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Dear Colleague:

It is my pleasure to enthusiastically recommend **Michela Giorcelli**, a graduate student in the department of economics at Stanford University, who will be completing her doctoral dissertation and applying for assistant professor positions this year. Michela is an economic historian and an applied microeconomist.

I am Michela's main advisor and have known her since her second year in the program. I have talked to her frequently about her work, read many drafts of her papers, and sat in seminars in which she presented her work. I know Michela well, and I am in very good position to write this letter of recommendation for her.

The bottom line is that I strongly and enthusiastically recommend Michela and think she is a strong contender for an appointment at the assistant professor level at any economics department or business school, including the best ones. Michela is creative, hard-working, productive, and focused. She is a data entrepreneur and has completed one of the most impressive archival data collection efforts I have seen in recent years. Michela's research is innovative and important, her research strategy is clever and compelling, and her job market paper has as good chance as any paper to land in a top-5 journal such as the AER or QJE.

Michela studies a unique historical episode to assess the long-run effects of management and technology transfer on firm performance. During the 1950s, as part of the Marshall Plan, the US administration sponsored management-training trips for European managers to US firms. Michela assembled new data through archival work on over 6000 Italian firms eligible to participate in the Productivity Program, tracked over a twenty-year period. Her identification strategy uses an unexpected cut in the US budget for this program, which allows her to compare firms that received the US transfers with firms that were initially eligible to receive the transfers but were eventually excluded because of the budget cut. Michela shows that management transfers significantly increased firm survival, sales, employment and productivity. These positive effects of management persisted for at least fifteen years after the program, a finding that she explains by the increased investment rate, capital intensity, training expenditure, and professional manager hires in firms that received management transfers.

The paper contributes greatly to both history and economics. One important question in economic history of that period is whether the US Marshal Plan was very helpful for European recovery, or whether Europe would have been on a high growth path anyway. Michela's is the first serious empirical study of a concrete and important program that was part of the Marshal Plan - the US Technical Assistance and Productivity Program to promote post war European economic recovery. Michela uses a rich newly-assembled data to empirically examine whether and to what extent the adoption of US management

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techniques improved the productivity of European firms and industries. Under this program, which lasted from 1952 to 1958, about \$1.3 billion of the Marshall Plan's US aid was used to finance the provision of technical and managerial assistance, and 18,000 European technicians, managers and leaders of industry visited the US, received training from US consultants and returned to their firms in Europe.

Michela has collected through archival work in Italy a new dataset of all the Italian firms that participated in this program and sent managers for training in the US, as well as on the firms that didn't participate. Michela spent many months in the archive and collected the data with great care and with an impressive attention to details. She insisted on taking the time to collect data on all the firms rather than a sample. For each firm and for every year between 1946 and 1973, Michela collected data on whether the firm was part of the US Technical Assistance and Productivity program, the number of managers sent to the US, where in the US training took place, and the firms' balance sheets. Michela uses this information to measure the productivity of each firms, as well revenues, sales, employment, loans received, and geographical location. Michela's findings suggest that the Marshal Plan contributed substantially to European recovery, in the sense that firms that participated in the program performed much better even 15 years after the program ended.

Beyond being important in itself and improve our understanding on the effect of the Marshal plan on post WWII European recovery, Michela's research overcomes a major challenge in economics more broadly. The question of how management affects firms' productivity has always been very important, but empirically examining it has been challenging. The reason in a nutshell is that managers are not randomly assigned to firms, and so teasing causality from correlations in the data becomes impossible. A number of recent papers randomized management practices to test the effects of management on productivity. However, these papers can only look at the short-run effects of management. Michela's paper is the first to use a compelling natural experiment to test the long term effect of management on productivity.

I expect Michela's paper to become a classic example of how "natural experiments" in history, when taking both the history and economics seriously, contribute greatly to economics by answering important and policy-relevant economic questions that require a long-term perspective.

Michela's job market paper is part of her broader research agenda that uses historical episodes to study the determinants of productivity and innovation. Michela has completed another paper (with Petra Moser) that uses the adoption of copyright laws within Italy - as a result of Napoleon's military campaign - to test the effects of copyrights on creativity. A third paper, still in process, is joint with my former student Nicola Bianchi (who started as an Assistant Professor in Kellogg last year). Michela and Nicola analyze the effects of a 1961 Italian reform that increased enrollment in university STEM majors by more than 200 percent in 8 years on the degree of invention and entrepreneurship in Italy. In 1961, the students from *Istituti Tecnici Industriali (ITI)* were allowed to enroll in

STEM majors for the first time. Michela and Nicola exploit this large increase in STEM degrees awarded to *ITI* students who completed high school after 1961 to analyze the effect of STEM education on innovation and entrepreneurship. They linked education data from high school and university archives for nearly 50,000 students who completed high school in Milan from 1958 to 1974 to information on patent owners from a database collecting all patents issued by the Italian Patent Office from 1968 to 2010. They are now in the process of adding information on foreign patents issued by the European and US Patent Offices. Preliminary results suggest that the *ITI* students who completed high school after 1961 (and, therefore, could enroll in university STEM majors) were less likely to become inventors.

In short, Michela is a focused, hard-working and productive young researcher, who has already proven she is capable of conducting first-rate research, from coming up with important and original questions, to engaging in impressive data collection, to executing a serious empirical analysis. Michela has the drive, energy and focus it takes to become a highly productive and successful researcher.

Aside from being an excellent researcher, I expect Michela to be a great teacher. Michela is also a very nice, pleasant and likeable person, and has a low-key and modest personality. She is full of energy, and will be a great public good provider, for example she just organized the “1st annual bay area student conference in economic history”, which was a big success. She will be a great colleague to have around. I strongly recommend Michela to any economics department and business school, including the top ones.

Please feel free to contact me if you need more information.

Sincerely,



Ran Abramitzky