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Debating high skills

and joined-up
policy



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Preface

This occasional paper arose out of the visit to South Africa by Hugh Lauder, Professor of Education and Political Economy at Bath University and leading contributor to the high-skills debate. Professor Lauder made two keynote speeches at the Pretoria and Cape Town launches of the *HRD Review 2003* released by the Human Sciences Research Council (HSRC) in March 2004. The two contributions in this book by Lauder, with his colleagues Phillip Brown and David Ashton, are reworked versions of these keynote addresses.

Andre Kraak provides an introduction to the debate on high skills and its relevance to the South African context. He argues that although the high-skills thesis requires significant adaptation if it is to be relevant to the developing world context, the adaptation already undertaken in the South African context has enriched the debate and taken it to a higher plane.

Readers may be interested in seeking further South African contributions to the debate, which are contained *HRD Review 2003* (HSRC 2004) and in a second special edition of the *Journal of Education and Work* (Volume 18, Issue 1 of 2005) dedicated to the high-skills thesis, in this case, as it applies in the South African context.

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Acronyms

COSATU	Congress of South African Trade Unions
ELIM	extended internal labour market
EPWP	Expanded Public Works Programme
ET	education and training
FET	further education and training
GEAR	Growth, Employment and Redistribution
HRD	human resources development
HSE	high-skills equilibrium
IPR	intellectual property right
LSE	low-skills equilibrium
MNC	multinational corporation
NEPI	National Education Policy Initiative
R&D	research and development
RDP	Reconstruction and Development Programme
SETA	Sector Education and Training Authority
SME	small and medium enterprise
VET	vocational education and training

1 High skills and joined-up policy: an introduction to the debate

Andre Kraak

The high-skills thesis

The high-skills thesis arose out of the work of a team of United Kingdom educationalists in the late 1980s and 1990s who sought to explain the high degree of divergence and variability in production systems and economic performance across societies otherwise seemingly alike in the advanced economies of the world (see Finegold & Soskice 1988; Finegold 1991; Ashton & Green 1996; Crouch, Finegold & Sako 1999; Brown, Green & Lauder 2001). The key to this diversity, they argued, lay with the differing social foundations and the cultural and historical factors underpinning economic development in these countries. They borrowed strongly from the French Societal School, which argued that the ‘social foundations of production’ played a critical role in shaping the effectiveness of the market mechanism (Maurice, Sellier & Silvestre 1986). These ‘social foundations’ vary widely between national economies, thereby differentially altering the way in which the market economy functions in each case. In some countries, for example, those in continental Europe, the presence of government legislation and institutional arrangements that impinge on the functioning of the market mechanism and cede to the state and organised labour a role in economic development have acted, in fact, as catalysts for growth and global competitiveness.

Finegold and Soskice pioneered the UK version of the debate on high skills through their work aimed at revealing the combination of conditions that must exist if an economy is to reach a ‘high-skills equilibrium’ (Finegold 1989). Finegold defines ‘equilibrium’ – the key concept in his approach – as signifying the self-reinforcing nature of the network of institutional pressures that act to reinforce the continuation of a given skills-formation system and a given economic growth path. A change in one institutional variable (for example, improved education and training delivery) without corresponding

shifts in the other institutional variables 'is unlikely to lead to a long-term shift' in the social and economic system as a whole (Finegold 1989: 2).

Finegold distinguishes between two ideal types of economic and education and training (ET) systems: an institutional framework based on a 'low-skills equilibrium' (LSE) and one based on a 'high-skills equilibrium' (HSE). An LSE type is defined as an economic system characterised by low-cost, low-skills and standardised production. Britain is viewed as being typical of an LSE society 'trapped in a low-skills equilibrium, in which the majority of enterprises are staffed by poorly trained managers and workers produce low-quality goods and services' (Finegold & Soskice 1988: 22). The self-reinforcing network of British institutions that interact to stifle any transition to a higher skills base include 'the organisation of industry, firms and the work process, the industrial relations system, financial markets, the state and the political structure, as well as the operation of the ET system itself' (Finegold & Soskice 1988: 22).

Finegold spells out specific LSE institutional factors that discourage and constrain any movement towards a high-skills alternative. The effective reversal of these LSE factors produces an HSE system. Finegold's LSE institutional factors include:

- capital's lack of long-term human resources planning;
- an emphasis on the production of low-cost, low-skills products;
- the absence of a successful export-oriented, competitive manufacturing strategy;
- minimal state intervention in ET and labour markets;
- a financial system driven by the rules of the stock market (quarterly dividends and short-term gains), which fails to prioritise long-term investments in human resources and long-term growth in productive assets;
- uncoordinated state policies in the spheres of economic growth, industrial relations and ET;
- incoherent ET policies and a divisive qualifications structure that limits mobility between ET institutions;
- a lack of co-operation between state, capital and labour; and
- low educational attainment levels for the majority of workers in the economy – in particular, low 'staying-on' rates in the critical 16-plus post-secondary age category (Finegold et al. 1990: 14–23).

The strength of Finegold's institutional approach is that it highlights the errors of previous ET policy reforms, which have too easily attempted to copy individual institutional features 'within overseas ET systems without any apparent intervening appreciation of the broader social, economic, technological and organisational contexts within which these institutions operate' (Keep 1991: 32). In other words, attempts are made to alter the shape of ET in isolation from changes to other institutions that have a significant influence on the character of ET itself. As Finegold warns:

raising the skills of employees can improve productivity only if it occurs simultaneously with other changes within the firm – for example, new technology and the reorganisation of work ... To make the investment in training and the other components of an HSE pay off, a company must be able to organise the work process in a way that encourages continual innovation. It makes no sense, for example, to raise the competencies and expectations of a production worker if s/he is then given a narrowly defined job that consists of a series of repetitive tasks. (Finegold 1989: 15, 25)

A piecemeal, ad hoc and unregulated approach to ET reform is unlikely to have a significant impact on macroeconomic performance. To contribute successfully to economic expansion, an ET policy must outline coherent and integrated changes in a range of related institutions, including the economic, human resources and ET agencies of the state, the labour market, the social organisation of work and in the forms of employer and trade union organisation.

Brown et al. (2001) and others (Ashton & Green 1996; Crouch et al. 1999) have expanded on this earlier work by developing what they call a political economy of skills formation, which argues that issues of skills formation and economic performance are socially constructed and experienced within social institutions such as schools, offices and factories, and can be organised in different ways. These differences not only give rise to variations in productivity and economic performance but also lead to significant 'differences in the distribution of income, employment opportunities and life chances' (Brown et al. 2001: 30).

Another theoretical influence has come from 'economic sociology', specifically its concern, given the new production conditions under globalisation, for the seemingly paradoxical rise of relations of both competition and co-operation

(networking) between firms in related product markets. Enterprises participating in purely competitive markets aim to eliminate competitors through self-interested and hostile market behaviour, often through cost-competition. However, under the new conditions of production, which emphasise quality, design configuration and continuous innovation, this opportunistic behaviour is short-sighted. The continual pressure for product market innovations, technological breakthroughs, access to expertise and a skilled workforce are often beyond the means of a single firm but are feasible through co-operation amongst a number of firms. By collaborating around research and development (R&D), training, marketing and producer-supplier relations, firms gain access to the knowledge and expertise of other firms, reduce the costs of R&D and, through joint innovation, are able to design new processes and products.

Human resources development (HRD) is considered a 'collective action problem' in the economic literature because the market mechanism fails to provide for it in its entirety. The most common example of market failure in the field of HRD is the standard externality problem whereby individual employers, when faced with training decisions based purely on 'free market' principles, most often do not engage in sufficient training for society's needs. When employers do train, they tend to train in narrow, company-specific skills. Those employers who do not train, poach.

However, market failure becomes a more severe problem when considered against the complexity of changes required by the shift up the value chain towards higher value-added production. Private enterprises and the market mechanism are not well placed to initiate this vast array of changes, precisely because the benefits that accrue to society as a consequence of the changes are far greater than those accruing to the individual employer. This is at the heart of the 'collective action problem'. The problem is premised on the dilemma that for dynamic growth to occur, investments in infrastructure are essential on a scale far beyond the means of any single employer (Finegold 1989: 22). Most often, employers resolve this dilemma by acting in an opportunistic and short-term manner – for example, by promoting company-specific skills, product-specific technology and company-specific marketing expertise (Chang 1994: 8).

Streeck (1992) takes the problems of collective action, externalities and the need for government subsidisation of the provision of public goods (such as

education, health and social infrastructure) several steps beyond their conventional neoclassical understanding. He extends the definition of public goods to the concept of collective production inputs. These are inputs required in the new production regime, which he calls 'diversified quality production', and which has significant collective properties that are not individually appropriable (Streeck 1992: 22). The demand for these inputs has risen significantly under diversified quality production. Individual employers are unable to generate these inputs, and unilateral state provision of them would be less than ideal. Streeck (1992: 22) argues for the appropriateness of 'behavioural regulation of market participants with obligations to suspend competition and protect their mutual expectations of bona fide cooperation'. What is required is a careful mix of new forms of market and state interaction. Examples of these collective production inputs are:

- *Social peace*. Within the firm, this input cannot be hierarchically acquired but is reciprocally shared. Outside of the firm, there are important externalities between firms that make 'peace more likely for any individual firm if it exists, too, in the neighbourhood'.
- *Ecological synergies*. The well-being, prosperity and technological capability of a community of firms cannot be owned by a single firm, but is a collectively owned production good. The ecological well-being of a network of firms cannot be guaranteed by one firm, but only by sophisticated institutional arrangements. It has to do with the development of strategic alliances and networks between firms, based on trust and co-operation, which allow individual firms to reach the high quality-production, R&D and training standards required in diversified quality production, but which they would not be able to attain in isolation from such networks.
- *Congenial organisational environments*. These are characterised by co-operation and flattened hierarchies in which the tacit knowledge and expertise of workers can be collectively acquired. These skills cannot be individually coerced.
- *Multi-functional skills competence*. Such capabilities require institutional arrangements that motivate investments, by employers and unions, in knowledge rather than in narrow job demarcations. Rapid technology diffusion and investments in a congenial organisational ecology entail the sharing of knowledge amongst potential competitors (Streeck 1992: 22-24).

Streeck warns against a market-regulated social structure that emphasises contractual exchange between utility-maximising individuals, because it will fail to acquire these collective production inputs so critical for diversified quality production in the new economy. It is only when the state plays a key role in the development and maintenance of a socially regulated institutional environment that these new collective inputs are likely to materialise on the scale required by the new global economy.

There has been a steady increase in the academic interest shown in the role of institutions in economic life. Pivotal contributions have been made by: the French 'regulation' school (Aglietta 1979; Lipietz 1988); the American 'social structures of accumulation' school (Gordon, Weiskopf & Bowles 1983); the 'societal' school (Maurice et al. 1986); the new institutional sociology (Streeck 1992; Crouch & Streeck 1997; Rodgers, Foti & Lauridsen 1996; Dore 2000); and the new institutional economics (Chang 1994, 1998).

Institutional substructures are also seen as important in the high-skills literature because they constitute non-market social institutions and social processes that assist in acquiring the collective production inputs central to the new global economy, which would not be as easily acquired through the market mechanism alone. Multifunctional skills competence and social obligations on employers to train are two typical examples of non-market inputs. Co-determinist societies with 'thicker' institutional arrangements, and associational networks that govern economic relations (for example, Germany, Japan and Singapore), tend to be more successful in attaining high-skills, high-performance production systems than those countries with 'thinner' institutional arrangements where economic relations are almost entirely governed by the market.

Joined-up policy

A key concept associated with the high-skills thesis and its concern for the relations between institutional substructures (such as those between the education system, labour market and economy) is that of joined-up or cross-sectoral policy co-ordination and complementarity. 'Joining up' is essentially an argument about the necessity for educational reforms to interlock with macroeconomic, industrial and labour market reforms so that their combined impact has a better chance of meeting the new conditions for global

competitiveness – the attainment of high-quality manufacture through a highly skilled and highly productive workforce. This view of policy and planning sees educational reform as constituting one component of a necessarily larger set of socio-economic reforms. It posits the argument that the attainment of successful reform in one institutional sphere is conditional on parallel changes occurring in others.

From an economist's perspective, Finegold (1991) pioneered this institutional analysis of ET by arguing that distinctive growth regimes are based on the interaction of a particular configuration of social institutions with the larger macroeconomy. According to Finegold, this produces an equilibrium: a tendency for these institutional structures and patterns of social action to stabilise and gel to produce a self-reinforcing social system. This can be characterised either by a virtuous circle of economic and social development (a high-skills equilibrium), or by a vicious cycle of low growth, unemployment and social insecurity (a low-skills equilibrium). In the case of the latter, economic reform will only succeed if countervailing tendencies are triggered across all social institutions and in all strategic decisions. The introduction of uni-dimensional, single reforms, for example, without systemic changes in the other interlocking institutional structures and social processes, will fail to trigger the all-important countervailing tendencies. Complementary policies that cohere well will produce a self-reinforcing and interlocking social system, acting as the 'glue' of the new social order:

It is those countries that can successfully develop 'joined up' policies involving different government departments, regional assemblies, employer organisations, trade unions, and local communities that are most likely to achieve a significant upgrading of skills. This is not only true with respect to policy formation but also their implementation at the local level, for instance, in schools, universities, training centres and small and medium-sized enterprises. (Brown et al. 2001: 44)

Two key requirements for joined-up state action are firstly, the effective co-ordination of information across a wide array of policy domains; and secondly, cross-sectoral planning processes based on comprehensive information. The problem of co-ordination in complex capitalist societies arises because of a lack of communication between transacting economic agents, the one not knowing

what the concurrent decisions and plans of the other are. Resolving this co-ordination dilemma will induce costs that may be high in contexts of multiple economic agents.

The solutions to the co-ordination dilemma under advanced capitalism lie with the state and with various collective institutional arrangements that act to reduce transaction costs and resolve the co-ordination problem. Chang (1994) looks primarily at industrial policy as a key lever of state intervention that can act to resolve the dilemma, and lists several benefits that arise as a result of state co-ordination of the economy. These include:

- *Targeting winners.* The need for strategic targeting arises out of the massive shifts in global trade over the past two decades. This has entailed the adoption of a targeted approach to economic planning – a focus on which manufacturing products can best capture comparative advantage in the global economy. Therefore, sectoral targeting policies are aimed at developing particular niche industries to ‘achieve outcomes that are perceived by the state to be efficient for the economy as a whole’ (Chang 1998: 60).
- *Promoting technological change and R&D.* Another key function of the co-ordinating state is enhancing technological capacity. Private enterprise alone cannot build up indigenous technological capacity (ITC). The enabling state is a necessary precondition for ITC to occur (Kaplinsky 1990: 24). ITC is very costly and can only be developed, adapted and diffused in the long term. This entails capacities well beyond the means of single employers. The need for an active state pursuing ITC has become more acute since the late 1970s with the advent of a whole new generation of technologies, including information technology, biotechnology and materials technology. Those countries not pursuing active technology policies are likely to fall further behind in the race for international competitiveness.
- *Visioning.* The state can perform other economic co-ordinating roles in addition to the broad ambit of industrial policy measures raised above. These include visioning – providing a broad vision of the future of the economy, which acts to generate ‘a voluntary coordination of activities which could be achieved through private agents’ (Chang 1998: 54). Chang argues that providing such a focal point around which decisions can be co-ordinated may lower transaction costs, which would otherwise be high if investments in complementary projects were agreed upon only through

private bargaining (Chang 1994: 53). Good examples of these visioning documents are the Japanese and French indicative planning exercises, and the substantive policy visions produced by Singapore ('Vision 2020' and the 'Next Lap') to map out its next development phase (Ashton & Green 1996: 167, 169).

Brown et al. (2001) argue that it is because of the complexity of contemporary economic life, particularly in its thick institutional settings, that co-ordination needs to be more systematic, requiring detailed foresight planning and the co-ordination of national and regional economic development through networks of local stakeholders, national strategies, research institutes, technopoles and global companies. The role of government, they argue, 'is not to direct but to inform, facilitate and coordinate' (Brown et al. 2001: 45).

The need to rethink the high-skills thesis

The high-skills thesis and its associated literature provide a useful theoretical framework for understanding divergence between skills-formation systems across the globe. However, many of its theoretical premises are flawed, particularly with regard to its applicability to the developing world. A rethink is required for several reasons.

Firstly, the reality of high-skills production is that it actually only occurs in a few sectors of the leading advanced economies, including information technology, biotechnology, pharmaceuticals, aircraft manufacture, machine tools, the high-skills end of financial and business services, and the high-skills professions in the civil service, law and medicine.

Secondly, the high-skills thesis, along with much of the globalisation literature, exaggerates the changes impacting on manufacturing. Analyses of economic change tend to overstate the shift within manufacturing towards higher value-added production, and to overemphasise the shift from manufacturing to services, particularly the high-skills 'information age' financial and business services. The reality is far less dramatic.

Thirdly, the neglect of manufacturing has a further ripple effect – the undervaluing of intermediate skills. Crouch et al. (1999) make the case for a more nuanced reading of the industrial change currently taking place. They

establish a useful correspondence between high, intermediate and low skills bands and certain economic sectors dependent on these skills bands. This correspondence arises because certain product markets lend themselves to particular skills inputs – low, intermediate or high.

Fourthly, the skills typologies developed by Brown et al. and other writers on high skills have not yet been applied and tested in countries other than predominantly high-skills societies. In the case of the United Kingdom, the authors acknowledge pronounced levels of skills differentiation within one nation state, which they term bipolar – both low-skills and high-skills formation with increasing polarisation of skills taking place in one society simultaneously.

However, there is even more extreme skills differentiation in the case of developing economies. The push for higher skills is also applicable here, as Kaplinsky (1995) confirms, because even these less-developed countries need to build strategies for moving up the value chain towards higher value-added production. The new production techniques based on high skills often coexist alongside older forms of industrial organisation such as batch (reliant on artisan skills) and mass production (reliant on the mass provision of operative and intermediate skills). The new high-performance production techniques and their associated high-skills requirements are, therefore, never totalising expressions of national economic need but rather reflect the demands only of those strategic sub-sectors that have undergone change towards the new high-skills, high-performance production regimes. Therefore, the transition to a new mode of regulation is uneven, and the dominance of a particular industrial paradigm is never total.

There are clearly serious conceptual problems with the ideal-type categories of high-skills societies as defined by the high-skills discourse. Alternatively, what is required is a conceptual model of skills formation that allows for far greater unevenness and variability in terms of the skills needs of a country's specific development trajectory (particularly those countries located in the developing world). These needs are unlikely to be only for high skills.

Application of the high-skills thesis to South Africa

Apartheid left in its wake a highly deficient skills legacy. Skills training in the late apartheid period can be characterised using Finegold's categories as a low-

skills equilibrium, predicated on market regulation, a weak institutional environment based on voluntarism, the continuation of a racially defined 'education-labour market' regime, the absence of joined-up state policies and social trust, and the predominance of short-termism and narrow skilling as the defining features informing investments in human capital (Kraak 2003a). Low skills and cheap manual labour have been key defining features of South African capitalism since the discovery of diamonds and gold in the late nineteenth century, which led to a specific form of industrialisation (minerals-driven) during the first seven decades of the twentieth century.

However, in parallel with the development of this cheap-labour minerals-economy, South Africa also acquired sufficiently developed manufacturing, telecommunications and high-end services sectors capable of diffusing several elements of the new production techniques. South Africa has grown key export sectors over the past decade, particularly the automobile industry (Altman & Mayer 2003).

In addition, intermediate skills continue to play a significant role in the South African economy and, more generally, in other developing and developed economies. Given all of these high-, intermediate- and low-skills attributes, it would be more useful to talk of a hybrid and differentiated skills-formation system in South Africa.

However, the typology is further complicated by post-apartheid political-economic policies, with a democratically elected African National Congress (ANC) government that seeks social democratic reforms to the market economy, in particular a skills development strategy that seeks to enhance the integrative and interlocking potential that exists between social institutions rather than their further bifurcation – as is clearly the case in the typology developed for the United Kingdom.

Table 1.1 attempts to develop this model of a hybrid and differentiated skills regime appropriate to South African conditions alongside three of the high-skills ideal-types developed by Brown et al. (2001) for Germany, Singapore and the United Kingdom.

Table 1.1 Adding South Africa to the Brown et al. skills-formation typologies

Key characteristics	High-skills society	Developmental high-skills society	Bipolar high-skills/low-skills society	Hybrid and differentiated low-, intermediate- and high-skills
Country	Germany	Singapore	United Kingdom	South Africa
Labour market – ET institutional regime	Occupational labour market	State-guided labour market	Flexible labour market	Highly segmented and inequitable labour market comprising: <ul style="list-style-type: none"> • a small, flexible market for high-skills • a sizeable but weakly evolved market for low to intermediate skills • a large secondary market for the unskilled and unemployed
Characteristics of the financial system and its impact on management style	Stakeholder capitalism, based on interlocking links between bank finance and industry long-term development of productive capacity and HRD	Stakeholder capitalism, based on interlocking links between bank finance and industry supported by state industrial policy	Shareholder capitalism, based on dominance of the stock market over industrial investments; short-term perspective and under-investment in productive capacity and HRD	Shareholder capitalism, based on dominance of the stock market over industrial investments leading to short-term perspective and under-investment in productive capacity and HRD
Characteristics of skills formation	Broad band of high-skills elites Wide skills distribution	Rapid but uneven distribution of skills Older workers less skilled Limited indigenous R&D and innovation	Narrow band of high-skills elites Skills polarisation Larger group of low-skills citizens	Small high-skills enclave Weak internal labour markets catering to low to intermediate-skilled and highly unionised workers,



Key characteristics	High-skills society	Developmental high-skills society	Bipolar high-skills/low-skills society	Hybrid and differentiated low-, intermediate- and high-skills
				<p>primarily located in the mineral extraction and semi-Fordist manufacturing sectors</p> <p>Large peripheral economy for the poor, unskilled and unemployed with little ET</p>
Form of interaction between state and market	<p>Social consensus model</p> <p>Strong co-determination by stakeholders of state market relations</p>	<p>A developmental state</p> <p>Conscious state intervention in market relations</p>	<p>Minimal state action</p> <p>Market is the dominant regulatory force</p>	<p>Weak post-apartheid developmental state, torn between:</p> <ul style="list-style-type: none"> • Predominance of monetary and fiscal policies over industrial and other more expansionary social-development strategies • Strong rhetorical and some policy commitment to redistributive social policies in education, health, welfare and social infrastructural development; attempts at socially inclusive policies



Key characteristics	High-skills society	Developmental high-skills society	Bipolar high-skills/low-skills society	Hybrid and differentiated low-, intermediate- and high-skills
Key defining features	Society that meets the high-skills ideal-type most closely A high-skills, high-wage economy with relative income equality	The phenomenal economic growth over the past three decades was not based on high skills but on a low-cost, disciplined workforce and a strategic location in South East Asia Singapore, however, has since moved rapidly up the value chain, developing indigenous capacity in high-skills manufacturing and services	Economic competitiveness rests on profitability of the finance sector and certain hi-tech industries Lower productivity and skills in manufacturing and services A large low-skills segment surrounds the high-skills enclave, producing a bipolar high-skills/low-skills model of skills formation	Great inequalities in wealth between a small high-skills, high-income enclave, a middle society characterised by employment in the mineral extraction, manufacturing industries and in the state, and a large and highly impoverished citizenry located in the urban and rural areas The key objective of an effective skills strategy in this context would be to have complementary strategies that generate employment at the high-, intermediate- and low-skills ends

The significance of high skills and joined-up policy for South Africa

The high-skills thesis and joined-up policy debate is relevant to the South African context in three important ways:

- The theoretical argument it represents underpinned much of the ANC policy work on the integration of education, labour market and economic

policies in the early 1990s. Although some of these ideas received less attention after the election victory of the ANC in April 1994, the idea of alignment between education, training, labour market and economic policies is now receiving fresh attention from the state.

- There is also increasing recognition, particularly from the Office of the President, Thabo Mbeki, of the necessity for joined-up implementation.
- The recent shift in government policy towards a more comprehensive package of socio-economic reforms reliant on a more expansive fiscus will require greater degrees of joined-up implementation than ever before.

The early emphasis on the integration of education, labour market and economic policies

The high-skills logic, as espoused by British and other educational and economics scholars, influenced the development of early ANC macroeconomic and educational policies. The central propositions of the evolving South African variant of the high-skills thesis were:

- *linking education, labour market and macroeconomic restructuring* within a single, integrated programme of socio-economic reconstruction;
- *promoting the idea of a developmental state* to ‘steer’ the implementation of such an integrated programme of complementary reforms; and
- privileging the idea of a *unified and integrative ET regulatory framework*.

The evolution of this high-skills discourse was different to the conditions that pertained in countries in central Europe and Australasia. It arose out of the policy processes of the mass democratic movement and was formalised by the ANC as official education and economic policy in the run-up to the elections of April 1994. It arose out of a strategic view adopted by the anti-apartheid movement regarding the optimal way of taking power and adapting to globalisation on terms beneficial to the working class and poor. This is in sharp contrast to the more traditional corporatist partnerships struck between the state, capital and labour in Europe and Australia during the 1980s.

The first coherent ANC macroeconomic policy framework in the post-1990 period was termed ‘Growth through Redistribution’. Drawn up in collaboration with economists aligned to the Congress of South African Trade Unions (COSATU), ‘Growth through Redistribution’ posited the argument

that the goals of equity (basic needs provision) and economic growth (the increased export of higher value-added goods) were compatible within a single, comprehensive plan for social reconstruction. ANC-linked economists argued that this relationship between growth and redistribution constituted a *singular* process, which contrasted sharply with the dualistic approaches of industry and the previous government, both of which saw growth as a separate and necessary prerequisite for redistributive activities (Gelb 1991: 30). The ANC emphasis on a singular process relied heavily on the notion that economic growth was achievable through an extensive and rapid redistribution of wealth, income and resources (Gelb 1992: 25).

Occurring in concert with the work done by these economists on 'Growth through Redistribution', COSATU launched its own programme, the 'Reconstruction Accord', in March 1993. The 'Reconstruction Accord' was premised on the fact that new social relations of production between capital and labour were essential for economic renewal. There had been a growing realisation within COSATU that current global restructuring directed towards higher value-added production, a higher 'science and technology' content in production and export-oriented economies could not be avoided. These global requirements for growth would necessarily have to be achieved through agreements with capital, but on terms beneficial to labour (see COSATU 1993a, 1993b; Erwin 1992: 23).

COSATU was also concerned with bolstering state power and promoting a deal between a future ANC government and the organisations of civil society, which would commit the state to a programme of 'fundamental transformation to the benefit of workers and the poor' (COSATU 1993a: 1). The 'Reconstruction Accord' had five central pillars. These were:

- *A democratic political solution.* The new government would need to be effective and strong to implement the programme of economic reconstruction and development. Trade unions, through co-determinist structures, would be able to influence state decision-making.
- *Education and training for all.* This involved an integrated education and training system administered by a single national department; a career-pathing system based on the linkage of workers' skills to pay and grading structures; and unions being able to play a central role in the restructuring of work in areas such as health and safety, new technology, investment and work organisation.

- *A programme of job creation.*
- *A social wage package to end poverty.*
- *A programme to extend socio-economic rights* (COSATU 1993a: 5, 1993b: 4–7).

The ‘Reconstruction Accord’ constituted the forerunner of the Reconstruction and Development Programme (RDP), which was published by the ANC a year later, in March 1994. The RDP comprised the integration of four key reconstruction programmes: meeting basic needs; developing human resources; building the economy (making it globally competitive); and democratising the state.

Both the ‘Reconstruction Accord’ and the RDP emphasised the notion of an integrated package of policy reforms linked in a single coherent plan for social reconstruction. The RDP consciously sought to link economic policy to other policy domains, most particularly employment growth and labour market reform, ET and HRD, public works programmes and youth training schemes (see ANC 1994: 81).

Two other policy texts in this period emphasised the need to link education reform to macroeconomic and labour market reforms in pursuit of a high-skills future for South Africa. These were the National Education Policy Initiative (NEPI) reports – *Human Resources Development* (NEPI 1992) and the concluding *Framework Report* (NEPI 1993). These documents adopted Finegold’s concept of a low-skills equilibrium and a high-skills equilibrium to compare the former government’s ET policies with those of the incoming ANC government. The reports depicted the former government’s proposals for an Education Renewal Strategy (DNE 1991) and a National Training Strategy (NTB/HSRC 1991) as reinforcing a low-participation, low-skills system. In contrast, both NEPI reports proposed a high-skills equilibrium alternative based on a high-skills development path requiring a strong state; a strong civil society; consensual government characterised by vigorous social partnerships between state, capital and labour; a clear economic growth path; and good-quality basic education and high levels of educational attainment (see NEPI 1992: 36, 67; NEPI 1993: 25).

Another central policy tenet of this time was the ANC’s emphasis on the need for an ‘enabling state’. The RDP document noted that ‘neither a commandist central planning system nor an unfettered free market system can provide

adequate solutions to the problems confronting us' (ANC 1994: 78). As the alternative, the ANC advocated an enabling state, which was 'slim' but which could intervene strategically while marshalling its scarce resources carefully. State intervention would be selective and targeted, based on sectoral planning. However, where the state chose to intervene, its intervention would be pervasive and far-reaching (Gelb 1991: 31; Erwin 1990: 38). The enabling state would also intervene decisively in the development of an export orientation (as occurred in successful newly industrialised countries). This would entail the training of highly skilled technicians and engineers, developing a local R&D infrastructure and technological capacity, and targeting specific sectors and industrial clusters for the development of beneficiated products that could compete on world markets (Kaplan 1991: 187, 196; Kaplinsky 1990: 24).

The high-skills argument worldwide has a political predilection towards the idea of a single, unified and integrated regulatory framework, primarily as a response to the pressures of globalisation, the massification of the ET system and the emergence of new forms of knowledge production. This predilection is reflected in the shift away from the divided, élite ET systems that characterise the past, towards a more open and unified ET system essential in the future (Gibbons et al. 1994; Scott 1995).

Adrienne Bird and Gail Elliot (1993a, 1993b) were instrumental in developing these ideas further in two discussion documents published by the ANC in 1993. They proposed a 'unified, multi-path model' of ET built around a nationally integrated curriculum with a single qualification structure. Learners would be required to complete a given number of modules. Some modules would be compulsory and 'core', while others would be optional and could be selected from a bank of vocational and academic modules. The precise content of these core and optional modules would be determined by the 'multi-path' context in which learning was done: whether in the school classroom, the factory training centre, night school or by correspondence.

The essence of this unified model was its flexibility and credit-accumulation properties. These ideas acquired hegemony within the ANC and became official government policy with the publication of the White Paper on Education and Training (Department of Education 1995) and the passing of the South African Qualifications Authority Act of 1995.

The absence of joined-up policy and the dominance of fiscal austerity

Although many of the new policy positions of the young ANC government in 1994 resonated well with the high-skills thesis, very little progress was made with regard to joined-up policy and comprehensive policy reform across the economic, labour market and education spheres. This was due largely to the dramatic shift in ANC policy in June 1996 with the release of the Growth, Employment and Redistribution (GEAR) strategy (Department of Finance 1996) as the government's official macroeconomic framework, thereby displacing the RDP from its earlier status as the party's social democratic orthodoxy on economic policy.

The significance of GEAR was that it privileged the attainment of monetary policy objectives, such as the reduction of the state's fiscal deficit and the inflation rate, at the expense of other important features of the RDP's broad socio-economic platform of policies – particularly those elements in the RDP and 'Growth through Redistribution' doctrine that were premised on co-ordinated market policies, a developmental state and strategies that prioritised the provision of basic needs.

Work by Webster and Adler (1999) highlights the genesis of this shift from what the authors term the 'Left-Keynesian' framework of 'Growth through Redistribution' and the RDP to the conservative macroeconomics of GEAR. The roots of this shift lay as far back as November 1993 with the formation of the Transitional Executive Council, when ANC officials, along with representatives from the apartheid government's Department of Finance and the Reserve Bank, negotiated a secret deal with the World Bank to secure a \$850 million loan. In return, the ANC (as the future government) agreed to maintain existing monetary policy, prioritise inflation reduction, contain government expenditure and desist from raising taxes – the key premises of the future GEAR strategy. Webster and Adler (1999: 15) show how these two tendencies – 'Left-Keynesianism' and macroeconomic conservatism – ran parallel to each other from 1993 onwards, but with the latter having a significant influence over the former. For example, the initial COSATU 'Reconstruction Accord' was redrafted by the ANC in its preparation of the April 1994 RDP election manifesto to include strong references to the new monetarist principles. By June 1996, with the publication of GEAR, this conservative macroeconomic framework was the new ANC economic orthodoxy.

The role accorded the state has changed considerably since the transfer of power to the ANC in April 1994. Prior to this watershed moment, the dominant view of the state within ANC ranks was that it should be a developmental state, making strategic interventions to overcome the limits of the market in steering economic and social development in directions consistent with socio-economic priorities.

However, the actual experience of state power has been somewhat different. A more realistic awareness of the weakness of the state has materialised in the post-apartheid period. Joel Netshitenzhe, a prominent ANC intellectual and senior official in the President's Office, argues that the weakness and fragility of the state arises 'from the political compromises made, most significantly, the reconciliation of both race and class relations that underpinned the settlement in 1990. This compromise has limited the new state's powers to act decisively. South Africa's re-entry into the global economy has also weakened the new state primarily because of the power of financial markets and their susceptibility to subjective manipulation' (in Kraak 2001).

Capacity problems are perhaps the most limiting factor of the new state. Young and inexperienced 'new guard' cadres entered the state alongside remnants of the 'old guard' without sufficient transfer of the tacit knowledge about state governance from the 'old' to the 'new'. In addition, sufficient policy 'adhesion' had not satisfactorily occurred within the state apparatuses. Significant levels of policy doubt existed, particularly with regard to certain policy platforms such as an integrated ET system, higher education's incorporation within a single national qualifications structure and qualifications authority, and a 'single, national and co-ordinated' higher ET system.

Other structural features have limited the power of the state. Firstly, the old apparatuses of the state have remained largely unchanged. For example, the Departments of Education and Labour were not integrated as expected in the policy texts. This decision has had serious ramifications, most importantly the failure of the new state to discard the political fiefdoms and territorial modes of working that characterised the divide between 'education' and 'training' in the apartheid state. In addition, few meaningful linkages have been established between education, the key economic departments (the Department of Trade and Industry, for example) and the science department (the Department of Science and Technology). These divisions seriously hinder the development of a comprehensive and well co-ordinated HRD strategy for the country. They

weaken the possibilities for attaining ‘co-ordinated social market’ policies founded on the idea of a developmental state – the short-lived RDP being the best example of such failed cross-sectoral attempts at policy co-ordination.

Further, state power has been considerably weakened by the dissolution and incorporation of the bantustan and homeland regimes into the central state alongside the simultaneous devolution of power to nine provinces. The first process acted to incorporate an inefficient, bureaucratic and often corrupt bantustan/homeland civil service within the new central state. The latter process acted to devolve the powers of the developmental state to the provinces, two of which, between 1994 and 2004, were governed by opposition parties less committed to official ET policies.

In short, all of these factors have acted to limit the state’s ability to act decisively across all social policy domains.

However, this failure to privilege the high-skills route was not the fault of the policy formulation process or of the Department of Education and Labour alone. It was compounded by the glaring absence of a coherent set of economic growth, industrial and HRD policies that would have given support to the high-skills imperative.

Alignment of education with the world of work

Subsequent to these problems which negatively affected state governance and performance during the first ten years of democracy, the Mbeki government has embarked on a major programme of policy review and revision. The absence of policy alignment, integration and co-ordination over the past ten years appears to be the most serious of the problems identified by this review process. In response, the government has made fresh calls for greater policy alignment or joining-up. In the educational realm, for example, President Mbeki has made explicit his desire to align further education and training (FET) colleges to the demands of his socio-economic transformation agenda, as outlined earlier. Mbeki (2004a) has promised to:

ensure adequate funding of the technical colleges and proper alignment of the courses they offer with the requirements of the economy ... We will, during the course of this financial year, recapitalise all the technical colleges and intermediate training

institutions, ensuring that they have the necessary infrastructure, capacity and programmes relevant to the needs of our economy.

The Minister of Education, Naledi Pandor, went further, promising to strengthen the articulation between higher education and FET college institutions:

higher education can play a role in the development of the further education and training (FET) colleges so that we improve the articulation between the colleges, higher education, and the world of work. (Pandor 2004)

In a groundbreaking move to fast-track skills development in South Africa, the Minister of Labour, Membathisi Mdladlana, and the Deputy Minister of Education, Mohamed Surty, signed a collaborative agreement in the Eastern Cape on 21 February 2005 to facilitate the Umsobomvu Youth Fund's skills development projects for youth through the FET college sector. At the core of the agreement is a partnership between the FET colleges, the Sector Education and Training Authorities (SETAs), the Umsobomvu Youth Fund and several private sector role-players such as employers.

The programme, which entails the linkage of education and skills training, follows a recent decision by the Departments of Labour and Education to develop a system that would enable young learners to acquire, through education, sufficient preparation and the relevant skills that are required in the labour market.

In a keynote address at Lovedale College, the Minister of Labour said a total of 1 300 young people from all provinces would benefit from this initiative in the first year. To date, the Umsobomvu Youth Fund has committed R22.2 million to 19 participating FET colleges for the creation of skills programmes and learnerships aimed at addressing skills shortages and unemployment. Mdladlana elaborated:

As you can see where we are gathered today is a rural community. Our ability to develop a skilled worker for the 21st century from institutions situated in rural and poor communities will add significant value towards improving the living conditions of our people in such communities. (Department of Labour 2005)

This emphasis on 'alignment' appears to have become a central pillar of President Mbeki's second term in office.

Recognising the significance of joined-up policy

The government has begun to emphasise other elements of joined-up policy. President Mbeki has taken the lead by establishing the 'cluster' system in his management of the Cabinet. Cognate departments in key areas, such as social and economic policy, are grouped together at the levels of ministers and directors-general, who are required to plan short- to medium-term strategies for achieving presidential priorities such as job creation, poverty alleviation and HRD. These plans are interrogated, adapted and finally approved by the President and Cabinet at six-monthly *lekgotlas* (meetings), which take place in January and July of each year. In almost all cases, acute social problems are seen as arising cross-sectorally, their reform requiring joined-up government action. The Policy Co-ordination and Advisory Services Unit of the Office of the Presidency helps to administer and co-ordinate all of these activities. More recently, President Mbeki has spoken of strengthening this joined-up approach, with regard to medium-term foresight planning.

Further, the Presidency has formulated a National Spatial Development Perspective, on the basis of a study of the country's social, economic, environmental and spatial trends over the past decades. The objective of this perspective is to develop guidelines to ensure that the government's infrastructure investment and development spending programmes have better spatial outcomes than are currently being achieved (Mbeki 2003a).

This presidential initiative is backed by other forms of cross-sectoral state co-ordination and planning – for example, the Medium Term Expenditure Framework (MTEF) which was adopted by the Treasury in 1997. The MTEF is a powerful planning and foresight tool that enables government agencies to project the costs of existing and future policies over the short to medium term.

Other examples of joining-up are the social market institutions such as the National Economic Development and Labour Council (Nedlac) and the 25 SETAs, as well as the social compacts signed regularly between the government, employers and labour. The most recent social compacts were the Job Summit of 1998 and the Growth and Development Summit of June 2003, the latter primed specifically to tackle job creation, increased investments and skills development.

In addition, the government's recently launched microeconomic reform and integrated manufacturing strategies are aiming at more thorough structural

reform than has been achieved in the past. These include cross-sectoral policy levers such as improving economic and social infrastructure, improving access to finance for productive activities, increasing investments in R&D, enhancing innovation and the take-up of new technologies, and improving HRD more generally. This is also related to the government's recent expansionary expenditure programme, as outlined in the past three state budgets for the years 2003/4-2005/6 (to cover greater infrastructural development, increased investments in R&D and higher education, and larger social welfare transfers), which signifies a stronger role for the state in national economic and social life. Lastly, the government's focus on strategically located 'nodes' in both highly populated urban areas and rural settings requires cross-departmental action and integrated planning capabilities.

Comprehensive package of socio-economic reforms

The government has consolidated and reinterpreted its socio-economic reform programme as having primarily to do with, in Mbeki's words, the dilution of the 'first economy-second economy' divide:

At the core of our response to all these challenges is the struggle against poverty and underdevelopment, which rests on three pillars. These are:

- encouraging the growth and development of the First Economy, increasing its possibility to create jobs;
- implementing our programme to address the challenges of the Second Economy; and,
- building a social security net to meet the objective of poverty alleviation. (Mbeki 2004b)

These three pillars now constitute the primary thrust of government policy in 2005 and beyond. The core components of this new integrated package of reforms include building stronger linkages between the formal and informal economies; increasing infrastructural investment; encouraging labour-intensive production methods; and promoting the Expanded Public Works Programme (EPWP).

Building stronger linkages between the formal and informal economies

Altman argues that a sustainable growth and employment trajectory will only arise where the private sector and informal sector grow hand-in-hand. If the informal sector grows faster than the formal sector, there may be an indication of displacement, representing a vicious circle, with falling incomes. If both the formal sector and informal sector are growing, it may indicate a virtuous circle, where rising incomes from the formal sector result in expanded expenditure on goods and services provided by the informal sector (Altman 2005).

President Mbeki has expanded on the need to build these linkages through what he has termed 'resource transfers'. He argues that:

government will attend to the challenge of poverty eradication in a sustainable manner, while developing the 'third world economy' so that it becomes part of the 'first world economy' ... To get to this point will require sustained government intervention. This is because, given the structural disjuncture that separates the 'first world' and 'third world' economies, we cannot and should not expect that there would be any mechanism inherent within the 'first world' economy that would result in the latter transferring the required resources to the former, to enable it to outgrow its 'third world' nature. We mention resource transfers because this is exactly what the 'third world economy' requires to enable it to break out of its underdevelopment. These resources include education and training, capital for business development and the construction of the necessary social and economic infrastructure, marketing information and appropriate technology, and the ways and means to ensure higher levels of safety and security for both persons and property. (Mbeki 2003b)

Increasing infrastructural investment

The government is now placing a renewed emphasis on increased infrastructural investment. According to the ten-year review report of the Policy Co-ordination and Advisory Services (PCAS), the construction industry experienced a severe decline between the 1980s and 1990s, with employment estimated as having fallen from about 450 000 to 200 000 workers between 1981 and 2001:

There are three investor groups in the South African economy who impact on the development of infrastructure: the private sector, government and the parastatals. The investment performance of all three has been lower than required, and government sector investment reached historically low levels in the late 1990s. Government investment was constrained by tight fiscal policies in pursuit of macro-economic stability whilst parastatal investment was constrained by the restructuring of state-owned enterprises. Since 1999, government investment expenditure has begun to grow, with the allocation to capital expenditure rising from 5.3 percent to 9.3 percent of total government expenditure. This trend is expected to continue as the investment capabilities of provincial and local government are strengthened. It is anticipated that this spending, in combination with the Department of Public Work's programme to intensify labour use in infrastructure projects, should together have an important impact on employment. (PCAS 2003)

Significant commitment to infrastructural development was obtained from all parties at the Growth and Development Summit held in June 2003. Amongst these commitments were:

- *Accelerating the pace and quality of public infrastructure investment.*
- *Reducing input costs.* The competitive advantage that underpins investment in industry and job creation depends in part on input costs, pricing and quality of raw materials, transport, energy, communications, research and technology development, and other aspects of the business environment.
- *Skills and equity.* More and more young people are successfully graduating from school, but too many of these graduates are unable to make the transition to work – not only because jobs are not available (although this is clearly part of the problem) but also because they have not yet acquired skills needed for employability. (Department of Labour 2003)

President Mbeki has built on all of these Growth and Development Summit themes in his recent policy announcements, committing the government to work with its social partners to raise the rate of investment in the first economy; engage with its social partners to implement a joint decision that 5 per cent of the funds held by institutional investors be invested in the real economy; roll out a detailed investment plan for the state-owned enterprises;

undertake road shows to explain the incentives available to foreign and domestic investors; reduce the cost of doing business in South Africa through restructuring ports and lowering the costs of moving imports and exports; open up the Coega Industrial Development Zone in the Eastern Cape by September 2005; increase Spoornet's freight capacity by 30 per cent over the next five years; and begin construction of the King Shaka International Airport and freight terminal in Durban:

Our programme for the coming year is premised on the broad objectives to increase investment in the economy, lower the cost of doing business, improve economic inclusion and provide the skills required by the economy. Therefore, the details outlined in May last year, to the extent that the tasks are ongoing, remain an integral part of the programme. On infrastructure, we have since May 2004, developed strategies and investment plans upward of R180-billion in relation to transport logistics, electricity and water resources. (Mbeki 2005)

Encouraging labour-intensive production methods

A policy lever closely linked to other mechanisms discussed above is the encouragement of labour-intensive production methods. Altman and Mayer (2003) argue that the promotion of non-traded goods and services, such as housing construction and public works, has long been a part of Keynesian employment programmes, elements of which have been present in most South African economic policy documents since 1990. Housing and social infrastructure development, in particular, is seen to stimulate construction and to provide households with essential assets, which could be used as the basis for other small business development. Hence, the strategy concentrates on the potential crowding-in of public investment, particularly in conjunction with small business support measures.

Promoting the Expanded Public Works Programme

The Expanded Public Works Programme (EPWP) has become one of the government's main ways of creating employment and work experience for people in the second economy. The programme started on a small scale in 1998 but subsequently expanded as Minister Stella Sigau explains:

In the first six months of the programme (up to September 2004), about R1.5 billion was spent to ensure that the EPWP meets its targets in terms of the number of work opportunities created. In its first year at least 75 000 work opportunities were created in the first six months of the financial year, and the programme is on track to create more than 130 000 work opportunities by the end of its first year. Training programmes and implementation guidelines are in place, and the programme will accelerate to create 300 000 work opportunities per annum by the end of its third year. The government is in the process of rolling out a sustained and substantial investment in economic and social infrastructure, built with methods with a bias towards labour intensive technologies. In order to facilitate this, we have put in place a number of capacity building measures, including a learnership programme that has been put in place by the Construction Sectoral Education and Training Authority for emerging contractors and their supervisory staff to develop the capacity to use labour-intensive methods. To date, 26 provincial departments and municipalities around the country have taken up 950 of these learnerships, and these learners are currently undergoing classroom training and undertaking practical training projects. Each of the learner contractors typically employs 100 workers on their practical training projects. By the end of 2005, there will be 1 500 learners under this particular learnership programme. (Sigcau 2005)

The EPWP is a nationwide programme that will draw significant numbers of the unemployed into productive employment, so that workers can gain skills while they are gainfully employed and increase their capacity to earn an income once they leave the programme. The EPWP is targeting one million unemployed people in the next five years.

The centrepiece of the EPWP is a large-scale programme using labour-intensive methods to upgrade rural and municipal roads, municipal pipelines, storm-water drains and community water supply and sanitation, and to maintain government buildings, housing, schools and clinics, rail and port infrastructure and electrification infrastructure.

The Minister of Finance, Trevor Manuel, reported in November 2003 that ‘infrastructure grants to provinces and municipalities will rise by R3.2 billion over baseline and will be the main source of funding for this programme with technical support from a dedicated unit in the national Department of Public Works’ (Manuel 2003). President Mbeki told Parliament in February 2005 that R1.5 billion had already been spent (Mbeki 2005).

Conclusion

This new package of socio-economic reforms will require degrees of joined-up cross-sectoral policy co-ordination and planning not seen previously in government. It will also require the conscious deployment of a multi-level understanding of HRD, promoting strategies for skills development in the high-, intermediate- and low-skills bands. Table 1.2 illustrates this differentiation of skills that will be needed if the government is to be successful in its socio-economic reform programme.

Table 1.2 Understanding South Africa’s skills needs in terms of a multi-level skills analysis

Skills band	Elements of the government’s wider socio-economic programme that depends on these types of skills being developed
Advanced skills needs	<ul style="list-style-type: none"> • Targeted sectoral strategies (for example, the development of export sectors, agriculture, tourism, information and communications technology, and cultural industries) • Top-end activity in the roll-out of infrastructural development (for example, upgrading of state-owned enterprises; improving Spoornet’s freight capacities; restructuring of ports; opening up the Coega Industrial Development Zone and King Shaka International Airport and freight terminal in Durban) • Resolving scarce skills needs • Restocking the scientific labour force needed in our National System of Innovation, specifically through the training of more young women and black academics in science and technology • Public sector upskilling



Skills band	Elements of the government's wider socio-economic programme that depends on these types of skills being developed
Intermediate skills needs	<ul style="list-style-type: none"> • Intermediate-skills needs in the expansion of South Africa's public infrastructure (for example, SASOL's need for several thousand well-trained artisans) • Broad-based black economic empowerment activities, aimed largely at stimulating the development of small enterprises • Social development initiatives, particularly the training of a cadre of Community Development Workers and home-based care workers for the sick and elderly
Entry-level skills needs	<ul style="list-style-type: none"> • Investments in labour-intensive infrastructural development • Expanded Public Works Programme • Training of the unemployed through learnerships and other training programmes

In conclusion, then, the high-skills thesis, with its dual emphasis on, firstly, the need for a comprehensive package of socio-economic and labour market reforms to be underpinned by and aligned with a set of complementary skills development strategies, and secondly, the necessity of cross-sectoral or joined-up policy co-ordination and implementation, has provided a very useful conceptual lens through which to understand recent developments in the macroeconomic, labour market and skills-development arenas in South Africa.

The refinement of the debate through its application to the South African context has taken the high-skills thesis, in the words of one of its key thinkers, 'onto a new plane' (Lauder 2005: 4). Lauder sees the South African debate as important specifically because of its potential for influencing state thinking; and through this engagement with the South African state, the debate will surely continue.

2 The high-skills thesis

Hugh Lauder and Phillip Brown

We have no money so we must think – Ernest Rutherford

The aspiration to develop a high-skills economy is based on the idea that if the demand and supply of skills can be raised, individuals and nations will gain because the returns to skill will make both better off. More skilled work should lead to greater individual satisfaction with work and greater stability and opportunity in finding work and staying employed.

The high-skills thesis has caught the imagination of policy-makers around the world. One of the first ‘out of the blocks’ was Australia under Bob Hawke who wanted that country to become ‘clever’, and the first President Bush saw education as the key to economic prosperity, as does Tony Blair. While it is related to the idea of the rise of a knowledge economy, there are several background factors that have led to politicians embracing the idea that economic and social progress depends on increasing the skills of the workforce. These are:

- the decline of economic nationalism, walled economies and high-wage, low-skills jobs;
- the retreat from Keynesian welfare state settlements, which has left workers vulnerable in the market without skills;
- the possibility that progress towards a high-skilled economy could alleviate poverty and unemployment;
- globalisation and the competition between nations; and
- the rise of the so-called knowledge economy.

It is clear that high-skills policy has been the centre of economic, social and educational policies in many Western and some newly industrialised East Asian nations. The question that I want to consider here is what application it might have to nations that are embarking on the process of developing their economies. To do so, I shall consider the following issues:

- the nature of the knowledge economy;
- some key assumptions behind the high-skills thesis;
- the nature of skills – embedded versus dis-embedded; and
- high skills and the case of South Africa.

It is the final issue that will be of most relevance to South Africa. Let me say straight away that the high-skills thesis has been constructively and cogently critiqued by Andre Kraak (2003b) as it relates to economies like that of South Africa. However, it should be stressed that as I analyse these issues it will be clear that this thesis is not unproblematic for Western economies. There is no single blueprint for nations to follow; however, there are parameters or markers that may signal a path, but that path is more akin to a route through a minefield than to a motorway.

The nature of the knowledge economy

There has been considerable debate about the nature and extent of the knowledge economy and hence about the nature and level of demand for skilled workers. Generally, the knowledge economy is seen to be based on an ever-closer relationship between science, technology and the market. So the typical knowledge industries are considered to be those of electronics, biogenetics and perhaps nanotechnology. In particular, the Internet is seen as a source of increasing productivity across the economy. Perhaps the most important aspect of this debate has turned on whether the Internet has, in fact, increased productivity. More recently, the debate has shifted to the phenomenon of jobless growth and the respective roles of technology and ‘offshoring’.

The issue that I have focused on with my colleague Phillip Brown concerns the ahistorical and static nature of the analysis of the knowledge economy. It is assumed by policy-makers that once young people have their paper qualifications then, like angels ascending the ladder to heaven, they will be guaranteed a satisfying and well-paid job in the knowledge economy sector. However, that assumption ignores the processes of innovation and skill under capitalism. What we are seeing now, as we have seen in the past, is that some of the archetypical knowledge economy sectors such as banking are becoming routinised, that creativity and initiative for which graduates might have been paid a premium are no longer required, because what corporations want is to

minimise risk, to make the processes of production predictable and to be able to diagnose with precision why things have not gone as predicted.

There is a danger that the idea of a knowledge economy is just part of the story of ineluctable progress based on technology, which has been with us since the middle of the previous century. How much of a danger? We need to look at some of the assumptions underlying high-skills policies.

The social capacity for the production of skills

From our work on the high-skills project, we came to the following ideal type view as to the necessary foundations for building a high-skills economy.¹ Broadly speaking, we can distinguish between two elements in the development of a high-skills economy. The first concerns capacity-building to lay down the conditions for a high-skills orientation. This includes the following:

- an inclusive and systematic process of skills upgrading linked to learning, innovation and productivity;
- a high level of entrepreneurial and risk-taking activities, whether in terms of new business ventures or through innovation within existing enterprises linked to new technologies, research and development and the upgrading of skills;
- institutionally embedded relations of ‘high trust’, which encourage individual discretion and collective commitment;
- a model of human capability based on an assertion that all have the potential to benefit from skills upgrading and lifelong learning;
- a system of occupational selection that values the diverse range of human talent, knowledge and creativity, whether these are based on gender, social background, ethnicity, race or religion; and
- a means of co-ordinating the supply and demand of labour, which includes a way of incorporating the increasing numbers of those with tertiary education into high-skilled jobs. (Brown 1999)

It is worth examining each of these assumptions in turn, because they apply wherever nations are on the high-skills trajectory; they can be seen as the framework for policy development.

The second element has to do with motivation and culture. Attempts to fulfil the requirements for capacity-building may fail for want of motivation on the

part of policy-makers, entrepreneurs and workers. Ashton and Green (1996), having analysed the rise of East Asian high-skills trajectories, talk of the importance of a commitment from the ruling class to developing the capacity for high-skills work. The same can be said of entrepreneurs: we know in England that the low-skills equilibrium trap remains partly because many entrepreneurs are happy to make profit from low-skilled sectors of the market, trading on price. Over and above these issues is a more profound cultural question; it has to do with creating a national culture of motivation. Historically, we know that the motivation to improve oneself and the nation financially has had to be forged. Liah Greenfield (2001) has shown that personal and national economic growth and progress have their historical roots in the rise of the modern nation state. The economic competition between nations, she argues, swept away many of the taboos against money-making for its own sake, although the motivation for wealth creation could be individualistic, as in the United States or Britain, or collectivist and nationalistic, as in Japan.

Presently, the issue of motivation shows itself most clearly in relation to the paths laid down between education, credentials and the job market. In the Asian Tigers, the traditional motivation for high levels of education have now been joined by the incentives offered to the best-educated in the labour market, creating a system of 'exam hell' or 'fanaticism'. Contrast these cases with a nation like Qatar, where the university has high levels of wastage and the links between credentials and the labour market are just emerging (Al Ansari 2002). In the past, social networks have been more important in gaining labour market position. So the idea of appointment on merit and the motivational links between wanting to achieve in education to achieve in the labour market have yet to be made. Not that such motivation is always based on the desire for economic returns; in Iran, a key motivation for many young women going to university and hoping for middle-class jobs appears to be autonomy and freedom from traditional constraints (Salehi 2000).

These examples illustrate that motivation and capacity-building are inextricably linked, but one without the other leads to failure. The danger is that motivation will languish or turn to crime or the illicit economy if the institutional capacity to deliver education, skills and formal work fails. It is clear in South Africa that there is a high degree of motivation for credentials and training, but unless jobs are forthcoming, that motivation may well be

threatened. Again and in different ways there are similar challenges in nations like Britain and America, where Brown (2003) has raised the spectre of graduates having to pay more and more for their credentials while gaining declining returns for them in the labour market. We often assume at our cost that, once laid, the institutional pathway that takes us from credentials to jobs is permanent and that the motivation to travel the pathway will automatically follow, but both have to be constantly reconstructed. A breakdown in one can lead to a breakdown in the other.

The nature of skills

Skills are socially constructed. Broadly speaking, we can distinguish between a technical and a social division of labour. The former refers to specific skills required to accomplish particular tasks such as those of a brain surgeon or car mechanic. The social division relates to the way skills are constructed and utilised differently in different organisations and societies (Maurice, Sellier & Silvestre 1986). To illustrate the general point, the division of labour is often understood as equating higher levels of skill and autonomy with professional and management jobs, intermediate levels with technician-level jobs, and lower levels with semi-skilled and unskilled job.² However, the division of labour may not reflect such hierarchies and may indeed change. Recent theories of work organisation, such as those relating to 'high performance work organisations' (Ashton & Sung 2002), require levels of skill across what is normally considered the division of labour and which extend beyond technical skills to interpersonal skills. Given this general thesis, what I want to focus on here is the tension between embedded and dis-embedded skills. The reason for this is that in the new era of economic globalisation this issue is perhaps the most significant in relation to the high-skills thesis, because it now ranges across so many issues of the moment including offshoring, outsourcing and the creation of high-reliability manufacturing.

Embedded versus dis-embedded skills

The approach of skills-formation theorists, from Maurice et al. (1986) onwards, has been to assume that skills are embedded: that is, that unique cultural, social and economic factors combine to produce particular skills sets.

For example, when we interviewed the human resources team at Daimler-Chrysler for the high-skills project, we were told that Mercedes Benz vehicles may be assembled elsewhere but could only be engineered in Germany because of the traditions, expectations and skills development of German engineering over a century. This approach is in stark contrast to human-capital theorists who assume that skills are acontextual. Effectively, the only distinction to be made is between general and specific vocational skills.

These theoretical differences are reflected in the tension being played out on a global scale between embedded and dis-embedded skills. The desire of capital is to generate dis-embedded skills, because this creates greater opportunities for mobility in investment and in playing off nations and regions against one another – what Phillip Brown and I have described as a global Dutch auction (Brown & Lauder 2001). Such an auction can only take place for skilled labour, across the globe, if it is commensurable. Indeed, while a Dutch auction has always been a possibility for unskilled labour, policy proponents of the high-skills thesis always thought that both the level and culturally distinctive nature of skills production would insulate skilled workers from such an auction. However, the ease with which high-reliability production units have been set up in motor manufacturing, and now offshoring in more skilled jobs, raises a question about the embedded nature of many skills. Indeed, when we look at high-skills strategies in Britain, the United States, Singapore and Taiwan, to take a few examples, it is clear that what policy-makers think remains distinctive is creativity. The emphasis is on blue-skies research that will lead to breakthrough innovations that, in turn, will lead to the creation of intellectual property rights – although, of course, not necessarily to the development and production of goods and services in the same country. In Taiwan, the threat that China poses to its high-end electronics industry has given added impetus to the reform of education to develop creativity. The strategy of offshoring and high-reliability production promotes standardisation. To reap the gains of lower wage and infrastructure costs, corporations need to standardise work tasks so that the performances and outcomes of offshore activities are predictable (Brown & Lauder 2004) – we return to the issue raised above about the standardisation of knowledge work.

Related to this issue is one that may be looked at quite differently in developing economies. This has to do with the rupture in the high-skills/high-income equation. Here the comparative price advantage of developing economies may

well provide employees of offshore firms with a premium on local wages, thereby, in the medium term, injecting higher incomes into the economy.

These are issues to which I shall return.

High skills and an overview of South African human resources

The aspiration for the development of a high-skills economy is problematic for advanced economies; for the economic development of South Africa, it will be equally so. Two of the clear lessons that we learned from the high-skills project were, firstly, that there is no one recipe or blueprint for developing a high-skills economy, as defined above (history, culture and institutions cannot be demolished and rebuilt from point zero) and, secondly, that joined-up policy-making is essential to this process.

The case made in the HSRC's *An overview of South African human resources development* (Kraak 2004) is that advances need to be made on three fronts: high skills, intermediate skills and low skills. The expansion of a low-skills formal economy to address severe unemployment problems may once have been controversial, but is less so now in the light of the government's support and attempts to create public works schemes that can begin to address the low-skills unemployment issue.

The reasons why there might be concern over such a policy are clear and understandable in the light of South Africa's history of apartheid. I know that others have debated this issue and for that reason I want to focus on one aspect of it. This is the concern that in a segmented labour market, black workers will be trapped in the low-skills segment and will not be able to move out of it. Many countries have faced the problem of a low-skills equilibrium in which institutional barriers trap generations of workers in low-skills work (Lauder 1999). The issue, as I see it, is not the creation of low-skills work in itself, but how routes out of such work can be created and protected. I do not underestimate the problem posed here. Britain and the United States have a major problem in this regard because of the type of flexible labour market they have embraced, and it is not clear that the recipes followed in Britain are successful. At the start of a new democratic South Africa, it is possible that path-dependent routes are not as rigid as those in countries like Britain, in

which case it may be possible to establish labour market structures that will enable a degree of openness out of low-skilled work.

There are at least three questions here that we need to consider:

- Does the type of labour market structure have an impact on whether workers can escape low-skilled work?
- Are education and training in work the answer?
- What other factors are involved in creating routes out of low-skilled work?

We need to start by distinguishing four different types of labour market structure. These are occupational, internal, state-guided, and flexible.

An *occupational* labour market is one where education and training closely dovetail with the labour market. There are close ties between qualifications and occupations and there is a band within which wages are earned for a particular occupation. The occupational labour market has several advantages, which include the efficacy of education and training in forming skills for the occupation and a sense of status and professionalism arising out of the extended training involved. In Germany, perhaps the exemplar, there is a philosophy of equality of productive capacity that underwrites the commitment to training and skills formation. The three major disadvantages are cost, a degree of inflexibility and a question as to whether this kind of labour market is appropriate in a services-dominated economy.

It is often argued that the inflexibility of the occupational labour market creates insiders, those with jobs, and a large proportion of outsiders, the unemployed. Indeed, one of the doubtful claims made by champions of flexible labour markets is that they are far more effective in tackling unemployment. Not only is this questionable, but an examination of the differences between the unemployed in Germany and the USA shows that the former are better skilled because of the dual system of vocational training. Consequently, they have a better opportunity, in times of economic upturn, to take advantage of their relatively higher skills.

An *internal* labour market is one in which high general skills are provided by the vocational education and training (VET) system and further firm-specific skilling is undertaken by corporations. This type of labour market is found in South Korea and Japan. The advantages are that specific skilling is related to a commitment to a lifelong career so that it is expected that workers

at all levels will constantly upgrade and retrain as appropriate. The disadvantage is that in South Korea, at least, it has left a sizeable small and medium enterprise (SME) sector relatively under-skilled since it only applies to the large corporations. In both countries it is a system under threat and, increasingly in South Korea, the state is having to take over the skilling functions.

The *state-guided* labour market is, to my knowledge, specific to Singapore. It is demand-led as Singapore encourages high-end production and innovation from those multinational corporations (MNCs) that it invites to the city state. The process of matching skills to the demands of MNCs is co-ordinated by the Economic Development Board. For those employed, the state has a battery of strategies for raising skills, largely through the incentives offered to companies to reorganise jobs so that higher skills are demanded. This is a process that has been highly effective with MNCs, but less so in terms of Singapore's own SME sector.

What all three labour market types have in common is a close integration of VET and the labour market. The kinds of debate about educational standards and the appropriate skilling of young workers are not as shrill as with flexible labour markets. Structurally, co-ordination is much easier to achieve.

A *flexible* labour market is characterised by a high degree of individualism, in which the fit between education, training and the labour market is often problematic; there is considerable time spent in job search and work is insecure; and the flexibility is numerical, so that employers can hire and fire as economic conditions change. Despite all the rhetoric, it is not a system that should be encouraged, precisely because it is one in which many companies that make profit out of low-skills work have no incentive for raising the level of skills demanded, and those within the system are trapped in a cycle of low pay or no pay. The pay is often so low that employers need to be subsidised for people to gain a living wage. The hours are long, and training for low-skills is minimal for obvious reasons. While there has been some discussion at both central and regional levels, the neo-liberal ideology that gave birth to numerically flexible labour markets also insisted that raising the demand for skills was beyond the state's remit. Raising demand for skills is probably the most important factor in creating pathways out of low-skills work. By the same token, co-ordination is extremely difficult under these conditions, and Keep (2002) has argued that most training in Britain is state- not employer-led and that there are fundamental differences in the interests of each of the

three parties, which makes joined-up thinking hard. A similar point is made in Szdlik (2002).

As I understand it, South Africa has a mixed labour market in which for many of the high-end export-oriented industries there will be an internal labour market. At the other end of the scale, there is an informal labour market that will be the ultimate in flexibility but which clearly requires a degree of skill – a foundation to build on as more workers are drawn from it to the formal labour market.

Three possibilities for optimism and a concern

In reading Kraak's (2004) *Overview*, there are three possibilities for optimism in breaking out of the low-skills trap. Each requires joined-up policy-making, and while McGrath (2005: 210-11) has pointed to departments of state 'with overlapping and frequently conflicting agendas and mandates', this is not a problem unique to South Africa. However, it is equally the case that until these issues are sorted out, the road towards a high-skills economy will be more difficult than it might otherwise have been.

Public investment and training

Altman and Mayer (2003) have argued for the development of public sector investment in the non-traded sector, and in housing in particular. This is clearly a way forward since, in the context of the global economy, South Africa needs to be able to generate domestic demand in areas of low skills to mop up unemployment. However, the key to ensuring that the state does not create a segmented low-skills market is for public investment in the non-traded sector to be accompanied by training so that workers, once recruited, will have a range of skilling options open to them. In essence, such a public investment policy would have the effect of creating an internal market in which skilling takes place in response to demand. The issue is how much investment in the non-traded sector the state can afford.

The reader will note that I have said little about education and training; that is because raising the demand for skills is the first step. One of the fundamental problems with the British route has been the human-capital

assumption that supply will create its own demand. There is now a growing recognition that this is not the case, and I shall say a bit more about this later. What is required are incentives for people to exit the informal economy and to follow the pathways that relate VET to credentials, which, in turn, are effective certificates of competence and merit that are appropriately rewarded.

As indicated above, these pathways have to be constructed and while it is clear from Kraak's *Overview* that there are problems with the capacity to deliver on the VET side of the equation, motivation to travel along this pathway has to have incentives at the end that are both individual and collective.

The training levy

It is also clear from the *Overview* that many firms see the training levy as a tax and are reluctant to pay it. Nevertheless, the establishment of such a levy is important because it opens the institutional route towards an architecture that can establish the functions of intermediate institutions like the Chambers of Commerce in Germany. These are multi-functional institutions that:

- certificate apprenticeships;
- transfer knowledge and best practice from the leading edge to SMEs; and
- ensure that new knowledge is incorporated into their curricula.

The training levy opens the way for these kinds of institutional functions, which in flexible markets have no counterpart (knowledge transfer relies on job hopping and poaching). It could enable upskilling through knowledge transfer and the reconstruction of job specifications, but it depends upon factors discussed below.

Globalisation and cost advantage in service industries

As offshoring gathers pace in the United States and the UK, so South Africa may be at an advantage in having intermediately and highly skilled English-speaking workers. This issue is not raised in the *Overview*, but there clearly must be possibilities in this area. As wages rise, then of course the global auction will cut in and such jobs, at the call-centre level at least, may disappear – but that is some time in the future.

The concern: Globalisation and magnet economies

Having listed some causes for optimism, the concern of course is that intermediate and high-skilled workers will be lost to the northern hemisphere. The *Overview* does an excellent job in identifying skills shortages and, at present, the pull from the North does not appear to be strong, but as countries like Britain seek to create a middle class of state workers (the jobs of many others having been hollowed out), so the pressure on South Africa will increase. In some developing countries, education and training systems are simply producing skilled workers for more affluent countries and relying on the repatriation of funds for survival.

Having laid out some possible causes for optimism in terms of upskilling and routes out of low-skills work, we need to look at product market strategies.

Product market strategies and the identification of firms that could move up the value chain

I should say immediately that this section is indebted to Geoff Mason at the National Institute of Economic and Social Research (NIESR). Rather belatedly, the British government has recognised the need to raise the demand for skilled work. The focus here has been on the idea of a low-skills equilibrium, and especially the more recent research by Oxford and Warwick Universities' centre on Skills, Knowledge and Organisational Performance (SKOPE), which has argued that many firms make a good profit out of low-skills work and have no need to raise their skills levels, thus reinforcing the low-skills equilibrium. If this were to be uniformly true then fears of a low-skills, predominantly black labour market segment could be well founded. However, Mason is undertaking research to identify firms in particular product markets to establish why some operate on the basis of low skills and others on higher skills – the point being that there appears to be a continuum of strategies for any given product. He is particularly interested in firms that will not survive unless they move up the value chain, and in examining the constraints upon them. This important empirical work will serve to flesh out what we know from strategies in Singapore to redesign jobs to raise skills and determine how they might be applied.

This is a more fine-grained analysis by Mason and it also carries with it hopes and a warning, given his previous research. The hopes are clear; the warning relates to the finding that in the UK it is firms that are exposed to international competition that are most likely to raise their skills levels or fail. However, an argument of the *Overview*, which I think is essentially correct, is that the hope for South Africa lies in the development of a large non-tradeable sector. The question is to ensure that product market strategies and skills-levels in this sector conform to best international practice, where possible.

Conclusion

The challenges facing what is a hybrid economy (Kraak 2004) are profound. Yet, there are real strengths in South Africa – it has a top-end, high-performing education system, it has some competitive firms in the tradeable sector and it has the aspiration to use public investment to create low-skilled jobs accompanied by training. It is also clear that the thinking about these issues is impressive.

Notes

- 1 This project, funded by the Economic and Social Research Council (UK), examined different national routes to a high-skills economy in Britain, Germany, South Korea, Singapore and Japan.
- 2 ‘Unskilled’ is strictly a misnomer; there are many studies that have shown the ‘unskilled’ to be highly skilled in the way they approach their jobs.

3 Globalisation, skills formation and the dilemmas of integrated policy: the case of South Africa

Hugh Lauder, Phillip Brown and David Ashton

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The question of integrated or joined-up policy in relation to skills formation is at the forefront of policy initiatives, since it is clear that skills strategies involve the vocational education and training system, the labour market and social protection. However, the argument of this paper is that globalisation has made joined-up policy much more complicated. An attempt is made to situate this analysis in the context of South Africa. Joined-up or integrated policy can be understood in at least three related ways.

Firstly, it can mean that policy-makers need to pay attention to the demand side of the skills equation. This is because, contrary to human-capital theory, raising the demand for increasingly higher levels of skilled work is not merely a function of the supply of skilled labour, nor indeed of technology, but of statecraft. In principle, employers have the choice of seeking to make profit either out of capital investment and the skills required to utilise the investment or by using low-wage, low-skilled workers. For those firms that are not already in a capital-intensive high-skills product market, the risk of investing in the medium term to escape a low-skills equilibrium often requires state-led policies to stimulate demand for higher-skilled work and to insure employers against some of the risks of moving up the skills chain.

Secondly, workers and those entering the labour market also need to understand the potential longer-term benefits of vocational education and training (VET), if the aim is to ascend the skills escalator. Here, the links between the VET system and the labour market are crucial (Brown, Green & Lauder 2001). How these links are structured and how they relate to the production of different types of skill are important both for individual workers and for broader state strategies for the development of a high-skills sector. It is important to recognise that there are different kinds of skill produced by different labour market-VET configurations so that when thinking about

raising the demand for skills, the crucial question is for what kind of skills we are seeking to raise the demand. This brings us to the third point.

It is a fundamental tenet of skills-formation theory that the production of and demand for skills depends upon societal capacity (Brown et al. 2001); in particular, it involves building the foundations of skills formation on complementary institutions underpinned by appropriate political, cultural, social and economic norms and conditions. In this sense, the idea of integrated or joined-up policy can only be effective if the nature of and the relationships between these foundations are understood: joined-up policy requires joined-up theorising about the basis of skills formation. One of the strengths of this approach, in contrast to human-capital theory, is that it is genuinely interdisciplinary (Ashton 1999) because it is focused on the relationships between different societal elements and the processes to which they give rise.

However, while we have already mentioned some of the component elements of skills formation – the VET system and its relationship to the labour market – recent work by Estevez-Abe, Iversen and Soskice (2001) has taken this type of analysis forward in two ways: it has placed the issues of the firm, competitiveness and product markets at the centre of an analysis of the different types of skills that can be produced, and it has shown how different kinds of skill utilisation produce different forms of social protection and inequality in society. They bring these different elements together in what they call *welfare production regimes*. In thinking about joined-up policy in South Africa, it is worth examining their arguments in greater detail because they provide a topography for skills production and utilisation that may be of help to policy-makers. Elaboration and criticism of their position may also help to move skills-formation theory and policy-making forward.

Estevez-Abe et al. (2001) start by distinguishing the production of three types of skills: firm-specific skills, industry-specific skills and general skills. They note that in any economy all three types of skills will be utilised but that some economies are so structured, due to competitive product market strategies, that the production of one of these skills types will predominate over the others. They go on to argue that for the firm-specific and industry-specific skills, particular types of social protection are in the interests of both employers and employees, while in the case of general skills, employers have

no interest in social protection. The linking concept between the production of skills types and social protection is that of *portability*.

Firm-specific skills are the least portable, industry-specific skills are portable within an industry, while general skills can be applied across a range of firms or industries. It is worth noting that each requires a different type of training and assumes particular kinds of product market strategy. Firm-specific skills have been associated with the large Japanese and Korean firms in which a high level of general education is required before entering the internal labour market of the company (Brown et al. 2001). Once in the company, employees are expected to undertake rigorous training and retraining consonant with a product market strategy that emphasises high-quality products. Product market strategies may diversify but the company has the in-house capability to ensure the maintenance of high-quality products. It is also worth noting that such a strategy is particularly relevant to manufacturing.

Firm-specific skills are likely to generate an alliance between employers and employees based on employment and unemployment protection. Employment protection involves employment security even in times of downturn. The reason why employers may well be committed to such protection is because laying off firm-specific skilled workers means that when an upturn comes, workers may have moved on or their skills may have degraded or failed to keep up with cutting-edge developments. Such a situation confronted Boeing recently. For workers, investing in such skills requires the knowledge that there is a degree of security for skills that may be worth far less on the open market. However, where large numbers of workers have firm-specific skills, the state may support workers through unemployment protection to ensure that they do not suffer from substantially reduced wages, and again this provides an incentive for workers to gain firm-specific skills. A high replacement ratio, where benefits are related to earnings, reduces the downward pressure on wages for firm-specific skills because workers do not have to take job offers at a significantly lower wage.

Industry-specific skills are those that have currency across an industry. Perhaps the clearest example of how such skills are generated, and wages protected, is the German occupational labour market (Brown et al. 2001). Here it is not only individual skills that are generated, but knowledge of cutting-edge skills can be transferred through the apprenticeship system

(Brown et al. 2001). Poaching, which is the underside of portability, is reduced because industry training is standardised and employers know that one worker is likely to be as skilled as another (Acemoglu 2002). Industry-determined wages also reduce poaching, while for workers there is greater equity in the distribution of income.

Estevez-Abe et al. (2001) argue that for such skills, employment protection is not as important as unemployment protection. If one firm suffers a downturn there may be others that do not. What is important is the protection of skilled wages so that overall industry wages remain protected regardless of employment status. For employers, support for unemployment protection is important to ensure that there is an industry-wide pool of skilled labour, especially in times of an upturn in demand. They also note that contrary to neoclassical theory, in which wage protection is seen as a hindrance to the clearing of markets, such protection can improve the competitiveness and cost-effectiveness of firms.

Where product market strategies depend upon low-skills mass-production of goods or services, then minimum general skills are what employers depend upon and they will reject any form of protection because they are seeking to pay the lowest price for the skills available: profit is made from the exploitation of low skills. Consequently, the type of labour market and social protection arrangements that best fit this product market strategy are numerically flexible labour markets such as those of Britain and the United States (Brown et al. 2001). Equally, for employees with little wage protection, the best strategy is to develop their general skills.

Vocational education and training and skills strategies

Each of the product market strategies and associated skills requires a different kind of VET system. For firm-specific skills a high level of general education is desirable. This is then used as the foundation for the in-house development of the skills that firms demand. Industry-specific skills require some interaction between the education and training system and industry for the training to be appropriate and up to date in supplying the skills required. This may be achieved through the dual system in Germany or the polytechnic system in Singapore. For general skills, education at only a minimum level is required for the lower end of the flexible labour market. For employers,

workers with higher-level skills present major problems because their skills are portable and they may easily be poached, a fundamental problem that has dogged British industry.

Welfare production regimes and inequality

Estevez-Abe et al. (2001) argue that the different welfare production regimes produce different kinds of inequality. For low-achieving students, a highly developed training system for either firm-specific or industry-specific skills provides the best opportunity for workers to gain skills that employers will wish to protect. For low achievers in a flexible labour market, there is likely to be a greater possibility of poverty wages; for example, in Britain 25 per cent of employees work for poverty wages. The counter to this view is that flexible labour markets are better at clearing unemployment precisely because the boundaries created by firm and industry wage bargaining systems and their associated forms of social protection create insiders, who are protected from unemployment, and outsiders, who find it difficult to gain entry to the labour market. Despite much rhetoric to the contrary, the empirical evidence does not support the flexible labour market theory (Webster 2001).

The advantages of the welfare production regime approach

There are several advantages to this approach that advance our thinking about skills-formation systems. Firstly, it extends the conventional analyses of skills formation by placing firms and product market strategies at the heart of an understanding of not only skills formation but its relationship to different types of labour market and welfare regime. Secondly, it extends an institutional comparative analysis in both an explanatory and a 'predictive' way (predictive in the sense that, given the explanation for the structuring of institutions based on product market strategies, the consequences in terms of links to social protection and inequality map quite well to real-world examples). Even when real labour markets appear more complex than these ideal types, they have explanatory force. For example, the particular problem of poaching in England, in cases where industry-specific skills are concerned, can be explained by a labour market for general skills that does not provide sufficient protection against poaching. Thirdly, and perhaps most importantly, it provides a topography for policy-makers of the possibilities

that different kinds of welfare production regime hold out in terms of what already exists and in a developmental sense.

To give an example, an incoming left-of-centre government in Britain might wish to pursue a high-skills trajectory, and it may seem that the most equitable and perhaps the most competitive is that associated with the generation of industry-specific skills, as in Germany. However, there are several reasons why such a strategy is unfeasible. Firstly, industry-specific skills are associated with product market strategies based on the production of high-end goods and services that require very high levels of skill. There are comparatively few companies in Britain that have such a product market strategy. Secondly, forms of training for such skills require intermediate institutions for industries through which employers and unions can meet to discuss wage bargaining, changes in skills standards and processes of training. These are at best weak in Britain. Thirdly, these institutions presuppose a mix of co-operation and competition that does not exist in Britain. Finally, the role of the state is quite different in Germany to that in Britain. As regards tax, the German pay structure rewards and emphasises those with intermediate skills. This means that they are better able to pay high marginal rates of tax in contrast to the more bi-modal distribution of income in Britain. These taxes then pay for the social protection that locks in the efficient use of industry-specific skills. The education and training system in Germany is also quite different to that of Britain and, if the dual system is taken into account, it produces quite different patterns of achievement.

The upshot is that dominant product market and associated skills strategies exhibit a degree of path dependency that requires fundamental change in the institutions and interests that lock them in.

In fact, there are two related forces that may produce precisely such fundamental change – globalisation and the rise of the service economy – neither of which is considered by Estevez-Abe et al. (2001).

Welfare production regimes and globalisation

There are several reasons why the policies and strategies of multinational corporations (MNCs) threaten the links between the demands for different types of skill, VET and welfare regime.¹ To understand the key issues here we

need to consider the global skills strategies of MNCs and the increasing exposure of goods and services to the tradeable sector. Underlying the global skills strategies of MNCs is what Brown and Lauder (2001) have termed a global auction in which, all other things being equal (*ceteris paribus*), MNCs will invest wherever skills are cheapest. As we shall see, the *ceteris paribus* condition does not always hold; nevertheless, in many areas across the supply and marketing chains of MNCs there is an increasing equality of skills in many countries that makes the price of skills a key factor in MNC investment decisions.

In manufacturing, it is clear that for many products, the importance of context for skills formation, once so important, no longer applies (Herrigel 2000). The best example of this is the speed with which China has become one of the manufacturing centres of the world. Equally, the outsourcing of services, which is rising up the skills chain, is being driven by cost, with the English-speaking world outsourcing to India and China, and Germany to eastern Europe.

At the centre of the analysis by Estevez-Abe et al. (2001) is a link between the demand for different kinds of skill types and social protection, where portability holds the key to the link. What effect, then, does this globalisation of skills strategies have on portability? Where they focus on the ability of workers to move between firms and industries to gain the best advantage, the advent of globalisation has placed the advantage with MNCs for at least some types of production, both in manufacturing and in services.

There are several reasons for this. To start with firm-specific skills, it is clear that the speed with which MNCs can move production between countries means that employment and unemployment protection is not as important as it might once have been; the same is true of industry-specific skills. In both cases, MNCs tend to pay efficiency wages but are less likely to support systems of social protection. Indeed, the nations where MNCs now invest most heavily – China and India – have little by way of systems of social protection, and efficiency wages may ensure that the advantage of working for MNCs or their suppliers is more than adequate compensation in what are, after all, countries with low wage structures. In the case of general skills, social protection has not been in the interests of employers in any case.

Offshoring: a case of the global auction for skills

Offshoring has gathered pace and is predicted to continue doing so. It is a good example of the global auction at work, because new electronic technology has enabled increasingly skilled service work to relocate to countries where labour is much cheaper (Brown, Lauder, Ashton & Tholen 2004). Table 3.1 shows the cost differentials between India and the United States for various kinds of computer operatives.

Table 3.1 Salaries of software professionals in the United States and India, 1997

	United States (US\$ per annum)	India (US\$ per annum)
Help-desk support technician	25 000–35 500	4 400–7 000
Programmer	32 500–39 000	2 200–2 900
Network administrator	36 000–55 000	15 700–9 200
Programme analyst	39 000–50 000	5 400–7 000
Systems analyst	46 000–57 500	8 700–10 700
Software developer	49 000–67 500	15 700–19 200
Database administrator	54 000–67 500	15 700–19 200

Source: OECD (2000: 140)

Note: Amounts reflect starting salaries for large establishments employing more than 50 software professionals. They may be marginally lower for small firms. Salaries for a particular designation vary owing to factors such as educational and experience profile of the professional; platform of operation; nature of the assignment (contract/full-time); location of the employer; and additional technical/professional certification. Converted at exchange rate of INR41.50/US\$ (Source: INFAC, Bombay 1998).

Clearly, with these cost differentials we might predict a rapid increase in offshoring. What is of interest is that now corporations in India are seeking to ascend the skills ladder in terms of their businesses because their wage operatives are threatened by China.

In the case of South Africa, offshoring may be considered an advantage for some types of skilled work. While the emigration of skilled workers has been a concern in post-apartheid South Africa, the potential numbers predicted to emigrate do not appear high (Bailey 2003). By the same token, new technologies may make it possible for more skilled South Africans to remain

at home and yet service elements of the global economy. That said, the shortage of skilled teachers, doctors and nurses in the metropolitan North may attract desperately needed professionals at home, as the investment in these areas builds up.

Given all these considerations, it might be expected that we would see a uniform and rapid convergence across Western societies in the reduction of forms of social protection (Scharpf & Schmidt 2000). If industry-specific and firm-specific skills are moving to East Asia, then we might expect to see the spread of Anglo-American welfare regimes. Yet, while there have been shifts in public expenditure over the past five years and some movement towards a more neo-liberal welfare state, in Germany, for example, there is no general movement towards greater convergence with the Anglo-American system and, in East Asia, countries like the Republic of Korea are seeking to develop various strategies to protect the unemployed. In part, this may be down to democratic pressure applied to the state, but it is also the case that there are factors other than the global auction for skills which suggest that the links between social protection and skills still hold, although they are clearly under threat. Underlying this point is the way foreign direct investment decisions are made by MNCs. In making such decisions, several contextual considerations are taken into account, in which skills are one part of the mix. We should, therefore, examine the pressure points on MNCs that deter them from simply seeking to reduce costs through the global auction for skills.

Pressure points and the global auction for skills

To understand the significance of these points, we first need to outline a theory of corporate global skills strategies because, while there may be external political factors that act as a counter to the global auction, there are also factors internal to the organisation of MNC skills strategies.² We can distinguish between home-based skilling, which is where the majority of skilling is undertaken in an MNC's home base, and global strategies, which include outsourcing, partnerships of various kinds and acquisitions. MNCs need a variety of skills strategies involved in these different kinds of arrangement to reduce costs and to acquire, in one way or another, complementary skills that they do not have. Offshoring is an example of cost reduction, but complementary skills can be gained through partnerships with

other MNCs that have the necessary expertise. For example, the link between Philips and LG exists partly because Philips has far greater marketing skills and experience than LG. Equally, partnerships with research institutes and universities may be struck in order to achieve research for breakthrough innovations. This may also involve links with universities for recruitment purposes. Finally, MNCs may acquire plants simply to buy up the skills they lack.

MNCs encounter a series of pressure points that inform their skills strategy decision-making. These pressure points constitute factors that may lead MNCs to restrict their entry into the global auction for skills. They include the following: the protection of intellectual property rights (IPRs); socialisation into corporation culture; talent management; skills diffusion; and language and culture. We look at these in turn.

Protection of intellectual property rights

There is a generally held view that the last frontier of global competitiveness lies with intellectual property rights. States and MNCs consider the capture of IPRs through creativity and innovation as providing an edge over rivals precisely because they give corporations temporary monopoly rights. As the phenomenon of offshoring gathers pace by reaching higher skills levels, the need to gain advantage through creativity and innovation intensifies. Given that IPRs may be seen as the new gold-rush, corporations are desperate to ensure that their ideas are not stolen and reverse-engineered. For example, some Korean MNCs are reluctant to establish research institutes outside the country for fear of industrial espionage. We were told by one corporation that rival electronics products could be reverse-engineered by competitors and placed in the market within a month of gaining the industrial intelligence. For this reason, there is a law in Korea that prohibits those with sensitive R&D knowledge from transferring it from one corporation to another without a two-year interval.

Socialisation into the corporation culture

One of the fundamental problems faced by MNCs is that of loyalty across the globe, and all seek in some way to ensure they gain it through programmes of

indoctrination or socialisation. However, the kinds of strategic skills partnerships discussed above raise questions about the boundaries to organisations and hence loyalty. The degree to which this is seen as a problem for MNCs will depend upon their culture. For American MNCs, the idea that employees are in effect their 'own bosses' and will move on as and when they see better opportunities may make the issue of loyalty otiose, but for MNCs that make an assumption that a long-term career is desirable, such as many in Germany and Korea, the issue of loyalty looms large. This may be a sectoral issue in that German and Korean MNCs are heavily concentrated in engineering and manufacturing and there may be advantages to longer-term careers in this sector as opposed to the service sector. However, the guarantee of loyalty may only be secured through a large 'home input'. For example, Samsung requires its managers and senior executives to undergo intensive education that is designed to generate commitment to the corporation.

Talent management

All MNCs seek to identify leadership talent, and this is reflected in the view that there is only a small pool of talent for which corporations compete (Brown & Hesketh 2004). However, in the study we are conducting, it is clear that the competition for leadership talent is not yet on a global scale. While some MNCs trawled across their markets, the majority stressed the identification and fostering of talent within their home country. Often talent was identified in one of their overseas operations, but normally such individuals were trained to continue working in their own country. To some extent, the reason for this is related to language and culture and, of course, loyalty. Many of the current MNCs were originally national champions and they still attract a degree of within-country prestige that converts to loyalty in new recruits.

Skills diffusion

Cutting-edge organisational and technological skills need to be transferred through the appropriate divisions and subsidiaries of MNCs. Porter (1998) has argued that the creation of knowledge as the focus of firms' competitive strategies has been accompanied by the formation of extended internal labour markets (ELIMs).³ These labour markets enable the transfer of knowledge

and intellectual capital because they are bound by strong systems of exclusion and inclusion. Recruitment occurs through networks that enable a degree of trust to be invested in new recruits. In our research, it was clear that MNCs placed great stress on reliable networks for recruitment from universities, which often involved internships so that companies could gain extended knowledge of a student's abilities and potential.

Naphapiet and Ghoshal (1997) have developed a theory of the relationship between social capital within an organisation and the creation of intellectual capital. It is a theory that explains both the importance of ELIMs and how they work to create knowledge. They outline three elements of social capital that facilitate the creation of intellectual capital: the structural element, which denotes the overall connections between actors; the relational element, which refers to how the network ties or connections are constructed and maintained, in which trust is central; and the cognitive element, which refers to the resources by which shared representations, interpretations and systems of meaning are generated and reproduced.

Central to intellectual capital is the way that knowledge can be exchanged and combined, which, Naphapiet and Ghoshal argue, is facilitated by the elements of social capital outlined above. The process of combination, in which existing aspects of knowledge are combined to produce something new, can be applied to both process and 'breakthrough' knowledge. For combination to occur, however, exchange is also required. This may involve the transfer of explicit knowledge between individuals or the collective knowledge of teams that will draw upon tacit knowledge and the culture within which it is embedded. It is the combination and exchange of knowledge in these processes that social capital underwrites and enables.

We can see from this account why intellectual capital is related to ELIMs, because the latter provides the organisational basis for the processes of combination and exchange.

Language and culture

Related to all three elements of social capital are issues of language and culture. There is a degree of protection for IPRs if key researchers all speak the same language, especially if it is not English. However, language and culture

also speak to questions of loyalty and talent management. A few MNCs have a dual language policy, as is the case with some German corporations; others in Korea aspire to such a policy (Korean and English) but seem much further from achieving that aim. This means that certain types of skill relating to research and leadership are likely to remain in Korea. However, even in the German MNCs that we have studied, culture, if not language, has meant that the pool of identified leadership talent remains German. Equally, it can be readily appreciated that ELIMs based on a particular language and culture facilitate knowledge combination and exchange. However, there is a trade-off between restricting the pool of knowledge and talent to particular language users and cultural resources and seeking to extend organisational networks across languages and cultures.

Given these considerations, it is clear that there is a degree of 'stickiness' in the operation of the global labour market, which means that there are factors that will keep the skills sets of some MNCs in their home country. It should be noted that these forms of 'stickiness' relate to the cadre of managers and researchers within MNCs, with the consequence that the global auction for skills will be open, in principle, to an increasing proportion of the workforce.

The application of this analysis to South Africa

The first point to make about joined-up policy is to ask the question: Where in the tradeable sector does South Africa have an advantage?⁴ However, as Mayer and Altman (2005: 48) caution, the expansion of employment through export-led growth is unlikely to make major inroads into South African unemployment. They note:

To maintain this as a dominant employment-generating strategy for any length of time it would be necessary to continuously reduce the cost of living ... or reduce real wages ... Otherwise, it is unlikely that these goods would be competitive in international markets.

This view is entirely consistent with the analysis of the global auction above. While South Africa's high-skills sector may generate resources for redistribution, the high-skills option in the tradeable sector is not feasible (Kraak & Young 2005), as indeed it is becoming increasingly unfeasible elsewhere.

This then raises a further question: Can the significant levels of unemployment in South Africa be addressed through government-led initiatives in the non-tradeable sector? Mayer and Altman (2005) argue that the state should stimulate basic-needs industries to generate domestic demand and low-skilled work. By the same token, the kind of expansion they envisage in delivering social services and construction is open to state incentives, amounting to an industrial policy that has yet to fall within the remit of World Trade Organisation (WTO) regulations and General Agreements on Tariffs and Trade. Alongside this strategy, there is the necessity to develop a skills policy to enable workers to develop the skills that will offer greater chances of employment in the future. Such a strategy refines the more general injunction towards a joined-up skills strategy and examines the limits and possibilities of state-led policy.

Conclusion

When we look at the different senses of joined-up policy raised in the introduction, we can now understand the challenge confronting states. When we look at the issue of how to raise demand, it seems clear that seeking to meet the demand of MNCs is likely to prove complex, if not daunting, for three reasons. Firstly, it is difficult to predict or meet MNCs' demand for skills. All other things being equal, demand will be determined by cost, and this can be for advanced skills given the mass higher education systems that are now developing in East Asia. Few of the more developed or intermediate economies can afford to maintain their costs of living by engaging in such a Dutch auction. Secondly, higher skills are likely to be captured within MNCs' extended labour markets, which depends on recruitment through MNCs' wider networks, especially in relation to higher education. Thirdly, our research suggests that MNCs will identify very particular enclaves of skills, if they are not part of their ELIMs. However, even here identification is related to their wider networks; for example, a German MNC identified computer software development in eastern Europe as key to fulfilling one aspect of their wider strategy, but this company has had links with eastern Europe for over a century and has well-embedded ties in the area.

When we examine the issue of linking VET systems to the labour market, it is arguably the case that outside the manufacturing hubs of East Asia and parts

of Germany, the majority of skills required are for largely service economies that seek general skills (Woolf 2002). In this sense, it is hard for any state to provide more than a general basic education. This may explain why, instead of the types of social protection related to firm-specific and industry-specific skills, there is a greater policy emphasis now on investment in human capital through education. However, such investment, if it is not to lead to greater inequalities and levels of poverty, requires jobs for those with general skills. The analysis of the links between types of skills production and social protection should alert us to the risks involved in making social protection so reliant on employment. In South Africa, one way of addressing this issue has been discussed. In many of the more developed economies, the only response has been to expand the low-skills non-tradeable service sector.

Ten years ago, there were examples of states whose joined-up policies appeared very effective; in their different ways, Germany and Singapore were examples (Ashton & Sung 2002; Brown et al. 2001). However, different aspects of globalisation, including the rise of mass higher education in East Asia, the concentration of manufacturing in the same area and the extension of the regulatory regimes of the WTO, have made such strategies infinitely more difficult.

Notes

- 1 This section derives from the authors' ongoing work on the global skills strategies of MNCs. See Economic & Social Research Council (ESRC) Contract No. RES-000-23-0287, Globalisation and the skill strategies of MNCs: A comparative analysis.
- 2 Some of the insights reported in this and the following section are from an ESRC project, Global Corporate Strategy and the Future of Skill, currently being undertaken by the authors.
- 3 We owe a debt to Rob Strathdee who drew our attention to the concept of ELIMs. See Strathdee (2005).
- 4 The concept of the tradeable sector has shifting boundaries, partly as a result of WTO regulations and partly because of new techniques and technology. For example, if a firm can supply complete bathroom units, and contracts to supply them to South Africa below the price that they can be made in South Africa, is construction then part of the tradeable sector?

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