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Title	Asset Specificity, Human Capital Acquisition, and Labor Market Competition

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Abstract

Firms let their employees operate assets to produce goods and services. Firm-specificity of asset and human capital, key concepts of transaction cost economics and labor economics respectively, play important roles in determining firms' productivity and welfare consequences of their competition. How are the degrees of firm-specificity of asset and human capital determined? We address this question through exploring a new model that captures interconnections among asset specificity, human capital acquisition, managerial capability, and labor mobility. We consider a two-period model with two firms, where period 1 is the skill-acquisition period and period 2 is the output period. In the beginning of period 1, each firm chooses a level of its asset specificity and employs a certain number of workers from the labor market. The level of asset specificity is interpreted as the extent to which the firm tailors its asset to the unique features of the firm's business strategies and products. A firm's second-period productivity is determined by its managerial capability, the extent to which its asset is tailored, and its worker' familiarity with its asset specificity. Managerial capability here means the capability of a firm's top management to develop an effective strategy and create a unique competitive position.

We find that, as the importance of managerial capability increases, the labor mobility increases, and both the level of asset specificity and firm size decrease. When a firm chooses the specificity of its asset and the number of workers it employs in period 1, it estimates how many workers it will retain and how many workers it will hire from its rival in period 2. A higher importance of managerial capability increases the difference of period 2 productivity between a high-capability and a low-capability firm. Then, as the importance of managerial capability increases, each firm anticipates higher labor mobility, because a larger number of workers will move from a low-capability to a high-capability firm. Anticipation of higher labor mobility, in turn, reduces each firm's incentives to hire more workers and increase the level of asset specificity in period 1.

We discuss implications of our model in the contexts of cross-industry and cross-country comparisons. In a newly emerging industry or in a business undergoing revolutionary technological changes, a business's success critically depends on the quality of its strategic decision making because these industries face a high level of uncertainty. Whereas in industries facing lower levels of uncertainty, strategic decision making is less important. These arguments suggest that the importance of managerial capability is higher in the former types of industries, and the importance tends to be lower in the latter types of industries. Our model then predicts that labor mobility is higher, specificity of asset and human capital is lower, and average firm size is smaller in industries of the former type and vice-versa in industries of the latter type. Also, as the economy makes a transition from industrial capitalism to post-industrial capitalism, modern economies are becoming increasingly knowledge intensive which renders the disadvantage to the firms that heavily rely on physical assets. Our model yields new implications regarding the consequences of the transition.

Keywords	Asset specificity, competition, firm size, firm specificity, human capital, managerial capability
JEL	J24, L20, M50