Annual Report 2017
Department of Economics
This annual report gives an overview of the most important outputs of our department in 2017.

The past year has seen some major changes of personnel in our department. We are especially happy that two new colleagues, Igor Letina and Eric Strobl, have joined us. Igor has started in July as assistant professor (tenure track). He has recently completed a PhD at the University of Zürich and specializes in applied microeconomic theory with a focus on innovation and contest design. Eric has joined us in October as full professor of environmental and climate economics. Thanks to major additional funding from the Mercator foundation as well as the Gebäudeversicherung Bern, he has the possibility to establish a research group in the field of empirical-experimental climate and environmental economics. Eric will closely work together with the Oeschger Centre for Climate Research as well as the World Trade Institute. This report contains short interviews with both, Igor and Eric. Another substantial change in our department is that we have to bid farewell to our colleague Gunter Stephan who is going into retirement at the end of the fall semester. Gunter has spent 30 years as a professor at the University of Bern and during this time has held various important positions at our University and other institutions. Klaus Neusser and Ralph Winkler contributed an overview of his achievements to this annual report.

In 2017, our department also had the opportunity to suggest to our faculty a candidate for an honorary doctorate of the University of Bern. As a result, Professor John Moore from the London School of Economics received this honor for his many seminal contributions in microeconomic theory. He has a long affiliation with our department through the courses he teaches for our doctoral students at the Studienzentrum Gerzensee.

Last but not least let me emphasize that 2017 has been another productive year for our department as shown by the wealth of research output listed in this report.

I would like to thank all members of the department for their contributions in research, teaching and outreach.

Aymo Brunetti
December 2017
Igor Letina studied economics and social sciences at the Bocconi University in Milan. After having received a PhD from the University of Zurich in 2017, he was appointed Assistant Professor at our department. His research focuses on applied microeconomic theory, in particular on questions related to innovation and contest design. We wish Igor Letina success and fulfillment in his new position at the University of Bern.

Interview with Igor Letina

Igor Letina, we are very happy to welcome you as a new member of the faculty. You received your PhD at the University of Zurich. What do you, after your first months in Bern, consider the main differences between the two institutions?

To me, the most striking difference is in size. The Department of Economics at the University of Bern is significantly smaller than the one in Zurich. However, there are advantages to being a smaller institution. We can offer our students more individual attention and supervision than what would be possible in Zurich.

Your output during your time as a PhD candidate is remarkable: a well-published article and several working papers. How do you come up with new ideas? What can you tell us about your current research?

For me, most research ideas come from being confused by something I’ve read or seen. I then try to find an explanation, which usually is trivial but sometimes turns into a research idea. I am currently trying to understand how we can better use prizes to promote innovation in fields where the profit motive alone does not suffice.

Your past projects in applied microeconomic theory align well with the research interests of other professors at our department. Did that already result in collaboration?

Yes, I have started a project with Prof. Marc Möller, which grew out of an idea we were discussing over coffee.

What kind of courses are you going to teach?

I will teach an elective course, Economics of Innovation, in the spring semester. In that course, we will mostly focus on the economic institutions, like patents and prizes, which have been used to promote innovative activity. I also teach Microeconomics II. This is a compulsory course which, for the most part, focuses on the general equilibrium theory.

In the recent past, it seems that the majority of publications in microeconomics is empirical. Do you think that improved data availability and computational progress jeopardize and/or distract from the importance of theory?

Not at all. Theory and empirical work tend to reinforce each other. If anything, empirical work done today is generating puzzles that will need to be explained by some theories in the future. In addition, theory can help us design new economic institutions and mechanisms. For example, new auction formats were invented so that licenses for mobile operators could be allocated more efficiently.

Igor Letina, thank you very much for this interview.
Eric Strobl received his PhD in economics from the University of Dublin. Amongst other academic positions, he was appointed Associate Professor at the Ecole Polytechnique in Paris and External Research Professor at the University of West Indies in Trinidad, before joining our faculty in 2017. He works together with the World Trade Institute (WTI) and is member of the Oeschger Center for Climate Change Research (OCCR). We wish Eric Strobl all the best in his new position at the University of Bern.

Interview with Eric Strobl

Eric Strobl, we are pleased to welcome you as a new professor at our Department. Did you already have time to discover Bern and its surroundings?

Unfortunately, with the moving and settling in at the university my “exploring time” has been a bit limited. But from the experience thus far it seems like a great city—large enough to offer more than one would need, and small enough to not feel too impersonal.

You worked at various places in the US, the Caribbean, Ireland and France. Why do you consider Bern an attractive place to further develop your academic career?

The University of Bern has a very innovative spirit to it that many European universities are still lacking. In a field like the one I work in—climate economics—which is relatively new, this sort of attitude is the best environment to be successful in both, research and teaching.

What courses are you planning to offer for our students?

My courses will all be in environmental and climate economics. The basic idea for all of these—whether at graduate or undergraduate level—will be to provide students with the necessary tools for good analysis while making sure that these are understood in a practical, real world context.

Your list of publications is impressively long and multifaceted: it encompasses projects in labor, development, as well as environmental and climate economics. Currently, what are your main research questions?

My research currently encompasses two main areas. Firstly, and this is something I have been studying for a while, I aim at estimating the impact of extreme climate events, with view of identifying potential policy options to deal with these events. Secondly, and this a more recent area of interest, I examine the economic aspects of biodiversity, in particular the role of economic decisions in affecting it and how effective legislation can be used to preserve it.

A lot of your findings are policy relevant. Do you think that today’s politics pay enough attention to scientific facts concerning climate change, especially in developing countries?

This is a challenging question. Nowadays, everybody seems to be talking about climate change in almost every context. The problem is that the term is often so loosely used that it loses meaning, at least in the sense of providing the impetus for constructive conversation and policymaking. Climate change as a concept is complex because it is still a not completely understood scientific phenomenon, so that predictions are hard to make with reasonable precision. Moreover, its causes, implications, and possible solutions are inherently multi-dimensional and hence inter-disciplinary—and cooperation across disciplines has never been a strong point of the scientific world. Additionally, for developing countries, which arguably carry the least responsibility for climate change while the negative consequences are perhaps the highest and most immediate, the trend is to introduce, based on the general concept, policies that are not necessarily founded on good science (and I am talking about both the natural and social sciences here), or at least not taking into account the still considerable uncertainty.

Eric Strobl, thank you very much for this interview.
In the last decade, many countries have implemented generous subsidy schemes for renewable energy investments. Simultaneously, the costs of renewable technologies have dropped significantly. For instance, between 2008 and 2013 the price of a small scale solar panel in Switzerland dropped from 8300 CHF/kWp to 2700 CHF/kWp. Both factors lead to exponential growth in solar power capacities, including residential PVs. As households start to consume their own electricity, two issues arise. First, households with photovoltaic installations and consumption of self-produced energy do not fully contribute to grid financing because energy providers mainly use consumption based charges (i.e. volumetric charges) to cover the fixed investment and maintenance cost of the electricity grid. Second, households with solar panels tend to be better off financially, shifting the burden of grid costs to poorer households. To reduce the adverse impact of decentralized energy production, energy providers and policy makers need to rethink grid tariff design.

In our paper we present a structural model that combines an electricity demand model with a dynamic model of PV adoption. We estimate the parameters using detailed household level data on electricity, income, and building characteristics, for the Canton of Bern between 2008 and 2013. Furthermore, we employ this model to simulate two scenarios. The first one highlights the evolution of volumetric charges in a world where all homeowners install a solar panel. In the second one, we calculate the optimal tariff mix for a regulator that wants to reach a predefined share of renewable electricity. The regulator chooses between a subsidy on PV installation costs, a volumetric charge, and a fixed fee (annual fee per household) to reach the target, while minimizing redistribution and generating sufficient revenue to cover total grid cost.

In the first scenario, with all homeowners installing a solar panel, we find that volumetric charges need to increase by 13% for current own consumption estimates and by 123% with batteries allowing for 100% own consumption. Moreover, this price increase has a regressive impact on grid financing as low-income deciles experience the largest increase in expenditures. In the second scenario, the household’s decision to buy a solar panel is a function of tariff design. To reach a predefined solar energy target the regulator can rely on both, volumetric charges and a subsidy towards installation costs. Increasing volumetric charges generates additional revenue for solar panel owners because they can save on grid expenditures by means of own consumption. In contrast, employing a subsidy provides a reduction in upfront cost. Figure 1 illustrates the impact of both instruments on the share of renewable electricity in total electricity consumption. Our findings show that the regulator should always use a combination of volumetric charges and subsidies to stimulate PV adoption. To reach a 9% solar energy target (based on the Energistatistik 2050), the regulator should increase volumetric charges by 75%, employ a subsidy on installation cost amounting to 34%, and increase the annual fixed fee by 61% to cover the remaining grid and subsidy expenses. This combination of instruments guarantees that the financial burden is equally spread among households. Based on data for the year 2013, we find stimulating PV adoption to be costly. Each kWh of renewable electricity costs the economy 0.7 CHF in subsidies, a multiple of the market price of electricity of 0.1 CHF/kWh. However, this cost is bound to decrease with further advancements in PV technology.

Overall, our research provides insights to counter the adverse impacts of solar panel adoption on energy grid financing and distributional aspects. Many challenges related to solar energy remain and need to be addressed by future research. The intermittency of renewable production and its impact on grid stability and investment cost is only one of them.

Research Bit II: Understanding the Vollgeld Initiative: A Theoretical Framework

Cyril Monnet – Switzerland will vote in 2018 on the Vollgeld initiative aimed at improving financial stability by limiting banks’ ability to create deposits. In a recent paper, Cyril Monnet and his co-authors study the risk-taking decisions of borrowers and compare their current behavior with that under 100% reserve requirements for banks. In times of high inflation, adoption of the Vollgeld initiative could lower investment below the efficient level, resulting in a suboptimal outcome even when taking into account stability gains. If, on the other hand, inflation is sufficiently low, 100% reserve requirements can be optimal.

Ask anyone what banks do, and they will tell you that they take deposits and make loans. This is partially correct: banks also create deposits when making loans and, in doing so, they create money.

To illustrate this, take a very simple example. Suppose bank B grants a loan of CHF 1 million to firm F. It does so by increasing the value of the deposit account of firm F by CHF 1 million. Very likely, firm F will use bank B’s online banking services to make an electronic transfer, say to its suppliers. If firm F’s suppliers also have their deposit account with bank B, then firm F could purchase CHF 1 million worth of supplies without cash being involved at all in the transaction (where cash is banknotes issued by the Swiss National Bank). So bank B created CHF 1 million worth of “money” (a.k.a. inside money). In reality things are more complicated: maybe firm F also needs cash, maybe its suppliers bank at bank D, etc. Still, the example illustrates the basic idea: by creating deposits bank B also creates money. Bank B would not create money if it were required to hold 1 CHF for each 1 CHF worth of deposits it creates. This begs the question: Does the ability of banks to create money through deposits promote growth, financial stability and economic efficiency, relative to an economy relying solely on deposits fully backed by cash?

The famous “Chicago plan” called for 100% reserve requirements at a time when the Great Depression gave ammunition to those arguing for limiting the creation of deposits. The Great Recessions (as economists call the period following the financial crisis of 2008) revived the academic and policy debate on the issue: Switzerland will vote in 2018 on a referendum initiated to drastically limit banks’ ability to create unbacked deposits (a.k.a. the Vollgeld initiative).

What does the theoretical and empirical literature on inside money say on the issue? There are two recurring themes. A system relying on the free creation of deposits is arguably more efficient because banks are more flexible to respond to loan demand (e.g. Williamson, 1999). But this flexibility may come at the cost of some inflation (e.g. Chari & Phelan, 2015), and the system can be inherently unstable because it allows multiple equilibria, which opens the door to exotic dynamics, cycles, and crashes (e.g. Sanches, 2015).

One puzzling aspect is that the literature assumes that banks’ investments and borrowers are safe. In a recent paper with Stephan Imhof (Swiss National Bank)* and Shengxing Zhang (London School of Economics), I analyze the efficiency properties of an economy with deposit creation by putting the risk-taking decision of borrowers at the center of the analysis.

To do so, we introduce the moral hazard of risk taking in an otherwise standard monetary model with banks. Moral hazard and limited liability implies that borrowers (i.e. the managers of firms) take too much risk in equilibrium relative to the optimum. As is standard, the more indebted the firm is, the more risk it takes. And when loan rates are low, firms will tend to borrow more, increasing their indebtedness and taking more risk.

In this context, we study how liquidity requirements, such as reserve requirements, can help achieve the optimal level of debt and risk taking. In a nutshell, no liquidity requirement implies that bank loans are too cheap, firms’ debt level is too high, and they take too much risk. Imposing a liquidity requirement will increase the firms’ borrowing cost, which tends to reduce investment but has the advantage of lowering risk-taking through a lower level of indebtedness. Interestingly, investment does not necessarily decline with stricter requirements: if all firms reduce risk-taking, banks are safer and they can finance firms more cheaply (as the risk premium on their bonds is lower) which can increase investment. Although the safest system, deposits fully backed by reserves may not be optimal as it can reduce investment too much.

The level of the central bank interest rate is important to determine the optimal level of liquidity requirements, as it defines the cost of holding liquidity. When the central bank rate is sufficiently low, higher reserve requirements (even 100%) are optimal. But for higher rate, it is optimal to reduce the level of reserve requirements. In some sense, our paper calls for an active reserve requirement policy, and more generally for liquidity requirement policy along the business cycle.

References:

*The views expressed here, or in the original paper, are the one of the authors and do not reflect the views of the Swiss National Bank.
Luca Moretti was awarded the Schmeller-Prize 2017 for his excellent master’s thesis titled "Cost and Benefits of Apprenticeship Training: A Comparison of Austria and Switzerland" that he wrote under the supervision of Klaus Neusser. After completing his Master’s degree, Luca Moretti started working at the Swiss National Bank. In what follows, he gives a short summary of his prizewinning master’s thesis.

Motivation

It is remarkable that the European countries with a vocational education and training (VET) system are amongst those with the lowest youth unemployment rate. Hence, it is not surprising that apprenticeship training received a lot of interest from policy makers in recent years, particularly because it is a promising educational pathway to ensure a smooth transition from school to working life. However, not much research has been done regarding the underlying mechanisms of how exactly apprenticeship systems generate positive outcomes for individuals, firms, and the broader society.

Central for the well-functioning of an apprenticeship system is the firms’ willingness to train apprentices. Economic reasoning suggests that the decision to engage in training is determined by the expected costs and benefits. While firms incur costs for instructors, training facilities, materials, and machinery, the most important cost factor is typically an apprentice’s wage. With the latter being subject to collective bargaining agreements or youth minimum wages, higher wages clearly affect a firm’s cost-benefit ratio and, by consequence, their willingness to offer apprenticeships. Benefits are measured by how much it would cost the firm to provide the same goods and services using skilled or unskilled labour respectively.

I contribute to this rather small literature by comparing a firm’s costs and benefits to provide apprenticeship training, analysing similar firms in Austria and Switzerland.

Methodology

I apply nearest-neighbor matching techniques to compare Austrian and Swiss firms based on firm size and profession. Thus, I essentially simulate a situation where an Austrian firm faces the institutional environment of a Swiss firm, while holding many other Austrian factors constant.

It seems reasonable to assume that the two countries are rather similar in a number of characteristics, such as the overall importance of its vocational education and training (VET) system, training curricula, location, and culture. Based on this assumption, I am confident that I am able to isolate institutional effects that influence important parameters of the training process including minimum apprentice pay, the availability of training opportunities outside the firm, and the situation on the market for skilled labour in general.

Results

The main results show that comparable Austrian firms on average make a significant net investment of more than 4200 Euro per year and apprentice whereas comparable Swiss firms generate a net benefit of 3400 Euro per year and apprentice. While Swiss firms show the well-known fact of decreasing net cost with each additional apprenticeship year, the Austrian firms show the opposite pattern.

Moreover, employee turnover after apprenticeship training is lower in Austria than in Switzerland. As a result, we can show that despite the high initial net costs an Austrian firm faces during training, they are willing to make an investment in apprenticeship training because they can subsequently reap the returns on their investment in the form of saved hiring costs for skilled workers. Additionally, stronger labour market regulations increase the value of apprenticeship training as a screening device.
The Department of Economics has to bid Farewell to Gunter Stephan

Klaus Neusser & Ralph Winkler — Professor Gunter Stephan retires at the end of January 2018. Klaus Neusser—his long-standing colleague at the faculty—and Ralph Winkler—his research colleague in environmental economics and at the Oeschger Center for Climate Change Research—take this opportunity to shortly appreciate some of Gunter Stephan’s merits and achievements. The department wishes him all the best for the future.

When Gunter retires by the end of January 2018, he can look back on a thirty-year long career as a professor at the Department of Economics of the University of Bern. This has been a long and moving period, not only for Gunter as an individual, but also for the institution he has been working for and even more so for the economics profession in general. Young colleagues, who were not even born when Gunter had been appointed, can hardly imagine how academic life was back then. Since these times, universities in general and the University of Bern in particular have experienced profound changes. On the one hand, strongly hierarchical and paternalistic governance structures have been broken up and made room for flatter hierarchies, concerns for career advancement and more gender equality (although the Department of Economics may be lagging somewhat behind the general trend). On the other hand, academic work and its governing institutions experienced a rapid advancement in professionalization and internationalization, at least partly triggered by improvements in information technology.

Gunter was certainly not one to bear this development, but engaged himself in the management of both, his own academic career and the academic institutions in general. Holding a Master’s degree in mathematics from the University of Heidelberg, he shifted his research interests with his Ph.D. to capital theory, a flourishing field in the aftermath of the Cambridge controversy in the 1960’s and almost forgotten since. Specializing in General Computable Equilibrium Models, Gunter found his vocation in environmental and climate economics. He was a co-author and friend of the late Alan Manne, a pioneer in the so-called Integrated Assessment Models that combine economic growth models with models of carbon cycles and climate impacts to assess and evaluate climate policies. Gunter’s most recent research interests span a large range of topics: from theoretical and somewhat philosophical concerns such as discounting and intergenerational equity to practical and applied issues like the interaction of mitigation of and adaptation to climate change as well as strategic aspects of transferring green technology or funding climate change adaptation in a world of 200 sovereign and highly heterogeneous countries. Gunter also succeeded in acquiring a number of NSF- and other grants, which served to finance and foster the career of many Ph.D. candidates and post-doctoral students.

During his career, Gunter held many important positions both within the University of Bern as well as among the broader scientific community in Switzerland and abroad. Just to name a few, he was Deputy Director of the NCCR Climate, served as an economic advisor to the Canton of Bern, and is a member of the Editorial Board of “Environmental and Resource Economics”. As a member of the Scientific Board of the Oeschger Centre for Climate Change Research at the University of Bern, Gunter is well versed in both the opportunities and obstacles of interdisciplinary work. Maybe most visible was his term as vice-rector of the University of Bern. The University in general but in particular the Department of Economics benefitted from his superb grasp for the subtleties of academic politics far beyond the end of his term in 2011.

All this documents Gunter’s view that responsibilities of a full professor go beyond the bubble of one’s own research, but encompasses the commitment to give back to society and to engage for a better world. While we wish him all the best for his upcoming “long sabbatical”, we already miss a good colleague and friend. Photo: Adrian Moser
Journal Articles


Publications (3)


**Monographs**


Book Chapters


* An asterik indicates publications that were listed as forthcoming in the Annual Report 2016.
Publications (5)

Newspaper Articles


Some Working Papers


Publications (6)


Grants & Awards

Grants

VON EHRLICH, MAXIMILIAN: Grant from the Swiss State Secretariat for Economic Affairs (SECO) for the project “Angebot an Wohnraum in verschiedenen Schweizer Zentren im Umfeld stark steigender Angebotsmieten”.

GERFIN, MICHAEL & CHRISTIAN SCHMID: Grant from the Qualitäts- und Forschungsfonds LOA IV/1 (VKF) for the project “Physician dispensing: Who decides to dispense and how does it affect medical treatments”.

KOUBI, VALLY: Grant from the Swiss Network for International Studies (SNIS) for the project “Environmental change and migration: The role of urbanization in conflict processes”.

MELLY, BLAISE: Grant from the Swiss National Funds (SNF) for the project “Distributional effects for duration and count data”.

SCHÖNI, OLIVIER: Grant from the Swiss National Funds, Sustainable Economy (NRP 73) for the project “Switzerland’s Sustainability Footprint: Economic and Legal Challenges”.

SCHÖNI, OLIVIER: Grant from the Swiss National Funds (SNF) for the project “Complexity and the Structure and Regulation of Trade and Investment”.

SCHÖNI, OLIVIER: Grant from the European Union Horizon 2020 for the project “Realizing Europe’s Soft Power in External Cooperation and Trade”.

WOLTER, STEFAN: Grant from the Bertelsmann Foundation for cost and benefit simulations in Italy and the UK.

Awards and Honors


FLEER, RITA: VBW Excellence Award Silver 2017 awarded by the VBW - Vereinigung Berner Wirtschaftswissenschaftler.

MORETTI, LUCA: Prize for achieving the highest grade in spring semester 2017 awarded by the Faculty of Business, Economics and Social Sciences of the University of Bern.

MORETTI, LUCA: Schmeller-Prize for Economics 2017 awarded by the Volkswirtschaftliche Gesellschaft des Kantons Bern.

MÜLLER, TOBIAS: Student Paper Prize 2017 awarded by the International Health Economics Association.


WOLTER, STEFAN: Best Paper Award of the 5th Congress on Research in Vocational Education and Training awarded by the Swiss Federal Institute for Vocational Education and Training.

WOLTER, STEFAN: Elected Chairman of the “Bildungsoekonomischer Ausschuss” of the Verein für Socialpolitik.
Appointments & Promotions

Aurélien ABRASSART has been appointed Postdoctoral Researcher at the Centre for Research in Economics of Education.

Konstantin BÜCHEL has been appointed Postdoctoral Researcher at the Center for Regional Economic Development.

Carlos LENZ has been appointed Titular Professor.

Igor LETINA has been appointed Assistant Professor.

Blaise MELLY has been promoted to Full Professor.

John MOORE has been awarded the title Honorary Doctor.

Tobias MÜLLER has been appointed Postdoctoral Researcher in Health and Public Economics.

Marcus ROLLER has been appointed Postdoctoral Researcher at the Center for Regional Economic Development.

Eric STROBL has been appointed Full Professor.

Doctoral Theses

Aregger, Nicole: “Essays in International and Monetary Macroeconomics: Exchange Rates and the Financial Crisis”. Doctoral Committee: Harris Dellas, Philippe Bacchetta (University of Lausanne).


Galli, Alain: “Essays in Applied Macroeconomics: Wealth Effects on Consumption and Tracking of Short-Term Economic Developments”. Doctoral Committee: Klaus Neusser, Massimiliano Marcellino (Bocconi University).

Hoffmann-Erb, Christine: “Adaptation to Extreme Climate Events at a Regional Scale”. Doctoral Committee: Gunter Stephan, Philippe Thalmann (EPFL Lausanne).

Moving on...

Sarah Fischer has left the department and has accepted a job offer at the State Secretariat for Economic Affairs (SECO).

Christin Hoffmann has left the department and is now Research Associate at the Brandenburg University of Technology.