

## Macroeconomics Term Papers

"The challenges facing agriculture are plenty. Along with the world's growing population and diminishing amounts of water and arable land, the gradual increase in severe weather presents new challenges and imperatives for producing new, more resilient crops to feed a more crowded planet in the twenty-first century. Innovation has historically helped agriculture keep pace with earth's social, population, and ecological changes. In the last 50 years, mechanical, biological, and chemical innovations have more than doubled agricultural output while barely changing input quantities. The ample investment behind these innovations was available because of a high rate of return: a 2007 paper found that the median ROI in agriculture was 45 percent between 1965 and 2005. This landscape has changed. Today many of the world's wealthier countries have scaled back their share of GDP devoted to agricultural R&D amid evidence of diminishing returns. Universities, which have historically been a major source of agricultural innovation, increasingly depend on funding from industry rather than government to fund their research. As Upton Sinclair wrote of the effects industry influences, "It is difficult to get a man to understand something when his salary depends upon his not understanding it." In this volume of the NBER Conference Report series, editor Petra Moser offers an empirical, applied-economic framework to the different elements of agricultural R&D, particularly as they relate to the shift from public to private funding. Individual chapters examine the sources of agricultural knowledge and investigate challenges for measuring the returns to the adoption of new agricultural technologies, examine knowledge spillovers from universities to agricultural innovation, and explore interactions between university engagement and scientific productivity. Additional analysis of agricultural venture capital point to it as an emerging and future source of resource in this essential domain"--

"Addressing an audience of policy-oriented economists and theorists, graduate students, and advanced undergraduates, Pierre-Richard Agenor and Peter Montiel review and assess the burgeoning research done in the past two decades, paying special attention in this new edition to issues that have recently gained in importance among developing countries, such as the interaction between macroeconomic policies and long-term growth, the political economy of macroeconomic reform, the management of capital inflows, and currency crises."--BOOK JACKET.

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The paper discusses a model in which growth is a negative function of fiscal burden. Moreover, growth discontinuously switches from high to low as the fiscal burden reaches a critical level. The paper provides an overview of key elements of corporate bankruptcy codes and practice around the world that are relevant to the debate on sovereign debt restructuring. It also describes the broad trends in international financial integration for a sample of industrial countries and explains the cross-country and time-series variation in the size of international balance sheets.

This volume presents six new papers on environmental/energy economics and policy. Robert Stavins evaluates carbon taxes versus a cap-and-trade mechanism for reducing greenhouse-gas emissions, arguing that specific design features of either instrument can be more consequential than the choice of instrument itself. Lucas Davis and James Sallee show that the exemption of electric vehicles from the gasoline tax is likely to be efficient as long as gasoline prices remain below social marginal costs, even though it results in lower tax revenue. Caroline Flammer analyzes the rapidly growing market for green bonds and highlights the importance of third-party certification to the financial and environmental performance of publically traded companies. Antonio Bento, Mark Jacobsen, Christopher Knittel, and Arthur van Benthem develop a general framework for evaluating the costs and benefits of fuel economy standards and use it to account for the differences between several recent studies of changes in these standards. Nicholas Muller estimates a measure of output in the U.S. economy over the last 60 years that accounts for air pollution damages, and shows that pollution effects are sizable, affect growth rates, and have diminished appreciably over time. Finally, Marc Hafstead and Roberton Williams illustrate methods of accounting for employment effects when evaluating the costs and benefits of environmental regulations.

This comprehensive Handbook presents the current state of art in the theory and methodology of macroeconomic data analysis. It is intended as a reference for graduate students and researchers interested in exploring new methodologies, but can also be employed as a graduate text. The Handbook concentrates on the most important issues, models and techniques for research in macroeconomics, and highlights the core methodologies and their empirical application in an accessible manner. Each chapter is largely self-contained, whilst the comprehensive introduction provides an overview of the key statistical concepts and methods. All of the chapters include the essential references for each topic and provide a sound guide for further reading. Topics covered include unit roots, non-linearities and structural breaks, time aggregation, forecasting, the Kalman filter, generalised method of moments, maximum likelihood and Bayesian estimation, vector autoregressive, dynamic stochastic general equilibrium and dynamic panel models. Presenting the most important models and techniques for empirical research, this Handbook will appeal to students, researchers and academics working in empirical macro and econometrics.

The Macroeconomics of Developing Countries provides a comprehensive discussion of the exogenous factors and macroeconomic policies that affect the business cycle, long term growth, and distribution of income in developing countries. It examines countries dependent on natural resources and affected by supply rigidities in agriculture. They also feature dualistic markets, a large informal sector, rapid population growth, a vulnerable export sector, and chronic dependence on a volatile global finance. The Macroeconomics of Developing Countries uses these examples to analyse the impact of stabilization and adjustment politics on growth, inequality, and poverty. Despite the launch of the Sustainable Development Goals there is little consensus on how macroeconomic policies can be consistent with these objectives. The Macroeconomics of Developing Countries demonstrates that a critical application of standard models to developing countries can generate erroneous results and induce the adoption of incorrect policy. In order to address this, it discusses the key structural differences between advanced and developing countries in order to justify the construction of alternative models.

This volume presents six new studies on current topics in taxation and government spending. The first study looks at the costs of income tax filing, which have risen over time because of the numerous tax forms families have to fill out when filing their taxes and because of increased costs of itemizing deductions, and explores ways to simplify filing and reduce those costs. The second study investigates the design of income tax schedules when there is uncertainty about the way taxation affects household behavior. The third study provides new and comprehensive estimates of the impact of the US Earned Income Tax Credit on the employment of low-income men and women, finding that the large majority of the various expansions of that credit over the last forty years have increased employment of single mothers. The fourth study reviews the structure of business taxation in China and describes a number of tax distortions and potential inefficiencies in the system. The next paper considers how the Affordable Care Act has affected the health insurance and labor market choices of individuals who are between the ages of 60 and 64, and it finds increases in insurance coverage and reductions in employment for some groups. The last study considers how reimbursement rates for health care providers under various government insurance programs affect providers' willingness to take on

new patients and expand their patient capacity.

This paper aims to widen the prism through which Fund policy analysis is conducted for resource-rich developing countries (RRDCs). While all resource-rich economies face resource revenue exhaustibility and volatility, RRDCs face additional challenges, including lack of access to international capital markets and domestic capital scarcity. Resource exhaustibility gives rise to inter-temporal decisions of how much of the resource wealth to consume and how much to save, and revenue volatility calls for appropriate fiscal rules and precautionary savings. Under certain conditions, it would be optimal for a significant share of a RRDC's savings to be in domestic real assets (e.g., investment in domestic infrastructure), though absorptive capacity constraints need to be tackled to promote efficient spending and short-run policies are needed to preserve macroeconomic stability.

The objective of this paper is to develop new macro-fiscal frameworks and policy analysis tools for RRDCs that could enhance Fund policy advice.

"Models for an early warning system do a good job predicting vulnerability to macroeconomic crises in several Latin American countries"--Cover.

This paper discusses several aspects of the medium-term orientation of OECD countries' economic policies in the 1980s, concentrating on monetary and fiscal instruments. The developments that led to the adoption of such a "medium-term strategy", and the apparent analytical rationale for it, are first described. The paper then examines the way the strategy was actually implemented, attempting to judge how closely policies have in fact followed medium-term objectives, and assesses the results. Some lessons from experience with the strategy are outlined in conclusion ...

Annotation Part 6: Financial Markets and the Macroeconomy. 19. Asset prices, consumption, and the business cycle (J.Y. Campbell). 20. Human behavior and the efficiency of the financial system (R.J. Shiller). 21. The financial accelerator in a quantitative business cycle framework (B. Bernanke, M. Gertler and S. Gilchrist). Part 7: Monetary and Fiscal Policy. 22. Political economics and macroeconomic policy (T. Persson, G. Tabellini). 23. Issues in the design of monetary policy rules (B.T. McCallum). 24. Inflation stabilization and BOP crises in developing countries (G.A. Calvo, C.A. Vegh). 25. Government debt (D.W. Elmendorf, N.G. Mankiw). 26. Optimal fiscal and monetary policy (V.V. Chari, P.J. Kehoe).

This is a collection of 13 papers by a leading proponent of new classical macroeconomics, published between 1981 and 1989. The papers are classified into three topical groups. The five papers in the first section, "Rules versus Discretion," provide an overview of the models and ideas that have been deployed in this policy debate. The next three papers investigate the impact of changes in the money supply on business cycles. The third category contains five papers that address various issues in fiscal policy. Of particular note is Barro's 1989 paper on the resuscitation of the Ricardian equivalence theorem. ISBN 0-674-54080-8: \$37.50.

The "Argentine disappointment"—why Argentina persistently failed to achieve sustained economic stability during the twentieth century—is an issue that has mystified scholars for decades. In *Straining the Anchor*, Gerardo della Paolera and Alan M. Taylor provide many of the missing links that help explain this important historical episode. Written chronologically, this book follows the various fluctuations of the Argentine economy from its postrevolutionary volatility to a period of unprecedented prosperity to a dramatic decline from which the country has never fully recovered. The authors examine in depth the solutions that Argentina has tried to implement such as the Caja de Conversión, the nation's first currency board which favored a strict gold-standard monetary regime, the forerunner of the convertibility plan the nation has recently adopted. With many countries now using—or seriously contemplating—monetary arrangements similar to Argentina's, this important and persuasive study maps out one of history's most interesting monetary experiments to show what works and what doesn't.

In recent years, term premia have been very low and sometimes even negative. Now, with the United States economy growing above potential, inflationary pressures are on the rise. Term premia are very sensitive to the expected future path of growth, inflation, and monetary policy, and an inflation surprise could require monetary policy to tighten faster than anticipated, inducing to a sudden decompression of term and other risk premia, thus tightening financial conditions. This paper proposes a semi-structural dynamic term structure model augmented with macroeconomic factors to include cyclical dynamics with a focus on medium- to long-run forecasts. Our results clearly show that a macroeconomic approach is warranted: While term premium estimates are in line with those from other studies, we provide (i) plausible, stable estimates of expected long-term interest rates and (ii) forecasts of short- and long-term interest rates as well as cyclical macroeconomic variables that are stunningly close to those generated from large-scale macroeconomic models.

Specific quasi-rents build up in a wide variety of economic relationships, and are exposed to opportunism unless fully protected by contract. The recognition that such contracts are often incomplete has yielded major insights into the organization of microeconomic exchange. Rent appropriation, we argue, also has important macroeconomic implications. Resources are underutilized, factor markets are segmented, production suffers from technological with creation, recessions are excessively sharp, and expansions run into bottlenecks. While, depending on the nature of the shock, expansions may require reinforcement or stabilization, recessions should always be softened. In the long run, institutions, such as those governing capital-labor relations, may evolve to alleviate the problem by balancing appropriation. Technology choice will also be affected, with the appropriated factor partially appropriation as manifested in the role capital-labor substitution played in the rise of European unemployment.

This very successful textbook is distinguished by a superior writing style that draws upon common reader experiences to introduce economic concepts, making economic theory more accessible and interesting. "Case Studies" and numerous examples take advantage of readers' intuitive knowledge of economics, building upon real-life situations. A streamlined design places pedagogy and illustrations directly within the flow of the text, making them less distracting and more useful for readers. A fully integrated program of technology enhancements sets this text apart by pairing the book with numerous online multimedia learning tools that have been developed to help the text better serve a wide range of learning styles. The text uniquely integrates classroom use of *The Wall Street Journal* by including in-text pedagogy to help readers learn to analyze the latest economic events as reported in the *Journal*.

This annual publication analyzes interesting macroeconomic events of contemporary India using macroeconomic and statistical tools. Its focus is on problems affecting the economy in general; it not only

addresses problems of the Indian economy, but also has a fairly broad perspective that would be applicable to the conditions in other countries. The first part of the volume deals with macroeconomic issues while the second part comprises academic research papers covering a wide range of topics such as labour, fiscal issues, banking and finance, international trade, econometrics, and computational and mathematical methods. Each paper studies topics relevant for developing countries through pure and applied economic theory and econometric methods.

This volume examines current and previous environmental policies, and suggests alternative strategies for the future. Addressing resource depletion and climate change are pressing priorities for modern economies. Planning energy infrastructure projects is complicated by uncertainty, as such clear government policies have a crucial role to play.

A number of recent studies have attempted to test propositions concerning "long run" economic relationships by means of frequency-domain time series techniques that concentrate attention on low frequency co-movements of variables. The present paper emphasizes that many of these propositions involve expectational relationships that are not inherently related to specific frequencies or periodicities. Thus the association of low-frequency time series test statistics with long-run economic propositions is not generally warranted. That such an association can be misleading is demonstrated by analysis of examples taken from notable papers by Geweke, Lucas, and Summers

A Practitioner's Guide to Stochastic Frontier Analysis Using Stata provides practitioners in academia and industry with a step-by-step guide on how to conduct efficiency analysis using the stochastic frontier approach. The authors explain in detail how to estimate production, cost, and profit efficiency and introduce the basic theory of each model in an accessible way, using empirical examples that demonstrate the interpretation and application of models. This book also provides computer code, allowing users to apply the models in their own work, and incorporates the most recent stochastic frontier models developed in academic literature. Such recent developments include models of heteroscedasticity and exogenous determinants of inefficiency, scaling models, panel models with time-varying inefficiency, growth models, and panel models that separate firm effects and persistent and transient inefficiency. Immensely helpful to applied researchers, this book bridges the chasm between theory and practice, expanding the range of applications in which production frontier analysis may be implemented.

NBER Macroeconomics Annual 2020 presents research by leading scholars on central issues in contemporary macroeconomics. George-Marios Angeletos, Zhen Huo, and Karthik Sastry ask how to model expectations without rational expectations. They find that in response to business cycle shocks, expectations underreact initially but eventually overshoot, which in their view favors models with dispersed, noisy information and overextrapolation of expectations. Next, Esteban Rossi-Hansberg, Pierre-Daniel Sarte, and Nicholas Trachter contrast the patterns of rising aggregate firm market concentration with falling market concentration over time at the local level. Some associate rising concentration with less competition and more market power, but because most product markets are local, studying changes in local competition, as opposed to trends in aggregate competition, provides important insights. Adam Guren, Alisdair McKay, Emi Nakamura, and Jón Steinsson develop a novel econometric procedure to recover structural parameters using cross-region variation, for example, to estimate direct effects of housing wealth changes on individual household consumption. To avoid confounding direct and indirect effects, the authors isolate the direct effect of house price changes on consumption by using other estimates of demand multipliers from the local government spending literature to deflate estimates of the total effect of local consumption on local house prices. Peter Klenow and Huiyu Li examine the sources of reduced productivity growth by quantifying the contribution of innovation to economic growth. They find that young firms generate roughly half the productivity growth, most of the changes in productivity during the mid-1990s are accounted for by older firms, and most growth results from quality improvements on incumbents' own products. In the fifth chapter, Fatih Guvenen, Greg Kaplan, and Jae Song use detailed micro panel data from the Social Security Administration to assess the progress women have made into the top 1% and top 0.1% of the income distribution over time. Finally, Joachim Hubmer, Per Krusell, and Anthony Smith Jr. explore the reasons for growing wealth inequality across the developed world. They argue that the significant drop in tax progressivity starting in the late 1970s was the most important source of growing wealth inequality in the United States. The sharp observed increases in earnings inequality and the falling labor share cannot account for the bulk of the increase in wealth inequality.

This paper analyses the effects of the internationalisation of financial markets on the conduct of macroeconomic policy and the allocation of capital. It first examines the increased integration between domestic and external (or "Euro") financial markets and the recent tendency towards convergence of real interest rates among financially open countries. After briefly touching on the macro policy consequences of financial internationalisation, the paper then deals with long-term implications for the international allocation of capital, with special emphasis on the existence of tax distortions. Using estimated tax wedges for business investment and the supply block of the INTERLINK system, it shows that, under integrated financial markets, the existing tax distortions could generate a large imbalance in the net external asset position which involves a significant welfare cost ...

Recently, De Nederlandsche Bank in cooperation with the CentER for Economic Research of Tilburg University organised an international conference on monetary policy. This volume contains the papers, comments and speeches given on that occasion. The organisation of such a conference and the publication of this book were possible only through the efforts of a number of people. More in particular I would like to thank the organising committee (prof Onno de Beaufort Wijnholds, assoc prof Sylvester Eijffinger, dr Lex Hoogduin and Broos van der Werff), Hans Haan the conference manager, Imelda Drubbel and Nicolette Ligtenberg who constituted the conference secretariat, Bert Groothoff who acted as press officer and Eric Schaling for their assistance. A special word of appreciation is due to Mrs Bodil Andersen (Denmarks National Bank) and Mr Kumiharu Shigehara (Organisation of Economic Cooperation and Development) who accepted the difficult task of chairing the meetings which they did most admirably. Of course, a conference cannot even take place without participants and cannot be a success without good participants. I am very pleased that we could be the host of the eminent group of people who in my view made the conference such a success. Before the conference I thought it would be a one-time-event. After the event I am not so sure.

Controlling inflation is among the most important objectives of economic policy. By maintaining price stability, policy makers are able to reduce uncertainty, improve price-monitoring mechanisms, and facilitate more efficient planning and allocation of resources, thereby raising productivity. This volume focuses on understanding the causes of the

Great Inflation of the 1970s and '80s, which saw rising inflation in many nations, and which propelled interest rates across the developing world into the double digits. In the decades since, the immediate cause of the period's rise in inflation has been the subject of considerable debate. Among the areas of contention are the role of monetary policy in driving inflation and the implications this had both for policy design and for evaluating the performance of those who set the policy. Here, contributors map monetary policy from the 1960s to the present, shedding light on the ways in which the lessons of the Great Inflation were absorbed and applied to today's global and increasingly complex economic environment.

Volume 32 of the NBER Macroeconomics Annual features six theoretical and empirical studies of important issues in contemporary macroeconomics, and a keynote address by former IMF chief economist Olivier Blanchard. In one study, SeHyoun Ahn, Greg Kaplan, Benjamin Moll, Thomas Winberry, and Christian Wolf examine the dynamics of consumption expenditures in non-representative-agent macroeconomic models. In another, John Cochrane asks which macro models most naturally explain the post-financial-crisis macroeconomic environment, which is characterized by the co-existence of low and nonvolatile inflation rates, near-zero short-term interest rates, and an explosion in monetary aggregates. Manuel Adelino, Antoinette Schoar, and Felipe Severino examine the causes of the lending boom that precipitated the recent U.S. financial crisis and Great Recession. Steven Durlauf and Ananth Seshadri investigate whether increases in income inequality cause lower levels of economic mobility and opportunity. Charles Manski explores the formation of expectations, considering the efficacy of directly measuring beliefs through surveys as an alternative to making the assumption of rational expectations. In the final research paper, Efraim Benmelech and Nittai Bergman analyze the sharp declines in debt issuance and the evaporation of market liquidity that coincide with most financial crises. Blanchard's keynote address discusses which distortions are central to understanding short-run macroeconomic fluctuations.

Policy makers often call for increased spending on infrastructure, which can encompass a broad range of investments, from roads and bridges to digital networks that will expand access to high-speed broadband. Some point to the near-term macroeconomic benefits, such as job creation, associated with infrastructure spending; others point to the long-term effects of such spending on productivity and economic growth. *Economic Analysis and Infrastructure Investment* explores the links between infrastructure investment and economic outcomes, analyzing key economic issues in the funding and management of infrastructure projects. It includes new research on the short-run stimulus effects of infrastructure spending, develops new estimates of the stock of US infrastructure capital, and explores incentive aspects of public-private partnerships with particular attention to their allocation of risk. The volume provides a reference for researchers seeking to study infrastructure issues and for policymakers tasked with determining the appropriate level and allocation of infrastructure spending.

The thirty-first edition of the NBER Macroeconomics Annual features theoretical and empirical research on central issues in contemporary macroeconomics. The first two papers are rigorous and data-driven analyses of the European financial crisis. The third paper introduces a new set of facts about economic growth and financial ratios as well as a new macrofinancial database for the study of historical financial booms and busts. The fourth paper studies the historical effects of Federal Reserve efforts to provide guidance about the future path of the funds rate. The fifth paper explores the distinctions between models of price setting and associated nominal frictions using data on price setting behavior. The sixth paper considers the possibility that the economy displays nonlinear dynamics that lead to cycles rather than long-term convergence to a steady state. The volume also includes a short paper on the decline in the rate of global economic growth.

This paper examines the possible short- and medium-term macroeconomic consequences of changes in trend factor productivity growth for the major OECD economies. The analysis includes a range of different scenarios based on the recently re-estimated OECD INTERLINK model, in particular its supply-side properties, which illustrate a range of uncertainties and the sensitivity of the adjustment mechanisms to macroeconomic and structural factors. Overall the results suggest that a rise in trend factor productivity will lead to higher levels of production and real income, but employment adjustment will depend on the extent to which the long-run equilibrium of an economy is affected. Though unemployment could rise temporarily, there are important mechanisms present which, if functioning correctly, should prevent any permanent increase in unemployment. The degree of market flexibility is, however, seen as being crucial to the adjustment process, with higher rigidities tending to lengthen the ...

Again and again, Latin America has seen the populist scenario played to an unfortunate end. Upon gaining power, populist governments attempt to revive the economy through massive spending. After an initial recovery, inflation reemerges and the government responds with wage and price controls. Shortages, overvaluation, burgeoning deficits, and capital flight soon precipitate economic crisis, with a subsequent collapse of the populist regime. The lessons of this experience are especially valuable for countries in Eastern Europe, as they face major political and economic decisions. Economists and political scientists from the United States and Latin America detail in this volume how and why such programs go wrong and what leads policymakers to repeatedly adopt these policies despite a history of failure. Authors examine this pattern in Argentina, Brazil, Chile, Mexico, Nicaragua, and Peru—and show how Colombia managed to avoid it. Despite differences in how each country implemented its policies, the macroeconomic consequences were remarkably similar. Scholars of Latin America will find this work a valuable resource, offering a distinctive macroeconomic perspective on the continuing controversy over the dynamics of populism.

We develop a model to analyze the macroeconomic effects of a scaling-up of aid and assess the implications of different policy responses. The model features key structural characteristics of low-income countries, including varying degrees of public investment efficiency and a learning-by-doing (LBD) externality that captures Dutch disease effects. On the policy front, it distinguishes between spending the aid, which is controlled by the fiscal authority, and absorbing the aid - financing a higher current account deficit - which is influenced by the central bank's reserve accumulation policies. We calibrate the model to Uganda and run several experiments. We find that a policy mix that results in full spending and absorption of aid can generate temporary demand and real exchange rate appreciation pressures, but also have a positive effect on real GDP in the medium term, through higher public capital. Full spending with partial absorption, on the other hand, may stem appreciation pressures but can also induce adverse medium-term real GDP effects, through private sector crowding out. When aid is very inefficiently invested and there are strong LBD externalities, aid can be harmful, and partial absorption policies may be

justified. But in this case, a welfare improving solution is to defer spending or - even better if possible - raise its efficiency.

Macroeconomic Policy is an applications oriented text designed for individuals who desire a hands-on approach to analyzing the effects of fiscal and monetary policies. The book demystifies the linkages between monetary and fiscal policies and key macroeconomic variables such as income, unemployment, inflation and interest rates. MBA and Executive MBA students who appreciate the importance of monetary and fiscal analysis will find this text to be right on target. Financial analysts and individual investors who need to strip away economic myths and jargon and systematically examine and understand the effects of macro policies will also find the book extremely useful. A unique feature of this book is the extensive use of specially written "newspaper" articles designed to simulate current macroeconomic news. Topics such as unemployment, soft landings, overheated economies, asset-price bubbles, liquidity traps, hyperinflations, and exchange rate meltdowns are incorporated in these articles. Each chapter contains exercises that enable the reader to relate specific underlined passages in these articles to the theory presented in preceding chapters. This distinctive approach ensures real-world applicability, and supporting diagrams further enable the reader to relate current economic news to the theoretical material discussed. Macroeconomic Policy is designed for a global audience. A key feature of this book is its emphasis on the role of expectations and "paradigm shifts" in implementing fiscal and monetary policies, both in developed as well as in emerging economies. This approach explains why once-successful macroeconomic models suddenly cease to be effective, and why Keynesian as well as Supply-Side models can legitimately coexist in several developed economies.

We study the long-term impact of climate change on economic activity across countries, using a stochastic growth model where labor productivity is affected by country-specific climate variables—defined as deviations of temperature and precipitation from their historical norms. Using a panel data set of 174 countries over the years 1960 to 2014, we find that per-capita real output growth is adversely affected by persistent changes in the temperature above or below its historical norm, but we do not obtain any statistically significant effects for changes in precipitation. Our counterfactual analysis suggests that a persistent increase in average global temperature by 0.04°C per year, in the absence of mitigation policies, reduces world real GDP per capita by more than 7 percent by 2100. On the other hand, abiding by the Paris Agreement, thereby limiting the temperature increase to 0.01°C per annum, reduces the loss substantially to about 1 percent. These effects vary significantly across countries depending on the pace of temperature increases and variability of climate conditions. We also provide supplementary evidence using data on a sample of 48 U.S. states between 1963 and 2016, and show that climate change has a long-lasting adverse impact on real output in various states and economic sectors, and on labor productivity and employment.

The best-selling pocket guide to using Internet sources--now in a 2001 update, with FAQs about using the Internet, new chapters on distance learning and on troubleshooting common search problems, and greatly expanded advice on evaluating electronic sources.

This paper provides evidence of the causal impact of oil discoveries on development. Novel data on the drilling of 20,000 oil wells in Brazil allows us to exploit a quasi-experiment: Municipalities where oil was discovered constitute the treatment group, while municipalities with drilling but no discovery are the control group. The results show that oil discoveries significantly increase per capita GDP and urbanization. We find positive spillovers to non-oil sectors, specifically, an increase in services GDP which stems from higher output per worker. The results are consistent with greater local demand for non-tradable services driven by highly paid oil workers.

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