was evident in the post-stabilisation phase, with the focus moving from an initial concern with financial market stability to a more mature second phase where these macro-economic concerns were complemented by a range of micro-economic interventions which sought to upgrade technological capabilities in pursuit of a globally competitive knowledge economy. Within this supply-side focus, issues such as corporate strategy, technical change, training, enterprise upgrading, the commercialisation of state-owned enterprises, public sector reform, local area regeneration, welfare reform and active labour market policy, all became important (O'Donnell 2008: 83).

Moving up the value chain

The discussion now examines specific components of the basket of micro-economic reform in the countries selected above, and in particular, to highlight the role of HRD in this critical second phase of development.

Human capital and innovation policy: the case of Finland

In Finland, the primary micro-economic policy tool has been its consistent focus on innovation, and more specifically, the building of a strong National System of Innovation (NIS). Finland was the first country to deploy such a concept in education and industrial policy. It entailed building human capital systemically and comprehensively, across education, technology, labour market and industrial policies. This shift in industrial policy is fundamental to understanding other key policy platforms such as science and technology and education and training. In short, the new policy platforms are increasingly forming on the content of existing industrial policy.

Finnish industrial policies are understood here as measures to establish the enabling conditions for businesses to flourish in key sectors rather than the old-style view of subsidising ailing industries or 'picking winners' (Ylä-Anttila and Palmberg 2005: 19). As such, industrial policy responses throughout the 1990s acted to support micro-economic measures that would improve the quality of the business environment, including the development of a strong knowledge infrastructure and a highly educated labour force to meet the demands of the emerging knowledge economy. According to Ylä-

Anttila and Palmberg, the role of government has been to intervene where market efforts were considered insufficient, such as in R&D and education, and 'creating and communicating a common vision of future national strongholds without intervening too much in the functioning of the markets' (2005: 19). The growing emphasis on R&D and technology is a recognition of the reality that the factors of production which guarantee competitive advantage in today's economy are not land, labour and capital, but rather, knowledge-intensive 'intangible' assets – those advanced production factors that create value such as entrepreneurship, creativity, R&D, new design capabilities, branding and marketing.

The 1993 *National Industrial Strategy White Paper* redefined industrial policy along the lines of industrial clusters. It emphasised the importance of locational competition and knowledge spillovers. Cluster-based policies seek to maximise and internalise within a specific geographical boundary the knowledge spillovers and technological externalities that exist between firms operating along the same value chain or industry. Industrial clusters are comprised of an agglomeration of producers, customers, and competitors who through co-operation act to increase specialisation, promote efficiency and enhance competitive advantage. In Finland, the ICT and health care sectors were identified as having the potential to support leading clusters. Networks between public and private sector actors were promoted. Nokia is the core of the ultimate industrial cluster. It is the industrial engine of the ICT cluster and benefits many other Finnish firms both through knowledge spillovers and as an important lead customer and promoter of exports (2005: 12-18; Dahlman et al 2006: 77-78).

Finland has one of the highest participation rates in higher education – at 85 per cent of the 18-24 age cohort (Dahlman et al 2006: 102). Finland also has a large researcher cohort with 52 per cent employed by the private sector (STPCF 2006: 25). The country has been successful in tripling the number of people acquiring doctoral degrees over the past 15 years. Two thirds of these PhDs, approximately 10,000 people, work in R&D. The majority work for the public sector and in particular universities which employ 60 per cent of the PhDs engaged in research (STPCF 2006: 26). State investment in R&D in Finland is highest amongst European Union and Organisation for Economic Cooperation and Development members, at 3.5 per cent of GDP in 2006 with targets of 4.1 per cent by 2012.

Human capital and innovation policy: the case of Ireland

Ireland has evolved a broad socio-economic policy approach that is remarkably similar to that adopted by Finland. Policy in Ireland is also explicitly focused on innovation and becoming more competitive on global markets. In part, this characteristic was shaped by both Ireland and Finland's membership of the EU and their obligations to meet the goals of the Lisbon Strategy – a development plan to make Europe the most competitive and the most dynamic knowledge-based economy in the world. It was signed by all member states in Lisbon in March 2000.

Ireland has been very effective in meeting many of the goals of the Lisbon agenda. This is due to its own internal policy commitments to these goals, as spelt out in two key policy documents: the *National Development Plan 2007-2013* (NDP 2007) and the *Strategy for Science, Technology and Innovation*, which were introduced in 2006. The goals of these two documents are to strengthen post-graduate education in Ireland – to double the number of doctoral graduates and to simultaneously increase R&D activity across the economy and society. A second aim is to increase the number of linkages between university research and industry (DETE 2006: 9).

A Department of Enterprise, Trade and Employment document entitled *Innovation in Ireland* reinforces this emphasis on 'promoting innovation in every sphere of business and public service' in Ireland (DETE 2008:1). It outlines ten elements of innovation policy which the Irish government will pursue. With regard to one of these ten elements – the knowledge transfer function – DETE supports the establishment of Centres for Science, Engineering and Technology with the aim of significantly advancing knowledge and exploiting opportunities for discovery and innovation. These Centres are intended to involve research partnerships between Irish universities, leading multinational companies and small and micro enterprises (SMEs). They also support the linking of researchers in academia and industry within Strategic Research Clusters that focus on specific aspects of the ICT and biotechnology sectors (2008:7).

A key underpinning factor in Ireland's turn-around has been its education and training system. Universal and free secondary education has been provided for the past thirty years, and participation in post-secondary education has risen impressively over the past decade. In higher education, the participation rate for 18-24 year olds rose from 25 per cent in 1986 to 55 per cent in 2006 – an enrolment rate which more than doubled over two decades (FAS 2007:16).

Malaysia: planning for growth over a 30-year horizon

There have been three main phases in Malaysia's industrial policy:

- Firstly, a highly interventionist phase of 'hard' industrial policy measures such as those adopted to build a sound economic infrastructure (for example, export processing zones) to attract significant foreign direct investment as well as the support given to building heavy import-substituting industries in the early 1980s;
- Secondly, a 'soft' phase of industrial policy which gave support to processes of technological upgrading which began in 1986 with the publication of the first Industrial Master Plan and which continues into the current period; and
- Thirdly, a phase launched in 1994 with the Multimedia Super Corridor which has as its main goal the creation of a knowledge economy with ICT technologies and advanced services sectors as the main engines of growth.

The early successes from 1970–1986 had their downsides, however. The heavy industries failed, labour shortages emerged and urban wages rose. By 1985, foreign direct investment was beginning to relocate to cheaper neighbouring countries. All of this was made worse by the recession of 1985-1987. The first Industrial Master Plan of 1986 argued that Malaysia had no other choice but to move towards higher value-added exports which required a significant technological upgrade of the production and science regimes. These components of the economy had been relatively neglected in the first phase of the post-1970 period because the emphasis had been on enticing foreign investments, export processing zones, and cheap semi-skilled labour. After 1985, industrial policy shifted to emphasising the science and technology components required for technological upgrading – technological acquisition, adaptation and transfer, R&D, university-industry linkages and human capital formation.

A significant element of this new emphasis, adopted formally in the second Industrial Master Plan of 1996, was the promotion of clusters in key sectors which would assist the development of linkages between foreign firms and local suppliers, most of whom were SMEs. The relationships forged in these clusters would become the main conduits for the transfer of technological know-how from multinational corporations to local firms. The production capabilities of these small firms could be more easily ratcheted up through inter-firm relationships with their clients and with the assistance of government technology agencies, all of whom would be located within these clusters. A more dramatic advance came in 1994 when the Multimedia Super Corridor initiative was launched. By 2001, over 400 companies had joined the MSC, including most of the world's top players in internet and software technology. Government has also invested heavily in venture capital to support participating local firms (Ritchie 2001: 31).

Education policy in Malaysia since the unrest of 1969 has primarily been geared to correcting the wrongs of its colonial past through the redirecting of resources to build more equitable access for *Bumiputera* citizens. Since 1970, expenditure on education has averaged out at about 5 per cent of GDP. In secondary and tertiary education, specific quotas were put in place to ensure that Malay enrolments met a certain specified minimum. These tight measures succeeded: by 1985, 68 per cent of upper secondary and 63 per cent of higher education enrolments were Malay, reaching levels close to and higher than their population share of 65 per cent. By 1990, 74 per cent of higher education students were Malay (Sato 2005: 77).

Malaysia still has several educational deficits. For example, only 28 per cent of enrolments in undergraduate degrees were in science, engineering and technology fields in 2005, a figure lower than the numbers achieved in the Asian Tigers. Malaysia's R&D system also performs poorly when compared with other countries in East and South-East Asia and with Finland and Ireland. The private sector contributes minimally to R&D activity. Ritchie argues that private sector expenditure on R&D is only about 0.03 per cent of GDP, which does not add significantly to government's low figure of 0,4 per cent. Most R&D activity in the private sector, such as it is, is done by the large parastatals or multinationals.

Defining a medium- to long-term 'vision'

A defining feature of the growth strategies of Finland, Ireland and Malaysia has been the formulation of comprehensive medium- to long-term development plans encompassing the full basket of micro-economic reforms discussed earlier. A powerful intermediary body, often chaired by the prime minister and comprised of leading representatives from all stakeholders in society, has in most cases played a leading role in defining this long-term economic vision for the country. For example, in Ireland, the National Economic and Social Council (NESC), a multipartite policy advisory body, produced an analysis of the 1986 crisis and proposed solutions in a report entitled *A Strategy for Recovery*. This report accepted that the reform of public finances was imperative. It proposed moderation in pay rises which was essential to improve competitiveness. In return government would commit to tax cuts to defend the living standards of the poor. This was supported by all players on the Irish political stage. In 1987, the newly elected Fianna Fail government won support for its programme of action (based on the NESC report) from the opposition party, Fine Gael, and from all other social actors: labour, business, and the still influential lobby group of Irish farmers. The implementation of this national agreement led to the dramatic turnaround in Ireland's economic fortunes in the early 1990s. All in all, seven of these three-yearly 'state of the nation' analyses have been undertaken by the NESC, followed by seven national agreements forged between all the key social partners. The seven analytical reviews and seven state programmes are summarised in Table 1 below:

Table 1: Seven Irish social partnership agreements and the NESC strategy reports underpinning them

No	Partnership Programmes	Time period	NESC strategy reports under-pinning partnership programmes
1	*Programme for National Recovery*	1987-1990	*A Strategy for Developmental*
2	*Programme for Economic and Social Progress*	1991-1993	*A Strategy for the Nineties: Economic Stability and Structural Change*
3	*Programme for Competitiveness and Work*	1994-1996	*A Strategy for Competitiveness, Growth and Employment*
4	*Partnership 2000*	1997-2000	*Strategy for the 21st Century*
5	*Programme for Prosperity and Fairness*	2001-2002	*Opportunities, Challenges and Capacities for Choice*
6	*Sustaining Progress*	2003-2005	*An Investment in Quality: Services, Inclusion and Enterprise*
7	*Towards 2016*	2006-2016 (10yr plan)	*People, Productivity and Purpose*

Source: O'Donnell 2008: 75

In Finland, the Science and Technology Policy Council (STPCF), has played a similar role. The STPCF is the pre-eminent policy body largely because of the high priority accorded innovation in Finland. The fact that the Council is chaired by the prime minister confirms its top-level status, thereby distinguishing it from many of its international counterparts which are often mere talk-shop bodies. Other members of the cabinet with a statutory membership include the Ministers of Education and Trade and

Industry, who are the vice chairs responsible for implementing science and technology policy and the Minister of Finance. The council is responsible for the strategic developmental and co-ordination of Finnish science and technology policy and of the national innovation system as a whole (Dahlman et al 2006: 43, 104). The Council defines national innovation policy through the publication of three-yearly strategic plans. The 2006 plan was entitled *Science, Technology and Innovation.*

Malaysia's economic development since 1970 has also been impressive, in large part a consequence of high levels of state planning and steering. There has been a plethora of plans ranging from long-term ten and 20 year cycles, to medium-term plans of quinquennial cycles. The most important of these are summarised in Table 2:

Table 2: The sequencing of national plans in Malaysia's socio-economic developmental, 1970 – 2010

Launch Year	**Plan**	**Duration of plan**
1970	*National Economic Plan (NEP) and its associated Outline Prospective Plan (OPP1)*	1971-1990
1990	*National Developmental Plan (NEP) and its associated Outline Prospective Plan (OPP2)*	1991-2000
1992	*Vision 2020*	1992-2020
2000	*National Vision Plan (NEP) and its associated Outline Prospective Plan (OPP3)*	2000-2010
1986	*1st Industrial Master Plan*	Ten years
1996	*2nd Industrial master plan*	Ten years
2006	*3rd Industrial Master Plan*	Ten years

Source: UNDP 2006: 24

All of these plans are linked and share common goals, differing primarily in terms of specific deliverables in particular time periods. There have been three consistent themes which have permeated these plans over nearly four decades: ensuring that *Bumiputera* interests participate in and benefit from economic growth; building a highly competitive, export-oriented economy; and finally, moving from a largely low-tech, labour intensive manufacturing strategy based on foreign investment in the low-wage electronics and micro-processor assembling sectors, to the development of more high-tech, higher value-adding indigenous manufacturing and advanced services.

Building social inclusion and trust

Social inclusion, trust and reduced levels of inequality are crucial ingredients in the long-term economic development plans described in the previous section. The work of Evans (1997) has been important in explaining the economic benefits which are derived from high levels of social capital and trust. He argues that state-society synergy can be a catalyst for economic development. Evans maintains that the norms of co-operation and networks of civic engagement among ordinary citizens can be promoted by public agencies and used for developmental ends. Evans has used these concepts of social capital and state-civil society synergy to explain the successes of the East Asian Tiger economies. He focuses particularly on the dense networks of ties that connect state agencies and private capital. Social consensus and buy-in regarding policy objectives are created in these joint business-government deliberation councils, in the maze of intermediate organisations, and within more informal policy networks.

These synergistic state-civil society relations are most evident in Finland and Ireland, and less so in Malaysia. Castells and Himanen (2002) argue that the distinctive feature of Finland's economic success is that it has not been achieved at the expense of social equality – as has been the case in the USA and Singapore, its main rivals at the top of the key innovation league tables. Finland's shift to the information society has been combined with a retention of the main features of the welfare state and low levels of social injustice and exclusion. It is precisely the solid foundations of social capital produced by inclusive corporatism that has enabled dramatic industrial restructuring without disruptive social instability or increasing social inequality (Kiander 2004: 20-23).

Ireland, in the period from 1987 right up until the economic shock of the 2008-2012 global recession, traveled a similar 'inclusive corporatist' route. There has been significant debate about an appropriate characterisation of the Irish state given its distinctive role in regenerating the economy in the 1987-2008 period – the era of globalisation and the triumph of free market regulation. Some have characterised the Irish state as developmental welfarism because of its strong focus on social inclusion. O'Connell, a state insider, who was Director of Research at the NESC, described the Irish state in the period 1987-2008 as an example of 'deliberative corporatism'. Problems faced by government were more complex and varied, requiring new processes of problem-solving and deliberation between the social partners. This agenda of deliberation widened after 1987, covering a vast spectrum of social issues including non-discrimination, ethnic minorities, stress at the workplace, social exclusion and enterprise training. In this role, Ireland broke dramatically with the British tradition of limited corporatism and its ideology of free market triumphalism during this 1987-2008 period, and started to evolve towards the continental European model of social concertation (Hardiman 2002: 1-2).

Malaysia represents a very different case to Finland and Ireland. Previously colonised by the British, the *Bumiputera* Malays were largely a very poor rural farming community up until 1970. The New Economic Policy dramatically changed this iniquitous social structure. It expanded education facilities and programs to the Malay population. The government also restructured industrial ownership in two ways. It created large investment trusts – similar to government-owned enterprises – which were to represent Malay interests in business ventures. Second, it required all companies to distribute 30 per cent of their assets to *Bumiputera* interests, and required a similar proportion of *Bumiputera* to be appointed to managerial posts. Malays of course controlled political office and the civil service. These affirmative action measures achieved dramatic shifts overnight. The incidence of poverty in Malaysia has been fundamentally eroded since the 1970s (Jomo 2004: 3). Income distribution has not changed as dramatically and inter-class inequalities remain relatively unchanged over the period 1970-2004. The bottom 40 per cent of society continue to receive less than 15 per cent of household income, even after the impact of the NEP and other seemingly pro-poor policies.

Another difference with Finland and Ireland is the illiberal nature of some of the powers acquired by the Malaysian state. Ritchie argues that the Malaysian state incorporates dual tendencies: on the one hand it is a classic liberal state promoting a free market economy and trade liberalisation, yet on the other, it is an illiberal version of the developmental state, exerting high levels of centralised control and coercion over society to achieve its policy goals (Ritchie 2001).

The state in Malaysia has a dual character: the one developmental, the other coercive. Malaysia's developmental state is founded on the hard interventionist industrial policies that have already been described above. In more recent times, overall economic policy has shifted to softer interventions, such as the push to build a knowledge economy via greater technological capability and promotion of HRD and ICT. However, even some of these elements, such as the Multimedia Super Corridor are administered out of the Prime Minister's Office under his personal command. This is a highly personalised form of horizontal co-ordination very different to that described in the Irish and Finnish case studies, where the office of Prime Minister was used for more consensual 'joined up' co-ordination.

A second feature of the Malaysian developmental state is its emphasis on coalition politics – as was the case in Ireland and Finland. Malaysia has been very successful in forming coalitions between the various ethnic interests to support the economic restructuring efforts of the dominant party. All of these parties came together in an alliance incorporating the ruling party, the United Malay National Organisation (UMNO), the Malaysian Chinese Association (MCA) and the Malaysian Indian Congress (MIC). This coalition was very effective from 1970 until recent times in bringing together the state with key business elites who agreed to redistributive policies to the benefit of the Malaysian poor in exchange for significant business opportunities and national development.

A third feature of Malaysian capitalism is its high level of corruption and the presence of widespread rentier forms of capital accumulation occurring amongst the Malay and Chinese business elite (Hart 1994: 53). This is of course an element of capitalist development shared with the earlier developmental paths of the Asian Tigers as well as China and India. Rentier forms of capital accumulation do not feature as prominently in the Finnish and Irish cases – yet it is emerging as a key feature of South African capitalism. Corruption and irregularities in the award of tenders are becoming an endemic feature of South African business (CASAS 2011: 3, Kinnes and Newham 2012: 34).

Managing horizontal co-ordination

The final developmental requirement as identified at the beginning of this article entails the need within government to effectively co-ordinate all of the diverse micro-economic components that together comprise the National Development Plan in each country. For example in Finland, the high priority accorded the NSI has required the integration of cross-sectoral policy domains such as education and training, science and technology and industrial policies. This approach necessitates a high degree of horizontal co-ordination across different parts of government, and between government and society (Dahlman et al 2006: 14, 40). The Prime Minister and his office have been the central institutional pillars in the process of turning Finland around since the early 1990s. They have consciously sought to build stronger forms of horizontal co-ordination as a more effective means of political steering and as a mechanism for ensuring the implementation of policy.

The actual form in which horizontal co-ordination is achieved across Finnish government is through the establishment of three to four intersectoral programmes, which are then systematically managed via the Prime Minister's Office. This approach was adopted for the first time as a new co-ordination tool in 2003. The three programmes adopted for the current period include:

- Employment, entrepreneurship and working life;
- Health promotion;
- The well-being of children, youth and families.

A key factor in the success of Ireland's post-1987 recovery has been the effectiveness of the state in its implementation of the seven multipartite national agreements. This success has in part been due to the effectiveness of several institutions, some existing prior to 1987, others established since then. Central to all of this has been the Irish state's emphasis on 'whole-of-government' or 'joined-up' policy implementation. Hardiman points to the application of 'whole-of-government' solutions to multi-agency problems (2006: 364). House and McGrath (2004: 43-45) argue that the most distinctive feature of the new forms of governance in Ireland has been its integrated, systemic and comprehensive nature. The role of the NESC has been crucial. Its three-yearly planning reviews of Irish society and the economy consistently adopted a wide-ranging and ambitious lens to examine socio-economic problems. The NESC always took a broad view, insisting that economic and social problems must be dealt with in an interdependent and integrated manner. Initially the focus was on macro-economic issues only, but as the fiscal and monetary position of the country stabilised in the early 1990s, so did the policy lens, which shifted to focus on a wider array of issues such as social exclusion, income inequality and regional disparities.

The key agency of the Malaysian developmental state is undoubtedly the Prime Minister's Office. With power highly centralised, particularly through the Economic Planning Unit, many of the major economic and industrial policy reforms have emanated, and have been implemented, from this office. These include: the push for new import-substituting industries in the early 1980s and the construction of key economic infrastructure such as the 13.5 km Penang Bridge linking peninsula Malaysia with the north-eastern island state of Penang; and the new administrative capital at Putrajaya outside congested Kuala Lumpur. Most importantly, the Multimedia Super Corridor and its Silicon Valley style city centre, Cyberjaya, was also driven by the Prime Minister"s office (Kheng 2002: 193). A clear expression of this office's policy formulation and implementation clout is the allocation of five additional ministers to the Cabinet (20 per cent of the cabinet with the Prime Minister), all housed in the Office of the Prime Minister.

After the 2008 financial shock

There is no doubt that the achievements of each of these three states have been affected – in differing ways – by the financial crisis which started in the USA sub-prime mortgages market in September 2008. Triggered by the collapse of Lehman Brothers, the fourth-largest USA investment bank, this crisis quickly spread across the globe, affecting financial markets, banking systems and real estate sectors in many countries, including the three examined in this article. The crisis continues to damage several economies four years later, especially the poorer southern European economies of Greece, Portugal, Spain and Italy but also Ireland. Finland and Malaysia have been less affected and have recovered more quickly. Space constraints disallow a detailed examination of the different trajectories of each of these countries through the present crisis. Because the crisis has not as yet settled, it would be premature to make definitive conclusions. What follows here are some preliminary insights.

Ireland has been the country most severely affected by the crisis of the three cases studied in this article. It led to the collapse of the social partnership model forged between government, business and labour which had underpinned the economic revival of Ireland since the late 1980s. Even though the NESC had prepared a report on the crisis entitled *Ireland's Five-Part Crisis: an integrated national response*, government ignored its findings in 2009/10 and unilaterally declared severe pay cuts in the public sector, tax increases and changes to the welfare system (Doherty 2011: 18). Relations between employers and unions have become more adversarial with many employers articulating a public antipathy towards unions and national wage agreements.

Finland's financial system was not as exposed as Ireland was to the global financial crisis because of its prudently managed financial sector, but it was severely affected in terms of trade and export levels. Real GDP levels declined 9 per cent from mid-2008 to mid-2009 led by an extraordinary 33 per cent collapse in trade volumes (OECD 2010: 3). Even ICT giant

Nokia was affected, having to lay off over 1,700 people in Finland. Other sectors affected were construction, forestry and paper. However, the social impact of the crisis was better managed in Finland by the social partnership system, especially the retirement system which allowed older workers to be retired early at 58 years of age, thereby avoiding larger levels of retrenchment of younger workers.

Malaysian banks had negligible exposure to the global financial crisis but the country was severely affected by a drop in exports, output, investment flows and employment. Malaysia's economy is one of the most open economies in the world, highly dependent on international trade. With the collapse of demand for Malaysian goods in 2008/9, exports levels dropped by 28 per cent, especially in the electronics sector (Khoon and Mah-hui 2010: 5). Exports of palm products as well as crude oil also dropped. As a consequence of this, industrial output fell and unemployment grew, but not as alarmingly as in other countries. The unemployment rate increased by less than one per cent from 3.1 to four per cent in 2008 (Khoon and Mah-hui 2010: 5).

Perhaps Malaysia's biggest problem has been the persistent decline of foreign direct investment into Malaysia and its migration to some of its lower cost neighbours. In part, this problem reflects deeper structural problems in Malaysia, primarily its inability to move up the technological ladder to more value-added production (Khoon and Mah-hui 2010: 33). Other factors contributing to this disinvestment are bureaucratic red tape, high levels of corruption, the lack of meritocracy in the public service, declines in the standard of education (especially the rapid growth of poor quality private provision), and shortages of skilled labour. As Khoon and Mah-hui argue, Malaysia is 'stuck in a middle income trap, losing its competitive edge as a low-cost producer to neighbours like Vietnam, Indonesia and Thailand' (Khoon and Mah-hui 2010: 33). Moving up the value chain is Malaysia's fundamental challenge, and the global financial crisis has made this task all the more difficult.

The developmental lessons highlighted in this article have not been negated by the impact of 2008-2012 global recession. The most important lesson still stands – that high levels of horizontal co-ordination are necessary to achieve a virtuous circle of policy complementarities between human resources development, industrial development, science and technological innovation, employment and economic growth. That this virtuous circle does not function as smoothly during a severe financial crisis does not negate the value of its earlier trajectory or the possibility of its resurrection in a modified form in the future.

Secondly, the particular trajectories followed in each country created huge human capital assets which were absorbed by growing economies which in turn enabled increased employment and social inclusivity. These human capital assets are not lost because of the financial crisis and will be available to these societies as they recover.

South Africa as a developmental state

The local literature on developmental states highlights a number of factors which limit the potential of the South African government to attain this status. Most of these factors affect the ability of the South African government in meeting the five pre-conditions for developmental states highlighted in this article. Constraining factors include: dysfunctional state institutions; fiscal austerity and weak industrial policy; poor cross-departmental co-ordination; low trust; and the failure to ramp up education and training. Each of these will be briefly examined.

Dysfunctional institutions

Critical articles highlight the dysfunction of many key state institutions, and their inability to implement policy and deliver socio-economic services (Gumede 2009: 24, Edigheji 2010: 5-7, Marais 2011: 346-52). Von Holdt, in an in-depth case study of the public health system, provides a detailed description of the failure of the South African bureaucracy. He examines organisational culture and 'processes of meaning-formation, the informal codes which shape officials' priorities, choices and interactions with others' (2010: 10). In doing so, he highlights the contradictory tension between, on the one hand, building a new state resting on modern bureaucratic skills, and on the other, promoting the nationalist project which has entailed rooting out white oppression and replacing it with a system which 'enshrines the sovereignty and dignity of Africans' (2010: 9). The latter process has been corrupted as the strata of new public officials join the privileged classes and continually seek their own promotion, '"facing upwards" towards the next job prospect, rather than "facing downwards", that is, focusing on improving the functioning of the domain that the official is responsible for' (2010: 11). This process of rapid upward mobility and elite formation is extended through the culture of extreme deference towards those in authority both in the civil service and in political leadership. This draws attention away from the purpose of the institution. It acts to prevent people from addressing real problems in public delivery. In addition, the post-apartheid bureaucracy remains extremely hierarchical. Provincial officials tend to adopt an autocratic attitude towards senior managers in the hospitals (the skilled clinical experts, many of whom continue to be white) and treat them as junior employees. The assertion of hierarchy becomes a mechanism to conceal problems and avoid challenges.

GEAR and the weakening of industrial policy

A second important difference with Finland, Ireland and Malaysia is that South Africa has not made the shift from fiscal austerity to the more mature second phase of development which the three model countries undertook, emphasising technological upgrading and the building of a knowledge economy through the promotion of an inter-dependent basket of education, innovation and industrial policies. South Africa, in contrast, has continued to be locked into conservative monetary policies, even through a mini-boom period from 2001 to 2008. This is all due to the prominence of the *Growth, Employment and Redistribution Strategy* **(**GEAR) which was launched in 1996. Its primary goal was to attain macro-economic stability through a battery of orthodox stabilisation policies, with fiscal austerity and monetary constraint being the main levers to reduce demand and hence reduce the balance of payments deficit. The initial impact of GEAR was harsh; cutbacks were experienced in many critical areas of social policy such as education, health and social welfare. High interest rates were maintained in an attempt to bring control over soaring inflationary conditions. Labour market conditions were tight, with few new jobs being created and significant job losses occurring in vulnerable sectors. The rise of GEAR represented the triumph of fiscal conservatism and the dominance of the Treasury, with minimal institutional attention given to the big issues of unemployment, poverty and inequality (Adelzadeh 1996: 67, Nattrass and Seekings 1998, Marais 2011: 112-20).

In the period after 2001 South Africa witnessed a small shift beyond fiscal austerity towards a more expansive state. By 2001, GEAR's austerity measures had paid off. Economic growth rates had improved significantly. An important consequence of this growing confidence in the economy was the gradual expansion of state expenditure on social and economic infrastructure. These increases were funded in part from declining debt service costs as well as from improved tax revenue collections. These developments represented an important shift in economic policy away from a reliance solely on the austerity measures of monetary policy towards a more expansive micro-economic policy outlook. The latter was seen as providing the necessary stimulus for growth, particularly through the lowering of input costs in production and through improved service delivery including road, rail, air transportation, water, energy and telecommunication services (Kraak and Press 2008).

However, this turnaround has been modest, with industrial and innovation policies still subordinated to GEAR's strict fiscal discipline. Industrial policy implementation has remained weak (Adelzadeh 1996: 83-84). The policy formulation phase – on the surface – appears impressive. For example, the 2007 launch of the *National Industrial Policy Framework* (NIPF) (DTI 2007) maps out an impressive agenda to facilitate diversification of the economy away from its traditional reliance on minerals and mineral processing towards increased value formation. Although this may sound commendable, actual implementation has been limited.

Hausmann, Rodrik and Sabel (2008), influential Harvard University professors and economic advisors to Trevor Manuel, then Minister of Finance, are critical of the NIPF because its 'customized sector programmes' do not engage and dialogue with employers sufficiently to overcome severe informational failures in key sectors of the economy (2008: 16). They argue for a new industrial policy 'in the small' based on the practice of 'self-discovery'. It requires firms, intermediary agencies and government officials to co-operate to identify blockages and market distortions which inhibit economic growth in specific sectors. Also, new areas of global growth frequently emerge and need to be identified. Countries and firms that are able to identify these trends early on have a first-mover advantage in new markets.

The ability to identify and act upon these opportunities requires complex processes of 'self-discovery' which match new potential areas of global growth with existing or potential capabilities in order to overcome the fundamental information market failures involved (Rodrik 2004). Collaboration amongst firms, and between government and key sector associations is critical – 'good industrial policy "in the small"' consists of 'those institutional arrangements and practices that organize this collaboration effectively' (Hausmann et al 2008: 4).

Hausmann et al maintain that South African government officials do this 'self-discovery' very badly, primarily because of poor dialogue with business leaders in each customised sectoral programme, and because of inadequate follow-through by state officials after such dialogic interactions (2008: 16). In sharp contrast, these acts of 'self-discovery' have been executed very effectively by government and business collaborating in key sectors in both Finland and Ireland.

An influential OECD review of South Africa's innovation system in 2007 noted the almost total neglect (in official industrial and innovation policies) of the role that large firms play in innovation and growth. The OECD review makes the powerful point that historically most private sector R&D has emanated from large firms based in the resource-intensive sectors and related upstream and downstream activities (OECD, 2007: 82). The review notes that large firms in South Africa appear to have played and continue to play the same role large firms elsewhere in the globe play, that being to:

> … act as leading accumulators of knowledge resources, diffusing significant fractions of those resources more widely into the economy, especially to smaller firms, and contributing to the long term evolution of the structure of the economy. (OECD 2007: 90)

The OECD argues that because of the linkages between the minerals industrial complex with other sectors of the SA economy, there are a myriad of value chains in a variety of sectors which have benefited in the past from the dynamism of these large companies in terms of both R&D and non-R&D activity (2007: 92). The benefits to smaller supplier firms in these supply chains are potentially enormous.

A similar policy vacuum exists in relation to large, multinational corporations (MNCs) operating or wishing to operate in South Africa. There is no pro-active encouragement of MNCs to invest in South Africa on terms beneficial to the South African value chains that would emerge around such MNCs. Policy focuses only on influencing the behaviour of domestic firms. The OECD review notes that it was 'not possible to find many examples of such initiatives in South Africa and the impression was gained that such activities would not be supported by government or by the national development bank, the Industrial Development Corporation' (2007: 106).

There is at least one exception to this OECD argument, and that is the *Motor Industry Development Programme*, which provides substantial support to MNCs in the South African automotive industry. Barnes (2009), however, remains skeptical of progress made so far, arguing that only an upper tier of South African automobile component suppliers operate at levels that are close to the global frontier. In other parts of the auto sector, performance is not as impressive. For example, in the components supplier domain, South African firms have surrendered key supply chain functions to foreign-owned firms with connections to the original equipment manufacturers (2009: 26-27).

Poor cross-departmental co-ordination

Cross-departmental co-ordination in South Africa is weak (Kraak 2011). The 1998 Presidential Review Commission into the public service chaired by Vincent Maphai, noted 'serious weaknesses in the current structures and mechanisms for co-ordination both within departments and provinces and between different spheres of government' (as quoted in Gumede 2009: 28). The Mbeki government from 1999 to 2008 attempted to improve horizontal co-ordination through a number of structures linked to the Presidency. He established a cluster system to manage medium- to long-term planning frameworks. Cognate departments in key areas such as social and economic policy were grouped together at the level of Ministers and Directors-General, who were then required to plan together to achieve the core micro-economic objectives. These plans were interrogated, adapted and finally approved by the President and Cabinet at half-yearly Lekgotlas. However, according to Gumede, these structures do not resolve the problems of both horizontal and vertical co-ordination. He argues that in the absence of central capacity to drive priorities and ensure quality control, these structures are still largely limited to monitoring the separate, sometimes contradictory, policy agendas adopted by individual departments (2009: 23).

The *Fifteen Year Review* produced by the Policy Co-ordination and Advisory Services unit in the Presidency admits that co-ordination and planning are ongoing challenges, with 'factors militating against effective integration in government more deeply rooted and more difficult to overcome than initially recognised'. One of the factors acknowledged are the statutory provisions which make public officials accountable in the first instance to their line-function responsibilities – and not to the collective requirements of the cluster. The *Fifteen Year Review* argues that a system of co-ordination based on voluntary co-operation has insufficient countervailing force to overcome such factors. Director-general and Ministerial cluster meetings 'lack the powers which genuine oversight would require: to take corrective or integrative action when required' (PCAS 2008: 110). The Zuma government in 2009 established the National

Planning Commission to resolve some of these co-ordination problems. Although it has published an impressive *National Development Plan: vision for 2030* (RSA 2011) for public comment in 2011-2012, it is too early to determine whether this framework will improve cross-departmental cooperation and co-ordination in the medium to long-term.

Low levels of trust

Fourthly, levels of trust and social inclusion are at an all-time low in South Africa since 1994. Low trust results in the absence of a strong pact between government and industry aimed at growing the economy jointly and inclusively as was established, for example, by the NESC in Ireland since 1987. There has never been an explicitly pro-capitalist pact forged between industry and government in South Africa as has been the case in the other countries under consideration. As indicated earlier, rather than forging ties with large firms – both local and international – the South African government remains distant and distrustful. This stance deprives the country of achieving the development pacts which underpinned the economic success of Finland, Ireland and Malaysia.

There has been no effective development pact signed between government and the unions since the Growth and Development Summit of 2003 and even this pact does not compare with the social compacts signed between unions and the state in Ireland and Finland. Relations have indeed become more adversarial in the last few years, particularly after the advent of the global recession of 2008. Union demands are now much more narrow and self-interested, largely about wage hikes.

Failure to ramp up education and training

Perhaps the greatest shortcoming in South Africa's attempts to become a developmental state has been its failure to increase substantially the number of people entering and graduating from post-school institutions with employable skills. The education crisis has been well-documented and this section will briefly outline some of the data (see Kraak and Press 2008). Participation rates in key institutions in the 18-24 age group are low. For example, Kraak (2011b) reports that absolute headcount enrolments in the further education and training college sector have not been able to grow beyond the upper benchmark of 420,000 over the past decade. This suggests little institutional capacity to ramp up to reach the official of one million learners by 2014.

Secondly, although higher education has changed dramatically since 1994 with African enrolments having more than doubled from 27 per cent proportionately in 1986 to 62 per cent in 2004, participation rates are still low – only 16 per cent of those between the ages of 18 and 24. This ratio has remained relatively unchanged over the past decade. It is far lower than Ireland's participation level of 55 per cent or Finland's 85 per cent achievement.

The flat structure of enrolment over the past decade in these two sub-sectors suggests an inability to expand substantially enrolments in the system. Educational outputs are equally bad, rendering the actual number of graduates from each sub-system extremely low. For example, in 2007 Scott, Yeld and Henry presented the first set of higher education throughput data made publicly available. This data was based on the 2000 cohort who entered higher education for the first time. The results are sobering. Only 30 per cent managed to graduate in five years. Worse still, 56 per cent left higher education without graduating, and 14 per cent were still in the system in 2006 trying to 'catch up' and graduate (Scott et al 2007: 12). With these restrictive educational conditions, South Africa will struggle to adapt to the high skill demands of the global knowledge economy.

Conclusion

A number of observations can be made in relation to the countries studied. Firstly, their development trajectories have been shaped by very different historical contexts. The illiberal and coercive regime of Malaysia stands in sharp contrast to the more social democratic transitions in Finland and Ireland. Secondly, as cautioned in the introduction, these case studies are not highlighted for the purposes of crude policy emulation in the South African context. Features from other countries cannot be automatically imported into the South African context.

They differ also with regard to the primary industrial policy instruments adopted in each context. Ireland enticed foreign investment through low tax rates, particularly in the financial services sector. Malaysia prioritised the development of intermediate manufactured goods and now aspires to move up the value chain towards the knowledge economy but its weak human resource base has been its main limitation in this regard as is the case with South Africa. Finland is perhaps the most successful of the three stories, having prioritised the ICT and electronics sector as the main vehicle for the dramatic diversification of its economy alongside a very effective use of science and technology to raise productivity and innovation levels throughout industry.

Conditions are very different in each context. Yet, they share similarities. For example, it is clear that a wide variety of well-managed state institutions has proven critical in attaining the horizontal co-ordination function in all three countries – institutions such as the National Economic Councils located in the Prime Minister's Office and the myriad of industrial, innovation and education agencies described in each of the case studies. This 'thick' institutional environment is contrary to the dictates of neo-liberal orthodoxy, which rejects regulation of economic activity. Yet in each case, state institutions have differentially intervened in the economy to steer socio-economic development.

Additionally, each of the three countries achieved very high levels of cross-departmental co-ordination across a number of policy domains in the past two to three decades – alongside impressive improvements in relevant education and training. In particular, education and training policies have been very skilfully joined together with industrial and innovation policies to create the critical knowledge underpinnings and learning capabilities required by these developmental states to move up the value chain towards a more knowledge intensive economy.

The comparative analysis put forward in this article has shown that progress in moving up the value chain is highly differentiated, with Finland by far the global leader, Ireland making significant progress to catch up, but with Malaysia struggling to overcome many of its human capital weaknesses. South Africa is positioned significantly further back on this value chain spectrum with little progress to increase value through becoming a more export-oriented economy less reliant on minerals and mineral processing. In addition, South Africa's education system is rated one of the poorest performing systems in the world and the capacity of the state to manage its key institutions is very weak. Taken together, these constraints impose very serious limitations on South Africa reaching its goal of becoming a successful development state anytime soon.

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