

**How Competitive Strategy Matters? Understanding the Drivers of Training,
Learning and Performance at the Firm Level**

Research Paper 66 May 2006

By David N Ashton and Johnny Sung, Centre for Labour Market Studies, University
of Leicester

**ESRC funded Centre on Skills, Knowledge and Organisational Performance
Oxford and Warwick Universities**

Editor's Foreword

SKOPE Publications

This series publishes the work of the members and associates of SKOPE. A formal editorial process ensures that standards of quality and objectivity are maintained.

Orders for publications should be addressed to the SKOPE Secretary, SKOPE,
Warwick Business School, University of Warwick, Coventry CV4 7AL

Abstract

This paper seeks to further our understanding of the links between training, learning and performance at the level of the firm. It starts with a critical examination of the conceptual underpinning of conventional approaches to this problem, approaches that dominate much of the academic and policy discourse. It argues that current attempts to understanding the drivers of training and the links between skills, management practices and performance, both rely on input/output models that have serious limitations, both for our academic understanding of the issues and for policy approaches.

The main body of the paper provides the outline of an alternative model which starts from the company's competitive strategy and proceeds to identify its two main components, namely the technical and interpersonal relations of production. The utility of this model is then demonstrated through the use of case studies in order to provide an explanation of phenomenon that are either ignored or left as unexplained by the conventional approaches. The conclusion provides a brief exploration of the implications of this model for future research and for policy approaches that seek to enhance skill formation within firms.

1. The Current Model

Underlying the current academic and policy debates about the determinants of skills and their influence on performance is a common model of how the various determinants of skills operate. At the core of this is an assumption that if we can identify the main variables determining the acquisition of skills, then this will provide the knowledge that would enable us to increase skill levels in individuals and firms and thereby enhance performance. In many respects this is a conventional input-output model in which an increase in the inputs, i.e. those factors or variables that improve the take-up of skills will generate an increase in skill levels and therefore in the performance of the company.

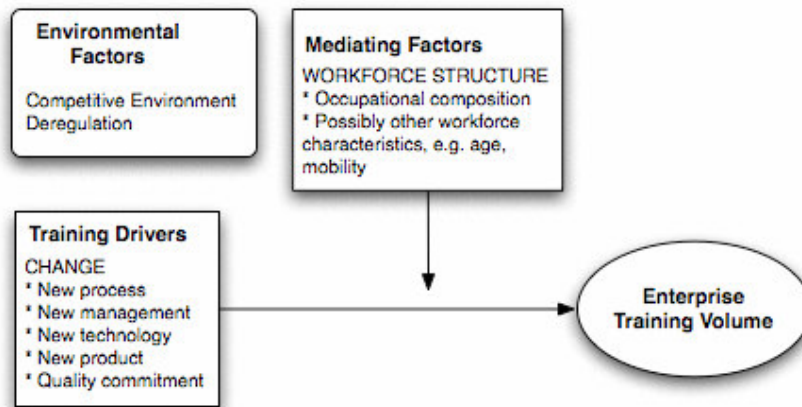
We will use two different examples to illustrate how this model informs the research and policy debate. The first example comes from the research into the determinants of training within firms. The second example comes from a slightly broader perspective, which is the research into the impact of human resource management practices (including training), on individual and firm performance.

Research into the Determinants of Training

The Australian researchers Ridoutt et al (2002) have produced a model that seeks to explain how a range of different variables, identified through the research process, generate variations in both the nature and volume of training undertaken by enterprises. They developed two variants of their model, one to identify the variables that determine the volume of enterprise training and a second to identify the factors that determine the nature of enterprise training in Australia. These were derived from the original work by the Warwick researchers in the UK¹ and Hayton et al (1996) in Australia. We reproduce their simplified model, for the volume of training in the process manufacturing and leisure industries, below (Figure 1). In this model the variables are placed into three categories, 'Environmental Factors', that condition the impact of training within enterprises, e.g. new legislation on training. 'Training Drivers' which are the factors associated with change within the firm, e.g. new technology, new processes, quality commitment that drive training and 'Mediating Factors' such as the degree of professionalisation within the workforce which mediate the impact of the training drivers on the volume of training.

¹ This refers to the work by Sparrow and Pettigrew (1985) and Hendry and Pettigrew (1989) at the Centre for Corporate Strategy and Change, University of Warwick.

Figure 1: Simplified model for volume of enterprise training in the process manufacturing and leisure and entertainment industries (Australia) (Ridoutt et al, 2002: 69)



Recent research in the UK and Australia has identified further variables, for example work by Green et al (2003) has found a link between a high specification product market strategies and high skill levels in the labour force. Similarly, Mason (2004) found high skill levels (as measured by formal qualifications) to be associated with high value-added product strategies. He found a strong positive relationship between product strategy and workforce skills after other variables were controlled for, including size, sector, region, site function, recent sales growth and so on.

Within the firm, a range of studies has identified factors such as new technology and especially workplace change as having a strong impact on training and skills. In the UK, Green et al (2003) found higher levels of computerisation associated with higher skills and technological change to be associated with increases in skill requirements. Also in the UK, Kitchin and Blackburn (2002: 36) found the introduction of new products or services and new equipment was linked to training activities in SMEs. In Australia, Smith and Hayton (1999: 262) found that new product or process technology was an important driver of training, while Ridoutt et al (2002: 7) found technological innovation in the form of the development of new products or services, had a strong association with four of their indices of training activity, including training volumes².

² It appeared that Smith and Hayton (1999) suspected that skill drivers might have been more complex than the 'input-output' model implied. They deliberately examined matched pairs of firms in the same industry sector and found that their training arrangements could be radically different. However, Smith

While this research has identified new technology to be an important driver of training³, there is a growing consensus among researchers in this tradition that workplace or organisational change is perhaps the most important driver of training and skill formation in the enterprise. Thus the findings of Kitchin and Blackburn (2002), Green et al (2003), Mason (2004) in the UK and Smith and Hayton (1999) and Ridoutt et al (2002) in Australia all point in this direction. To this we could add the earlier work of Betcherman et al (1997) in Canada. However, the people who have explored organisational change as a driver in most detail are Smith et al (2002) who examined the impact of five new management practices (NMPs) on training within enterprises in Australia.

What they found was that size, previously thought to be one of the main determinants of training activities, was not positively related to training practices, apart from the existence of a training manger; it was the adoption of NMPs, that emerged as the most important explanatory factor for training. They summarise their findings as follows (Smith et al, 2002: 8):

"The research has shown unambiguously that most NMPs are associated with higher levels of enterprise training. TQM, teamwork and learning orientation are associated with higher levels of training activity and a greater diversity of training. Lean production, understood in most enterprises to be synonymous with cost reduction, is associated with the reduction of training activities. However, teamwork, the most prevalent of the NMPs investigated in this study, is associated with a more even distribution of training in the workforce and, where teams are given reasonable levels of autonomy, with more formalised and externally sourced training."

There are of course many other variables that have been linked to training activities, for example the building of training into the strategic planning process within the enterprise, (Smith et al, 2002: 61), the training orientation of owners of SMEs (Kitchin and Blackburn, 2002: 54), the existence of an HR department and so on. No doubt further research will reveal more variables at work.

and Hayton did not identify this as the effect of competitive strategy of the individual firms. They put this down to the unique combination of 'moderating factors' (what Riddout termed "mediating factors").

³ It is not always clear from the literature exactly what is covered by the label, technology, sometimes it refers to new equipment, others refer to new products, while others use the term to cover new forms of ITC.

While this tradition of empirical analysis has certainly enhanced and deepened our understanding of the drivers of training, there are at least two major limitations attached to it. The first concerns the mechanical nature of the causality between the dependent and independent variables. This type of conceptualisation is an almost inevitable consequence of the statistical techniques employed, and while authors are careful not to read causality into specific statistical associations, the eventual model that informs the conclusions leads to a positing of a mechanical-like causality. The implication is that these various variables are involved in triggering or driving specific outcomes, either in the form of skill levels, training frequencies or other measures of training outcomes. Thus, when explaining their results, authors frequently posit such connections. For example, in discussing their results on organisational change and its impact on training Kitchin and Blackburn (2002: 36) argue that changes in products and processes:

" ... are likely to necessitate adjustments in individuals' work roles, and consequently, in the skills and knowledge required to facilitate their successful implementation. The impact on training will of course depend on the precise character and extent of organisational change. Extensive or fundamental changes in the product and working processes are likely to require more substantial developments in workforce skills than minor modifications."

Here the organisational change provides the trigger and the response is more training. We could continue with more examples. However, the argument we make here is that the process of causality is far more complex than this model portrays.

This is the second major limitation, namely that this approach fails to explain why some firms are more prone to the impact of these various variables that drive training than others. Why is it that some may introduce fundamental changes in products and working process while others confine change in this area to minor modifications? Why is it that some of the firms which have introduced NMP have not increased the level of training while others have? Why is it that some firms with high-specification product strategies do not necessarily have more qualified staff and higher levels of training? To answer these questions we require a very different model and conceptualisation of causality.

Research into the Impact of HR Practices on Individual and Firm Performance

We use research from within the UK, to identify the impact of human resource management practices on the level of skills and motivation in the workforce and the translation of this into higher levels of performance. Although this is a slightly different definition of the problem to that outlined in the first model, this approach also utilises the same underlying input/output model. Thus Purcell et al (2003: xi) argue that:

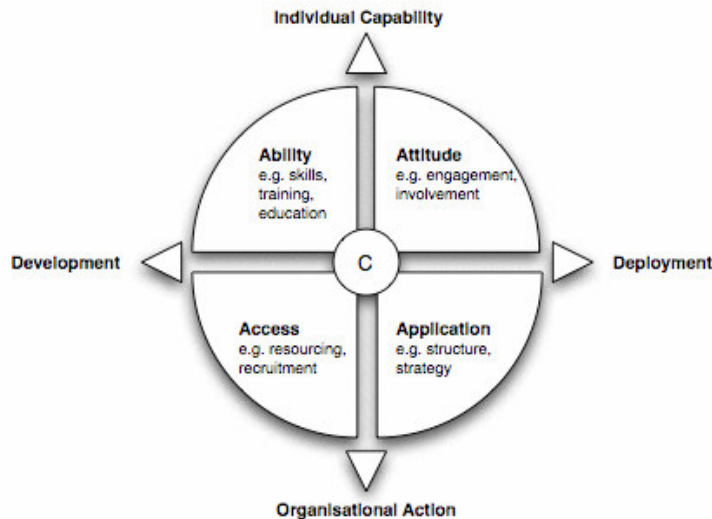
"Performance is a function of Ability + Motivation + Opportunity. Essentially this means that people perform well when, firstly, they are able to do so because they possess the necessary knowledge and skills; when, secondly, they have the motivation to do so, and do it well; and when, thirdly, they are given the opportunity to deploy their skills both in the job, and more broadly in contributing to their work groups and organisational success."

They then identify eleven human resource practices such as training and teamworking which are the inputs required to turn this into action. More recently, Tamkin (2005) has sought to develop this approach further and produce a model which explains the impact of high performance working practices on skills and then on performance. She identifies a series of human resource practices, such as training, and job autonomy, together with psychological states such as job satisfaction, providing the inputs into individual and workforce capability, which then generates higher levels of activity, which increases productivity and in turn produces outcomes such as higher profits.

In many respects these approaches of Purcell et al and especially Tamkin have advanced our thinking because they incorporate the opportunity to acquire new skills provided by the employer, for example through the provision of employee autonomy and job re-design, as an input. We reproduce what Tamkin refers to as the '4A model of capability' in Figure 2 below. On the left top quadrant the inputs are skills training, that determine the level of workforce ability and below that is the quadrant where the inputs that determine access to organisations such as recruitment strategies are located. In the top right are the factors that determine employee attitudes, such as engagement and below that are the factors that determine application or opportunities for the deployment of skills, such as job design. Together, these four quadrants form the capability (i.e. the centre 'C') of the organisation. Once again, the assumption is that by increasing the inputs into these quadrants we will generate improvements in

outcomes and performance - the same input-output model, albeit an advance on earlier attempts⁴.

Figure 2: The 4A model of capability



Here again, research from within this tradition continues to uncover an increasing number of human resource practices which have an influence on individual motivation and subsequent performance. For example, Guest (2000) in his research has identified a range of 18 practices which he sees as having a potential impact on performance while Becker and Huselid (1998) in their work in the USA have extended it to 30.

What is different from the research tradition on training is the fact that the impact of high performance practices on worker motivation and behaviour is seen as more contentious. Whereas there is a more widespread agreement that training is likely to generate higher levels of skills, this is not the case when it comes to the impact of high performance working practices on worker motivation. Thus researchers such as Marchington and Grugulis (2000), Danford et al (2004) and Brown (1999) have argued that the use of high performance management practices can lead to work intensification and negative effects on worker motivation, while Lloyd and Payne (2004) argue that the impact of these practices on skills is problematic. All this suggests that under certain conditions the use of more high

⁴ The reason we see the Tamkin model as linear is that there no place for the impact of a company's competitive strategy.

performance management practices may not generate the higher performance outcome that our second model would predict. Another way of putting this is to say that under some circumstances, the use of these practices have clearly increased skill levels and the subsequent performance of employees, but under others it has had a different effect.

Once again we are confronted with the inability of this model to explain why certain management practices can generate higher levels of skills and performance in some instances and not in others. In concrete terms we have to be able to explain why increased training and the use of self-managed teams and knowledge sharing may generate higher skill levels and performance in an IT company producing internet applications, while the same practices may have the opposite impact in a textile factory producing cheap knitwear, leading to work intensification, an increase in its training and production costs and reduced profits.

We argue that in order to produce an effective answer to this problem, we have to abandon this input-output model with its main focus on the individual (either singularly as an employee or collectively as the workforce), as the centre of the analysis. Instead, we have to stand back and conceptualise the firm as a purposive organisation with its own productive system and competitive strategy. Then we can start to understand why increases in training or the use of more HRM practices will generate different outcomes.

2. The Links between the Drivers of Skills and Outcomes in Training and Skill Levels: a Productive Relations Approach

There is a long tradition of academic enquiry stemming from the work of Marx, Weber and others, which highlights the fact that firms and other forms of large-scale organisation are purposive in character. In the case of firms, they are established to create profit and to do so they need to gain a competitive advantage in the market. Once established, they develop their own dynamics and there are inevitably unintended consequences to the purposive actions of those who form them, but this does not detract from the fact that there is an underlying rationale to their existence. Production is organised in order to achieve the owners' or managers' objectives and, in the process, the organisation selects and shapes the skills of those within it. This is manifest most explicitly in the competitive strategy adopted by the company. Put at its most basic, the attempt to secure a competitive advantage in the market requires the

company to identify first, what it is going to produce, the type of technology it will use and second, how it will use people to produce that product or service.

In the policy debate, and in the academic literature, this purposive characteristic of organisations is normally subsumed by the question of whether the economy and the companies that comprise it should pursue a 'low road' strategy where companies produce standardised goods or services such as routinised production or fast food using forms of mass production and low skilled labour to achieve a cost advantage in the market, or whether they should follow a 'high road' strategy with companies producing differentiated products using teams of highly skilled labour to achieve a quality or value added advantage over their competitors.

While this debate acknowledges the role of companies' competitive strategy, it tends to assume that the use of low skills is invariably associated with a product market strategy focussing on the use of mass production techniques and low skilled labour to achieve a competitive advantage. Similarly, the high road strategy is seen to involve a necessary association between high skill levels and a differentiated product market strategy. However, as the recent work by Mason (2005) has shown this is not necessarily the case. In some companies the use of a differentiated product market strategy is not associated with the use of highly skilled labour. Similarly, in our own case study work (Sung and Ashton, 2005) we found examples of companies selling standardised low cost products but achieving a competitive advantage in the market through the use of more highly skilled employees.

In view of this, what we aim to do in this paper is move this debate forward by analysing the components of companies' competitive strategies, utilising a distinction between the technical and interpersonal relations of production. This represents a new and very different way of approaching the problem of skill drivers. It is an approach that enables us to provide answers to the questions the conventional approach fails to ask. In brief, what we argue is that by starting from the basis of the company's competitive strategy and examining the relationship between the two components of this strategy, we can provide a more powerful explanation of the ways in which companies develop and utilise the skills of their employees.

The notion of technical and interpersonal relations of production is derived from the work of Wilkinson (1983; 2002)⁵. The technical relations of production refer to the relations people enter into by virtue of their function within the division of labour, often mediated by machines or information systems. These determine to whom people relate in the workplace and the form in which they relate, for example as functionaries who perform similar tasks and/or as superiors or subordinates. These relationships stem from the organisation of work over which the individual workers or employees have relatively little control. For example, in an insurance office they refer to which aspects of the business the employee is involved in, (monitoring the performance of pension funds or handling sales enquiries) the complexity of the tasks involved and the knowledge required to perform them (professional accountancy qualifications or a two day induction course) and where the person sits in the authority system (with authority over the work of others or at the bottom of the hierarchy with no authority over others and little discretion over the exercise of their tasks).

These relations are conceptually distinct from the interpersonal relations of production which are the personal associations between the human beings who form these organisations. These are sometimes referred to as the 'social relations' workers or employees enter into with other workers and superiors over which they do exert a degree of control as part of their everyday interaction. For example, in the insurance office the professional employee monitoring the performance of pension funds can make a significant difference to the financial performance of the company through the consistent and creative application of their knowledge, if they are committed to the company, or they can perform adequately if they feel no commitment to the company and or their superiors. The sales clerk, through the use of tacit knowledge, may exercise some control over the work tasks but even more control over their relationships with colleagues, their boss and their commitment to the company. The important point about these relationships is that they provide more room to be influenced by the employee who decides what level of commitment they give to the organisation and how much of themselves they invest in the performance of their work and their relationships with colleagues.

⁵ Wilkinson uses the terms technical and social relations of production. We prefer the term interpersonal relations because the use of the term social implies that technical relations are not social in nature.

Using these distinctions we can provide a more powerful explanation of the linkages observed in the statistical analysis between factors such as the product market strategy, technological change, organisational change, skill formation and the performance of firms. In the next section, we examine how these relations of production operate. We then explore how they combine to provide a more powerful explanation of variations in the part played by skills in company performance. In the final section, we examine the research and policy implications of this model.

3. Technical Relations of Production

Mass or Standardised Production

There is a whole tradition of Marxist analysis, embodied in the labour process school of thought, which has produced an extensive body of work, following Braverman (1974) and others, on the impact of mass production on skills. This has documented the ways in which the separation of thought from execution, through Taylorist systems of management and Fordist systems of mass production, has deskilled employees. Researchers such as Danford have documented how these old systems of production, sometimes disguised in part by the rhetoric of new management practices (1998; 2004), still retain the technical relations of production characteristic of the old Fordist systems. Others following Rizer (1993) have shown how the techniques of production management originally designed for use in the mass production of manufactured goods have been extended to call-centres (Taylor, 1998) and offices (Baldry et al, 1998) in the service sector. All are firms where the organisation of production is designed to routinise jobs, provide tight description of tasks and maintain control through strict supervision, thereby facilitating the use of unskilled labour. These are companies where the power differentials between management and workers are maximised in order to enhance management's control over the production process by deskilling the content of employees' jobs, thereby reducing labour costs.

In this instance, we see a clear link between the competitive strategy of these firms focusing primarily on the basis of cost and the use of low cost and low skilled labour.⁶ In these organisations, the use of low cost labour is an integral part of the companies' product market strategy. Moreover, because profits stem from the sale of

⁶ Note here a) the situation in India where graduates are used for this type of work because they are cheaper and can speak the language, b) the shift of much of this type of manufacturing activity to China to take advantage of lower labour costs. Thus although we speak of low skilled labour in fact in places like India and China the labour may be highly qualified, it is the jobs that are low skilled.

standardised items at the lowest cost, changes to the production system are kept to a minimum, as there are financial advantages to be derived from long uninterrupted production runs. In addition, technical changes that generate the need for additional training further increase the cost of labour and reduce profit margins. In this case, training expenditure is rightfully seen as a cost.

In firms utilising mass production techniques we can therefore see why low skilled labour is used, why there are few organisational and technological changes to drive training and why there is no incentive for further training beyond the minimum required to learn the specific tasks required and to meet legal obligations.

Differentiated Production

While much of the work from the labour process school has documented the continuities in the use of traditional Fordist and Taylorist ways of organising production and their extension to the service sector, there has emerged over the last few decades another literature documenting the gradual emergence of new technical relations of production or ways of organising production. This literature refers to the use of techniques of lean production such as cellular manufacturing, total productive maintenance (EEF, 2001), just-in-time (Kanban), integrated product teams, (Thompson, 2002) in manufacturing and ICT in the service industries (Murphy, 2002) which has generated higher levels of innovation and which respond more quickly to customer needs⁷.

These are firms in which the technical relations of production take on a very different form to those observed in capitalist mass production. They are typically found in firms that seek to differentiate their product in the market, usually through innovation, involving continuous improvement, finding better ways of doing things and involving the majority, if not all employees. While they can be found in manufacturing companies they may be more frequently found, and often more fully developed, in knowledge-intensive companies in the service sector, for example in IT and advertising, where the skills of employees are definitely seen as part of the company's competitive advantage in the market place (Sung and Ashton, 2005).

⁷ These are sometimes referred to as HPWOs but there is some confusion in the literature over the use of this term. Many proponents of HPWP use the term to refer to specific sets of HR practices often without any reference to the technical relations of production. For this reasons we have limited the use of the term here.

These represent organisations in which power differentials between senior management and employees are still there, but the imbalance is not as great as under the mass production system. Control over the behaviour of workers is more through the use of personal commitment to the values of the organisations and less through the scrutiny of supervisors. This way companies can tap into, and make use of, the intellectual skill of the employees in their business strategy. In this case, highly skilled workers are an integral part of their business strategy and not a consequence of it.

Where these technical relations are fully developed we find that instead of organising workers and worker skills around the production process, that work processes are organised around the continuous development of worker skills. Production is organised on a collaborative basis in order to maximise the input of all employees. There is extensive use of self-managed teams and the use of ITC for knowledge and information sharing. In these firms, the technical relations of production are designed to maximise the opportunities for learning and skill development. Knowledge is spread throughout the organisation and mechanisms are in place to ensure the integration of different knowledge bases required to support production, including tacit knowledge, technical knowledge and the behavioural skills required to transfer and share knowledge.

Here again there is a clear link between the product market strategy and the level of skill of the labour force⁸. High skill levels are an essential part of the business strategy. When it comes to changes in work processes these are also continuous and an essential means whereby the firm sustains its competitive advantage through innovation in its products or services. In these companies, because of the different technical relations of production, skills represent not an additional labour cost but an investment necessary to ensure future competitiveness. It also means that continuous organisational change is taken for granted, which in turn drives training, while the need for continuous improvement and innovation in the product market means that continuous learning is a necessity. Thus not only do the technical relations require highly skilled personnel to function effectively, they also require continuous

⁸ The proportion of firms with these forms of technical relations of production, or ways of organising production is limited. However, many companies have adopted elements of the high performance working practices associated with them and sought to graft these onto more traditional ways of organising production or traditional technical relations (see for example Danford, 1998, 2004 and Doeringer (2002) for different interpretations of this phenomenon).

improvements in their skills. The technical relations are represented by the vertical axis in our competitive strategy model in Figure 3 (in the following section).

These brief pictures represent extreme types, but ones based on observed companies⁹. However, in reality most companies represent either a combination of types, for example where a large corporation may produce different products in divisions with different technical relations of production, or they may have modified the technical relations of production in an attempt to improve quality or involve employees in the production system. Nevertheless, they do help further our understanding of why different product market strategies lead to the utilisation of different levels of skills and why technical change can produce high levels of training and skill formation in some organisations and not in others.

4. Interpersonal Relations of Production

The interpersonal relations of production are also an integral part of the production process but need to be conceptualised separately because they have a degree of independence from the technical relations of production.

Task Focussed

In examining interpersonal relations we need to distinguish between interpersonal relations that are *task focussed* and those that are *people development focussed*. In firms or organisations where the interpersonal relations are 'task focussed', relationships between staff are organised in such a way that attention is paid to the execution of specific tasks, which may be the manufacture of widgets or components, the sale of fast food or the answering of queries in a call centre. Here the resources of the company are geared to ensuring that these outputs are achieved. In terms of the interpersonal relations this means that there is little or no concern with any aspect of the employees' behaviour or capacities, other than those required to perform the requisite tasks. Management systems are geared to ensure maximum control over those aspects of the person's behaviour that are relevant to the performance of that specific task. This may involve close supervision, the delivery of specific skills in manual dexterity, the scripting of conversations or the management of a person's

⁹ We prefer the term extreme types because the way in which the Weberian notion of "ideal types" can be interpreted as only existing in the realm of ideas or perhaps textbooks. All the types we have depicted here are firmly rooted in reality.

emotions (Hughes, 2005). Similarly, rewards are tightly geared to the expected performance outcomes, e.g. X number of widgets to be produced per minute or X number of phone calls per hour. It means that the industrial relations, payment systems and the human resource or training functions have a very narrow focus on these aspects of the employees' behaviour.

In the task focussed approach the skills of operatives are minimised as part of the process of cost minimisation. It follows that only a select group of employees responsible for the management of the firm and the development of the product or service are 'developed'. For the remainder, who are not expected to contribute anything over and above the effective performance of a few routine tasks, their 'training' can be left to the first line management or training department, as something to be tackled when operatives join the company or when the production process throws up a 'training problem'. Even a well thought through HR strategy, which complies with the Investors in People requirements and delivers all the appropriate skills, is unlikely to play a significant part in raising skill levels. Here the direction of causation is close to that identified by the research for the Skills Task Force where "the formulation of human resource and skills strategy tended to lag behind changes in product strategy, work organisation and production methods or service delivery" (cited in Mason, 2005: 3).

People Development Focussed

The 'people development focussed' interpersonal relations are totally different. These are geared to ensuring that the individual employees contribute to their maximum potential. Control over their behaviour is derived from the commitment of the individual employee to the overall objectives of the organisation. Collective values are the glue that holds the organisation together. Employees therefore monitor their own behaviour in relation to the achievement of collective values and goals (Hughes, 2005). Management systems focus on monitoring and supporting employees through techniques such as performance appraisals and personal development plans. They use extensive on-the-job training and mentoring to provide support for the continuous acquisition of the technical and social skills required to make an effective contribution to the team and the wider organisation. Payment systems reward both individual and collective efforts. Here the development of staff is central to the thinking of senior management and explicit strategies are put in place to ensure such development takes

place and is rewarded. These interpersonal relations are represented by the horizontal axis in our competitive strategy model in Figure 3.

In the people development approach senior management see the skills of the entire labour force as providing an important component of the competitive advantage of the firm's products. The continuing development of all employees is so important for the company that it cannot be left to an occasional training course delivered by the training department and becomes an integral part of the responsibilities of all managers/team leaders for all their staff. The ability to teach others is a central component of the manager's job. The role of the HR department is to monitor and support that process of continuous development. Because the employees' skills are so crucial to the business success of the firm, skill issues are an integral component of the business model, it is therefore vital that the skill or HR strategy maintains and enhances the skills of the labour force. This means that the interpersonal relations of production are an additional tool through which the company maintains and improves its competitive position in the market.

Some of the techniques used to shape interpersonal relations and so enhance skills and the performance of the firm, are sometimes referred to as high performance working practices or in some instances high involvement practices¹⁰. Here the use of performance based pay, information dissemination techniques, forms of employee participation, mechanisms to support continuous learning such as personal development plans, TQM etc, are all geared to supporting and reinforcing each other with the aim of improving individual and company performance. For their effective use these techniques depend on high levels of trust between employees and managers/owners. It means that the senior management have to win the hearts and minds of the employees as motivation stems from the personal commitment of the employee to the organisation and or its leaders. This requires vision and the articulation of clear goals and is often delivered through charismatic leaders who provide a sense of purpose and who demonstrate their commitment to the company values through their own behaviour as they 'walk-the-talk'. This behaviour is crucial because it provides the source of inspiration for other employees to commit

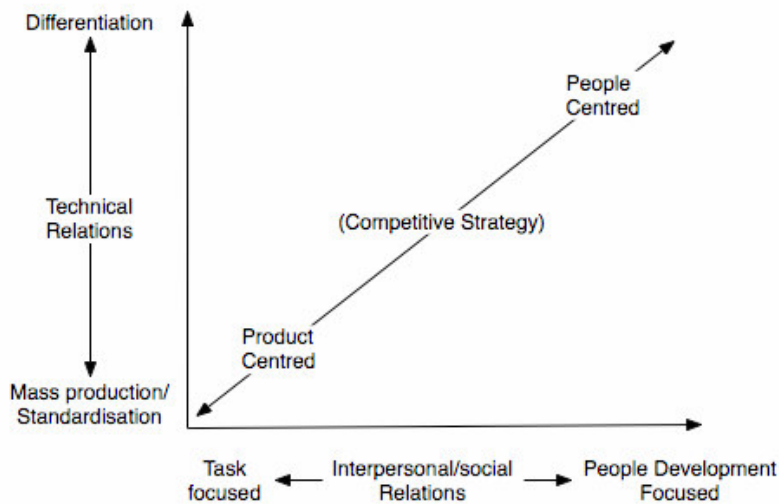
¹⁰ We have already referred to the confusion over the use of the term high performance working practices with regard to the inclusion or not of aspects of the technical relations of production. Here we wish to acknowledge the debate over the use of the alternative term high involvement practices, which does not assume any link to performance. We acknowledge these difficulties but have used the term high performance in order to highlight the fact that we are also referring to practices such as those associated with performance management as well as high involvement practices.

themselves to their jobs and exercise their discretion in accordance with company goals and values. It provides one of the main mechanisms through which senior management co-ordinates the actions of relatively autonomous employees¹¹.

5. Relative Autonomy of Technical and Interpersonal Relations of Production

While we have spelt out in some detail the characteristics of the technical and interpersonal relations we must stress that these are components of a competitive strategy. The organisation of production in firms requires both technical and interpersonal relations and it is therefore unrealistic to find any organisation which can be located along the vertical or horizontal axes. Most organisations have competitive strategies which are derived from some combinations of the two axes and therefore are likely to be located in the space between the two. The relationship between a firm's competitive strategy and the technical and interpersonal relations that deliver it is depicted in Figure 3.

Figure 3: The competitive strategy model of skill utilisation



For this reason we see the two dimensions as being combined in different ways and therefore exhibiting varying degrees of independence in relation to each

¹¹ The impact of senior management in creating this commitment to overall business objectives on the part of the majority of staff is difficult to identify and articulate. It is sometimes referred to by management writers through the use of clichés such as 'Energise your Enterprise' (Wickens, 1999). While academics might shy away from such loose terminology, the point we are making here is that this does refer to a very real phenomenon.

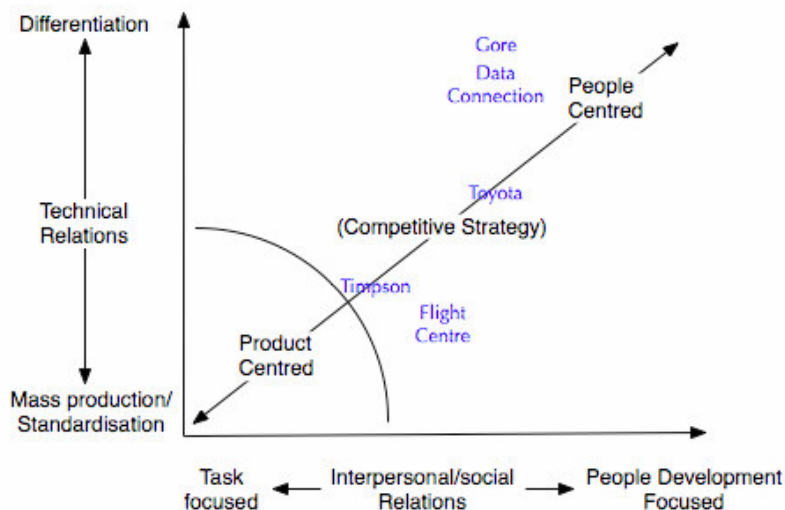
other and therefore being characterised by their relative autonomy. The fact that we can find examples of firms with a mass production form of technical relations adopting a people development focus for their interpersonal relations and vice versa, of firms with a differentiated product focus for their technical relations and a task focus for their interpersonal relations of production, testifies to the relative autonomy of these two spheres. Given their relative autonomy, these different forms of technical and interpersonal relations of production therefore provide us with the potential to explain why companies can differ so radically in terms of their use of skills and training, and in their capacity to enhance performance through skills.

In order to illustrate this we make use of our recent case studies conducted for the Department and Trade and Industry (Sung and Ashton, 2005). This research provided us with access to a range of firms which pursued competitive strategies characterised by very different combinations of technical and interpersonal relations. Figure 4 is used to show where some of these companies are located in terms of our model. Flight Centre is an example of a company that sells standard retail package holidays on the high street, which would locate it low on the technical dimension where the skill demands are not particularly high (as is the case in many retail establishments). However, it has used some high involvement management practices to produce a motivated and committed workforce to provide a competitive advantage in the market through the quality of service it provides. Such companies use a people development focus approach (e.g. extensive training and employee commitment practices) in their interpersonal relations to provide a committed and highly motivated workforce force to produce a competitive advantage in their customer relations (see Figure 4). Although Flight Centre may not have adopted the people development focused strategy extensively, the attempts that they made have moved the organisation away from the task focused direction. A similar strategy has been adopted by the high street retailer Timpson which diversified from its main business of shoe repairs to a wide range of services and products. In general, the more an organisation moves away from the 'half circle' in Figure 4, the more training is used to fulfil a strategic importance and is therefore likely to make a greater impact on performance.

Further along the vertical dimension are W. L. Gore and Data Connection. Both of these produce highly differentiated products and services, often tailored to the needs of specific customers. In the case of W. L. Gore their technical relations centre on the use of teams to deliver high quality knowledge-intensive chemical products,

whereas in the case of Data Connection they produce sophisticated IT products and solutions for customers such as Fujitsu and the UK and US military. However, to sustain their competitive advantage, which depends crucially on the skills of their engineers in the case of W.L. Gore and IT professionals in the case of Data Connection, these companies have developed sophisticated people development policies, such as supports for continuous learning, knowledge sharing mechanisms and finely tuned reward systems that support continuous learning and commitment to the company. This approach to interpersonal relations places them further along the horizontal dimension. In these companies skill development is far more crucial to the success in the market than is the case for companies located within the 'half circle in Figure 4.

Figure 4: The stylised locations of selected DTI case studies in the competitive strategy model



For firms located within that 'half circle' we find a close correspondence or "functional fit" between the technical and interpersonal relations of production. For example the use of mass/standardised forms of production and a task focused approach to interpersonal relations. While we had no examples from our case studies, companies located at the base of the diagonal would be those producing standardised goods where the competitive advantage in the market would be cost, for example in some forms of food production and fast food sales. Here interpersonal relations are

task focussed, with training kept to a minimum as costs have to be kept low in order to compete effectively in the market.

Other, more well known companies such as Toyota¹² use a combination of technical and interpersonal relations which would locate it mid-way along the diagonal. Thus Toyota competes on both cost, quality, innovation (the 'hybrid, electric-petrol' car) and speed of response to the market, using the Toyota Production System. This would locate the technical relations mid way along the vertical dimension. These are then supported by fairly sophisticated inter-personal relations designed to support learning and skill acquisition which would again place it mid-way along the horizontal dimension (Liker, 2004).

What all these companies have in common is that the specific combination of technical and interpersonal relations support the business strategy. However, this is not always the case. In some companies, people development focussed interpersonal relations may be used on their own, without modification to the technical relations, to increase output. The result is frequently the creation of a distrust of management and other outcomes such as work intensification and low morale. For example, some companies have attempted to use a more people development focussed approach to interpersonal relations, based on the use of high performance management practices to sidetrack the union (Ashton and Sung, 2002) or, as we have seen above, to intensify the work process (Brown 1999). In these circumstances the impact on skill formation will be minimised (Danford et al, 2005). All this serves to remind us that the use of these techniques is no guarantee of enhanced skills; much depends on how the practices are implemented and whether corresponding changes have been made to the technical relations. When high performance practices are used in companies whose technical relations are located within the 'half circle' then the result is likely to be work-intensification, a minimal increase in skills and resentment among staff. Where the same practices are introduced in companies with differentiated technical relations the result is likely to be something that the employees embrace in order to enhance their skills and the organisation's performance. In short our model provides the basis for explaining a whole range of outcomes in terms of skill development and performance that the conventional model fails to deal with.

¹² Toyota was not one of the DTI case studies. The information on which this case is based is derived from (Liker, 2004).

6. Implications for Research and Policy

Our competitive strategy model has a number of implications for both research and policy. As we have demonstrated above, it can provide a more powerful explanation of why more training may not necessarily lead to enhanced skills and performance in the ways in which predictions from the conventional (input-output) approach would lead us to expect. For example, offering more training to companies with standardised technical relations and task focussed interpersonal relations will not result in higher skill levels. However, if such companies modify their competitive strategy and introduce changes in their interpersonal relations then it will.

Similarly with regard to the HPWP literature, we can explain why the practices work well in some instances but not in others. For example, the use of HPWPs when combined with differentiated technical relations will increase the chances of upskilling the labour force. In other industries where the same 'bundle' of HPWPs is used in association with standardised technical relations the outcome will be different with little increase in skills.

The use of this approach also provides a different perspective on the skill driver debate. It shows clear limitations to the traditional 'variable' analysis that breaks down where factors such as size, sector, and more recently product market are seen as determinants of training. Without some indication of the technical and inter-personal relations within the firm then these factors lose their analytic power.

With regard to the research agenda, it highlights the need for future research to identify both the technical and interpersonal relations of production. At the moment a great deal of the research into HPWPs only identifies the interpersonal relations of production. The technical relations are often ignored, in part no doubt because they are seen as outside the jurisdiction of the personnel professionals. Some researchers such as Green et al (2003) have collected data on technology and EEF (2001) have collected data on production systems, but this has not been used in a systematic way to analyse the data. The result is to reduce the explanatory power of most research. A first step here would be to develop a typology of technical relations so they can be identified through survey research.

In the case of interpersonal relations the challenge is different. Much of the data required for the analysis of these relations can be obtained through questions on management practices, e.g. forms of HPWPs, but it is much more difficult to capture the strategies that drive the people development approach. This is because the crucial

driver here has to be found in the leadership qualities of the organisation. Here we are referring to the thought and actions of business leaders (MDs) or senior management and the business model that informs their management style. For example, where MDs perceive the skills of their staff as a source of competitive advantage and as central to achieving their business objectives, then this in turn gives rise to an explicit strategy for developing and co-ordinating those skills. This type of data is best obtained using a case study methodology.

One recent attempt to address this is the work of Mason, (2005) who hypothesised that success in developing high value-added product strategies depends in part on the capabilities of management to anticipate the additional skill requirements associated with upgraded product strategies and, furthermore, to take appropriate steps to ensure that those skills are available when needed. Another example is the case studies of innovative companies reported by Toner et al, (2004). While Toner et al do not treat management strategy as a separate dimension, they found that in all their (eight) case studies of innovative intensive firms "training was seen as an essential element in the maintenance and growth of their business, and flowed automatically from their decisions regarding the pursuit of product and process improvements. This reflects the 'basis of competition' within the industries in which the firms operate." (ibid: 66). These are findings which suggest such a strategy was integral to the thinking of senior management. However, to establish this requires that we have a better understanding of how competitive strategies are articulated and used in companies.

Here we must be careful to distinguish such a 'business model' from the mere existence of a training plan (Sung and Ashton, 2005). The existence of such a plan does not tell us how useful and significant training is within the firm or whether it occupies a strategic position in it, neither does it tell us whether it has been or is likely to be implemented (Ridoutt et al, 2002: 68). The identification of a business model that places skills and performance at the centre of management thinking provides a more effective way of identifying the appropriate skills strategy and the means by which it is used to mobilise the actions of individual employees. Here the demand for skills does not just stem from the organisation of technical relations within the firm but from the aspirations and ideals of individuals who drive the interpersonal relations of production.

Our model also has implications for skills policy. The above analysis points to the need for a more differentiated and a clearly targeted approach to skills development. For example, training resources may be wasted on mass production/task oriented firms unless these organisations have a business strategy that locates skills as a source of competitive advantage (see for example Timpsons and Flight Centre above). The implication is that the company must first develop a business strategy in which the skills of its employees are seen as providing a source of competitive advantage. Such strategies have to be established before buying into HPWPs and skills development.

Our model therefore suggests that it is not always useful to exhort all employers to train more. For some employers (with their specific competitive strategy), training beyond the operation level is pointless and counter-productive. Resources devoted to such an ‘undifferentiated’ skills policy are likely to be wasteful. Perhaps a first step here is to determine how these competitive strategies and their component technical and interpersonal relations differ between sectors. If, as some evidence suggests, business strategies vary significantly across sectors, then there will be little point in spending resources on convincing employers of the need for training if their business strategies are centred around standardised technical relations and task focussed interpersonal relations.

In this short paper we have not been able to address all the academic and policy implications of our approach, for example for the supply-driven targets that dominate current policy or the sector skills framework. Rather, our objective has been to outline how it differs from the conventional approach to the relationship between training, skills and performance and to highlight the opportunity it offers to provide new perspectives on current issues in this field.

References

- Ashton, D. N. and Sung, J. (2002) *Supporting Workplace Learning for High Performance Working*, Geneva: ILO.
- Baldry, C., Bain, P. and Taylor, P. “‘Bright Satanic Offices’: Intensification, Control and Team Taylorism,” in P. Thompson and C. Warhurst (eds.) *Workplaces of the Future*, London: Macmillan Press, pp. 163-183.
- Becker, B. E. and Huselid, M. A. (1998) “High performance work systems and firm performance: A synthesis of research and managerial implications”, in *Research in Personnel and Human Resource Management*, Vol. 16, Stamford, JIA Press, Stamford, CT. pp. 53-101.
- Betcherman, G., Leckie, G. and McMullen, K. (1997) *Developing Skills in the Canadian Workplace*, Ottawa: CPRN.
- Brown, T. (1999) “Restructuring, Teams, and Learning: the case of a clothing company,” *Studies in Continuing Education*, 12 (2), pp239-258.
- Braverman, H. (1974) *Labor and Monopoly Capital. The Degradation of Work in the Twentieth Century*, London: Monthly Review Press.
- Danford, A. (1998) “Work organisation inside Japanese firms in South Wales: A break from Taylorism?” in P. Thompson and C. Warhurst (eds.) *Workplaces of the Future*, London: Macmillan Press, pp.40-64.
- Danford A., Richardson, M., Stewart, P., Tailby, S. and Upchurch, M. (2004) “Skills training and employee development in the high performance workplace: Supporting partnerships or elites”, paper prepared for the 23rd International Labour Process Conference, University of Strathclyde, March 2005, pp22.
- Doeringer, P. B., Evans-Klock, C. and Terkla, D. G. (2002) *Start-Up Factories. High Performance Management, Job Quality, and Regional Advantage*, New York: Oxford.
- EEF (2001) *Catching up with Uncle Sam*, London: Engineering Employers Federation.
- Green, F., Mayhew, K. and Molloy, E. (2003) *Employers Perspectives Survey, 2000*, Sheffield: Department for Education and Skills.
- Guest, D. E. (2000) “HR and the bottom line: Has the penny dropped?” *People Management*, 20th July, pp 26-31.
- Hendry, C and Pettigrew, A. (1989) “The forces that trigger training”, *Personnel Management*, December, pp.28-32.
- Hughes, J. (2005) “Bringing emotion to work: emotional intelligence, employee resistance and the reinvention of character”, *Work, Employment and Society*, (19) 3, pp. 603-625.

- Kitchin, J. and Blackburn, R. (2002) *The Nature of Training and Motivation to Train in Small Firms*, Department for Education and Skills, Research Report RR330.
- Liker, J. K. (2004) *The Toyota Way: 14 Management Principles from The World's Greatest Manufacturer*, New York: McGraw-Hill.
- Lloyd, C. and Payne, J. (2004) "Just another bandwagon? A critical look at the high performance workplace as a vehicle for the UK high skills project", SKOPE Research Paper No 49, University of Warwick.
- Marchington, M. and Grugulis, I. (2000) "'Best Practice' human resource management: perfect opportunity or dangerous illusion?" *International Journal of Human Resource Management*, 11 (6), pp 1104-1124.
- Mason, G. (2005) "In search of high value added production: How important are skills?" *NIESR*, May 2005.
- Mason, G. (2004) "Enterprise product strategies and employer demand for skills in Britain: Evidence from the employers skill surveys", SKOPE Working Paper No. 50, University of Warwick.
- Murphy, M. (2002) "Organisational change and firm performance," Paris: OECD, STI Working Paper Series, 2002/14. 40pp.
- Purcell, J., Kinnie, N., Hutchinson, S., Rayton, B. and Swart, J. (2003) *Understanding the People and Performance Link: Unlocking the Black Box*, London: CIPD
- Ridoutt, L., Dutneall, Hummel, K. and Smith C. S. (2002) *Factors Influencing the Implementation of Training and Learning in the Workplace*, Leabrook: NCVER.
- Ritzer, G. (1993) *The McDonaldisation of Society*, California: Pine Forge Press.
- Smith, A. and Hayton, G. (1999) "What drives enterprise training? Evidence from Australia", *International Journal of Human Resource Management*, 10:2, pp 251-272.
- Smith, A., Oczkowski, E., Noble, C. and Macklin, R. (2002) *New Management Practices and Enterprise Training*, Leabrook, SA, NCVER.
- Sparrow, J. and Pettigrew, A. (1985) "Britain's training problems: The search for a strategic HRM approach", *Human Resource Management*, 26 (1), pp. 109-27.
- Sung, J. and Ashton, D. (2005) *Achieving Best Practice in Your Business. High Performance Work Practices: Linking strategy and skills to performance outcomes*, London: DTI and CIPD, pp. 72.
- Tamkin, P. (2005) *The Contribution of Skills to Business Performance*, Brighton: Institute for Employment Studies.
- Taylor, S. (1998) "Emotional labour in the new workplace", in P. Thompson and C. Warhurst (eds.) *Workplaces of the Future*, London: Macmillan Press, pp84-103.

Thompson, M. (2002) *High Performance Work Organisations in UK Aerospace - The SBAC Human Capital Audit 2002*, London: SBAC.

Toner, P., Marceau, J., Hall, R. and Considine, G. (2004) *Innovation agents; Vocational education and training skills and innovation in Australian industries and firms - Volume 1*, Adelaide, S.A.:NCVER.

Wickens, P. (1999) *Energise Your Enterprise*, London: Macmillan Business.

Wilkinson, F. (2002) "Productive systems and the structuring role of economic and social theories", ESRC Centre for Business Research, University of Cambridge, Working Paper No. 225.

Wilkinson, F. (1983) "Productive systems", *Cambridge Journal of Economics*, Vol. 7, pp. 413-429.