

Networked Firm and Its Impact on Labour and Human Resource Policies

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Textbook microeconomics theorizes business firms as single firms and is therefore inadequate to explain how modern industrial firms produce quality products at competitive costs, and in the process how they also choose to have in place particular employment relations systems in relation to different sets of employees. The theory of networked firm is examined here as an alternative. However, this alternative theory is not without empirical limitations.

Introduction

The evolution of modern industrial firm, especially in the motor vehicle industry, reveals that the single firm has vanished (IILS, 1992), and what has come into existence is the 'networked firm' in terms of inter-enterprise network or inter-firm relationships/linkages in the production system whereby the boundary of any single firm has got blurred. In such a production network, the lead firm is hypothesised to respond innovatively to the new competitive pressures by managing competencies on an intra-firm and inter-firm basis. To put it differently, it seeks to leverage more competitive advantage from its core competencies through alliances, partnerships and outsourcing with other firms. It meets the simultaneous needs for flexibility, quality and cost reduction in its operations by simultaneous implementation of internal competencies or capabilities development along with externalisation and quasi-internalisation strategies. This in turn gives us insights on the materialisation of diverse new employment patterns in the inter-enterprise production network.

This theory is actually a take-off on the Japanese collective capitalism in terms of the networked model of production organization, and it is the only way available to us now as a template for unravelling the relatively unexplored link between the world of corporate strategy and the world of labour studies. The theory cannot be attributed to any single author. It is brilliantly put forward with all its antecedents by Palpacuer (1997). A summary of her exposition runs like this.

The lead firms build and maintain their competitive advantage by: (a) developing core competencies on the basis of decentralisation, trust and strategic human resource management; (b) externalising standard competencies through the use of peripheral workers and/or peripheral suppliers/subcontractors; and (c) building cooperative relations with key partners performing closely complementary activities.

Such strategies are implemented both at the local level within a country and on a global scale, as the lead firms extend network links to other locations in a variety of countries. From the perspective of employment, these strategies generate new and complex labour segmentation patterns that are simultaneously situated within firms, between firms, and between locations.

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At the firm level, externalisation strategies produce segmentation between regular workers embodying the firm's core competencies, and peripheral workers performing more simple tasks, or tasks which are loosely linked to its core activities. At the inter-firm level, quasi-internalisation and externalisation strategies generate a segmented network structure between lead firms, first-tier suppliers/subcontractors and second-tier suppliers/subcontractors. Geographically, this segmented structure can be found both within core locations, and between core, semi peripheral and peripheral locations. Contracting, subcontracting and re-subcontracting as integral to the real world industrial organization is explored very well in Bose (2018a).

We elaborate this theory, selectively and briefly though, as follows by drawing on the exciting research in recent times in relation to the so-called best practices in the automobile industry.

Internal Development of Core Competencies

The lead firms specialise in and control service-intensive functions such as marketing, product development, network coordination and final assembly, which provide superior value and scale economies in today's competitive environment. These core competencies can be developed in the following ways.

A more flexible and responsive organisation dealing with various levels of coordination in a firm's activity is sought: coordination between individuals working in teams, between the various stages of the production process, between functional activities, and between business units of the large firm. The emphasis is on managing product flows, resource deployment and information sharing, with the objective of integrating individual tasks, functions, and units into a consistent and dynamic system. This involves greater reliance on horizontal coordination processes and a decentralisation of decision-making, together with a reduction of hierarchical layers within the organisation. For example, in the Japanese lead firms, horizontal communication processes are a central feature, and quality improvement involves organisational learning across functional divisions. Trust and shared values through a process of socialisation appear as central mechanisms for work coordination and control in the flexible enterprise. This is because when work is complex and constantly changing, 'direct control' based supervision becomes too expensive, and 'bureaucratic control' based on work standardization cannot be used. As such, strategic human resource management (Schuler and Jackson, 1999) which is contingent on the firm's environment, competitive strategy and organisational structure, is said to be used to promote employee commitment to the goals and consequent work of the organisation, foster employee initiative and creativity, and provide the firm with an adequate pool of individual competencies. This is done through HRM (human resource management) practice regarding the selection, development, appraisal and motivation of the workforce. Selection plays an important role when the firm relies on social norms and values to coordinate and control work. Selection criteria can be of an objective nature when applied to technical skills, but they tend to be rather general and subjective for evaluating work attitudes and values, or the ability of individuals to successfully operate within the organisation. Human resource 'development' relies mainly on job and task experience, i.e. on-the-job training, which is most conducive to the development of experiential knowledge. Such

experience can be gained through career moves and job rotation, with an emphasis on horizontal movements that allow individuals to acquire a systemic view of the firm's activity. The other option is job enrichment, allowing individuals to develop and make use of a variety of skills within a given position. Performance appraisal relies on a combination of objective and subjective criteria. The former can be used for evaluating results, while the latter apply to the assessment of work attitudes and behaviours, that best reflect the potential contribution of individuals to the organisation.

Motivation of the workforce depends on each country's context. In the Japanese firm, employees are motivated to engage in continuous learning and problem-solving because these activities are taken into account in performance appraisal, which in turn affects promotion opportunities and pay. Japanese firms also rely on financial incentives, through pay increases linked to promotion as well as the important use of bonuses as part of total wage payments. In the US, the use of financial schemes such as gain-sharing or profit-sharing is also an important feature of firms pursuing innovation strategies.

These features of the internal development of core competencies contribute to maintain a dynamic balance between cooperation and competition within the firm. Individuals cooperate within and across teams, functions and departments on the basis of shared norms and values, while competing to improve their positions in terms of pay, promotion and/or employment prospects. Such balance between cooperation and competition supports continuous learning and improvement within the firm.

Externalisation of Standard Competencies

There are three types of externalisation, applying respectively to the location of work, its administrative control and its duration. The externalisation of place refers to the growing use of homework, either through the informal sector or through institutionalised work programmes in major corporations. It also includes the geographical relocation of particular groups of jobs and activities. The externalisation of administrative control is based on the resort to temporary help service workers, leased employees, self-employed workers as well as subcontractors and business service enterprises. Reducing the duration of employment can be accomplished by hiring employees on a part-time or fixed-term basis, or simply without committing to a continuation of the employment relationship.

Externalisation on these lines presents several advantages for the lead firms engaged in developing their core competencies in service intensive functions such as marketing, product development and network coordination and/or final assembly. First, it is a way of increasing internal consistency in terms of activity, culture and human resource management practices since the externalised activities are associated with skills of a generic rather than a firm-specific nature. However, the skill content of externalised activities is not necessarily low, as firms might externalize specialised activities that require complex skills but are not tightly coupled to their main activity. Externalisation can help to preserve the cultural homogeneity of the firm by keeping out individuals with different norms and values. Likewise, maintaining internal pay equity might lead firms to externalise higher-paid activities in order to avoid pressures to upgrade the prevailing wage scale, as well as lower-paid activities that would have

to be compensated at a higher rate if performed within the firm. Conversely, externalisation allows firms to exploit cost differences between different types of workers.

In the Japanese firm, externalisation increases internal homogeneity as some employment categories are not integrated into the internal promotion system; they play a marginal role in the horizontal coordination of activity, teamwork and continuous quality improvement. They include part-time and temporary positions, which are predominantly filled by women while men hold the majority of regular jobs. Another kind of externalisation can be found in the important use of a deeply layered subcontracting of production in Japanese industries. Secondly, externalisation is a way of increasing flexibility. The workers who embody the firm's core competencies provide its main source of functional flexibility as well as some financial flexibility linked to performance-based pay. They also contribute to the firm's numerical flexibility through variations in the number of hours worked, as illustrated by the substantial use of overtime in Japanese and American firms. However, the importance of social cohesion and functional interdependencies within the firm puts some restriction on the numerical flexibility that can be obtained from core workers. Therefore, employment in core activities tends to be a fixed resource for firms engaged in competencies development strategies. In that perspective, externalisation provides the main source of numerical flexibility, allowing firms to meet fluctuations in output demand while buffering their permanent workforce from environmental turbulence. Externalisation can also be used to achieve some functional flexibility, as firms can access a variety of skills in the external labour market to perform special projects or meet unusual market demands. Likewise, financial flexibility is enhanced as firms can reduce their fixed cost by focusing competencies development strategies on core employees. Another cost advantage provided by externalisation relates to the fact that contingent workers, including part-time, temporary and contract workers, typically receive fewer benefits than do regular workers. Lastly, externalisation is also a way of maintaining competitive pressures on the core workers. Japanese employees know that they will be displaced to peripheral positions if they do not exhibit satisfactory performance. The American workers too face a similar alternative: "Contract firms and temporary workers serve as a constant reminder to permanent employees that their jobs, too, can be transformed or contracted out if productivity or loyalty falters. In this way, temporary help agencies and business services serve the same function as did immigration at an earlier point in history, providing a reserve army of alternative labour power that serves to constrain and discipline the permanent workforce" (Pfeffer and Baron, 1988, p.276).

Quasi Internalisation of Complementary Competencies

This refers to horizontal as also vertical cooperation between firms. Horizontal cooperation (or 'strategic alliances') refers to bilateral or multilateral arrangements between firms performing similar or competing activities. Through such arrangements, lead firms can pool resources to undertake projects that are beyond their individual capacities due to high costs, high risks and/or insufficient know-how. Horizontal cooperation also provides the most effective way to enlarge a firm's market base within the context of global competition. By contrast, vertical cooperation

allows firms to develop specialised capabilities at a particular stage of the production/value chain, while enjoying some of the advantages of vertical integration (i.e. complete internalisation). Lead firms benefit from economies of integration provided by their enhanced ability to coordinate complementary activities, both quantitatively and qualitatively. At the same time, they avoid the strategic costs of vertical integration, including higher fixed costs, reduced ability to change partners, non-access to suppliers' and customers' know-how, as well as reduced incentives to innovate as buying and selling occur through a captive relationship. Influential examples of vertical cooperation include the subcontracting relations developed by the Japanese and more recently, American firms, as well as the stable linkages between small firms in clustered craft industries and industrial districts.

The Japanese subcontracting networks are said to be showing cooperative relations based on trust, stability and joint-competencies development, even as they allow the lead firms to exercise significant control over their main subcontractors/suppliers.

It may be noted that subcontracting was developed by large Japanese firms in the postwar period on the basis of externalisation strategies aimed at reducing costs, weakening unions, and transferring risks to small subcontractors. However, during the following decades, firms reacted to new environmental pressures by transforming their subcontracting relations from 'market links' or 'arm's length transactions' to relational contracting based on trust, stability and competencies development, which is also hailed as the "fewer and closer" model of supplier relations.

In the automobile and electronics industries, large firms concentrated on strategically important activities such as product development and process innovation, had delegated to subcontractors a substantial number of manufacturing functions including not only assembly tasks, but also testing, parts procurement and design. Subcontractors were largely unequipped to perform these complex functions, and large firms played an essential role in helping to improve their capabilities. Large manufacturers concentrated and stabilised their contracting relationships in order to allow for the development of specific skills and knowledge by their main subcontractors.

Skills development, cooperation and control are closely intertwined in these new subcontracting relationships. For example, the joint determination of contract prices is based on the gathering by manufacturers of detailed cost data on subcontractors' activities. Instead of unilaterally asking for lower prices, manufacturers advise contractors on ways to lower their production costs and provide them with technical assistance in implementing needed improvements. Through the "grading system", subcontractors' performance is continually evaluated by prime firms in terms of product quality, price, delivery and other criteria. As their "grades" improve, subcontractors are given more responsibilities and long term commitment, which increases their motivation to develop specific skills and meet manufacturers' objectives. Thus, the development of relational contracting involves greater control by the large firms over the manufacturing operations of their main subcontractors. The latter benefit from know-how transfer, stabilised orders and enhanced growth opportunities, but their autonomy vis-à-vis their lead firms is greatly reduced.

It must be noted that the so-called cooperative linkages in the vertical supply chain apply only to primary subcontractors in Japan. The lead firms have a concentration of exchanges with key subcontractors to whom they have delegated the management of relationships with secondary subcontractors, thus forming a tiered subcontracting structure or a 'clustered control' system. While the first-tier or prime subcontractors perform complex functions, the second-tier subcontractors execute simpler tasks under their direction. These secondary subcontractors operate at the boundary of the network, as they maintain 'market links' with their clients characterised by unstable orders and strong pressures on price. Thus, the adversarial subcontracting relationships developed by the lead firms in the postwar period have been transferred to lower order contractors in the new network configuration. By contrast, the primary subcontractors have built a more diversified customer base, a trend which has been reinforced in recent years. The boundaries between first-tier and second-tier subcontractors are not fixed, though, as lead firms use the grading system to upgrade or downgrade their positions depending on performance achievements. If a first-tier contractor does not exhibit satisfactory performance, Nishiguchi(1994) indicates that it will be discharged or forced to become a lower tier contractor serving higher-tier contractors with better grades. Such a system introduces competitive pressures within the production chain or network, providing incentives for subcontractors to improve or maintain their network position.

To sum up, through stable partnership with first-tier subcontractors, the lead firms can effectively coordinate production activities, both quantitatively in relation to production volumes, and qualitatively with respect to product characteristics. The second-tier subcontractors provide additional flexibility to absorb fluctuations in output demand, allow lead firms to reduce their production costs, and maintain a competitive pressure within the network. From this perspective, the configuration of vertical networks presents similarities with the classic core-periphery labour segmentation model inside firms as identified by Doeringer and Piore(1971) and Loveridge (1983). The relative position of core and periphery employees within the firm is replicated at the level of inter-firm relations between core and periphery subcontractors, within the production network or chain.

New Forms of Labour Segmentation

The above segmented structure has important implications for employment. In Japan, secondary subcontractors are typically smaller than primary subcontractors, and smaller firms account for a greater share of disadvantaged workers in terms of age and gender. Employment conditions in secondary firms are characterised by low wages, high absenteeism and employee turnover, as well as strong variations in employment levels resulting from fluctuations in output demand. Thus, we arrive at a profound conclusion that employment conditions are strongly differentiated according to a firm's position within vertical networks or production chain.

To sum up, the competencies management theory of the firm throws light on work and employment relations outcomes as follows. First, the management model aimed at developing core competencies is transforming the employment conditions in the lead firms. Through strategies of greater internal flexibility, greater reliance on trust and shared value, as well as new priorities in their human resource management, these

firms are moving away from bureaucratic work structure and employment relations. In the transformed workplace, core employees are more exposed to competitive pressures and face declining prospects for stable career paths within a single firm. The new human resource management model also involves a shift away from the old industrial relations system which provided detailed rules for job classification, pay and promotion. For some scholars, this new model is in essence a non-union model, organised and regulated by the firm's personnel policy.

Secondly, through vertical disintegration, the lead firms are reducing the size of their core workforce and transferring activities to smaller production settings, that typically offer lower wages, fewer benefits, less employment stability as well as less opportunity for union representation. The growing use of contingent workers is also likely to increase the size of the peripheral workforce. However, networking strategies allow some small firms to improve their economic performance and employment conditions beyond what is suggested by traditional segmentation theory.

Such is the case of first-tier suppliers in vertical networks, that have reached an intermediate position between the lead firms and the second tier subcontractors. One more point to be noted is that in a network of shared authority, the ability of the unions to influence employment conditions within a given firm is increasingly constrained by economic interdependencies with outside organisations.

Thirdly, as new forms of network organisation get globalised, the privileged employment conditions that apply to the workforce in primary labour markets in a particular old location can get very badly affected. Global links produce new interdependencies between locations, so that the quality and quantity of local jobs are increasingly related to local firms' position within a global value chain, and to the nature of their relations to other network firms. In such a case, the regulation of local labour markets is constrained by the global dynamics of vertical networks. In core or semi-peripheral locations, local institutions might find it difficult to take actions aimed at reducing local segmentation without running the risk of losing jobs to lower cost locations. In peripheral locations, improving the quality of local jobs might run against providing incentives to attract business from foreign firms.

Conclusion via Critical Appraisal

The above theory of networked firm is the best we have got now to discern the changes in real world industrial organisation by way of value chains and production chains or networks at the national and international levels; but it suffers from lack of empirical proof to support the logic of nature and character of employment restructuring at the lead firms and first level subcontractors that it propounds.

What is needed is a "grounded theory" through empirical testing and revision of this logic (see Glaser and Strauss, 1967). Moreover, the experiential worker discourse needs to be compared with the spoken managerial discourse. That is to say, as Noon and Blyton (2002) point out, the employees' perspective could be diagonally opposite to the managerial perspective about how work and workplace relations get transformed in the way modern, large industrial firms reorganise themselves to cope with or beat competition in the marketplace. The ultimate purpose of this empirical research agenda is to find out if big employers treat labour as an asset or as a

consumable. Obviously, this is what counts in the labour welfarist perspectives of the goals and means of economic development.

The once-upon-a-time glorified Japanese model of industrial organization in terms of innovative lead firms and their supplier relations and labour relations, on which this theory is based, is conspicuous by its absence under the competitive and cost-cutting pressures of neoliberal, imperialist globalization, in Japan as well. Lazonick (1992), who had praised the rise of Japanese industrial leadership (Japanese collective capitalism) while accounting for the decline and fall of the industrial leadership of the US (managerial capitalism) and the UK (proprietary capitalism), has not acknowledged this generalised truth. He should have extended his analysis away from lead firms to supply chain management and labour relations, and he should also have looked at the organizational and labour relations features of the recent rise of innovative industrial leadership in South Korea and China.

There is mounting evidence from research on these lines to the effect that the value and production chains are, from top to bottom, full of 'lean and mean' firms surviving and thriving on 'disposable jobs regimes' of temp and permanently temp labour subject to excessive work intensification and other indignities associated with labour rights violations. High quality products at competitive costs are produced without high quality employment relations even at the lead and first tier firms in the value/production chains (Bose, 2018b; Pratap and Bose, 2017). The talk about change management (just-in-time and/or total quality management/total preventive maintenance and the like) for worker empowerment in this connection is a cruel joke and nothing but bullshit as demystified in Spicer (2018). Following Weissberg (1999), we can also take the management-speak about worker involvement, upskilling and empowerment as a fictitious promotion made by academics so that their careers might flourish from publications about uplifting!

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