

Minimum and Job Specialization in a Matching Model

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In this article, I study the minimum wage effects in a new approach. I introduce a new vision of interactions between technological choices and public policies, in particular minimum wage and unemployment benefits. In this model, job specialization is seen as resulting from firms' choice. This specialization choice, which endogenizes the technological bias, is a rational response to the labour market state. Unemployment becomes in this paper the cause and not the effect of job specialization.

For this purpose, I use a matching model in which horizontal differentiation of firms and workers is represented by a circle *à la* Salop (1979). The location of a worker on this circle represents his skill *type*. Likewise, the position of a firm on the circle represents its *type*, that is the skill which perfectly suits its needs. The hiring process between the two agents is formalized by a constant returns function. The distance between worker and firm locations on the circle measures the mismatch between both agents. Consequently, workers' productivity depends both on this mismatch and on the degree of specialization. In accordance with intuition, I suppose that productivity of a job-worker match decreases with this distance. In this context, an increase in the degree of specialization raises the output of well-suited workers (the workers whose mismatch is low) and lowers the output of ill-suited workers (the workers whose mismatch is high).

When entering the labor market, firms decide on the job specialization by maximizing the value of a vacancy. I show that an increase in minimum wage would make agents more selective by requiring a lower mismatch for recruiting workers. Considering that the recruitment of well-suited workers (the workers whose mismatch is high) becomes more probable, firms in this economy respond to this increased selectivity by creating more specialized jobs. This adaptation of jobs characteristics leads to an improvement in matching quality, and thus productivity. In spite of the negative impact on job creation process, minimum wage can be presented as a public policy instrument for regulating job assignment and for improving labour market efficiency. Comparative statics also suggests that an increase in unemployment benefits leads to a negative effect on unemployment rate in spite of matching quality improvement.

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