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*Internal Labour Markets: An Institutional  
Perspective on Recent Research in  
Personnel Economics*

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# **INTERNAL LABOUR MARKETS: AN INSTITUTIONAL PERSPECTIVE ON RECENT RESEARCH IN PERSONNEL ECONOMICS<sup>1</sup>**

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## **ABSTRACT**

The interplay of socio-cultural and economic forces produces important institutional features within the economy. Institutionalist labour economists have established one of these key features to be internal labour markets (ILMs). This paper discusses the origins and development of the concept of ILMs in the institutionalist labour economics tradition. Recently personnel economics has emerged as an important new branch of the neoclassical school of labour economics and has turned its analytical attention to ILMs. This paper describes the emergence of personnel economics and then critically examines the personnel economics approach to the empirical study of ILMs. It is argued that personnel economics has a limited understanding of the concept of ILMs and has adopted an inadequate methodology, overly reliant on quantitative techniques, for studying them. Finally, the paper makes the case for an approach to studying ILMs, which takes seriously the consciousness of economic agents and the important role played by social forces in creating and maintaining ILMs.

**JEL Classifications:** J01, J49

**Keywords:** institutionalism, personnel economics, internal labour markets

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*“...the study of internal labour markets attracts scholars of divergent backgrounds. For mainstream economists the challenge is to explain the rules within a framework that preserves the core ideas of maximization and efficiency. Institutional economists do not deny the impact of standard economic considerations, but they do emphasize the interplay of economic, political and social forces.”*

Paul Osterman (1994, p. 304)

## **1. Introduction**

The interplay of socio-cultural and economic forces produces important institutional features within the economy. Nowhere is this more evident than in the labour market. Institutional labour economists have always been interested in identifying and describing such features. One of the most original and innovative concepts developed by the institutionalist school is that of internal labour markets (ILMs). The concept of ILMs originates in the work of Clark Kerr (1950, 1954) and John Dunlop (1957, 1966). Their ideas have been subsequently developed and the concept extended by later generations of institutionalist labour economists such as, Peter Doeringer and Michael Piore (1971) and Paul Osterman (1982, 1984, 1987, 1994). In addition, scholars in related fields such as industrial relations, sociology (Althuser and Kalleberg, 1981) and business history (Jacoby, 1984) have contributed significantly to the understanding of ILMs. In recent times, an important and relatively new branch of the neoclassical school of labour economics, known as, personnel economics has turned its attention to these concepts.

In Section 2 the paper will clarify the theoretical position of the post-WWII labour economists in the US who formulated the concept of ILMs and describe the origins and development of the concept of ILMs in the institutionalist labour economics tradition. Following this, in Section 3, the emergence of personnel economics will be examined, and its core theoretical ideas, philosophy and current significance will be briefly discussed. The paper will then turn its attention in Section 4 to the empirical studies of ILMs undertaken by personnel economists and these will be critically examined from an institutionalist perspective. It will be argued that the methodology adopted by them to

analyse ILMs is inadequate. The paper argues that these studies demonstrate a limited understanding of ILMs as that concept has developed within the institutionalist tradition, which also makes difficult a proper assessment of the continued importance of ILMs in the labour market. In Section 5, the paper makes the case for the ongoing critical importance of an approach to studying ILMs, which takes seriously the consciousness of economic actors. Section 6 acknowledges the importance of an interdisciplinary perspective and the influence of socio-cultural forces, as well as, economic forces in explaining the emergence, functioning and development of ILMs. Finally, a conclusion is provided in Section 7.

## **2. Institutional labour economics and ILMs.**

There is some debate in the literature as to the appropriate name for the tradition of work in labour economics that began in the US in the 1940s with the writings of John Dunlop, Clark Kerr, Richard Lester, and Lloyd Reynolds (herein DKLR) as the principal contributors. Economists from this tradition dominated the field of labour economics from the 1940s until the rise of the neoclassical school of labour economics in the early 1960s. Writers within the Chicago school refer to these post-war labour economists as part of the “institutional” tradition (Rees 1976). Other neoclassical scholars, such as Cain (1976) prefer the title “neoinstitutionalists”. Meanwhile, Segal (1986) suggests the term “post-institutionalist”. These various designations are due to different conceptualisations of the relationship between the post-war labour economists, and the earlier or “old” institutionalist school, primarily situated at the University of Wisconsin and founded by John R. Commons

The approach taken to the labour market by DKLR and the institutionalism associated with Commons has many commonalities. Both assign a significant role to socio-cultural, political and institutional factors in limiting market forces, and utilize insights from other social sciences, psychology, sociology and history, to explain labour market processes and outcomes. In addition, both strongly support collective bargaining and see a positive role for trade unions as an important source of countervailing power (Kaufman, 1988 and 1994). A notable feature of the early institutionalists identified by Kaufman (2004, p. 17) is their methodological approach to research, which had four key

features; “an emphasis on fact gathering, the importance of realism of assumptions, the virtues of a ‘go and see’ participant/observer method of investigation, and the necessity of an interdisciplinary approach to theory-construction.” Similarly, DKLR were primarily engaged in studying how real world labour markets actually worked and while they did not eschew available statistics and quantitative techniques, they also put considerable store in qualitative methods such as field observation and interviews. Kerr (1988) describes the resulting theory-building as middle-level theorizing, or middle-level generalization, with “fidelity to reality” as the principal guiding maxim. It can be argued that this strategy generated models that were descriptively rich and did not attempt to provide efficiency-based explanations for the aspects of the labour market they were investigating. The ILM models produced by Kerr (1954) are excellent examples of this argument. This bias towards accurate description and away from rationalization in efficiency terms is another binding point between the two groups. In the light of these reasons it is argued the post-war labour economists should be regarded as institutionalist labour economists. A final reason supporting this argument is that the economists who built on the work of these post-war labour economists, such as Lester Thurow, Peter Doeringer, Michael Piore and Paul Osterman regard themselves as institutionalist labour economists.

The relationship of the new institutional economics (NIE) to the institutionalist tradition under consideration here is much debated in the literature. This paper will only deal with the issue briefly. Dow (1997) argues that the NIE has a clear bias towards generating efficiency-based explanations for existing economic phenomena. Indeed, Jacoby (1990) argues that this tendency is so strong that when NIE is applied to the study of labour it should be called the “new efficiency-oriented institutional labour economics”. The most significant contribution of the NIE to the study of ILMs, Williamson, Wachter and Harris (1975) provides an efficiency-based explanation for the existence of ILMs. It is difficult to reconcile this efficiency explanation bias with the descriptive approach of the institutionalism that preceded it. In addition, the methodological approach of Williamson, Wachter and Harris (1975) has very little in common with that of DKLR and those that followed. In the light of these arguments, the NIE school will be treated as standing closer to neoclassical economics and indeed, personnel economics, than it does to the institutionalism that preceded it.

In the post-WWII period Clark Kerr extended Cairnes's (1874) concept of non-competing groups to explain the way worker organizations, employers and government interacted to produce institutional rules, which segmented or "balkanised" labour markets. Kerr (1950 and 1954) identified two broad types of institutional or internal labour markets; the guild or craft market and the manorial or industrial market.

The guild or craft internal market was based on the craft union having control over the jobs "falling within a carefully defined occupational and geographical area" (Kerr, 1950, p 26). If firms required a specified occupational skill in that area they must hire a union member or face industrial action. Once a worker was a union member they could largely move anywhere within the internal market, and movement between employers, and between the plants of a particular employer was normal, with workers' careers more associated with horizontal moves between employers rather than vertical moves with a single employer. Workers could be fired by an individual employer but could not be ejected from the craft ILM except by the union. Employment security was not linked to a worker's relationship with a particular employer but to his occupation or skill and therefore to union membership. Social norms relating to equity often played a role in determining which workers received employment.<sup>1</sup>

The second type of internal market, the manorial market, was based on the industrial enterprise, rather than occupation. Production jobs were structured into job ladders, with jobs rising in importance as workers moved up the ladder. Access to the internal market was restricted to entry-level jobs on ladders. These jobs were known as ports of entry. Job vacancies within the firm were filled internally, with promotion based typically on seniority and ability playing a secondary role. Seniority also played an important role in determining the order of lay-offs when the enterprise had to reduce its workforce. Therefore, social norms relating to equity were important in terms of determining both promotion and lay-off. Power, was also important with the threat of industrial action generally preventing the enterprise from filling vacancies on job ladders by external recruitment. In addition, within a particular enterprise, there could

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<sup>1</sup> For example, the daily allocation of work in the market for longshoreman on the West Coast of the US in the 1930s was based on a rotational system where those that had worked the day before went to the end of the dispatch queue and those that had been waiting longest for work were at the front of the queue (Kahn 1976; Finlay 1983).

be a number of job families – production, maintenance, sales and white-collar – each constituting a separate sub-internal market. Typically horizontal movement between job families was not possible. Unlike in craft based internal markets horizontal movement between enterprises was discouraged not simply by seniority driven promotion systems but also by the non-portability of pension plans, the knowledge that a worker would only be employed at a port-of entry in another enterprise and sometimes by the existence of a “gentleman’s agreement” between employers against pirating labour from each other. Wages were attached to jobs, and therefore primarily determined by the position of one job relative to another within ILM. The influence of market forces on wages was relatively muted in such ILMs because a change to one wage rate would necessitate a change to all wages within the ILM, if notions of equity were to be maintained (Kerr 1954).

These two markets were seen as separated from the “open” or “unstructured” labour market by institutional rules. Kerr made clear however, that the open market was not free of institutional influences but was rather not as structured as craft or industrial markets. This perspective was implicit in Kerr and Siegel (1955) who argued that the labour market did not exist in isolation from its socio-cultural, political and historical context but was embedded within it and structured by a “web of rule”, which emerged from the interplay of worker organizations, employers and the state. The “web of rule” related to rules concerning the recruitment and training of the labour force, the level and form of pay received by workers the pace and quality of work, the movement in and out of work and from one position to another etc.

It was Kerr’s fellow labour economist, John Dunlop, who first coined the term internal labour market to describe Kerr’s two types of institutional labour market. Dunlop (1957 and 1966) did a considerable amount of research on the organization of work within the industrial type of ILM and introduced concepts such as “job clusters”, “key jobs”, “seniority districts” and “wage contours”. The work of Kerr and Dunlop on the industrial ILM was supplemented by a number of other institutionalist labour economists, in particular, Livernash (1957) who made an important contribution to the understanding of the internal wage structure of industrial ILMs.

It is important to note that Kerr does not provide a theoretical account of the origins of ILMs, nor does he pass definitive judgement on the efficiency of such markets. In terms of the relationship of ILMs to economic efficiency, Kerr does point out that the institutional rules channel economic forces and in so doing determine “the points of competition, the groups which may compete, and the grounds on which they compete”(Kerr 1954, p. 37). However Kerr argued that ILMs, and particularly industrial ILMs, significantly reduced worker mobility and this could be construed as suggesting he had some concerns about the implications for allocative efficiency of ILMs. Kerr’s descriptions of the craft and industrial markets reveal a significant role for trade unions in generating ILMs. In addition, the state at this time through the War Labour Board, on which Kerr worked, was also an important source for the diffusion of ILM practices. In other words, power was important in the generation of ILMs.<sup>2</sup>

Two of the next generation of institutional labour economists Peter Doeringer and Michael Piore produced what is regarded as the benchmark study of ILMs in 1971 with their book, *Internal Labour Markets and Manpower Analysis*. Doeringer and Piore (1971) built on the ideas of Kerr and Dunlop in a field study involving open-ended interviews of management and union officials at 75 firms during 1964-69. The majority of companies were from the manufacturing sector, although firms from the construction and service industries were also included as were both public and private enterprises. This study generated the classic definition of ILMs, which Doeringer and Piore (1971[1985]) clarified in the new introduction to the second edition of their 1971 book. They define ILMs in the following quote:

“The basic assertion ... is that there is an institutional structure to labour markets reflected in a sharp distinction between internal and external market arrangements. The internal labour market is defined by an enterprise, or a part of an enterprise, or by a craft or professional community. Entry into such markets is limited to particular jobs or ports of entry. The pricing of labour, and its allocation from the point of view of entry to other work positions, is governed by administrative rules and customs. These rules and customs differentiate members of the internal

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<sup>2</sup> Alexander (1974) is the only attempt in the mainstream economics literature to operationalize Kerr’s labour market framework.

labour market from outsiders and accord them rights and privileges which would not otherwise be available. Typically, these ‘internal’ rights include certain guarantees of job security, opportunities for career mobility, and equity and due process in treatment at the workplace” (p. x).

Doeringer and Piore (1971) clarified the ideal-typical features of craft and industrial – renamed enterprise – ILMs and juxtaposed them with the external labour market (ELM), which was by comparison relatively unstructured. They emphasised that employment within ILMs shielded workers from the direct impact of competitive forces in the external market.<sup>3</sup> The focus of Doeringer and Piore (1971) is mainly on enterprise ILMs, the key features of which emerge primarily from interviews conducted with blue-collar manufacturing establishments.<sup>4</sup> Doeringer and Piore note that while this picture of blue-collar manufacturing ILMs can be broadly extended to other workers, such as managers, technical staff and white-collar workers, there typically needs to be some modification of the description. For example, they argue that unlike the careers of blue-collar workers, which typically occur within a single establishment, managerial careers tend to extend beyond one establishment, often taking in all the plants of a corporation. In addition, ability usually dominates seniority, sometimes completely, in promotion decisions and there is an absence of formal rules relating to lay-offs. This does not mean that norms of equity and fairness are eliminated but rather they are expressed differently. Moreover, they were careful to point out that their descriptions of craft and enterprise ILMs were ideal types and thus there could be considerable variation in real world ILMs. For example, most enterprise ILMs lie somewhere between being completely open and completely closed when it comes to filling job vacancies, with internal markets for white-collar workers typically being more open than those for blue-collar workers.

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<sup>3</sup> In addition, Doeringer and Piore (1971) fitted ILMs into a broader theoretical framework known as dual labour market theory, which divided the labour market into primary and secondary segments.

<sup>4</sup> The focus on enterprise ILMs is not because administrative rules are more evident in such markets. Doeringer and Piore (1971) point out that because craft workers are often employed by a number of firms in the course of their careers and employers do not fill positions predominantly through internal promotion, it would be easy to think that craft or occupational ILMs are more directly influenced by the forces of competition than enterprise ILMs. They argue that such a view is mistaken because these ILMs have just as many administrative rules concerning the pricing and allocation of labour, including rules relating to training requirements and licensing criteria.

Doeringer and Piore (1971) also provide a theoretical account of the emergence of ILMs that is based on three important factors; skill specificity, on-the-job training and customary law. Drawing on Becker's (1964) distinction between specific and general training, Doeringer and Piore argue that skill specificity relates to the idea that many of the skills a worker acquires are specific to the job they perform for a specific firm. In addition, these skills typically are not acquired through employer provided formal in-house training, rather they are acquired informally on-the-job, by asking questions of more experienced workers, by simply observing fellow workers and by practicing during slower production periods. Consequently, incumbent workers are more valuable to the firm than those outside and if an incumbent exits, firms are faced with a new round of recruitment, screening and training costs. In order, to economise on these costs firms create enterprise ILMs to foster worker attachment to the enterprise. The third factor, customary law is more elusive to define. Doeringer and Piore (1971) define custom at the workplace as "an unwritten set of rules based largely upon past practice or precedent . . . [and] appear to be the outgrowth of employment stability with internal labour markets" (p. 23). Customs are also vehicles through which social norms relating equity or fairness are expressed. Moreover, customs can either facilitate or diminish economic efficiency.

Overall, Doeringer and Piore's theoretical account of ILMs is of primary relevance for enterprise ILMs. In addition, the first two factors provide an economic rationale for the emergence of ILMs and have been of greatest interest to mainstream economists. However, it should be emphasised that Doeringer and Piore did not privilege economic factors and in recent times they have been at pains to distance themselves from any interpretation of their work which downplays the importance of socio-cultural and political factors in generating ILMs (Doeringer and Piore (1971[1985]; Doeringer 1986; and Piore 2002).

Paul Osterman has significantly developed and extended the institutionalist understanding of ILMs. Osterman (1984 and 1987) reports on an interview- and questionnaire-based study of the organization of white-collar work, which had been largely neglected by ILM researchers until that time. From the data, Osterman generates

a description of a new type of ILM called the salaried model, which he argues describes most white-collar ILMs and innovative blue-collar employment settings in the US. The salaried model combines “ more flexible and personalistic administrative procedures with greater commitment to employment security”(p 50). In return for greater flexibility in the allocation of work, firms provide an implicit guarantee of lifetime employment. Therefore, the negative employment effects of downturns in product demand and technological change will be met, as much as possible, by work reassignment rather than layoffs. There is typically a lack of clearly defined job ladders and promotion sequences. In addition, the greater flexibility in work assignment and thus career paths also provides a greater role for personalistic considerations in wage setting. Merit considerations typically play a stronger role and workers tend to take their wage levels with them when assigned to different jobs. This model is consistent with the observation that the wages of two individuals in the same job can vary considerably. Hence, it can be said that in this model wages are attached to individuals and not jobs. Yet it cannot be argued that institutional rules are absent in this system.

Osterman (1982 and 1987) provides a number of examples where the same work can be performed under very different employment arrangements. This leads him to prefer the term employment subsystems rather than ILMs when describing the possible employment arrangements that can exist within firms.<sup>5</sup> Osterman’s taxonomy is made up of four employment subsystems; craft, industrial, salaried and secondary.<sup>6</sup> Each of the employment subsystems is constituted by a set of rules, which “fit together with a coherent logic” (Osterman 1987, p 49). Osterman (1987, p. 48) argues that the rules and procedures operating within an ILM can be classified into four categories which “taken together, define the internal labour market for a set of occupations”. The first category relates to rules associated with job classification and definition, such as, whether jobs are defined rigidly or loosely, narrowly or broadly and whether jobs can be re-designed easily. Rules relating to the deployment of labour are the second category and refer to

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<sup>5</sup> Although he uses the terms interchangeably in most publications, see Osterman (1994 and 1996).

<sup>6</sup> Osterman provides a more general account of the craft or occupational subsystem than Kerr or Doeringer and Piore, reducing the emphasis on unions and increasing the emphasis on the professions. In addition, Osterman (1987, p. 52) describes the secondary subsystem as containing “jobs which lack career prospects, either within the firm or via interfirm movement. They tend to be (but are not always) low skilled and poorly paid. These jobs are more accurately conceptualised as lacking clear linkages to future jobs.”

procedures relating to the hiring, promotion and transfer of workers. The third category refers to rules relating to employment security, in particular, the formal or informal guarantees of lifetime employment and rules constituting the firm's layoff policy. Wage rules are the final category and refer to issues, such as, are wages attached to jobs or to individuals. Osterman (1994) argues that specific rules associated with an ILM should not be examined in isolation from the others because this diminishes the important insight that the rules constitute a coherent set. Even though Osterman argues that the rules of each of the employment subsystems have a certain functionalist logic, there is not an efficiency-based ranking of the different models. The most that can be said is that the secondary system is the least attractive from the point of view of most workers employed within it because the terms and conditions tend to be poorer.

Drawing on the field of organizational behaviour, Osterman (1987, p. 53) proposes that "firms choose in a conscious manner" between the four employment subsystems how they will organize work. In other words, the adoption of a particular ILM is part of employer strategy, which Osterman (1994, p. 306) argues can be usefully thought of as representing the "overall human resource strategy of an enterprise". This does not imply that firms are constantly monitoring and fine-tuning the ILM structure, rather Osterman argues that firms will revise their choices in the face of exogenous shocks to the ILM. According to Osterman (1987) a firm's choice of subsystem involves considering three key goals, cost effectiveness, predictability, and flexibility, which are subject to four constraints, physical technology, social technology, the characteristics of the labour force, and government policies.<sup>7</sup>

For Osterman the ILM concept must be studied from a multidisciplinary perspective and consequently in his two important edited volumes on ILMs, *Internal Labour Markets* (1984) and *Broken Ladders* (1996) contributions have been included by economists, industrial relations specialists, sociologists, management scholars, human resource academics and business historians. In addition, Osterman emphasises that ILMs are the product of social, political and economic forces and cannot be explained in economic terms alone. Moreover, it is this combination of forces that makes it very difficult to predict what type of ILM or indeed, how many types of ILM will exist

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<sup>7</sup> It is important to note that unions are classified as a constraint and are treated in the social technology category.

within the firm. Osterman (1987, 1994 and 1996) also approaches ILMs from a dynamic perspective seeking to see how their structures emerge and change. For example, Osterman (1987) reports that in the late 1970s and early 1980s in the US, occupational ILMs for computer programmers were being dismantled and replaced by enterprise ILMs as firms tried to secure greater control over their IT workforces. In particular, firms were testing secretarial and clerical staff to identify those with the aptitude to be trained in-house as computer programmers. The training would be truncated with a significant firm-specific component to reduce the ability of the workers to move to another employer. The new programmers were also cheaper to employ and if firms had need of a more skilled programmer they would recruit from the occupational market.

Jill Rubery and her colleagues in the UK have made a significant contribution to the study of ILMs from an institutionalist perspective. Rubery (1994), argues that seeing ILMs as a product of employer strategy is a useful perspective but it also risks overestimating the degree of autonomy enjoyed by employers in selecting employment policies and obscuring the impact of ILMs on the operation of the ELM. In addition, it tends to “assume both compatibility and coherence between firms’ employment systems and their employment needs or requirements” (Rubery, 1994, p. 38-39). In other words, there is a risk that theorizing will be driven by a desire to provide functionalist or efficiency-based explanations of the key features of ILMs. Consequently, the potential for identifying tension and mismatch between features of the ILM and a firm’s needs can be diminished. In the light of these concerns Grimshaw and Rubery (1998; Rubery, 1994) propose that ILMs should be analysed from a dynamic perspective. Methods are used, interviews and specially designed surveys, which facilitate uncovering changes to management policy, the reasons for them and the complex range of feedback effects that can be generated from them.<sup>8</sup> In addition, Burchell and Rubery (1994) show that managers and employees perceptions of the policies operating in an ILM can be very different and suggest that it is likely this will result in behaviour that is different than what managers had anticipated.

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<sup>8</sup> Grimshaw, Ward, Rubery and Beynon (2001) examine the dismantling of traditional ILM practices during the 1990s in four large organizations in the UK. They find that firms respond at times very differently to the same exogenous shocks. For example, new technology adopted by call centers at both a bank and a telecommunications firm results in a deskilling of jobs and a narrowing of job descriptions at the latter and multitasking and a broadening of jobs at the former.

Other social science disciplines have made important contributions to the study of ILMs. In sociology, among a large literature, key contributions have come from Robert Althauser and Arne Kalleberg (Althauser and Kalleberg 1981 and Althauser 1989)<sup>9</sup> who emphasise the importance of conceptually defining the different types of ILMs carefully. In the IR field, the UK scholar David Marsden (1999) has recently proposed an innovative general theory of employment systems that is based partly on the framework of the NIE. Radical political economy has also contributed significantly to the study of ILMs, emphasizing the role they have and can play in increasing managerial control of the workforce (Edwards, Reich, and Gordon 1973; Edwards 1979).

### **3. The emergence of personnel economics**

The debut as an organized intellectual force of an important branch of modern labour economics occurred at the Goldwater Conference on the New Economics of Personnel held in Temple, Arizona in 1986. The proceedings of which were published in 1987 as a single issue supplement in the prestigious *Journal of Labour Economics*. The name of this new branch of modern labour economics has been variously labelled the new economics of personnel, the economics of personnel and human resource management (Gunderson 2001) and personnel economics (Lazear 1995, 1998). The driving force behind personnel economics is Edward Lazear, who is rightfully regarded as the founding father of the field and its most ardent proponent. In the 1993 Wicksell Lectures, Lazear, following a personnel management text, defines the subject area of personnel or human resource management to be the study of “obtaining, organizing and motivating the human resources required by enterprise” (Armstrong and Lorentzen 1982; cited in Lazear 1995, p 1). Personnel economics is defined by Lazear to be the “application of microeconomic principles to human resource issues that are of concern to most businesses” (Lazear 2000b, p. F611). In other words personnel economics is the “use of economics to understand the internal workings of the firm” (Lazear 1999, p. 200). From this perspective personnel economics is part of a broader project within

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<sup>9</sup> Althauser (1989) is an excellent summary of the conceptual and empirical research on ILMs up to the late 1980s.

neoclassical economics to look inside the “black box” of the firm that started with the NIE of Williamson (1975).

Lazear (2000b) identifies three important reasons for the emergence of personnel economics. Firstly, the experience of economists teaching business students who were decidedly uninterested in the core topics of modern labour economics, including “labour supply and demand, unemployment, investment in education and other topics” (p. F611). Lazear (1999) reports that this type of experience was personally formative when he moved from the University of Chicago’s economics department to its business school. Overall such experiences were taken as signal that a “new product might be warranted”. Secondly, the area of human resource management (HRM) included topics of interest to economists, but the standard HRM approach was deeply unsatisfying. To Lazear, this approach was “loose, unfocused, and *ad hoc*” (Lazear 2000b, p. F611). It was characterised by an “institutional and chatty literature” (Lazear 1998, p. iii). Or more pejoratively Lazear declares that “[H]uman resource executives are often regarded as the lowest form of managerial life. The same has been true of those academics who study human resources. There is a reason: historically, the field was loose talk. It was descriptive. It was *ad hoc*. It lacked positive predictions or reliable normative prescriptions” (Lazear 2000a, p. 119). Consequently, opportunities to provide more satisfying explanations were identified and economists equipped with a rigorous analytical framework entered the field of HRM with a view to extracting the available rents (Lazear 2000a; Gunderson 2001). Thirdly, economists were emboldened to make this foray because the “technology of economics” had changed. Innovations in the areas of principal-agent theory and contract theory allowed economists to update their toolbox and be better able to tackle the problems of procuring, allocating and motivating the labour required by firms.

Lazear is an enthusiastic proponent of economic imperialism, and applauds the colonization of the other social sciences by economics. Indeed, he argues that economics, by which he means mainstream or neoclassical economics, is the “premier social science” (Lazear 2000b). The dominance of economics, according to Lazear, results from its “rigorous language that allows complicated concepts to be written in relatively simple, abstract terms. The language permits economists to strip away complexity. Complexity may add to the richness of description, but it also prevents the

analyst from seeing what is essential” (Lazear 2000a, pp. 99-100). Personnel economics is very much part of this imperialistic project and seeks, as has been noted above, to capture the personnel field, from rival disciplines including, industrial relations, industrial sociology and human resource management. Not only is personnel economics competing with these other social science disciplines but it is also competing with the institutionalist school of labour economics. Unlike personnel economics the institutionalist school of labour economics, as discussed above, was and is interested in the complexity and detail of how firms actually allocate, organise and reward labour.

Lazear (2000a) argues that there are three core components to economics’ rigorous analytical framework. Firstly, economists assume that individuals will exhibit rational maximizing behaviour. Secondly, the concept of equilibrium is an important property of any theory. Thirdly, there is a focus on efficiency-based explanations. These components are consequently core tenets of personnel economics.

An alternative perspective comes from Michael Gibbs, an economist who has made a number of important contributions to the field of personnel economics (Baker, Gibbs and Holmstrom 1994a and 1994b; Gibbs and Hendricks 2004; and Gibbs and Levenson 2002). Gibbs does not seem to view personnel economics as part of an imperialistic project. Rather he writes in a more ecumenical spirit about the field and its relationship to other social sciences and his work exhibits a level of constructive engagement with other disciplines, which is not evident in the case of Lazear (Gibbs and Levenson 2002). Consequently, his approach represents an alternative direction that personnel economics may take in the future.

Currently, the star of personnel economics is most definitely rising. Since the 1986 conference, Lazear has given the 1993 Wicksell lectures on personnel economics. His 1998 Presidential Address to the Society of Labour Economists was entitled *Personnel Economics: Past Lessons and Future Directions*, in which he pointed out that 25 percent of papers submitted for the first three meetings of the Society were on personnel economics. Lazear also contributed an important article to the *Economic Journal* on the future of personnel economics (Lazear 2000b). In 1998 he published a successful textbook entitled *Personnel Economics for Managers*, which is essentially a simplification of his Wicksell lectures. In addition, two more personnel economics texts

have recently been published (Garibaldi 2006 and Neilson 2006). There have been at least two further special issues of journals devoted to personnel economics (Mitchell and Roberts 1990 and Rulliere and Villeval 2003). In 2004 Lazear and McNabb edited a two-volume work entitled *Personnel Economics*, which brought together the key papers in the field and was part of the series *International Library of Critical Writings in Economics* (Lazear and McNabb 2004). Finally Gunderson (2001), in a more humorous vein, quips that the ultimate sign of personnel economics arrival on the intellectual stage is that it even has its own summer camp.

#### **4. The personnel economics approach to ILMs**

The personnel economics approach to studying ILMs is multifaceted. One type of research focuses on specific aspects of firms' human resource policies such as compensation (Lazear 1986 and 2000c) and mandatory retirement (Lazear 1979) and aims at finding efficiency-based explanations for their existence. Indeed, this line of research goes back before the emergence personnel economics, to the work of Williamson, Wachter, and Harris (1975) and seeks to explain one or more of the stylised facts of enterprise ILMs. Addison and Siebert (1991) group these explanations into five general categories; risk aversion, efficiency wages, deferred compensation, specific human capital and transactions costs. Another type of research involves undertaking single-firm case studies, with a view to generating a set of findings and comparing these to the existing ideal-type ILM models. A final line of research involves using multi-firm data sets in order to determine both the prevalence and features of ILMs within a particular country. This section will examine in detail the single-firm case studies and the research using multi-firm data sets. The reason for this is that both these forms of research are directly focused on challenging the ongoing empirical relevance of institutionalist accounts of ILMs.

##### **4.1 *Single-firm case studies***

As has been pointed out in an earlier section of the paper, Osterman (1987) proposes that there are four broad categories of rules and procedures, which taken together constitute the ILM for a set of occupations. These categories are: job classification and

job definition, deployment (hiring and promotion policies), employment security, and wage rules (policy). Each of these categories, broadly interpreted, will be used to organize the key findings of the case studies and examine them in the light of the institutionalist approach to ILMs. Two key studies, Lazear (1992) and Baker, Gibbs and Holmstrom (1994a and 1994b), particularly the latter, will be dealt with in slightly more detail because they are regarded as seminal works in the field and because Baker et al. provide a particular orientation and framework for the study of ILMs, which has been followed by all subsequent studies.

Lazear (1992) and Baker et al. (1994a and 1994b) are the first two studies to examine ILMs from within the personnel economics perspective. In different ways both these studies set the agenda for the empirical study of ILMs by economists and this approach is almost exclusively quantitative. These papers study US firms; Lazear examines blue- and white-collar workers in a large manufacturing firm and Baker et al., managerial workers in a medium-sized financial services firm. Baker et al (1994a and 1994b) is a sophisticated, rigorous and comprehensive study and has become the gold standard in this field of inquiry. In fact, all subsequent studies adopt the same overall methodology and attempt to answer the same questions as Baker et al. The studies that have followed have been quite varied in terms of industry, country and time period studied. Treble, van Gameren, Bridges and Barmby (2001) also examine a financial services firm but in Britain over the period 1989-97 and they include white-collar workers both clerical and managerial. Dohmen, Kriechel and Pfann (2004) and Dohmen (2004) look at blue- and white-collar workers at the Dutch aircraft manufacturer Fokker from 1987 until 1996 when it was declared bankrupt. Ariga, Ohkusa and Brunello (1999) study white-collar employees at a large high-tech manufacturing Japanese firm for the period 1971-1994. Lin (2005) investigates both blue- and white-collar workers at a Taiwanese auto dealer covering the 1991-2000. While the previous studies all cover fairly recent time periods across a range of industries and countries there are also a number of studies examining much earlier periods. Seltzer and Merrett (2000) research white-collar employees at an Australian bank analysing the careers of workers who entered the bank between 1888 and 1900. Hamilton and MacKinnon (2001) study blue-collar workers at a Canadian railway firm over the period 1921-44. Howlett (2000 and 2001) examines blue-collar workers at a British railway firm for the period 1870-1913.

It could be argued that not all of these researchers identify themselves as personnel economists, and most perhaps would prefer to see themselves as simply engaging in applied labour economics. Despite this, all these researchers favourably, though not always uncritically, cite the works of Lazear and Baker et al. and see themselves as contributing to the literature that began with these seminal works. Consequently, it is argued here that treating all these studies as contributing to the personnel economics literature on ILMs is justified.

Lazear (1992, 1995a) is concerned with reintroducing the concept of the “job” into labour economics. Lazear points out that human capital theory and standard production theory, both core components of the neoclassical school of labour economics have very little place for the notion of the “job”. Prompted by both developments in economic theory and the idea that the concept of the “job” is central to the thinking of businesspeople, Lazear argues that labour economists must turn their attention to the questions posed by the old internal labour markets literature. Lazear (1992) undertakes a jobs-based analysis of a large US manufacturing firm over a thirteen-year period during the late 1970s to the 1980s. Confidentiality requirements prevent Lazear from providing clear and detailed descriptions of the firm, the industry it operates in and the relevant occupations.

Baker and Holmstrom (1995) point out that the impact on the economics profession of Doeringer and Piore’s (1971) classic work on ILMs has been minimal. In addition, they report that developments in information economics and contract theory have meant that there “is hardly any feature of ILMs that cannot be given some logical explanation using the right combination of uncertainty, asymmetric information and opportunism” (p 255). Importantly, they note that Doeringer and Piore (1971[1985]) in the preface to the second edition of their book have strenuously distanced themselves from this approach preferring to re-emphasise the role of social forces in creating and maintaining ILMs. Baker and Holmstrom prefer not to engage Doeringer and Piore on this issue. Instead, they argue that the more pressing problem is how relevant for today and for white-collar workers is the description of ILMs provided by Doeringer and Piore, which is now 25 years old and was based on interviews at primarily unionised, blue-collar manufacturing enterprises. Consequently, Baker et al. (1994a and 1994b) is an attempt to directly test whether the “old stereotype” ILM is still empirically relevant.

Unlike Doeringer and Piore (1971) they approach the study of ILMs on a purely quantitative basis, utilizing personnel data on all management employees for the period 1969-1988. Confidentiality provisions restrict the amount of information that can be revealed about the firm such as the actual names of job titles.

#### **4.2 *The definition of ILMs***

All the single-firm case studies take Doeringer and Piore's (1971) description of an enterprise ILM as their reference point ILM model. None of the studies that examine white-collar workers, and in particular managers, take into account the qualifications made by Doeringer and Piore concerning the expected features of an enterprise ILM when investigating such employees. Nor do any of the studies that examine white-collar workers consider whether the salaried model put forward by Osterman (1987) is a better reference point model.<sup>10</sup> Finally, both the institutionalist (Kerr 1954, Osterman 1987) and sociological (Althausen 1989) traditions point out that the boundary of the firm does not necessarily constitute the boundary of the ILM and that different types of workers can be working under very different rules within the same firm. In other words, a number of sub-ILMs can be operating within the firm. A number of the studies take this possibility into account and distinguish between clerical and managerial workers (Treble et al. 2001), blue- and white-collar workers (Dohmen et al. 2004), and technicians, salespeople and administrative workers (Lin 2005) in their analysis.

#### **4.3 *Job hierarchy and job definition***

Doeringer and Piore (1971) argue that workers in an enterprise ILM tend to have long careers with the firm and this is facilitated by a well-defined job structure. When Lazear (1992) and Baker et al. investigate the job structure within the firm, management and workers are not consulted rather the job structure is generated statistically from personnel records. Lazear (1992) reports that each job has been given a five-digit code by the firm, which seems to be closest in meaning to a formal job title. Lazear, however, chooses to classify jobs on the basis of two digits only. This results in jobs being

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<sup>10</sup> A number of the later studies cite Gibbons (1997). However, they do not seem to have taken in that he identified the salaried model as the model most relevant for the Baker et al. study (see pp. 26-7).

analysed without regard for their functional significance. Furthermore, the job structure of the firm is established by using pay levels to identify job levels. The weakness of this strategy is that it effectively prevents the independent analysis of the relationship between wages and jobs, which forecloses the prospect of generating answers to key questions such as are wages attached to jobs or individuals (Baker et al 1994a, Lin 2005).

Baker et al. prefer the term job hierarchy to job structure and define it in the following way: “[H]ierarchies are usually said to consist of job titles aggregated into ‘levels’ related to the job’s authority and place in the path of decision making (hence the term level). Careers are often described as a series of promotions to higher-level jobs with higher rewards and responsibilities” (1994a, pp. 888-9). Baker et al. note the weakness in the strategy deployed in Lazear (1992) to determine the job hierarchy and instead only use data on the pattern of movements between job titles. From this they create a hierarchy of 8 job levels and examine movement between levels to discover what career paths exist.

A number of critical remarks can be made about this method for generating the job hierarchy. Firstly, Baker et al. acknowledge that they do not have access to information on the reporting relationships and hence an important consistency check could not be undertaken to determine to what extent the statistically generated hierarchy is consistent with the actual authority structure within the firm. Secondly, by focusing on the abstract notion of “job levels” much knowledge about the “actual” functioning of the ILM is lost. Osterman (1996) notes that analysing job levels and not job titles means that the functional dimension of the job structure is ignored. Consequently, it is difficult to know to what extent managerial careers are played out within a particular functional area or advancement occurs in tandem with horizontal moves. Thirdly, it is not clear to what extent participants in the ILM are aware of this job hierarchy operating in the firm. This is not a minor issue even from a neoclassical point of view because employee knowledge of the job structure and career paths operating in the firm are crucial to motivating workers and eliciting desired behavioural from them.

Despite these significant criticisms some justification for this approach can be found in the sociological literature. In her classic ethnographic work *Men and Women of*

*the Corporation* (1977) Rosabeth Moss Kanter reported that among managers there was considerable ignorance, disagreement and uncertainty regarding career paths. Indeed, the sociologist James Rosenbaum (1984) cites Kanter (1977) and other work demonstrating the imprecision of worker perceptions concerning career paths and promotion opportunities to justify his decision to proceed statistically in the generation of the job hierarchy. Finally, in Osterman's ideal-type description of the salaried model there is a lack of well-defined job ladders and promotion sequences. However, it should be noted that Baker et al. were not using the salaried model as their reference model.

In the light of the arguments put forward, which render problematic, the strategies used by Lazear and Baker et al. to derive the job hierarchy it is interesting to examine how subsequent studies dealt with these issues. Virtually all of these studies make explicit or implicit reference to avoiding the strategy adopted by Lazear (1992). A number of studies make use of corporate documents (organizational charts, reporting relationships and job ranking systems) in order to derive the job hierarchy (Ariga et al. 1999; Seltzer and Merrett 2000; Treble et al. 2001 and Lin 2005). Other studies (Howlett 2000 and 2001 and Dohmen et al. 2004) follow Baker et al. and infer the hierarchy from the pattern of job transitions, however, they are able apply consistency checks using information on reporting relationships or job titles or the composition of teams. Overall, because of better information sources and/or because of a desire to overcome the problems inherent in a purely statistically generated job hierarchy (this is most explicit in Lin 2005), the more recent studies have generated job hierarchies that have a greater likelihood of corresponding to the conscious understanding of participants in the ILM.

#### ***4.4 Ports of entry and the hiring and promotion policy of the firm***

Well-defined ports of entry and a policy of promotion from within are key features of enterprise ILMs and are important indicators of the degree of openness of the ILM to external market forces. The ideal-typical description is that firms recruit workers at the bottom of the job hierarchy (port of entry) and fill vacancies up the hierarchy through internal promotion. Lazear (1992) finds outside hiring is higher among lower paid jobs and argues this is weak evidence for the existence of ports of entry. However, it is also

found that in 90 percent of jobs, external hiring exceeds 35 percent, leading him to conclude that there is no evidence for the existence of well-defined ports of entry or a strong internal promotion policy.

Baker et al. (1994a) find that the lowest job level in the firm looks like a port of entry with external hires constituting 99 percent of those who enter at that level. For the next three job levels, external hires constitute on average about 25 percent of entries, while for the top three job levels the entry rate is 10 percent. Despite this they conclude that this data is “revealing, and contradicts the supposition that entry occurs only at designated ports...” (p. 898). The other studies produce similar findings to Baker et al., with entry rates highest at the low end of the hierarchy and declining as job level increases. Probably the strongest case for the existence of a closed ILM is provided by Seltzer and Merrett (2000, pp. 584-5), who find that 97 percent of new entrants begin their careers at the bank as clerks, which is the lowest hierarchical level despite 43 percent of entrants having previous experience, and 29 percent having previous banking experience.

From an institutionalist perspective the findings of these studies are supportive of the existence of ports of entry. For institutionalists, ports of entry are a key structural feature of enterprise ILMs and refer to a central tendency in these institutions. Institutionalists from Kerr (1954) onwards have argued that the notion of ports of entry does not preclude external hiring at any job level if, for any reason, there is a lack of suitably qualified internal candidates. Bearing this in mind, a fairer conclusion is that there is clear evidence of ports of entry in virtually all these studies because external entry becomes typically less significant the further one proceeds up the job structure. In addition, for those studies examining clerical and managerial employees, such a finding concerning multiple ports of entry, or hiring through the hierarchy, for clerical and managerial employees, is consistent with Osterman’s salaried model.

Another stylised fact of the enterprise ILM is that among blue-collar workers seniority plays a dominant role relative to ability or performance in the promotion process. Baker et al (1994a) attempt to address this question by looking for the existence of promotion fast tracks and also by examining the incidence of demotion. Fast tracks are said to exist, according to Baker et al. (1994a, p. 901) if individuals

promoted quickly at one level are also promoted rapidly again. In addition, Baker et al. argue that this pattern emerges because individuals differ in terms of innate ability. Alternatively, they argue that if individuals do not differ much in terms of innate ability, and firm-specific human capital is crucial, then people promoted rapidly once will have accumulated less firm-specific capital and will be delayed in receiving their next promotion. All the studies that test for the presence fast tracks find evidence of them (Baker et al. 1994a; Ariga et al. 1999; Seltzer and Merrett 2000; Treble et al. 2001 and Dohmen et al. 2004). Baker et al. argue this is clear evidence that ability is the key criterion in the promotion process.<sup>11</sup> However, the important role played by ability is consistent with both the salaried model and the qualifications made to the enterprise ILM model by Doeringer and Piore when relating it to white collar workers.

Interestingly, Baker et al. (1994a) and Treble et al. (2001) also find evidence of a fast track exit effect, which refers to the phenomenon that those on promotion fast tracks are also more likely to exit the firm. Baker et al. argue that this suggests that the formal salary system of the firm is not flexible enough to adequately remunerate highly able employees to ensure their retention. Consequently, it would appear that the internal wage structure of these firms is not simply mirroring the ELM and this is potentially costly for the firms.

Demotions are also another indicator that ability plays an important role in the staffing decisions of a firm. Both Baker et al. and Treble et al. find that demotions are quite rare at any level in the hierarchy. When demotion is found to be more frequent (2.5–3.3 percent) it is due to job rotation and temporary reassignment, rather than poor performance (Seltzer and Merrett 2000 and Dohmen et al. 2004). The one exception is Lin (2005) who finds that demotion is very low among administrative staff and technicians but extremely high among salespeople (18–21 percent). Lin argues that this significantly different outcome is due to the company's personnel policies, which

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<sup>11</sup> The approach of Baker et al. has been criticised by Treble et al. who argue that the second promotion pattern which according to Baker et al. is due to accumulation of firm-specific skills can also occur if innate ability is multidimensional rather than unidimensional. Ariga et al. also take issue with Baker et al. because they find fast track effects exist even after controlling for innate ability and they speculate this is due to individuals, who are best at accumulating skills being given more intensive training or assigned to tasks and career ladders which provide greater learning opportunities. Either way it is largely about ability.

require salespeople to be appraised every three months, failure to perform over a six month period results in demotion.

External recruitment at every level of the job hierarchy is a common finding among these studies with the exception of Seltzer and Merrett (2000). Despite this, weak support for a policy of promotion from within could be inferred if incumbents did better in terms of promotion than new hires. Both Baker et al. (1994a) and Treble et al. (2001) examine the career paths of workers promoted to a particular job level compared to those who are external hires to that job level. While there are some small differences between the two studies, the overall result is that new hires tend to advance further up the hierarchy albeit exhibiting greater variance in outcome.

The steady decline in entry rates with job level found in many of the studies or the weaker result that entry rates are higher at the low end of the hierarchy than at the high end, can be interpreted as evidence that promotion from within becomes more important with job level. However, the findings on fast track effects indicate that merit or ability dominates seniority in the promotion process. Both these findings are not inconsistent with the existence of ILMs. Doeringer and Piore (1971) point out that enterprise ILMs for white-collar workers typically involve a greater if not dominant role for ability and a diminished role for seniority and greater openness up the hierarchy to external hiring because firm-specific skills are not as significant. In addition, Osterman (1987) argued both these findings are consistent with the salaried model. A shortcoming of the approach taken by these studies is that there is very little illumination of the type of promotion policy operating in a firm. We do not know if a firm has a policy of, in the first instance, advertising a job vacancy internally and only if a candidate cannot be found is the position advertised externally or are all jobs advertised internally and externally simultaneously. If the position is advertised internally, is it advertised across the firm or only in the functional area where the vacancy exists, and can managers appoint someone to the job without being first advertised? Also is there opportunity for workers to be promoted without a job vacancy existing? From an institutionalist perspective, answers to these questions are crucial if the rules and procedures associated

with promotions are to be known and for making sense of the data on job transitions revealed in these studies.<sup>12</sup>

#### **4.5 *Ports of exit and employment security policy***

Baker et al. (1994a) consider ports of exit to be a measure of openness to the external market. A close reading of Doeringer and Piore (1971) reveals that while ports of exit are discussed in the section of the book dealing with market openness, the authors believe they are better thought of as exit rules for controlling involuntary mobility. Osterman (1987) deals with exit rules when discussing the various notions of employment security that characterize different ILMs. In enterprise ILMs, formal lay-off policies, typically based on reverse seniority are the primary vehicle through which firms deal with reduced product market demand. It is an open question whether a policy based on reverse seniority is an expression of cultural norms regarding fairness or loyalty, or of the firm's desire to protect firm-specific human capital. All these considerations lead to the expectation that ports of exit should exist primarily at low levels in the job hierarchy. By contrast, in the salaried ILM model, downturns in product demand are dealt with against the background of an implicit policy of employment security. In other words, firms will make all efforts to avoid permanent workforce reductions, by redesigning jobs and retraining, and transferring workers. In the salaried model there would be no expectation of clearly identified ports of exit. Osterman and Kochan (1990) ground these different notions of employment security using the detailed examples of the auto industry for the enterprise model and Digital Equipment Corporation for the salaried model.

All the studies that measure exit rates find that workers exit at all points in the hierarchy, however, some find that exit rates tend to decline as job level rises (Treble et al. 2001; Dohmen et al. 2004; and Lin 2005). From an institutionalist perspective exit rates alone or together with entry rates do not convey enough information to establish a substantive account of the employment security policy of a firm.<sup>13</sup> Knowing what the

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<sup>12</sup> See Pinfield (1994) for an excellent, qualitative study of an ILM, which yields important detail about the firm's promotion policy.

<sup>13</sup> This is seen most clearly in Dohmen et al. where the significant increase in exit rates among middle managers in the two years prior to bankruptcy is interpreted as a shift in layoff policy. However, it is just

firm's policy is through consulting company documents and/or interviewing relevant market participants would provide insight into the correspondence between the firm's intentions and actual exit behaviour. Another limitation is that exit rates do not distinguish between voluntary and involuntary exits.

#### **4.6 Wages policy**

Two key structural features of enterprise ILMs are that wages are tied to jobs rather than individuals and the internal wage structure is insulated to a significant extent from developments in the ELM. If job level is an important determinant of wages it is interpreted to mean that a worker's wage does not equal his or her marginal product and therefore that wages in the firm are not determined in spot markets (Howlett 2001).

All the studies find that wages and job levels are positively related and that promotion is important for wage growth. However, only Hamilton and MacKinnon (2001) find that wages are strictly tied to jobs. Human capital variables are also found to be important but there is a tendency, in most studies, for job level to dominate.<sup>14</sup> An exception is Seltzer and Merrett (2000) who report that firm-tenure significantly dominates job level in explaining earnings. A closely related and common finding (Baker et al. 1994a and 1994b; Seltzer and Merrett 2000; Treble et al. 2001; Dohmen et al. 2004; Dohmen 2004 and Lin 2005) is that wage increases associated with promotion are large relative to normal within job level increases, but small relative to the difference in average wage between the two job levels. Baker et al. (1994b) interpret this finding as further evidence that individual characteristics (primarily ability) are important in determining pay.

The studies also provide evidence of the internal wage structure being insulated from external market forces. Nominal wage rigidity is one piece of evidence, found in most of the studies, indicating workers in a firm enjoy at least nominal wage shielding

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as likely that these represent voluntary quits from a sinking ship. How do we know?

<sup>14</sup> For example, Baker et al. (1994 a) estimate that human capital variables account for 35 percent of the variance in current salary while job level accounts for 68 percent. Treble et al. (2001) find human capital variables explain 22 percent of the variance in current salary and job level explains 67 percent.

from the ELM.<sup>15</sup> In addition, Baker et al. (1994b) and Lin (2005) find strong evidence of a cohort effect, which cannot be fully explained by observable differences in the make up of the cohort.<sup>16</sup> Therefore, Baker et al. and Lin (2005) interpret their results as evidence that their firms are shielding workers from external market forces.

#### **4.7 Studies using multi-firm data sets**

Research on ILMs has also been undertaken using large multi-firm data sets for a particular country. This approach has the advantage of producing findings, which have greater generality than those produced by single-firm case studies. However, they do suffer from disadvantages. Firstly, workers in different firms face different personnel policies, which impact on behaviour in important ways, particularly when these policies change, and their effects are very difficult to capture using multi-firm data sets. Secondly, in order to make firms comparable a general classification of jobs and or levels is used which typically involves a loss of precision when compared to what can be achieved in single firm case studies (Lin 2005).

Lazear and Oyer (2004) use detailed and uniform establishment-level personnel data on white-collar workers in Swedish firms covering the period 1970-90 to examine the relationship between ILMs and the ELM. Once again by default ILMs are assumed to be enterprise ILMs. Ports of entry are studied by examining external hiring through the job levels. Lazear and Oyer find that, while firms have the highest rates of external hiring at the lower levels of the job hierarchy, significant external recruitment occurs at every job level. However, they do find that external hiring becomes less significant and internal promotion more important as the job hierarchy progresses, reinforcing the findings of the single-firm studies. Furthermore, Lazear and Oyer (2005) suggest that because of the extent of external recruitment at all job levels, wage movements within firms will be strongly influenced by market forces. Indeed, Lazear and Oyer find that despite some short run, year to year variation in wages, in the long run the firm accounts

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<sup>15</sup> In Baker et al. real wage shielding was not as common because under-performing workers often received zero percent nominal wage increases.

<sup>16</sup> According to Baker et al. (1994b, p. 923) a cohort effect exists when “[C]ohorts who earn more on entry maintain their advantage through time. Cohort averages change more or less in unison inside the firm, while changes in entry wages follow a more idiosyncratic path.”

for only about 1 percent of the variation in wages among workers across occupations. Consequently, they conclude that “occupation is a more important determinant of wages, suggesting that firms are disciplined to a large degree by the external labour market in their wage setting” (p. 551).

In discussing their findings on wages, Lazear and Oyer (2004) point out that the results are consistent with a “spot labour market where the wages are determined by the market at the level of the job” (p. 548). Significantly, they also point out that such findings are consistent with “centralized wage setting, where firms have no discretion over wages paid once they have been centrally set” (p. 548). In fact, they acknowledge the critical importance of centralized wage setting in explaining the co-movement of wages in the Swedish labour market. At one level, which of these interpretations is more correct is immaterial for Lazear and Oyer because they argue that both represent the effect of the ELM. However, there is a considerable amount of conceptual slippage in their use of the term ELM and this renders problematic their claim that ILMs are weak. Lazear and Oyer are careful to point out that the ELM is not to be necessarily equated with an efficient labour market. They acknowledge that institutional phenomena are also features of the ELM. However, if wages are primarily determined by collective bargaining at the national or industry level, as they are in Sweden, then is it appropriate to describe such a labour market as being primarily governed by market forces?

An alternative explanation, not considered by Lazear and Oyer, is that socio-cultural and political factors have interacted to produce an institutional framework in the Swedish labour market, which in turn has resulted in a different type of ILM developing. Moreover, it is these institutional features, transmitting socio-cultural values, rather than market forces, that have generated the findings of Lazear and Oyer regarding ports of entry and wages.<sup>17</sup> Indeed, Lazear and Oyer take it as given that when referring to ILMs one must be referring to an enterprise ILM. In fact, it can be argued that the type of ILM operating in Sweden is a craft or occupational ILM.

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<sup>17</sup> This result is important because as is seen with the Kwon and Meyersson Milgrom (2003) study the centralized wage system in Sweden was an important channel through which the labour market was influenced socio-cultural values of an egalitarian nature, rather than market forces.

Interestingly, other researchers within the personnel economics perspective have taken up this possibility. Gibbs, Ierulli and Meyersson Milgrom (2003)<sup>18</sup> were the first to raise the idea that in Sweden in the period 1970-90 occupational labour markets could be more important than enterprise ILMs in explaining career mobility. This work unfortunately was not completed, but the ideas are taken up in Kwon and Meyersson Milgrom (2003).

Kwon and Meyersson Milgrom (2003) draw upon the work of Doeringer and Piore, and sociologists such as Althauser and Kalleberg (1981), to suggest that economists have unthinkingly assumed that the boundary of the firm determines the boundary of the ILM and as a result, all ILMs are enterprise ILMs. This has led economists to neglect craft or occupational ILMs that span firms. In addition, they draw attention to the crucial role played by social forces in determining the boundaries of ILMs. Consequently, Kwon and Meyersson Milgrom (2003) provide considerable information on the socio-political and institutional forces that impact on the Swedish labour market. Particular reference is made to the strong egalitarian traditions transmitted through the tax system and the centralized wage system that have promoted earnings equality. In addition, employers are completely free to hire and promote whomever they wish but firing or laying-off workers is tightly regulated by law and subject to union surveillance. Therefore, on the one hand it is reasonable to expect that these institutional conditions will result in workers staying at firms for long periods of time and hence it would be expected that enterprise ILMs would be the norm. On the other hand, however, workers incur few costs when moving from one firm to another, so that levels of inter-firm mobility consistent with a craft ILM could also be reasonably expected.

Kwon and Meyersson Milgrom (2003) use the same Swedish data set as Lazear and Oyer (2004) but they focus on the period 1986-89 and examine the role played by occupation in recruitment decisions and wage determination. They find that as job rank increases the hiring ratio for those promoted from within the firm and within the occupation rises, whereas the hiring ratio for those promoted within firm but outside the occupation does not vary. In addition, they find that the outside the firm but within

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<sup>18</sup> Cited with author's (Gibbs) permission.

occupation hiring ratio rises with job rank. Putting these findings together leads Kwon and Meyersson Milgrom to conclude that “occupation-specific reasons (such as occupation-specific skills) are more responsible for ports of entry within firms than firm-specific reasons” (p. 19). Furthermore, Kwon and Meyersson Milgrom also analyse wage data and find that occupation tenure is more significant than firm tenure, which reinforces the findings on hiring patterns. Consequently, they conclude that for the “Swedish data, internal labour markets based within occupations give a better account of the facts concerning ports of entry, recruitment and wages, than do markets based within firms” (p. 32).

Ohkusa, Brunello and Ariga (1997) who conducted one of the single-firm case studies, point out that for Osterman’s (1987) theory of employment systems no reliable quantitative measure that distinguishes between enterprise ILMs and occupational or craft ILMs has been developed. They construct a measure, which is basically the ratio of firm-specific-to-occupation-specific tenure for all workers in an occupation. This measure is found to be positively correlated with firm size and with the slope of Japanese wage-seniority profiles, both indicators of enterprise ILMs. Importantly, it allows the classification of occupations into enterprise ILMs and craft ILMs.

Eriksson and Werwatz (2004) examine an employer-employee linked data set based on 222 Danish private sector firms, employing at least 200 people and covering the period 1980-95. They find that the majority of firms in the sample do not follow a policy of promotion from within and that careers within firms are relatively truncated. However, in support of enterprise ILMs, it is found that wages are significantly related to job levels, and that job levels are as important as human capital variables in explaining wages. Further support for enterprise ILMs is provided by the finding, that “the negative impact of unemployment on wages is substantially smaller in firms with more internal labour market characteristics, than in those with little” (p. 17).<sup>19</sup>

Lima and Centeno (2003) use a matched employee-employer panel of detailed information on a large number of Portuguese firms to examine whether firms exhibiting certain enterprise ILMs features have a greater tendency to promote incumbents. They

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<sup>19</sup> Eriksson and Werwatz (2004) also examine specific industries and find that in the financial services industry enterprise ILM features are more pronounced, which they note provides support for the findings of Baker et al. (1994 a and 1994b) and Treble et al (2001) both of which it will be recalled studied large financial services firms.

restrict their analysis to top managers and assess the presence and strength of ILM practices using two indicators, one measuring the existence of ports of entry and the other measuring the steepness of the wage profile in the firm. Lim and Centeno find that as the strength of either ILM indicator increases, so too does the likelihood to promote insiders.

Overall, a number of these studies using multi-firm data sets have continued the trend evident in the single-firm case studies of using the term ILM to mean an enterprise ILM (Lima and Centeno 2003; Eriksson and Werwatz 2004; and Lazear and Oyer 2004). This is not necessarily problematic because there is a legitimate debate in the literature about whether the enterprise ILM model has or is being dismantled (Cappelli 1999; Jacoby 1999a and 1999b; Rubery 1996; and Stone 2004). In addition, none of the data sets contain information on firms' hiring policies, employment security policies and wage policies from the point of view either of management, workers or company documents. The content of these policies are all inferred from statistical analysis. However, the studies by Gibbs et al. (2003), Kwon and Meyersson Milgrom (2003) and Ohkusa et al. (1997) represent a very important development in the personnel economics approach to ILMs. These scholars have extended the number of ILM models under consideration, have constructively engaged with the institutionalist and sociological literature on ILMs and careers and in the case of Kwon and Meyersson Milgrom have actively integrated aspects of the institutional framework of the labour market into their analysis of ILMs.

## **5. Methodological uncertainties and inadequacies**

The methodological approach adopted by institutionalist labour economics to the study of ILMs involves the deployment of both qualitative and quantitative techniques. Of particular importance, is the use of interviews and specially designed surveys, which are critical to generating the ideal-type descriptions of different ILM models. These models are the basis for further investigation to determine the prevalence of ILMs and their evolution in a dynamic environment. From an institutionalist perspective the accounts of labour market actors are important theoretical building blocks. Doeringer and Piore (1971[1985]), in the new introduction to the second edition of their 1971 study, point

out that the materials used (interviews and field observations) do not yield a fully developed alternative behavioural theory of labour market operations. However, they argue that “the vocabulary used to describe ILM processes does reflect the actual way in which workers, managers, and trade unions perceive wage and employment decisions” (p. xxi). Piore (2006) reinforces this point, proposing that for a theory to “work” economic actors must recognize themselves and their actual motivations in the theory. In addition, he argues that policy-making based on such theories is also likely to be effective because participants are more likely to recognize themselves in the policy initiatives. When faced with a choice between competing metaphors or the vocabularies of neoclassical theory and market participants, the latter has a greater empirical foundation. This position is also supported by the sociologist David Bills (1987, p. 203-4) who argues that “[D]espite the obvious virtues of abstract models, they are of little value if their assumptions fail to correspond with the motivations and perceptions of those whose behaviour they purport to explain”. Bills (1987) demonstrates the importance of interviews in uncovering counterintuitive reasons for the existence of ILMs.<sup>20</sup>

Institutionalist labour economists, industrial relations researchers and sociologists need to be reminded, however, of the ongoing importance of qualitative research to the study of ILMs. Whitfield and Strauss (2000) reveal the significant shift away from qualitative and toward quantitative research in leading industrial relations journals over the last thirty years. Whitfield and Strauss (2000) draw attention to the diagnosis made by Brown and Wright (1994) that in Britain “the partial eclipse of IR by other disciplinary approaches has arisen from an unthinking neglect of the most potent tradition of the subject . . . the tradition of multi-disciplinary research, heavily reliant upon fieldwork case studies, observation and interviews” (p. 153; cited in Whitfield and Strauss 2000).

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<sup>20</sup> One example from Bills (1987) involves an interview-based study of a manufacturing firm and found that the only workers they hired under enterprise ILM conditions were those acquiring general skills (an apprenticeship program). The firm did this to ensure an adequate supply of skilled workers, which would keep wages down in the long term. Moreover, this practice continued despite the high turnover rates among staff that completed the training process.

By contrast the approach adopted by personnel economics is almost exclusively quantitative, primarily relying on the personnel records of firms or data collected from matched employer-employee databases. The exception to this is that some studies, particularly those examining much earlier historical periods, make additional use of company documents. By primarily relying on quantitative techniques and without first hand contact with labour market participants it is difficult to imagine how personnel economists could ever have articulated the ILM concept. Significantly, none of the single-firm case studies reviewed here have made any effort to construct new ideal-type descriptions of ILMs. Dunlop (1988) is damning of the current quantitative approach supplemented by microeconomic theory that dominates mainstream labour economics. He argues that this research methodology

“almost never confronts a real labor market, a real workplace or real participants in the market. The crucial test is statistical congruence or compatibility with the general corpus of microeconomic theory, not its capacity to illuminate the full range of labor market behaviour or to provide an explanation for wage decisions. If the pursuit of understanding of labor markets and wages proceeds in this way, the inevitable results are those that are achieved” (p. 73).

Despite the criticisms made of the personnel economics approach to the empirical study of ILMs there is no doubt that the single-firms case studies undertaken by Baker et al. and others represent an important and sophisticated contribution to our knowledge of ILMs. Encouragingly, Gibbs and Levenson (2002) have recently argued that personnel economics needs to develop and deploy other quantitative techniques if it is to understand more of what is actually occurring within firms and what employees actually do. They propose that less traditional and typically neglected techniques be adopted, such as the construction of specially designed surveys.

Consequently, it is argued here that it is crucial that both qualitative and quantitative techniques are utilized in the study of ILMs and the almost exclusively quantitative approach adopted by personnel economists be resisted. This conclusion is

supported by Althaus (1989, p. 157) who emphasizes that the best approach to studying ILMs involves a combination of “numerical data and qualitatively rich data”.

## 6. The importance of being social

There is more at stake here than the choice for an empirically valid language. Doeringer and Piore (1971[1985]) claim that taking market participants accounts seriously leads to an explanation of the origin and functioning of ILMs centered on the behaviour of social groups. They argue that:

“The institutional structures of internal labour markets are sometimes the product of formal negotiations between groups such as trade unions and business firms. But the alternative to such negotiations is not the interaction of individuals in a market process. Rather it is the interplay of formal and informal groups exerting various kinds of social pressures . . . . Similarly, the conventional literature fails to recognise that the economic relationships within the group, and between one group and another, may be a manifestation of *social* needs being met by the group that are so fundamental to human existence that society could not function in the individualistic mode which underlies traditional standards of optimality” (pp. xxii-xxiv).

Piore (2002), reflecting on the thirty years that have passed since *Internal Labour Markets and Manpower Analysis*, points out that while the enterprise ILM model appears to be of declining significance in the US economy, social forces are creating ILMs with different boundaries. In particular, he draws attention to the growing importance of social groups such as occupational and professional associations. In addition, other social networks organized along racial, ethnic and gender lines are in turn structuring these associational groups.

The importance of social groups in generating ILMs has been demonstrated by a number of studies. Jacoby (1984) shows it is possible to decouple the technologically driven job structure from the policy of hiring from within to fill vacancies. He examines

the rise of blue-collar ILMs in US manufacturing firms in the early part of the twentieth century. Specifically, Jacoby describes in detail how a number of groups, unions, employers, the personnel management movement and the vocational guidance movement interacted to produce formal rules concerning promotion from within. Elbaum (1984) provides convincing evidence that efficiency considerations played only a minor role in the emergence of ILMs in the US iron and steel industry in the late nineteenth and early twentieth century. Rather, it was due to conflict between social groups, highly skilled craft workers and their helpers. Finlay (1983) conducts a fieldwork and finds that as a result of a 1978 employment contract, skilled longshore crane operators on the West Coast of the US could be employed in a union controlled occupational ILM or an enterprise ILM. This unusual situation emerged out of efforts by the union to close down employer driven enterprise ILMs, which had formed as a result of firms' efforts to control the wage bill. This situation is notable because crane operators, possessing the same general skill, are employed in two very different labour markets, differentiated because of socio-political forces not technology.

Osterman recently revisited the ILM topic, poignantly remarking that “[A]t the end of the day, the ILM idea is about how social, political, and economic forces act together to determine what happens to people at work. It is this mixture that gives the idea so much power” (Osterman and Burton 2005, p. 428). The approach of personnel economics tends to downplay, if not ignore, the role played by social and political forces and emphasizes the role of economic forces. However, Osterman and Burton (2005, p. 430) point out that “[W]hile economic explanations of ILM practices are useful and important, they treat the organization as simply the transmission belt for a set of considerations that are removed from the dynamics of social and political life”. An associated issue is the position of personnel economics on the provision of institutional details, which is far from clear. At times confidentiality issues appear to prevent institutional detail being provided. In most of the single-firm case studies very little information is supplied about the role of unions, management philosophy and corporate policy, and the conflict between different groups of employees. There are exceptions to this with both Gibbs and Hendricks (2004), Dohmen (2004) and Lin (2005) providing considerable detail about the pay system operating in the firm and Seltzer and Merrett (2000) revealing a number of insights from company documents on remuneration and

job transfer policy. Of particular interest in this regard is Lazear's ambiguous position on the importance of institutional detail. Lazear's (2000c) study of the Safelite Glass Corporation's shift from time rates of pay to a piece rate system is widely quoted and rightly so because it is an important contribution to the literature on the economics of compensation. This paper is rich in institutional detail with information provided on the shift from time rates to piece rates, the provisions of an earnings safety net to prevent a deterioration in worker morale, the prior existence of an inventory tracking system, which made the change both possible and cost effective, and the different types of policies that were put in place to deal with defective installation work. The provision of this kind of information stands in stark contrast to that provided in either Lazear (1992) where we are told nothing of substance about the personnel policies of the firm or Lazear and Oyer (2004) which provides scant information about the institutional features of the Swedish labour market. On a more positive note, even where institutional detail is inadequate, to their credit, Baker and Holmstrom (1995, p. 259) concede that "we do not want our results to be read as proof that institutional details can simply be overlooked. The full range of our findings cannot be understood within a competitive model."

Doeringer and Piore (1985) strenuously distance themselves from efficiency-based interpretations of their work and of ILMs generally. They point out that neoclassical theory cannot adequately, account for the emergence of ILMs or their functioning. Explanations, for example, based on the Becker-Oi theory of fixed labour cost leave the wage indeterminate and cannot account for the internal wage structure. Personnel economics does not at any time seek to explain the origins of the job and wage structure they find. Presumably if called upon to do so, they would round up the usual suspects; specific human capital, implicit contracts, job matching theory, lifecycle incentives and idiosyncratic exchange. Ultimately, though, this is hardly adequate.

The importance of socio-cultural, political and economic forces in generating, maintaining and bringing about transformations in ILMs indicates that this concept must be studied from a multidisciplinary perspective. Institutionalist labour economists are at ease with such an approach. However, it is unclear what position personnel economics will take on this issue. Lazear argues that personnel economics is part of economic imperialism seeking to colonize the field of personnel and human resource management.

Consequently, the features of ILMs must given an efficiency-based explanation or shown to be without or with only limited empirical support. An alternative perspective would appear to be advocated by Gibbs whose more recent work shows a higher level of engagement with other social science disciplines and a willingness to extend the quantitative techniques deployed to study ILMs.

## **7. Conclusion**

This paper has described the origins and development of the concept of ILMs within the institutionalist labour economics tradition. An importance feature of this tradition is its multidisciplinary perspective and its use of both quantitative and qualitative research techniques. Indeed, it can be argued that without the use of the latter it is difficult to imagine how the ILM concept could have been generated. Personnel economics has emerged as a new force in mainstream labour economics and approaches the empirical study of ILMs on primarily a quantitative basis. A number of single-firm case studies have yielded highly sophisticated statistical portraits of firms' employment systems, providing answers to questions about the job hierarchy, the relationship between jobs, wages and people, and ports of entry and exit. However, the interpretation of these findings is limited because of an adequate engagement with the institutionalist tradition. In addition, it was argued that reliance on statistical methods alone makes it difficult, if not impossible, to determine the institutional features of the markets studied. What is notable about the work and approach of institutionalist labour economists is the privileging of interviews, observation in the field, and historical analysis. By focusing on the articulated experience and intentions of labour market actors, institutionalists have been able to generate ideal-type descriptions of a range of ILM models. Furthermore, such an approach has assisted these researchers in identifying the roles played by social, political and economic forces in the emergence and functioning of ILMs. The significance of the future contribution of personnel economics to the study of ILMs depends on its willingness to engage constructively with the research findings of the other social sciences and to expand its research methodology.

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