

Social Networks in Labor Markets: The Effects of Symmetry, Randomness and Exclusion on Output and Inequality

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In this paper we study how some characteristics of social networks affect the dynamics of output and inequality, by extending in various directions Lavezzi and Meccheri (2005). In particular we focus on the following topological aspects of networks: i) the degree of symmetry and asymmetry in the configuration of agents' social connections; ii) the possible presence of social exclusion, that is of agents who are socially isolated; iii) the effect of network density, that is of the average levels of social links. The effects of network density, symmetry/asymmetry and social exclusion have been often discussed qualitatively in the sociological literature, but their quantitative effects on output and inequality have still not received the same attention. Points i) and ii) are studied with fixed networks, while to study point iii) we introduce random networks. The examples we study allow us to shed some light on the "strength of weak ties hypothesis" (see Granovetter (1973)). Our findings are: I) symmetric networks with "strong ties" produce higher output and lower inequality than asymmetric networks; II) the introduction of "weak ties", having the function of "structural holes" (see Burt, 1992), has a larger positive effect on output and inequality if they are associated with symmetric networks; III) with homogeneous agents, the elimination of social exclusion increases output and reduces inequality; IV) in random networks, an increase in network density increases output and reduces inequality, but there are clear decreasing returns; V) random networks with the same density produce the same level of output and inequality, irrespectively of the relative values of density's determinants, i. e. the number of agents and the probability of link formation. On the contrary, in fixed networks the same density can be associated to different levels of output and inequality, according to the network geometry.