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Globalization and the empowerment of talent☆

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ABSTRACT

Many experts have identified globalization as the new way in which firms organize their activities and the emergence of talent as the new stakeholder in the firm. This paper examines the role of trade integration in the changing nature of the corporation. International trade leads to a 'war for talent' which makes it more likely that an organizational equilibrium emerges in the integrated world economy in which control is delegated to lower levels of the firm's hierarchy empowering human capital. Furthermore, trade integration is shown to lead to waves of decentralization and to convergence in corporate cultures across countries.

1. Introduction

In the last two decades, the corporate sector in industrialized countries has undergone a spectacular change. The corporate sector in rich economies has witnessed the break-up of conglomerates resulting in more specialized and 'downsized' firms. The corporate sector has sold unrelated businesses and expanded into related businesses. At the same time, firms have eliminated layers of middle management by introducing more decentralized decision-making inside the corporation and by empowering workers at lower levels of the firm's hierarchy. This has resulted in flatter hierarchies inside the corporation.[1]

But perhaps the most dramatic change in the last decade is that the nature of the corporation itself is changing. Human capital has become the new stakeholder in the firm. The enterprise of the past was well defined by the ownership of physical assets. These physical assets required huge amounts of investment which went beyond the capacity of management. As a result, the enterprise of the past came to be owned by shareholders. The resulting separation of ownership and control made the agency problem between top management and shareholders the central focus of corporate governance. In contrast, in today's enterprise, human capital and talent rather than plants and machines are the critical assets. Improvements in financial markets have made it easier to finance large investments, so capital is no longer the critical asset of the firm. In today's enterprise, specialized human capital has to create ideas on how to do things differently to survive an increasingly competitive environment. Innovative and customized deals are the source of profits today. Thus, the enterprise's talented workforce has become an important source of value to the firm. But this raises new problems in corporate governance. Today's enterprise is no longer a stable entity. In contrast to machines, the firm cannot own its talented workforce. Human capital is mobile and can leave, taking with it the firms' value. Thus, the central focus of corporate governance today is how to preserve and protect the boundaries of the firm. The big challenge is how the firm can obtain power over its human capital when it cannot own it.[2]

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[1] For empirical evidence, see Holmstrom and Kaplan, 2001; Rajan and Wulf, 2006; Marin, 2008.

[2] For an argument along these lines, see Rajan and Zingales (2000), for empirical evidence see Blair and Kochan, 2000.

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What accounts for these changes in the nature of the corporation? Can the increased integration of rich countries into the world economy explain some of the described changes in corporate organization? Why has human capital become so important recently? There are two traditional explanations for the increased importance of human capital in the literature: skill-biased technical change and trade integration with low wage countries. Computerization and related technologies have caused firms to switch towards production techniques that are biased in favor of skilled workers (Lawrence and Slaughter, 1993). The increase in import competition from low wage countries has shifted resources towards industries that use skilled labor relatively intensively (Leamer, 1993). We offer a novel explanation for the increased importance of human capital based on changes in the organization of the firm. Due to the increase in trade integration, human capital nowadays has more options for where to go and is free to leave the firm. The improved opportunities for human capital outside the firm coincide with talent becoming the new source of value to the firm. As a result, the organization of the corporation has responded to these external changes by giving power and decision control to talent to prevent it from leaving the firm.[3]

In this paper, we combine the trade explanation for the increased importance of human capital with an explanation based on the theory of the firm to examine how competition for talent can affect the firm's organization on the one hand, and how the firm's mode of organization feeds back to the market for talent on the other hand. We develop a general equilibrium model that combines a variant of the Aghion and Tirole (1997) theory of the firm with elements of the Helpman and Krugman (1985) theory of international trade. The AT theory of the firm describes the power struggle inside a single firm but neglects the market environment in which firms operate, in particular the competition with other firms for talent. The HK theory of international trade describes the market environment in which firms operate, but the firm remains a black box. The integration of the two models allows us to examine the interaction between trade integration on the one hand and changes in corporate organization on the other. We show that trade integration leads to a ‘war for talent’ which may induce firms to change their organization in such a way as to empower human capital. The resulting shift in organizational mix in the economy towards skill-intensive firms, in turn, raises the relative demand for human capital in industrialized countries. This increase in the demand for skills is distinct and goes beyond the well-known relative increase for skilled workers due to a shift in the output mix towards more skill-intensive sectors that typically comes with trade integration with low wage countries.

As in Helpman and Krugman (1985), we develop a $2\times2\times2$ (i.e. two factors, skilled and unskilled labor, two sectors, and two countries) model, in which one of the sectors (the unskilled-intensive one) is perfectly competitive, while the other sector features product differentiation and monopolistic competition. On the demand side, preferences are homothetic and identical everywhere. The homogenous, unskilled-intensive good is produced under standard CRS technology.

Production of different varieties in the skill-intensive sector is as in Aghion and Tirole. Two agents are involved in production: a principal and a skilled division manager. There are m potential methods of production, of which one maximizes profits (which accrue to the principal) and another maximizes a private benefit for the manager. The principal hires unskilled workers to (i) gather information on which of the m methods is the one that maximizes profits, and to (ii) manufacture the good once the method of production has been decided. The manager also spends resources to try to find out which of the m ways of running the firm maximizes the private benefit. If neither of the two agents find out which is their preferred project, production does not take place (the other $m-2$ projects yield large negative payoffs). If both agents find out which are their preferred projects, the decision rights reside in the agent with *formal authority* (the allocation of these rights is ex-ante contractible). If only one of the agents learns which his/her preferred project is, the uninformed agent always rubber-stamps this project. In this case, the informed party has *real authority*. In choosing between keeping formal authority or delegating power to the manager, the principal trades off the benefit of control against the manager's loss of initiative.

The first result of the paper (Proposition 1) states that the principal will find it optimal to give the manager formal authority only when the ratio of profits to unskilled wage takes intermediate values. When this ratio is very low, the principal's stakes are low and she invests little on information acquisition. This in turn implies that the manager is more likely to have real authority ex-post, and so it becomes unnecessary to also give him formal authority ex-ante. On the other hand, when profits are high, the principal's investment in information acquisition will also tend to be high and thus it is likely that the principal will intervene in the manager's decision even when the manager is given formal authority. As a result, the manager's initiative is crowded out when profits are high. In such a case, the principal is indifferent between keeping formal authority or giving it away, so there is no gain in assigning formal authority to the manager. Finally, depending on parameter values, there may exist intermediate levels of profits for which the principal finds it optimal to delegate formal power to the manager to induce him to invest in information acquisition and avoid no production.

We then solve for the industry equilibrium (imposing free entry) and for the general equilibrium of the closed economy (imposing factor market clearing). Interestingly, we find that relative factor endowments are important determinants of the equilibrium mode of organization. In countries where skilled labor is relatively scarce (high L/H), the wages of unskilled workers will tend to be low, while the fixed costs of production (which consist of the wages of skilled workers) will tend to be high, thus making entry more costly. These forces tend to make the ratio of profits to unskilled wages high in skill-scarce countries and low in skill abundant countries. It follows that countries with very high or very low ratios of skilled workers to unskilled workers will tend to have firms in which principals keep formal authority, while in countries with intermediate levels of L/H, organization modes in which power is delegated to skilled managers might prevail.

Our model delivers further interesting results. First, in the general equilibrium of the closed economy, there exists a range of relative factor endowments for which there are multiple equilibria, with all principals in the monopolistically competitive sector either delegating or not delegating power. Second, there also exists a range of L/H for which one gets a unique mixed equilibrium, with some principals delegating formal power and some principals keeping it to themselves. In this range, factor prices are independent of L/H: factor market clearing comes about through a relocation of resources from one organization mode to the other (in equilibrium, different organization modes differ in their factor intensity). Third, when two countries with different relative factor endowments open up to trade, their factor prices will tend to converge and this could induce convergence of corporate cultures leading all principals in both countries to delegate power (even when no principal in any of the two countries was delegating in autarky).

The paper contributes to an emerging literature on general equilibrium models with endogenous organizations (e.g. Grossman and Helpman, 2002; Legros and Newman, 2008; Marin and Verdier, 2008a,b,c; Antràs, 2003; Antràs and Helpman, 2004). We contribute to this literature in several respects. First, we incorporate into trade

[3] Peter Drucker (2001), a well known author of managerial books, argues in his article “The Future of the Company” in The Economist in December 2001 that giving more freedom to what he calls today's prized “knowledge workers” is essential. He cites McKinsey, a consultancy, as arguing that the key battle of this century is the ‘war for talent’.