Annual Report 2018
Department of Economics
This year has seen a major change at our department’s administration: Marlies Wälchli, the head of the department secretariat has retired and handed over responsibility to Fiona Scheidegger. Marlies worked at our department for almost 20 years and was the driving force behind centralising administrative work in one department secretariat. But above all, Marlies was the first and most important contact person for us when it came to ensuring that the department ran smoothly and she assumed this role in a remarkably open, constructive and likeable manner. We wish her all the very best in her well-deserved but certainly active retirement. This annual report features an interview with Marlies in which she looks back on her time at our department.

In the second interview, we talk to the well-known education economist Stefan Wolter who heads the Centre for Research in Economics of Education of the University of Bern. As a part of our department, it focusses on the field of education economics with its research being financed by external funding. Additionally, Stefan also teaches as Titularprofessor at our University.

This year has also seen the departure of Fabrice Collard, full professor of macroeconomics. He has accepted an offer from Toulouse School of Economics. Together with the departure of Gunter Stephan last year and the upcoming retirement of Klaus Neusser in 2019 we, therefore, have three open positions to fill. In all these cases, the work for appointing successors is well underway: potential candidates have been interviewed and presented their research. We hope to fill these vacancies during 2019.

Overall, 2018 has been another productive year for our department. You can find a compilation of our research output in this report.

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

Aymo Brunetti
January 2019
Interview: Stefan Wolter, Director of the Centre for Research in Economics of Education

Created in 2001, the Centre for Research in Economics of Education (CREE) has since become a prominent address in its field. The centre offers popular courses to our students and conducts research to inform policy makers as well as the private sector. The CREE also partners with the University of Zurich as the "Swiss Leading House on Economics of Education." In order to learn more about the history and inner workings of the CREE we interviewed Stefan Wolter.

Interview with Stefan Wolter

Stefan Wolter, the CREE’s and your history are very much intertwined. Could you walk us through your career and how that influenced the CREE?

In fact, working here meant returning to the University of Bern. I had studied here and written a dissertation in macroeconomics under the supervision of Prof. Ernst Baltensperger. While doing so I was also in charge of economic forecasts for France at UBS, specializing in labor market questions. As a next step I became chief economist at a predecessor of the SECO. This was during times of relatively high unemployment in Switzerland — consequently, this matter received a lot of attention and my research interests increasingly shifted towards the microeconomic aspects of unemployment. In 1999, I was then named director of the Swiss Coordination Centre for Research in Education (SCCRE), an institution under the patronage of the Swiss federal government and the cantons. One year later, I began lecturing at the University of Bern and shortly thereafter, the CREE was founded. In a joint project with the University of Zurich, the CREE established the Swiss Leading House on Economics of Education.
in 2005. The Leading House essentially complements the work of the SCCRE in that the former does academic research and the latter links academia to politics.

*How about the institutional integration of the CREE into the Department of Economics?*

While we are fully integrated in the department, it is important to note that we are funded exclusively by external partners. Nonetheless, we are not a consultancy. While practitioners suggest the topics, the implementation is academic. Thus, every project we take on has to qualify in terms of academic suitability. Based on this we employ research assistants, PhD students and Post-Docs. Over the years and together with the Leading House, we have published roughly 100 peer-reviewed journal articles. This setting combining academic rigour with practical appeal also opens doors for our (junior) researchers to move into practical policy work as well as to continue in academia. For example, two of our previous members now hold professorships in Germany and the Netherlands.

*Besides work related to Switzerland, the CREE has also researched the utility of apprenticeship training in other European countries in recent years. Can you outline those projects for us?*

Originally, we were approached by a Spanish foundation who wanted to know the costs and benefits of doing apprenticeship training relative to those of hiring already qualified employees. In this make-or-buy context across nine job categories, we showed that four would benefit from training apprentices and only one would face higher costs. This research then was replicated for the United Kingdom as well as Italy and will be the baseline for comparative analysis across Germany, Austria and Switzerland.

*Turning back to Switzerland, how would you assess the impact of the CREE’s research?*

Considering, for example, the Leading House which is funded by the State Secretariat for Education, Research and Innovation, our research definitely has had considerable impact on Swiss policy. Of course there are examples where policy did not reflect our recommendations: in one instance, our research suggested that conditioning public procurement on whether bidders hire apprentices would be counterproductive. Notwithstanding this result, law makers saw some low hanging fruit and incorporated such a requirement into legislation for the sake of optics. Overall, however, our impact definitely is a positive one. We have been able to institute somewhat of a "virtuous cycle" in which our work is motivated by practical questions. The resulting research, thanks to it being peer-reviewed, is highly credible and therefore valuable to policy makers while also contributing to the literature.

*Stefan Wolter, thank you very much for this interview.*
Interview: Marlies Wälchli, former Head of the Department's Administration and Spiritus Rector

Marlies Wälchli was a member of the Department of Economics for nearly 20 years. Working in the administration, she has seen the department evolve from a very particular vantage point. Marlies will be retiring in spring 2019 after a brief stint at the Dean’s Office. In the following interview, Marlies walks us through the history of the department and her time here.

Interview with Marlies Wälchli

Marlies Wälchli, before actually talking about your time at the department: what did you do before and how did you come to the University of Bern?

I was "Familienfrau" for 16 years as well as a member of the municipal council. Unfortunately, the latter meant that I would often leave the house in the evening when my family returned. So in 1999 I decided to change this and successfully applied for the job as Prof. Ernst Baltensperger’s personal assistant.

What did the department look like at the time and how has it changed since?

Very different! The department was spread out across three different sites and each of the then seven professors had an own assistant. Together with Profs. Baltensperger and Hess, I was at the Vereinsweg where the department’s library was too. Among others, Profs. Dellas, Emons, Leu, Neusser and Stephan were at the Gesellschaftsstrasse and the CRED’s predecessor was at the Engehalde. A first notable change came when we introduced a PC Pool at the Vereinsweg. In 2005 the next major development was when the different
offices were relocated to UniS. One year later, in light of the upcoming retirement of Prof. Baltensperger, I was put in charge of gradually instituting a department-wide administration. However, this was not a popular idea everywhere: specifically the then four assistants felt that their standing would be diminished. Also, they — exclusively ladies, by the way — were very loyal to their professors and took pride in "being in charge" of a given chair. But I am of the persistent type and when I have set my mind on something, I follow through with it. At the same time, the department also began expanding, notably the Macro-Group thanks to the introduction of the MIME-program. Additionally, the department began hiring Assistant Professors and so, over time, our department grew to what it is today.

How would you evaluate all of these changes you described?

Positively; while my time at the Vereinsweg was unforgettable, regrouping the department at UniS definitely has increased efficiency. Similarly, interaction among professors as well as PhDs has improved. So, while having grown in size it still has the feel of a family to it. Perhaps there is room for improvement regarding communication, specifically with respect to the Administration Office. You see, this office is at the center of the department and everything comes together here!

Given your tenure here, you got to know and work with so many people. How would you describe these relationships?

This probably is the part I enjoyed most. All these people have strong personalities, just like me and our relationships would reflect this. Overall, I always felt trusted and was granted a large degree of autonomy and responsibility. Obviously, this implied that if I made a mistake I would also have to take responsibility.

Did you ever make a mistake?

No. (laughs).

Last question, dear Marlies: what are your plans for your retirement?

I have not yet gotten around to actually planning everything. I very much look forward to the increased freedom and to spending time with my husband, my grandchild Flavio, as well as my family in general. I will also be travelling to the United States regularly to visit my younger son who lives there. Also, simply because of who I am, I have accepted a mandate from the municipal council and will preside over the club "U100" that provides a "generational network" and helps integrate foreigners. Overall, I think I’ll be fairly busy!

Marlies Wälchli, thank you very much for this interview. We wish you all the very best.
Macroeconomic activity and economic confidence are intimately linked. For example, there has not been a single instance of a recession in the US during the last half century that has not been preceded/accompanied by a significant deterioration in confidence (as measured, say, by the popular MCSI). This relationship underlies a great deal of commentary on the macroeconomic outlook. For example, recessions are commonly attributed to declines in aggregate demand triggered by negative sentiment. Reductions in hiring and investment by firms are often related to their pessimism about the demand for their products and reduced spending by consumers to their pessimism about their job and income prospects.

Mainstream macroeconomic models have little use for the conventional notion of "confidence"

In spite of its popularity with economic commentators, the conventional notion of confidence as a measure of market psychology has seen limited action in macroeconomic theory. An attempt was made in the late 80’s and the 90’s to model market psychology within models of multiple equilibria, animal spirits and self-fulfilling fluctuations. While such models proved useful for studying things such as speculative attacks they have proven less successful, both conceptually and empirically, as theories of the business cycle.

The mainstream DSGE models of our days completely ignore the possibility of coordination failure, strategic uncertainty and extrinsic shifts in market sentiment. By assuming that all economic actors have a common belief about the current state and the future prospects of the economy (e.g., agents never disagree with one another about the depth or length of a recession), these models imply that the millions of firms and consumers, whose joint behavior determines macroeconomic activity, can coordinate their actions in a perfectly orchestrated manner. This is not only blatantly unrealistic but also counterproductive. Lack of coordination is pervasive. As a result, the standard models take a narrow view of the notion of confidence: they link it exclusively to uncertainty about fundamentals such as technology and economic confidence.
policy, while ruling out uncertainty about the actions of others and the possibility of coordination failures.

**Waves of optimism and pessimism as drivers of the business cycle**

In contrast, in our paper confidence encapsulates beliefs not only about fundamentals but also about the beliefs of other people about the economy. The following narrative may help reveal the workings of our mechanism. Consider a negative confidence shock represented by the belief that other agents have developed a pessimistic outlook about the short-term prospects of the economy (with the medium- to long-term prospects remaining invariant). As firms expect the demand for their products to be low for the next few quarters, they too find it optimal to lower their own demand for labor and capital. Households, on their part, experience a transitory fall in wages and total income. They react by working less and by cutting down both consumption and saving. Variation in confidence, therefore, gives rise to cyclical co-movements between employment, output, consumption, without any commensurate movements in labor productivity, TFP, and inflation at any frequency. It is precisely these co-movement patterns that represent the key properties of observed business cycles and that existing structural mechanisms have difficulty accounting for.

Along with capturing these important features of the data, our mechanism offers a novel formalization of the notion of fluctuations in "aggregate demand". In spite of its popularity and widespread use, aggregate demand is a fuzzy concept that is difficult to define in general equilibrium models. Our model links aggregate demand and its variation to the level and variation of confidence (a barometer of the beliefs held by economic actors about other actors' outlook on the economy) and, unlike the New Keynesian model, it does not require either nominal rigidities or frictions in the conduct of monetary policy for demand to matter for business cycles.

More generally, our work makes contributions on both the methodological and applied front. The methodological contribution lies in devising a method that bypasses the technical difficulties associated with incomplete information and strategic uncertainty. The applied contribution concerns the modelling of certain types of waves of optimism and pessimism about the short-term economic outlook, the quantification of their importance within the main business cycle models of nowadays (RBC and New-Keynesian models), and the demonstration that these waves provide a theory of business cycles that is more compelling than existing, alternative theories.

Estimates suggest that up to 539 species have become extinct in the US over the past 200 years. Yet, while there had been a growing awareness of the extinction threat to a number of species since the turn of the 19th century, prior to the Endangered Species Act in 1973 (ESA) no general protective legislation was put in place. The ESA potentially provides extensive protection for species listed, including e.g. protection of critical habitat, implementation of a recovery plan, restrictions on take and trade, and federal aid to State and Commonwealth conservation departments. Currently over 2,400 species figure on the ESA's endangered species list, and annual expenditures on their conservation exceed USD 1.5 billion. This begs the question as to how effective the ESA has been in terms of facilitating species recovery.

One has to recognize of course that, in practice, implementation of an effective species recovery plan is not necessarily straightforward since habitats are not always easily defined, threats are often multi-faceted, monitoring can be difficult, and implementation can be costly, both more generally and in terms of opportunity cost. A representative case in point of these challenges is the loggerhead sea turtle. More specifically, sea turtles are threatened by a number of factors, including entanglement in fishing gear, poaching and illegal trade of eggs, meat, and shells, ocean pollution, and coastal development. Consequently, their population is widely believed to be decreasing at an alarming rate worldwide. A crucial part of the threat to loggerheads is the presence of artificial lighting on their nesting beaches, where there has been considerable evidence showing that artificial nighttime light deters sea turtle adults from nesting and disorients them. Moreover, artificial lighting also increases the mortality rate of sea turtle hatchlings because it interferes with hatchlings' ability to find their way from their nests to the sea.

While loggerheads have been ESA-listed and hence protected since 1978, with current annual expenditures of nearly USD 9.5 million, it is not clear how effectively they are protected. In Florida, which hosts 90 per cent of nesting activity in the US, they enjoy additional protection under the 1995 Florida Marine Turtle Protection Act (MTPA), which specifically prohibits, amongst other things, the "take" of loggerhead turtles, where "take" includes their harassment and harm. As confirmed by a ruling of a federal appellate court in 1998, artificial light on beaches during their nesting period falls under this definition of "take" and hence can be viewed as prohibited by both the ESA

Research Bit: Protecting Species Through Legislation: The Case of Sea Turtles

Eric Strobl – While species protection in the US is arguably the most extensive in the world, there is mixed empirical evidence as to whether it has actually been effective. We use the case study of loggerhead sea turtles in Florida to show that legislation can indeed be an effective tool for species preservation. We also show that legislation, at least in the case of loggerheads, may be much less costly than alternative species conservation strategies.
and the MTPA. Additionally, the Florida Department of Environmental Protection (DEP) has enacted a ruling setting forth guidelines for local government regulations that control beachfront lighting to protect nesting females and hatching sea turtles. However, importantly, the DEP sea turtle lighting rule does not require local governments to legally adopt the proposed guidelines. While presently most Florida coastal counties and municipalities have adopted some form of beach lighting ordinances, their ordinances differ widely not only in terms of their legislative details but also in their effectiveness of implementation.

In this study we explicitly set out to analyze how effective the sea turtle friendly lighting legislation (STFL) has been and what the monetary benefits are. To this end we build a time-varying county level STFL ordinances index that takes the intricacies of the legislative pieces and their implications for sea turtle nesting into account. We combine this with information on local nesting activity over 26 years and more than 200 beaches, which we use to econometrically quantify the effectiveness of the ordinances. We find that the legislation has indeed been effective in encouraging nesting activity of loggerheads. With this estimate in hand, we employ a calibrated population model for loggerheads to assess the effect of STFL ordinances on the evolution of their population over the long term. Our findings, displayed in Figure 1, show that compared to having no ordinances the current situation reduces the years to extinction by 10 per cent, but that increasing ordinances to their maximum potential effectiveness (currently Florida counties are on average only 42 per cent effective) would add a further 19 years to their overall survival as a species in Florida.

Finally we use our results to put a monetary value on the STFL legislation. To this end we compare the number of turtles saved to how much it would cost to raise them in captivity to then be released into the wild. We find that the costs of such an alternative strategy would range between USD 17 and 39 billion per year, i.e., between 1.8 and 4.2 per cent of Florida’s GDP. Taking a range of willingness-to-pay-estimates derived from the existing literature we show that the Florida public is, however, likely to be ready to only finance at most 4.5 per cent of such a program.


![Figure 1: Population Dynamics of Loggerhead Turtle Population under Current and Counter-Factual Scenarios](image-url)
Motivation
The mitigation of man-made climate change is impeded by the public goods property of greenhouse gas emission reductions, specifically by the fact that each individual country’s efforts to reduce emissions benefits all countries in a non-exclusive and non-rival manner. In addition, there is no supranational authority which might ensure an efficient outcome, leading to a general under-provision of emission reductions.

The international community, recognizing these issues, therefore aims at the creation of international environmental agreements (IEAs). The most recent negotiations led to the formation of the so-called Paris agreement, which was approved in December 2015.

Contribution & Model
Economists analyze IEAs in the context of game theoretical models. In the standard model, countries are regarded as homogeneous entities and are represented by a single benevolent decision maker, e.g. a government that acts in the best interest of its country. My thesis deviates from this by assuming a hierarchical structure in domestic environmental politics, meaning that e.g. democracies typically feature a chain of delegation from voters to those who govern. In order to introduce this feature, the standard two-stage coalition formation game is complemented with an additional delegation stage. The goal of the thesis is to identify, if and in what direction the domestic delegation stage can affect outcomes on an international level.

The stages featured in the model are the following: in the first stage, the principals in the individual countries simultaneously decide on whether to join an IEA. In the second stage, the principals simultaneously delegate to agents who, in the third stage, simultaneously decide on their domestic emission levels. In countries that did not join the IEA, the agents choose emissions such as to maximize their own payoff while agents of countries that joined the IEA choose emissions such as to internalize some exogenously given fraction of the externalities that their emissions cause.
Despite being highly stylized, this model captures essential characteristics of the hierarchical structure of domestic and international environmental policy. For example, the principal might be the median voter in a country, while the agent represents the elected government.

**Results & Outlook**

The standard coalition formation game, i.e. one without delegation, predicts that the stable coalition size depends on the degree of internalization: the larger the fraction of internalized damages, the lower the coalition size. In the case of full internalization, the largest stable coalition size is 2 countries. In introducing the delegation stage, I find that it nullifies any attempt to increase the stable coalition size resulting from more modest environmental agreements that internalize only a fraction of externalities caused by coalition members. Furthermore, I find that the possibility of delegating the choice over emission levels to independent agents leads to strategic delegation in the sense that principals in both types of countries, member or non-member, delegate to agents with lower valuations of environmental damages than they exhibit themselves. This then results in higher global emissions than in the case without delegation.

In my thesis, I analyze weak delegation which can be observed in direct democracies like Switzerland. The delegation is considered weak because the membership decision, i.e. whether or not the country joins a coalition, lies in the hands of the electorate. However, in order to also reflect processes in representative democracies, the model has to be adapted to analyze strong delegation. In this case, delegation occurs in the first stage, i.e. the membership decision is also delegated to an agent. I am currently working on a model of strong delegation as a part of my PhD thesis. Similarly, I will include some form of heterogeneity across countries into the model, with the goal of being able to better describe processes, and specifically obstacles, in climate agreement negotiations.
Publications

Journal Articles


Publications (3)


**Monographs**


Book Chapters


Newspaper & Blog Articles


**Davies, Ronald & Joseph Francois.** 2018, October 1. Hard Brexit, Hard Decisions and 'Irexit'. *VoxEU.*

Publications (5)


Some Working Papers


Visit www.vwi.unibe.ch/research to read the Discussion Paper Series of the Department of Economics.

Other Publications


Grants & Awards

Grants

**Bischof, Tamara, Michael Gerfin & Jonas Meier:** Grant from the *Berne University Research Foundation* for the project "Physician Induced Demand and Financial Incentives – Evidence from a Natural Experiment".

**Brunetti, Aymo & Konstantin Büchel:** Grant from the *Berne University Research Foundation* for the project "Improving Basic Education in Developing Countries: Is Teachers' Content Knowledge the Missing Link?".

**Von Ehrlich, Maximilian:** Grant from the *Swiss State Secretariat for Economic Affairs (SECO)* for the project "Estimating Housing Supply Elasticities".

**Francois, Joseph:** Grant from the *Swiss National Science Foundation* for the project "Regulatory Heterogeneity in International Trade: From Measures to Systems".

**Francois, Joseph:** Grant from the *European Union Horizon 2020 Program* for the project "RESPECT – Realizing Europe's Soft Power in External Cooperation and Trade".

**Koubi, Vally:** Grant from the *Swiss Network for International Studies* for the project "Environmental Change and Migration: The Role of Urbanization in Conflict Processes".

**Möller, Marc:** Grant from the *Swiss National Science Foundation* for the project "Dynamic Screening without Commitment: Rent, Lease or Sell?".

**Wolter, Stefan C.:** Grant from the *Swiss State Secretariat for Education, Research and Innovation* for the project "Efficiency of the Swiss Education System".
Awards and Honors

**MÜLLER, TOBIAS:** Student Best Paper Prize 2018 awarded by the *International Health Economics Association*.

**SPYCHER, SARAH:** VWG-Prize for Economics 2018 awarded by the *Volkswirtschaftliche Gesellschaft des Kantons Bern*.

**WALLIMANN, HANNESES:** VBW Excellence Award Bronze 2018 awarded by the *VBW – Vereinigung Berner Wirtschaftswissenschaftler*.

**WOLTER, STEFAN C.:** Appointed member of the "Wissenschaftlicher Beirat Gemeinschaftsaufgabe" of the German *Bundesministerium für Bildung und Forschung* and the *Kultusministerkonferenz* of the German Bundesländer.

Appointments & Promotions

**ANDRÉ BODMER** has been appointed Postdoctoral Researcher in Macroeconomics.

**THOMAS TVEIT** has been appointed Postdoctoral Researcher in Climate Economics.
Department News

Doctoral Theses

ADRIAN, NANA CHRISTINA: "Salience, Consequences and Equal Sharing in Partnerships". Doctoral Committee: Marc Möller, Fabian Herweg (Universität Bayreuth).

ALTERMATT, SOPHIE: "Money Demand, Money Velocity and Twisting the Yield Curve. Three Essays in Empirical Macroeconomics". Doctoral Committee: Luca Benati, Refet S. Gürkaynak (Bilkent University), Peter N. Ireland (Boston College).

BERNHARD, SEVERIN: "Three Essays on Unconventional Monetary Policies, Forward Guidance and Open Economics". Doctoral Committee: Fabrice Collard, Céline Poilly (Aix-Marseille Université).

BODMER, ANDRÉ KURT: "Intangible Investments in Macroeconomics". Doctoral Committee: Harris Dellas, Apostolis Philippopoulos (Athens University of Economics and Business).

NGUYEN, HUONG QUYNH: "Economic Integration and Firm Performance in Vietnam". Doctoral Committee: Joseph Francois, Miriam Manchin (University College London).

STUCKI, YANNIC: "Essays in Business Cycle Analysis". Doctoral Committee: Fabrice Collard, Franck Portier (University College London).


Moving on...

SOPHIE ALTERMATT has left the department and has accepted a job offer at Bank Julius Baer & Co. Ltd.

FABRICE COLLARD has left the department and has accepted a job offer at the Toulouse School of Economics.

YANNIC STUCKI has left the department and has accepted a job offer at the Swiss National Bank.

JACQUELINE THOMET has left the department and has accepted a job offer at the Swiss National Bank.