

16th End-of-Year Conference of Swiss Economists Abroad

December 22, 2021
University of Basel

Organizers: Enrico Berkes (Ohio State University), Aline Bütikofer (Norwegian School of Economics) and Patrick Gaule (University of Bristol).

Local Organizer: Kurt Schmidheiny (University of Basel).

Learn more about our network at www.swisseconomistsabroad.org

Supported by the Swiss National Bank and the Swiss Society of Economics and Statistics

16th End-of-Year Conference of Swiss Economists Abroad

Tuesday, December 21

19:30 - 21:30 **Conference Dinner** [Venue TBA]

Wednesday, December 22

8:45 - 9:00 Arrival, Registration, Coffee

9:00 - 9:10 **Welcome Session**

	<i>Parallel Sessions A</i> <i>[Room TBA]</i>	<i>Parallel Sessions B</i> <i>[Room TBA]</i>	<i>Parallel Sessions C</i> <i>[Room TBA]</i>
9:15 - 10:35	1. Innovation	2. International Macroeconomics	3. Environment

10:35 - 11:05 **Coffee Break**

11:05 - 12:25	4. Health	5. Monetary Economics I	6. Theory/Metrics
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12:25 - 14:00 **Lunch**

14:00 - 15:20	7. Labor Economics	8. Macroeconomics	9. Industrial Organization
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15:20 - 15:50 **Coffee Break**

15:50- 16:10 **A word from our Partner, the SNB ??**

16:10 - 17:30	10. Political Economy/Development	11. Macroeconomics and Finance
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17:30 - 19:00 **Apéro** [Venue TBA]

16th End-of-Year Conference of Swiss Economists Abroad

Thursday, December 19

19:30 - 21:30 **Conference Dinner** [Venue TBA]

Friday, December 20

8:45 - 9:00 **Arrival, Registration, Coffee**

9:00 – 9:10 **Welcome Session** [Room TBA]

9:15 - 10:35 **Session 1: Innovation** [Room TBA]

Sara Signorelli Human mobility and the globalization of knowledge production: causal evidence from multinational firms

Enrico Berkes Knowledge Access: The Effects of Carnegie Libraries on Innovation
Patrick Gaule Why U.S. Immigration Matters for the Global Advancement of Science

9:15 - 10:35 **Session 2: International Macroeconomics** [Room TBA]

Constantin Bürgi Do Forecasters Believe in Uncovered Interest Rate Parity?

Julien Bengui Macroprudential arrangements for currency unions

Guillaume Sublet Regional Trade Agreements with Global Value Chains

9:15 - 10:35 **Session 3: Environment XXX** [Room TBA]

Diego Känzig The unequal economic consequences of carbon pricing

Laure de Preux Management Practices and Climate Policy in China

Myriam Marending Gone with the wind: the welfare effect of desert locust outbreaks

10:35 - 11:05 **Coffee Break**

11:05 - 12:25 **Session 4: Health** [Room TBA]

Katharina Blankart A hard look at "soft" cost-control measures in healthcare organizations: Evidence from preferred drug policies in Germany

Christian Ochsner Dying for ignorance? 1918-influenza mortality, vaccination skepticism and vaccination behavior

Aline Bütikofer Pregnancy Loss: Stress, Investment, and Subsequent Children

11:05 - 12:25 **Session 5: Monetary Macroeconomics I** [Room TBA]

Lukas Altermatt Systemic Bank Runs, Solvency Crises, and Monetary Policy

Network of Swiss Economists Abroad

Laura Gati Talking Over Time - Dynamic Central Bank Communication
Oliver Pfäuti Falling Natural Rates, Rising Housing Volatility and the Optimal Inflation Target

11:05 - 12:25 **Session 6: Theory/Metrics** [Room TBA]

Marko Mlikota Estimation of Nonlinear Economies Using Approximate Models
Stefan Bucher Inattention and Inequity in School Matching
Richard Faltings Surge pricing as a dynamic matching problem

12:25 - 14:00 **Lunch**

14:00 - 15:20 **Session 7: Labor Economics** [Room TBA]

Esther Mirjam Mothers at Work: How Mandating Paid Maternity Leave Affects Employment,
Girsberger Earnings and Fertility
Stefan Staubli The Long-Run Impact of Early Retirement Programs: Evidence from Canadian
Pension Reforms
Patrick Arni Uniformly or Not? How Migrant and Native Job Seekers React to Labor Market
Policies

14:00 - 15:20 **Session 8: Macroeconomics** [Room TBA]

Yann Koby Low Rates and Bank Loan Supply: Theory and Evidence from Japan
Michele Andreolli Monetary Policy and the Maturity Structure of Public Debt
Adriano Rampini Constrained-Efficient Capital Reallocation

14:00 - 15:20 **Session 9: Industrial Organization** [Room TBA]

Andras Niedermayer Rational Panic Purchases During Crises
Pascal Seiler Price Setting Before and During the Pandemic: Evidence from Swiss Consumer
Prices
Jonas Meier Business analytics meets artificial intelligence: Assessing the demand effects of
discounts on Swiss train tickets

15:20 - 15:50 **Coffee Break**

15:50- 16:10 **A word from our Partner, the SNB** [Room TBA]

16:10 - 17:10 **Session 10: Political Economy/Development** [Room TBA]

Stefano Carattini Voting and information: Evidence from a randomized controlled trial
Joris Mueller China's Foreign Aid: Political Determinants, Economic Effects

16:10 - 17:10 **Session 11: Macroeconomics and Finance** [Room TBA]

Christian Wipf Should Banks Create Money?

Frederic Martenet Exchange Rates and the Macroeconomy: Evidence from the 2015 Swiss Franc Appreciation

Luzi Hail Determinants and Career Consequences of Early Audit Partner Rotations

17:30 - 19:00 **Apéro** [Venue TBA]

14th End-of-Year Conference of Swiss Economists Abroad

Abstracts

9:15 - 10:35 **Session 1: Innovation** [Room TBA]

Sara Signorelli (University of Amsterdam), Dany Bahar (Brown University), Prithwiraj Choudhury (Harvard Business School), James Sappenfield (Brattle Group)

Human mobility and the globalization of knowledge production: causal evidence from multinational firms.

We investigate how reforms that ease or restrict human mobility affect global innovation. We leverage a unique dataset merging patent data with exhaustive information on business-related migration reforms that take place in 15 countries over 26 years, and employ a novel event study approach. Our results show that reforms favoring inventor mobility increase the patenting of multinational companies (MNEs) within a country, while the opposite is true for reforms discouraging inventor mobility. We consistently find the negative effect to be larger in magnitude, which suggests that policies restricting cross-border mobility of workers decrease long-lastingly the innovation capacity of the host economy. Finally, large MNEs benefit more from positive migration reforms while smaller MNEs are more harmed by negative ones, suggesting that migration policies can exacerbate the innovation inequality between large and small firms.

Enrico Berkes (Ohio State University) and Peter Nencka (Miami University)

Knowledge Access: The Effects of Carnegie Libraries on Innovation

Between 1883 and 1919, Andrew Carnegie donated approximately \$1 billion in 2019 dollars to fund the construction of more than 1,500 public libraries across the United States. We show that this historical rollout of public libraries—which promoted access to knowledge for millions of people—increased the innovation output of recipient towns. To identify the causal effect of Carnegie libraries on innovation, we use new data on city-level patenting and a novel control group: cities that qualified to receive a library grant, applied for the program, received preliminary construction approval, but ultimately did not build a Carnegie library. Patenting in recipient towns increased by 8-13 percent in the 20 years following library entry. We show that this increase is concentrated in technology classes that overlap with library holdings. The number of women and immigrant inventors also increased after libraries opened. We provide evidence that additional access to scientific knowledge and opportunities to interact with fellow patrons are possible mechanisms.

Ruchir Agarwal (International Monetary Fund, Ina Ganguli (University of Massachusetts), Patrick Gaule (University of Bristol), Geoff Smith (University of Bath)

Why U.S. Immigration Matters for the Global Advancement of Science

This paper studies the impact of U.S. immigration barriers on global knowledge production. We present four key findings. First, among Nobel Prize winners and Fields Medalists, migrants to the U.S. play a central role in the global knowledge network- representing 20-33% of the frontier knowledge producers. Second, using novel survey data and hand-curated life-histories of International Math Olympiad (IMO) medalists, we show that migrants to the U.S. are up to six times more productive than migrants to other countries-even after accounting for talent during one's teenage years. Third, financing costs are a key factor preventing foreign talent from migrating abroad to pursue their dream careers, particularly for talent from developing countries. Fourth, certain "push" incentives that reduce immigration barriers - by addressing financing constraints for top foreign talent- could increase the global scientific output of future cohorts by 42 percent. We conclude by discussing policy options for the U.S. and the global scientific community.

9:15 - 10:35

Session 2: International Macroeconomics [Room TBA]

Constantin Bürgi (University of College Dublin), Laura Gati (European Central Bank)

Do Forecasters Believe in Uncovered Interest Rate Parity?

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No, not according to data. We run panel regressions to test whether the uncovered interest rate parity (UIP) holds in expectations. Specifically, we test whether the interest rate expectations for individual forecasters are in line with their exchange rate expectations using the UIP condition. Just like the ex post UIP condition that excess returns should be unforecastable is regularly violated in data, we find that this condition also does not hold in expectation across a range of different horizons. We then examine underlying explanations for why forecasters do not believe in UIP. We show that in a model where a sufficient mass of forecasts do not incorporate UIP, it is individually rational for the marginal forecaster to form expectations deviating from UIP as well. This renders transitory arbitrage opportunities persistent, justifying the belief that UIP is violated.

Julien Bengui (Bank of Canada), Louphou Coulibaly (University of Wisconsin)

Macroprudential arrangements for currency unions

We propose a simple framework to analyze the effectiveness and design of region-specific macroprudential regulations as a macroeconomic stabilization tool in currency unions. The higher the degree of trade integration between regions, the less potent macroprudential taxes are as asymmetric aggregate demand management tools, the larger the distortions they entail, and the more they are associated with terms-of-trade externalities. This implies a limited role for macroprudential policy as a macro stabilization tool in highly integrated currency unions, unless the policy is carried out by a central authority.

Guillaume Sublet (University of Montreal), Francois de Soyres (Federal Reserve Board), Julien Maire (Peterson Institute)

Regional Trade Agreements with Global Value Chains

This paper uses data on directional trade flows and Regional Trade Agreements (RTA) to i) estimate the effects of RTA on trade flows and ii) assess the importance of Global Value Chains for these effects. Based on a Difference-in-Difference identification strategy, we find that RTAs are associated with: (1) an increase in trade within the region, (2) a decrease in inflows to the region, and (3) an increase in outflows from the region. We then propose an augmented version of a standard intra-industry trade model à la Melitz (2003) with input-output linkages. Our model with input trade is able to qualitatively account for all three empirical findings, while a standard model of trade in final goods cannot replicate the increase in outflows from the agreement region. We revisit the debate on whether regionalism begets more regionalism or multilateralism. A free trade agreement is a small step towards multilateralism which calls for further integration. A customs union is a bigger step towards multilateralism which thwarts further integration.

Session 3: Environment [Room TBA]

9:15 - 10:35

Diego Känzig (London Business School)

The unequal economic consequences of carbon pricing

This paper studies how carbon pricing affects emissions, economic aggregates and inequality. Exploiting institutional features of the European carbon market and high-frequency data, I identify a carbon policy shock. I find that a tighter carbon pricing regime leads to a significant increase in energy prices and a persistent fall in emissions. The drop in emissions comes at the cost of a temporary fall in economic activity, which is not borne equally across society: poorer households lower their consumption significantly while richer households are barely affected. Not only are the poor more exposed because of their higher energy share, they also experience a larger fall in their income. These indirect effects play a crucial role in the transmission, accounting for over 80 percent of the aggregate effect on consumption. My results suggest that targeted fiscal policy can reduce the economic costs of carbon pricing without compromising emission reductions.

Soo Keong Yong (University of Waikato), Ulrich J. Wagner (University of Mannheim), Peiyao Shen (Shanghai Tech University), Laure de Preux (Imperial)

Management Practices and Climate Policy in China

Cap-and-trade program for CO₂ emissions are being considered by governments worldwide to address the climate change challenge. The success of such a market-based climate policy at minimizing overall abatement cost and fostering low-carbon investment and innovation depends on participants fully understanding the trade-offs between using, selling or banking a permit. This paper provides the first empirical evidence on how management quality moderates responses to carbon pricing, by focusing on firms that participated in two of China's regional pilot emissions trading schemes (ETS), located in the city of Beijing and Hubei province. We collect new data by interviewing plant managers or lead engineers at 216 randomly selected firms, and combine them with financial, patent and energy consumption data for each firm. First we find, as in similar studies for other countries, that well-managed firms have on average higher productivity. In addition, low-carbon innovation measures elicited from managers are strongly positively associated with "green" patenting. These results strengthen the credibility of our interview data. Second, we investigate whether carbon trading affects energy use of regulated firms. We estimate that the launch of the pilot ETS in Beijing has reduced consumption of coal and electricity by treated firms relative to control firms, but this effect is statistically significant only for well-managed firms. Our estimates imply that the overall reduction in coal use following the introduction of the pilot ETS would have been four times smaller if firms with above-median managers had been managed by below-median managers.

Myriam Marending (Copenhagen Business School), Stefano Tripodi (Copenhagen Business School)

Gone with the wind: the welfare effect of desert locust outbreaks

Desert locust outbreaks and other pests pose a significant threat to food security for millions of people. In this paper we quantify the size of the productivity and welfare loss caused by a desert locust outbreak that happened in Ethiopia in 2014. We identify the causal effect of locust swarms on agricultural output and children's nutritional status by modelling their movements based on wind speed and direction to distinguish areas in which they likely land (affected areas). We find that agricultural output and children's nutritional status is significantly lower in areas hit by the shock compared to areas that are not affected.

11:05 - 12:25

Session 4: Health [Room TBA]

Katharina Blankart (University of Duisburg-Essen), Daniel Avdic (Monash University)

A hard look at 'soft' cost-control measures in healthcare organizations: Evidence from preferred drug policies in Germany

Cost-control policies that target physicians' clinical discretion are common in healthcare, but evidence on their efficacy is scarce; in particular for "soft" policies when liability is unlikely to be enforced by the regulator. We study the effectiveness of preferred drug policies (minimum prescription quotas of specific 'preferred' drugs within a drug class) in altering physicians practice styles within the high volume drug class of HMG-CoA-reductase inhibitors (statins) in the German statutory health insurance system. Using a nationally representative panel of ambulatory care physicians between 2011 and 2014, we exploit the decentralized institutional setting to estimate physician responses to variation in preferred drug policies across regional physician associations over time in a generalized difference-in-differences design. Results show that although the cost-control mechanism increases average policy adherence, this effect is entirely driven by physicians with initially high use rates of preferred drugs. We argue that such misdirection may limit the policy's usefulness in reducing inappropriate practice variation among healthcare providers.

Christian Ochsner (CERGE-EI), Lukas Schmid (University of Luzern)

Dying for ignorance? 1918-influenza mortality, vaccination skepticism and vaccination behavior

How do societies respond to epidemic crisis in both stated political preferences and revealed health-related behavior? To answer this question, we link overmortality during the 1918-flu to the political support of compulsory vaccination and to real vaccination behavior before and after the 1918-flu. We rely on the 1922 popular vote in Grisons when Grisons' voters have to decide about compulsory vaccination in their canton. We find that a 1% higher overmortality during the 1918-flu reduces the support of the compulsory vaccination bill by almost 3%. The results are robust to different specifications regarding the definition of flu-affectedness, the inclusion of regional fixed effects and socio-economic variables. Other popular votes, by contrast, do not correlate with overmortality neither before nor after 1918. We are now digitizing real vaccination behavior at the municipality level using smallpox vaccination reports from 1907 to 1933. We aim to show whether revealed health-related behavior differ from the political statement by investigating a potential shift in vaccination abstinence after 1918. We further aim to distinguish among two potential channels to explain the results' cognitive dissonance and mistrust into experts or the government. The results might improve our understanding how epidemics might shift a society towards ignorance and mistrust into experts. Parallels to the COVID-19 epidemics show that part of the population are still acting ignorant today as our ancestors have done so 100 years ago.

Aline Bütikofer (NHH), Deirdre Coy (University College Dublin), Orla Doyle (University College Dublin), and Rita Ginja (University of Bergen)

Pregnancy Loss: Stress, Investment, and Subsequent Children

Pregnancy loss, which affects about 1 in 4 pregnancies, is often a traumatic, although unacknowledged, event which may alter prenatal stress and investments in subsequent pregnancies. Using Norwegian registry data, we exploit the random nature of single, early miscarriages to examine the impact of previous pregnancy loss on maternal investment, the birth and educational outcomes of subsequent children, and parental labor market outcomes. Pregnancy loss initially improves subsequent maternal investment and child outcomes, but effects become negative over time. These findings suggest that negative effects arising from prenatal shocks to maternal mental health can be mitigated through investment, but long-term supports are necessary.

11:05 - 12:25

Session 5: Monetary Macroeconomics I Room TBA]

Lukas Altermatt (University of Essex), Hugo van Buggenum (ETHZ), Lukas Voellmy (Swiss National Bank)

Systemic Bank Runs, Solvency Crises, and Monetary Policy

We develop a dynamic general equilibrium model of bank runs and solvency crises. Banks hold cash as a short-term asset and can invest in government bonds or loans to entrepreneurs as long-term assets. Impatient households withdraw funds from the bank and purchase goods from entrepreneurs. If a run occurs, consumption by impatient households decreases, as some liquid funds end up with patient households.

Therefore, the occurrence of a run lowers the profits of entrepreneurs and thus reduces the return on bank assets - the bank run triggers a solvency crisis through its effects on the real economy. This mechanism makes it individually rational to run the bank if other households do so, even if the bank uses suspension of convertibility.

Laura Gati (European Central Bank)

Talking Over Time - Dynamic Central Bank Communication

What tradeoffs arise when a central bank talks over time? This paper investigates this question in a Bayesian persuasion game between the central bank and the financial market across two models that only differ in the temporality of the correlation between two fundamentals. I find that the endogenous priors of the financial market alter the nature of the optimal dynamic communication policy in two ways compared to the static benchmark. First, the optimal dynamic signal of the central bank has a higher weight on talking about the present than the future. Second, the dynamic communication policy involves less precise communication.

Oliver Pfäuti (University of Mannheim), **Klaus Adam** (University of Mannheim), **Timo Reinelt** (University of Mannheim)

Falling Natural Rates, Rising Housing Volatility and the Optimal Inflation Target

The decline in natural interest rates in advanced economies over the past decades has been accompanied by a significant increase in the volatility of housing prices. We show that the monetary policy implications of these macroeconomic trends depend - in the presence of a lower-bound constraint on nominal rates - on the source of increased housing price volatility. If housing price expectations are rational, increased housing price volatility reflects more volatile housing demand shocks. The Ramsey optimal inflation target then increases only minimally as average natural rates fall. Instead, if housing price volatility is partly due to speculative housing price beliefs, as suggested by survey data, then lower natural rates endogenously trigger larger fluctuations in belief-driven housing price fluctuations. This causes the volatility of the natural rate to increase and exacerbates the lower-bound problem. As a result, the Ramsey optimal inflation target rises much more strongly as the natural rate falls.

11:05 - 12:25

Session 6: Theory/Metrics [Room TBA]

Marko Mlikota (University of Pennsylvania), **Frank Schorfheide** (University of Pennsylvania)

Estimation of Nonlinear Economies Using Approximate Models

This paper describes and investigates the model tempering approach to posterior sampling. It consists in using information from the posterior under an approximate time series model in order to elicit a proposal distribution for the posterior under the original model of interest. Model tempering has the potential to substantially speed up the Bayesian estimation of any time series model with slow likelihood evaluation. This includes the broad class of nonlinear DSGE models with kinks, jumps, asymmetries or multiplicity of equilibria, which force the researcher to move beyond perturbation-based solution techniques and whose estimation is generally considered infeasible. We analyze how the proposal distribution characteristics influence the runtime and demonstrate the merits of this method using two applications: a VAR with stochastic volatility and an RBC economy with capital adjustment costs. For the former the runtime reductions amount up to 75%.

Stefan Bucher (NYU), **Andrew Caplin** (New York University)

Inattention and Inequity in School Matching

The widespread use of the Deferred Acceptance Algorithm in school matching is justified by its attractive theoretical properties that rest on the assumption of perfect information. Yet field studies suggest not only that information is imperfect, but also that this exacerbates inequity. We introduce a tractable model of costly strategic learning in which such effects can be characterized. To focus on the impact of inequity we assume that schools agree on their ranking of students. To simplify the solution we assume that schools are ex ante symmetric and that learning is rationally inattentive. We solve analytically for the unique symmetric equilibrium. Due to the greater strategic uncertainty they face, we find that lower-ranked students are affected disproportionately more by information costs, suffering a larger welfare loss than higher-ranked students. This raises questions about the mechanism's consequences for inequity.

Richard Faltings (*University of Texas*)

Surge pricing as a dynamic matching problem

The use of surge pricing by transportation platforms has been controversial and generated much policy discussion on whether it should be banned or capped. However, recent research on the topic could not explicitly study the algorithm itself, instead taking its output as given. To better study the properties of surge pricing and how to incorporate caps on surges, an explicit algorithm is needed. In this paper, I present a surge pricing algorithm for dockless scooter markets, which casts the problem as a dynamic two-sided matching problem. The algorithm responds dynamically to changes in the supply of vehicles, which requires solving over a large state space. As traditional iterative dynamic programming solution algorithms scale poorly, I instead adopt methods from the recent literature on reinforcement learning, combining the use of simulations and function approximation.

14:00 - 15:20

Session 7: Labor Economics [Room TBA]

Esther Mirjam Girsberger (*University of Technology Sidney*), **Lena Hassani-Nezhad** (*University of London*), **Kalaivani Karunanethy** (*Independent*), **Rafael Lalive** (*University of Lausanne*)

Mothers at Work: How Mandating Paid Maternity Leave Affects Employment, Earnings and Fertility

In July 2005, Switzerland introduced the first federal paid maternity leave mandate, offering 14 weeks of leave with 80% of pre-birth earnings. We study the mandate's impact on women's employment and earnings around the birth of their first child, as well as on their subsequent fertility by exploiting unique, rich administrative data in a difference-in-differences set-up. Women covered by the mandate worked and earned more during pregnancy, and also had temporarily increased job continuity with their pre-birth employer after birth. Estimated effects on other labor market outcomes are small or absent, and all dissipate by five years after birth. The mandate instead persistently increased subsequent fertility: affected women were three percentage points more likely to have a second child in the next nine years. Women living in regions that had greater early child care availability experienced a larger increase in subsequent fertility following the mandate, suggesting that child care complements paid maternity leave in helping women balance work and family.

Stefan Staubli (*University of Calgary*), **Qionгда Zhao** (*University of Calgary*)

The Long-Run Impact of Early Retirement Programs: Evidence from Canadian Pension Reforms

Raising the early eligibility age (EEA) for old-age pensions is a popular policy to reduce financial pressure on pension systems. While a mature literature has investigated the short-run impact of the EEA on labor supply, evidence on the long-run impacts on economic well-being and poverty is scarce, even though the impact on later-life living standards is crucial to determine the EEA's welfare effect. This paper helps to fill this gap by studying two Canadian pension reforms that reduced the EEA from age 65 to age 60. The reforms took place in the 1980s, enabling us to follow affected individuals for the entire retirement period until they die. Using comprehensive tax records and a variety of research designs, we obtain three main findings. First, a one-year reduction in the EEA lowered the pension claiming age by 0.25 years but had no effect on the labor market exit age. Second, early claiming increased pension and total income early in retirement but these gains were overshadowed by income losses later in retirement. Third, lowering the EEA had important distributional consequences: the losses in lifetime pension and total income were concentrated among retirees with above-median income, while low-income retirees experienced a significant improvement in later-life economic well-being. Overall, the EEA reduction in the 1980s were associated with a significant decline in elderly bankruptcy and poverty rates in Canada.

Patrick Arni (*University of Bristol*), **Rafael Lalive** (*University of Lausanne*), **Gerard van den Berg** (*Free University of Amsterdam*)

Uniformly or Not? How Migrant and Native Job Seekers React to Labor Market Policies

In almost all OECD countries foreign-born job seekers experience higher unemployment rates than natives. Does active labor market policy provide means to sufficiently support migrant job seekers? We aim at

contributing to reduce the evidence gap by comprehensively comparing ALMP effects on migrant and native job seekers. Using rich Swiss register data and applying our recently developed approach to identify policy regimes, we find substantial differences in reactions to ALMPs. Our preliminary findings show for the short run that, e.g., sanction threat effects do not operate among migrant job seekers and supportive regimes primarily reduce native's unemployment durations. In turn, in the long run we find that the direct benefit (in terms of earnings) of joining a support program is higher for foreign-born job seekers; but no benefit arises for them from supportive regimes.

14:00 - 15:20

Session 8: Macroeconomics [Room TBA]

Yann Koby (Brown University)

Low Rates and Bank Loan Supply: Theory and Evidence from Japan

What are the long-run consequences of low nominal interest rates for credit supply? In this paper we (1) provide panel evidence from Japan of the adverse effects of low rates on long-run bank profitability and loan supply, (2) propose a quantitative macroeconomic model with heterogeneous banks that rationalizes our key empirical findings, and (3) discipline the model using our panel evidence to estimate the aggregate impact on credit supply. Our empirical evidence exploits the differential exposure of banks to nominal rates through their historical liability structure. We show that exposed banks face relatively higher costs of funding, have lower profitability, and decrease loan supply as low rates unfold. In the model, loans are undersupplied in equilibrium due to financial frictions. Market power in deposits helps mitigate these frictions, but is sensitive to nominal rates due to competition from money. This force is stronger for banks with more ex-ante market power, generating heterogeneity that we use to discipline the model. We find that low rates resulted in significantly lower loan growth in Japan. We explore in counterfactuals two commonly discussed policies: tiering bank reserves and taxing cash. Although tiering has a limited effect, both policies alleviate the negative effects of low rates on credit supply.

Michele Andreolli (London Business School)

Monetary Policy and the Maturity Structure of Public Debt

This paper studies the mediating impact of the maturity of public debt in the transmission of monetary policy shocks to economic activity. A longer debt maturity attenuates greatly the effect of monetary policy: going from the average historical duration of US debt to very short term debt doubles the impact of a rise of the policy rate on output. A similar result holds in UK data. Using data on corporate debt, spreads, investment, and fiscal variables, I show that these effects can be traced back to a quantitatively important financing channel. A model featuring an interaction between an empirically estimated primary market friction and a standard financial accelerator is able to account for these facts.

Andrea Lanteri (Duke University), Adriano Rampini (Duke University)

Constrained-Efficient Capital Reallocation

We characterize efficiency in an equilibrium model of investment and capital reallocation with heterogeneous firms facing collateral constraints. The model features two types of pecuniary externalities: collateral externalities, because the resale price of capital affects collateral constraints, and distributive externalities, because buyers of old capital are more financially constrained than sellers, consistent with empirical evidence. We prove that the stationary-equilibrium price of old capital is inefficiently high, because the distributive pecuniary externality exceeds the collateral externality, by a factor of two in our calibrated model. New investment reduces the future price of old capital, providing a rationale for new-investment subsidies.

14:00 - 15:20

Session 9: Industrial Organization [Room TBA]

Andras Niedermayer (Cergy Paris University)

Rational Panic Purchases During Crises

This paper analyzes panic purchases of goods after demand changes due to an unexpected event such as a pandemic. Our two-period model incorporates capacity constraints by sellers and search/shopping costs by consumers. Even if sellers have enough capacity to satisfy total demand, there may be shortages because consumers panic purchase (i.e. buy the good in period 1 before knowing whether they will need it). Shortages can hence be a self-fulfilling prophecy: consumers inefficiently panic purchase in expectation of shortages. The paper analyzes various measures taken against panic purchasing, such as price caps, rationing, information policy, and restrictions on resellers.

Barbara Rudolf (Swiss National Bank), Pascal Seiler (ETHZ and European Central Bank)

Price Setting Before and During the Pandemic: Evidence from Swiss Consumer Prices

Using microdata underlying the Swiss consumer price index from 2008 to 2020, we establish new facts about price-setting behavior. First, the frequency of price changes has increased over the last decade, especially for online prices, reflecting the rise of e-commerce. Second, variations in the frequency contribute more than the size of price changes to aggregate inflation dynamics, providing evidence of state-dependent pricing. Third, price changes are synchronized within rather than across stores, but synchronization across outlets has increased in all sectors. Fourth, the response of prices and temporary sales to the COVID-19 pandemic varied significantly across sectors but remained small overall.

Martin Huber (University of Fribourg), Jonas Meier (University of Amsterdam), Hannes Wallimann (University of Applied Sciences and Arts Lucerne)

Business analytics meets artificial intelligence: Assessing the demand effects of discounts on Swiss train tickets

We assess the demand effects of discounts on train tickets issued by the Swiss Federal Railways based on machine learning. Considering a survey-based sample of buyers of 'supersaver tickets', we investigate which customer- or trip-related characteristics predict buying behavior, namely: booking trips otherwise not realized by train, buying a first- rather than second-class ticket, or rescheduling a trip when being offered a supersaver ticket. Furthermore, we use causal machine learning to assess the impact of the discount rate on rescheduling a trip, which seems relevant in light of capacity constraints at rush hours. Assuming that (i) the discount rate is quasi-random conditional on our rich set of characteristics and (ii) the buying decision increases weakly monotonically in the discount rate, we identify the discount rate's effect among 'always buyers' who would have traveled even without a discount, based on our survey that asks about customer behavior in the absence of discounts. We find that, on average, increasing the discount rate by one percentage point increases the share of rescheduled trips by 0.16 percentage points among always buyers. Investigating effect heterogeneity across observables suggests that the effects are higher for leisure travelers and during peak hours when controlling several other characteristics.

16:10 - 17:30

Session 10: Political Economy/Development [Room TBA]

Stefano Carattini (Georgia State University), Anomitra Chatterjee (London School of Economics), Todd Cherry (University of Wyoming)

Voting and information: Evidence from a randomized controlled trial

Information asymmetries affect many real-world decisions, including voting behavior. Important welfare losses may occur if people's voting behavior is biased because of information asymmetries and misleading political campaigns. One crucial example is environmental policy. Growing evidence suggests that information asymmetries affect people's perceptions of Pigouvian policies. In particular, people tend to underestimate the incentive effect of such policies and overestimate their drawbacks. In combination with a ballot initiative on carbon taxes, taking place in Washington state, we realized a large randomized controlled trial providing information on carbon taxes to over 285,000 individuals. We collect data at the precinct level and measure variation in voting behavior across treatments and with respect to the counterfactual. We find that our intervention affects voting behavior, especially for voters located in precincts relatively opposed to the initiative and less exposed to media coverage of carbon taxes or more exposed to media coverage potentially challenging their effectiveness. Additional evidence is provided at the individual level with a survey of about 1,000 individuals, using the same treatments as in the randomized controlled trial. The survey allows analyzing

the mechanisms underlying the treatment effects, which we show relate to belief revision on the effectiveness of carbon taxes.

Joris Mueller (*Northwestern University*)

China's Foreign Aid: Political Determinants, Economic Effects

The efficacy of foreign aid, especially when given to satisfy the objectives of the donor country, is highly controversial. I study this question in the context of Chinese infrastructure aid, which has received much attention from policymakers. I build a novel project and firm-level dataset to identify determinants of Chinese aid and its economic consequences for recipient countries. I document that when there is local labor unrest in China, contracts for Chinese aid projects are allocated to large state-owned firms in the area, and employment by these firms increases. Connections between these firms and other countries mean that China's response to domestic unrest affects the allocation of Chinese aid projects to other countries. I exploit the variation in countries' receipt of aid caused by the timing and spatial variation in local labor unrest in China to develop an instrument for identifying the causal effects of Chinese aid on recipients. I find large positive effects on GDP, capital formation, consumption, and employment.

16:10 - 17:30

Session 11: Macroeconomics and Finance [Room TBA]

Christian Wipf (*University of Essex*)

Should Banks Create Money?

The paper compares the welfare properties of the current fractional reserve banking system versus a narrow banking system where deposits are fully backed by reserves. The analysis shows that under sufficient competition fractional reserve banking is beneficial compared to narrow banking because of higher interest payments on deposits. Since under fractional reserve banking deposits fund loans, banks have a higher income on their asset side which "if competition is sufficiently high" they pass on to deposit holders in the form of higher interest. This improves welfare because it compensates the deposit holders against inflation. A calibrated version of the model suggests however that the welfare gains of FB are relatively small, below 0.16% of yearly GDP in the US between 1984 and 2008.

Frederic Martenet (*Stanford University*)

Exchange Rates and the Macroeconomy: Evidence from the 2015 Swiss Franc Appreciation

How do swings in the exchange rate affect aggregate economic activity and inequality among households? The macroeconomic literature lacks a consensus on these questions. In this paper, I document new stylized facts from Swiss administrative data on how the large and unexpected appreciation of the Swiss Franc in January 2015 affected household balance sheets, income and wealth inequality, and the aggregate economy. I then develop a quantitative macroeconomic model consistent with these facts to measure the welfare implications of this appreciation across the distribution, and to evaluate the effects of alternative monetary policy actions by the SNB around this event.

Brandon Gipper (*Stanford University*), **Luzi Hail** (*University of Pennsylvania*), **Christian Leuz** (*University of Chicago*)

Determinants and Career Consequences of Early Audit Partner Rotations

We examine how often and why some audit partners rotate off client engagements before the end of the maximum five-year cycle period. Specifically, we investigate whether audit quality issues play a role for engagement partners and clients to separate prematurely. For a sample of about 4,000 within-audit firm partner rotations for Big 6 clients over the 2008 to 2014 period, we find that client characteristics such as financial leverage or performance have little explanatory power. In contrast, severe audit quality issues such as financial restatements or PCAOB inspection findings are associated with early partner rotations. These associations are more pronounced for early rotations that are not explained by scheduled retirements, promotions, or temporary leaves as well as for large clients and when partners are less experienced. We also find that female

partners have a higher likelihood of early rotation for audit quality reasons. Early rotations have career consequences. Partners are assigned to fewer SEC issuer clients, manage fewer audit hours, receive lower partner ratings, and are more likely to be internally inspected after being rotated early. Our results suggest that audit quality concerns are an important factor for early partner rotations with ensuing negative career consequences for partners' client assignments and management responsibilities.