

STANFORD UNIVERSITY

STANFORD, CALIFORNIA 94305-6072

DEPARTMENT OF ECONOMICS

Melanie Morten
Assistant Professor of Economics

ph: (650) 497 9491
memorten@stanford.edu
www.stanford.edu/~memorten

Dear Colleague:

November 15, 2015

I am happy to recommend **Michela Giorcelli** for a position as an assistant professor in your department. Michela is a PhD student at Stanford who is finishing a dissertation examining the long-run implications of access to management technology on firm productivity.

I have known Michela for 12 months since my arrival at Stanford in September 2014 in the capacity as a research assistant and as a late-stage advisor to her thesis work. Because I worked extensively with Michela during the year, meeting her approximately once a week, I felt well placed to comment on her and her work even though I have not known her for a long time.

Michela is a serious, thoughtful and thorough researcher. Her work is insightful and novel, and combines several distinct skills: locating an appropriate historical context, undertaking a mammoth original data collection from archival sources, analyzing the data and then making links to contemporaneous literatures on management technology, productivity growth and trade. She has an exciting research agenda and has a lot of potential as a researcher. She would make an excellent colleague.

I will talk mostly about her job market paper, as it is the piece of her work that I am most familiar with, and will let her other advisors comment on her other work.

Michela's job market paper looks at the long run effect of receiving management and loans. This is an important question that fills a gap in the literature: from more recent randomized controlled trials we know that the quality of management can have important productivity effects on firms in the short run, but we do not know what the long run effect of such interventions are. Do firms converge back to their pre-intervention levels, or does productivity growth continue? This is exactly the question that Michela can answer by using detailed historical data spanning 15 years.

Michela's job market paper highlights one of her great strengths as a researcher. She first identified an interesting and unexplored question in the literature and then utilized her historical and empirical training to identify a setting where she can answer this question. Michela then undertook a very substantial data collection exercise in several Italian archives to collect and document an original dataset of firms' balance sheets. Michela is someone who pays a lot of attention to detail, and

making sure that she is thorough. As an example, rather than collect only a sample of firms, she made sure to collect the full census of all firms that applied to the US aid program, at considerable extra time and effort on her behalf.

Michela is then able to answer the question of the long-run effects of management technology by identifying an historical episode, the Marshall Plan in Italy, which plausibly randomly gave some firms access to management and loan transfers. The variation comes from changes in the US budget for the program, which meant that only a subset of regions from those that had been initially planned to receive the project could actually receive the funds. Importantly, this budget cut came *after* firms had already applied to the project. Michela then spent most of a year in archives in Italy to construct an original database of the firms' balance sheets. This was a mammoth task. The database includes firms that applied to the program and were in the regions that received the program, and firms that applied to the program and were in the regions that did not eventually receive the program. The empirical analysis then compares the treatment effects of receiving the program, controlling for selection into the program by using firms that applied for, but were in regions that did not receive, the program as the control group. Of course, there may still be concerns that the regions that were selected to receive the program that were different than those that weren't selected; however both a careful reading of the historical record as well as a complete baseline check of observable characteristics of firms finds no empirical evidence to support such concerns.

The main empirical finding of the paper is that the productivity effects of receiving the technology transfer are large. For the management transfer, productivity increased by 15% in the first year and by close to 40% after 14 years. Michela's study is the first to be able to track firms over such a long period and find evidence of the long run effects of management transfers. One of the most interesting empirical results is on the margin of firm exit: firms that received the management transfer were 71% less likely to exit the market than the control firms that applied for, but were in the regions that did not receive the program. Again, Michela's thorough data collection puts her in a unique place to be able to quantify this important response to the technology transfer.

The last section of the paper turns to analyzing mechanisms for the change. Here Michela has taken frontier methods from the trade and productivity literature to test potential mechanisms for the effects she finds. For example, she implements the De Loecker and Warzynski method to estimate variable mark ups across firms, to be able to bound the how much of the effect may have come through a competition effect and increased market shares of those firms that received the program, at the cost of the control firms. I was impressed that Michela made sure to first learn about, as well as understand, the methods used to answer these questions in the relevant subfields of economics, and then to empirically implement these tests in her context. This reflects her genuine intellectual curiosity to get the correct answer.

In sum, Michela is a hard working, thoughtful and careful scholar. Michela maintains

an unflustered and even keel during presentations addressing questions and comments from the audience precisely and calmly. I encourage you strongly to consider Michela for your department, and I recommend her without hesitation.

If I can provide any further information please do not hesitate to contact me.

Yours sincerely,

Melanie Morten

Melanie Morten