

The making of star innovators: The role of gender, seniority and complementarity of coinventors

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This article examines the role of peer collaborations in patenting success for an individual inventor relative to their co-authors. Previous studies found that exceptionally prolific inventors (stars) contribute their outstanding intellectual productivity to their team. Indeed, an inventor is expected to reach the status of star not only thanks to their genius but also to team synergies. Peer dynamics, mentorship and role model effects all play a role in favouring career success. We examine how gender, which in patenting usually corresponds to a strong underrepresentation of women, affects the relationship between co-patenting team characteristics and inventor's success. Homophily (same gender matches) is expected to boost productivity, but it is unclear if this should be true also for rare women inventors. We find that higher shares of female coinventors is associated with delays in becoming a star. However, having collaborators of different gender is associated with a shorter time to reach the status of star. Seniority of coinventors does not impact on the time to become stars but having older experts in the patenting group of the same gender (homophily) reduces it. Finally, stars among coinventors relates to faster success, especially if the star and the inventor are both women.