NBER’s 36th Macroeconomics Annual Conference held on April 8 and 9, 2021, virtual meeting.
Organizers: Martin Eichenbaum (Northwestern and NBER), Erik Hurst (Chicago and NBER)

The NBER’s 36th Annual Conference on Macroeconomics brought together leading scholars to present, discuss, and debate five research papers on central issues in contemporary macroeconomics. In addition, we included a panel discussion on the cost associated with expanding the size of government debt. Raghu Rajan moderated the panel, which included Carmen Reinhart, Richard Reis, and Larry Summers. Given the Pandemic, the conference took place via Zoom. Video recordings of the presentations of the papers and the panel discussion are accessible on the web page of the NBER Annual Conference on Macroeconomics. These videos make a useful complement to this volume and make the conference's content more widely accessible.

This conference volume contains edited versions of the five papers presented at the conference, each followed by two written discussions by leading scholars and a summary of the debates that followed each paper.

How the labor market evolves during a recession and its subsequent recovery is a key question in macroeconomics. During a recession, many workers are displaced from their employers. Over time, these workers are absorbed back into the labor force. So, at the onset of a recession, the unemployment rate rises sharply, while the unemployment rate falls slowly during the recovery.

In their paper, “Why Has the U.S. Economy Recovered So Consistently from Every Recession in the Past 70 Years”, Robert Hall and Marianna Kudlyak explore the underpinnings of unemployment dynamics across recessions. Hall and Kudlyak start their paper by documenting a set of stylized facts showing that the unemployment rate falls at a relatively similar rate during the recoveries of a wide variety of post-war recessions within the United States. Hall and Kudlyak further show that the speed of the decline in the unemployment rate is too slow relative to what is predicted by the standard Diamond-Mortensen-Pissarides model. Finally, the paper illustrates how a model with negative feedback from unemployment to labor market tightness
provides a way to generate slow recoveries consistent with the data. In particular, Hall and Kudlyak discuss several potential forces to slow down the fall in the unemployment rate during recoveries, such as adjustment costs in vacancy creation, congestion in firm recruiting activities, and scarring effects stemming from lengthy unemployment.

Hall and Kudlyak argue that unemployment falls slowly during recoveries because of negative feedback from the level of the unemployment rate to measures of market tightness. Both discussants caution against this interpretation. Rob Shimer notes that models with persistent fundamental shocks that caused the unemployment rate to rise in the first place or shocks that lower the value of occupation-specific human capital can generate the patterns in the data without relying on the unemployment rate being “contagious.” Ayşegül Sahin mentions that it is hard to draw conclusions about the causes of the sluggish unemployment recoveries without accounting for an endogenous participation margin or allowing for employer-to-employer transitions.

One of the defining features of the Pandemic Recession was the large relative declines in the employment of women, particularly when compared to prior recessions. In earlier recessions, the employment rate typically falls more for men because they are more likely to work in cyclically sensitive sectors like manufacturing and construction. In their paper “From Mancession to Shecession: Women’s Employment in Regular and Pandemic Recessions,” Titan Alon, Sena Coskun, Matthias Doepke, David Koll, and Michèle Tertilt explore the underpinnings of the relative decline in employment of women during the 2020 recession.

The Alon et al. paper begins by documenting that women’s employment declined more than men’s during the Pandemic Recession, which was a pervasive feature across most countries. In the United States, the employment declines were disproportionately concentrated among women with young children. The paper shows that both the presence of young children and differences in industries and occupation can explain a portion of why women’s employment declined more than men’s during the Pandemic Recession. In particular, women were more likely to work in sectors and occupations that shed workers during the Pandemic. However, for the United States, the paper shows that childcare and industry/occupation channels each account for less than 20 percent of the gender gap in hours worked during the Pandemic. The authors conclude that
understanding the additional factors behind the gender gap in employment during the 2020 recession is an important challenge for future work.

The Alon et al. paper presents a comprehensive set of facts about cross-country employment declines by gender during the recent recession. The discussants – Loukas Karabarbounis and Laura Pilossof – praise the authors for their data work. Loukas Karabarbounis develops a parsimonious model of consumption and time allocation to interpret the patterns developed in the paper. In doing so, he shows that (1) the data produced by Alon et al. are informative about the changing employment patterns by gender during the Pandemic Recession relative to prior recessions and (2) that the gender gap in employment in the United States during the Pandemic is not particularly puzzling when viewed through the lens of his proposed model.

Laura Pilossof discusses potential reasons why the gender gap in employment persists even after controlling for industry, occupation, and the presence of children in the household. Finally, Pilossof highlights new data showing that the gender gap in employment seems to have narrowed meaningfully as the recovery has gotten underway. After the paper was presented, the discussion centered on the potential welfare implications of the patterns highlighted in the paper.

Increasing lifespans have resulted in a renewed interest in the labor supply of older households. In their paper “Shocks, Institutions, and Secular Changes in Employment of Older Workers,” Richard Rogerson and Johanna Wallenius explore the time series patterns of employment rates for older households across various OECD countries and then offer potential explanations for these patterns. Rogerson and Wallenius document that the employment rate for workers aged 55 to 64 has followed a U-shape pattern over the last forty years. In particular, the employment rates for this group declined sharply from the early 1970s through the mid-1990s and then increased sharply from the mid-1990s through the late 2010s. The patterns were pronounced across most OECD countries and held for both men and women. Similar U-shaped time series of employment rates were not found among younger age groups.

The paper then proceeds to explore explanations for these robust patterns across countries. Rogerson and Wallenius conclude that negative aggregate shocks in the 1970s and 1980s reduced the value of work for all workers. The negative shock during this period coincided with an expansion of institutions that incentivized older workers to retire before their
normal retirement age. The endogenous response of institutions favoring retirement resulted in older workers being more responsive to the negative aggregate shocks during the 1970-1995 period. This change caused the employment rates of older individuals to fall relative to those of younger individuals during this period. Finally, the paper argues that many of these institutions were curtailed starting in the mid-1990s resulting in an increasing employment rate for older workers.

Overall, this paper provides a set of stylized facts about the U-shaped time series patterns for employment rates of older workers during the last 40 years in OECD countries. The discussants – Mark Bils and Nir Jaimovich – both highlighted additional micro data on the employment patterns of older households. Nir Jaimovich used detailed data from the United States to show that U-shaped patterns are even more pronounced for individuals over 65. Specifically, the increase in employment rates starting in the mid-1990s was largest for individuals aged 65-74. Additionally, the increasing employment rates beginning in the mid-1990s in the U.S. were the largest for higher educated workers. Nir Jaimovich, in his discussion, also provided a framework to help guide future empirical work looking to quantify the role of institutions in shaping the employment rates of older households. Mark Bils used micro data from Germany to bolster the argument made by Rogerson and Wallenius that changes in pension benefits were important in explaining the employment trends for older individuals during this period.

In their paper, “Climate Change Uncertainty Spillover in the Macroeconomy,” Mike Barnett, William Brock, and Lars Peter Hansen explore the consequences of risk, ambiguity, and model misspecification on the design and conduct of climate policy. The authors analyze these consequences in the context of a social planner whose preferences embed ambiguity aversion. The paper notes that there is no scientific consensus on the quantitative importance of at least three determinants of climate change. These determinants are (i) carbon dynamics mapping carbon emissions into carbon in the atmosphere, (ii) temperature dynamics mapping carbon in the atmosphere into temperature changes, and (iii) economic damage functions that depict the fraction of productive capacity reduced by temperature changes.

The paper considers a social planning problem of designing the pricing of carbon emissions. The authors show how the solution to the problem depends on different sources of uncertainty.
Specifically, the planning problem that they consider formally incorporates risk, model ambiguity, and misspecification.

The paper includes three computational examples designed to shed light on which sources of uncertainty have the most significant impact on policy. The first example explores what impact future information about environmental and economic damages should have on current policy. The second example assesses the relative importance of uncertainties in carbon dynamics, temperature dynamics, and damage function uncertainty. Finally, the third example investigates how uncertainty about environmental damages and the development of green technologies interact in optimal policy design.

The discussants Per Krusell and Mar Reguant focused on the extent to which the paper’s results could be used to inform the current policy debate about climate change.

Per Krusell notes that the two climate-economy models are quite stylized. In his view, the models in the paper are appropriate for studying the importance of uncertainty in illustrative planning problems. But he thinks they are less well suited for analyses of achieving good climate outcomes in market economies.

Krusell emphasized that he is sympathetic to the authors’ agenda of formalizing and analyzing uncertainty in the climate-economy context. At the same time, he would like to see work that combines the approach taken in this paper with a more full-fledged description and analysis of market economies and available policy instruments.

Like Krusell, the other discussant Mar Reguant agreed that a comprehensive treatment of uncertainty surrounding climate change is important and that the paper provides a good framework for doing so. She cites uncertainty regarding the ability of people to adapt to climate change and the possible presence of significant tipping points as particular important sources of uncertainty. However, she expressed concern that the analytical and quantitative assumptions built into the paper’s models minimize the climate change problem. So, in her view, the paper’s results about climate change per se are of limited empirical relevance.

Reguant voiced broader concerns about where the profession should place its efforts when informing the fight against climate change. She argued that economists should incorporate some
of the key political economy constraints that policymakers and societies face into their climate models.

In their paper, “Converging to Convergence,” Michael Kremer, Jack Willis, and Yang You revisit empirical tests from the 1990s, which found little evidence that poor countries were catching up to rich countries. This finding led many people to reject the neoclassical growth model and work on alternative models of growth. It also led to an important theoretical and empirical literature on conditional convergence, that is, convergence conditional on growth covariates such as government policies, institutions, and human capital.

Kremer et al. find substantial changes since the late 1980s, in growth, in its correlates and, the fundamental determinants of total factor productivity. Their findings can be summarized as follows. First, since 2000, there has been a steady trend towards convergence since the late 1980s, leading to absolute convergence. Second, this pattern is driven by a slowdown in the growth of countries at the frontier and a broad increase in the rate of catch-up among countries away from the frontier. Finally, there has been convergence in various determinants of economic growth across countries, including the determinants of total factor productivity. Finally, they find a flattening of the relationship between growth and their covariates.

According to the authors, their results are consistent with neoclassical growth models. In their view, conditional convergence held throughout the period. Absolute convergence didn’t hold initially, but as policies, institutions, and human capital improved in poorer countries, differences in institutions across countries shrunk, and their explanatory power for growth and convergence declined.

The paper offers a clear challenge to many theories of growth that arose in the aftermath of early rejections of the neoclassical growth model.

The paper led to two detailed, co-authored discussions. Rohini Pande and Nils Enevoldsen agree that there has been a trend towards absolute convergence in GDP per capita and that policy convergence probably played a helpful role. They focus their discussion on the positive and normative implications of absolute convergence for individual well-being. Their analysis takes a development economics perspective, with poverty as the relevant welfare metric.
Pande and Enveoldse’s main points are as follows. First, during the period associated with absolute convergence, there was a more significant clustering of the world’s poor within lower-middle-income countries and rising within-country inequality. Second, the changing nature of structural transformation has contributed to these patterns. Third, inequality combined with weak institutions for redistribution may limit progress on further reduction in poverty levels.

In their discussion, Daron Acemoglu and Carlos Molina voice skepticism about the main findings in Kremer et al.. Specifically, they argue that the key results in the paper are driven by the lack of country-fixed effects in the relevant regressions. These fixed effects would control for unobserved determinants of GDP per capita across countries. In their view, the failure to include country-fixed effects creates a bias in convergence coefficients towards zero. Moreover, this bias can be time-varying, even when the underlying country-level parameters are stable. Thus, in contrast to Kremer et al., Acemoglu and Molina conclude that the data do not support the view that there were significant changes in patterns of convergence and, more importantly, no flattening of the relationship between institutional variables and economic growth.

The discussions led to numerous comments from the audience, analyzing the merits of the various points raised by the authors and the discussants. We leave it to the reader to reach their own conclusions about the critical issues raised in this session.

As in previous years, the editors posted and distributed a call for proposals in the spring and summer before the conference. Some of the papers in this volume were selected from proposals submitted in response to this call. In addition, other papers are commissioned on central and topical areas in macroeconomics. The selections are done in consultation with the advisory board, who we thank for their input and support of the conference and the published volume.

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