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CULTURAL DIVERSITY, KNOWLEDGE DIVERSITY AND INNOVATION

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OBJECTIVE

The studies on the impact of cultural diversity on innovation reveals mixed results. This has led some researchers to consider cultural diversity as a "double edged sword". On one hand, positive effects of cultural diversity are related with increased synergies and spillovers which arise from the association of different viewpoints, and increased opportunities for knowledge recombination. On the other hand, negative effects are related mostly to communication problems and problems which arise in conflict resolution. The underlying premise of this paper is that, these opposing effects of cultural diversity can better be understood if we consider not only differences in cultural attributes but also the nature of the industry, the similarities/differences in the competencies of the population studied, as well as the structure of networks that form between them.

The paper addresses the following questions: what is the impact of cultural diversity on innovation, when we consider explicitly the industry regime, and the knowledge diversity in a population? What are the nature of networks that evolve in this context?

MAIN RESULTS AND POLICY IMPLICATIONS

In understanding the impact of cultural diversity on innovation, the nature of the industry is important, since some industries are characterized by richer technological opportunities for innovation. This is usually the case in knowledge intensive sectors, in which there are rich economies of scope. The software sector is an example, a software code can be used in a variety of different contexts which increases the opportunities for the creation of new knowledge. On the other hand, other industries are more stable in terms of innovation potential, providing reduced opportunities for innovation. In these industries, learning is mostly through the diffusion of existing knowledge.

In addition to the industrial regime, the distribution of knowledge in the population is also found to be important in various contexts. In particular, it is found that when innovative actors are similar in terms of their specializations, learning is limited, since

they have few to add to each others' knowledge. At the same time, when knowledge diversity is too high, developing a common language becomes more difficult, and learning is also limited. Some studies posit an intermediate level of knowledge overlap to be optimum for learning.

The results of the paper reveal that the impact of cultural diversity on innovation depends on the diversity in competencies of actors and technological opportunities. Distinguishing between three knowledge regimes, low technological opportunities characterise a system in which there is only knowledge diffusion, and weak opportunities for knowledge creation. In a high technological opportunity regime, the dominant form of innovation is continuous creation of new knowledge. In the intermediate technological opportunity regime, innovation landscape is characterized by both diffusion and new knowledge creation.

The results reveal that, cultural diversity has a negative impact on the knowledge growth, in industries characterized by intermediate levels of technological opportunities. On the other hand, no significant effects of cultural diversity on innovation are detected for low and high technological opportunity regimes. However, this result should be considered along with the impact of knowledge diversity. Knowledge diversity also has a negative impact on knowledge growth for intermediate degrees of technological opportunities. In such knowledge regimes, homogeneous populations yield highest knowledge growth. The underlying reason behind this result can be related to the networks of actors. In particular, it is found that, high degrees of cultural and knowledge diversity tends to reduce the extent of partnerships between a variety of agents.

According to the results of the simulation analysis, there is also an interaction effect between knowledge diversity and cultural diversity. In particular, the highest knowledge growth, and the highest level of interactions occur when both cultural diversity and knowledge diversity is minimum. This also implies that negative effects of cultural diversity can be offset by promoting cultural homogeneity.

Various policy implications of these results can be underlined. Firstly, since the impact of cultural diversity on innovation largely depends on the context of the industry, it is particularly important to consider the nature of knowledge creation in the specific context. By knowledge creation is meant, the extent to which learning happens through solely transfer of knowledge on one hand, and the extent to which new knowledge is created on the other. Where both mechanisms determine learning, cultural diversity has a negative impact on innovation. However, in cases where cultural diversity is a necessity, the negative impacts can be offset by employing people/organizations who have similar competencies. In other words, a policy perspective which takes into account diversity in competencies is relevant to promote innovation. Networks of actors also play an important role in this context. In this paper, networks are taken as the main mechanisms through which the impact of diversity manifests itself. In general, the extent of interactions between different actors contributes to learning. On the other hand, to the extent that partnerships are repeated between the same people/organizations, learning and new knowledge creation can be limited.