



Sinergia Workshop 2016 – Inequality and Globalization

Abstracts for Paper Presentations

Sales and Markup Dispersion: Theory and Empirics

Mathieu Parenti (with M. Mrazova and P. Neary)

We derive exact conditions relating the distributions of firm productivity, sales, output, and markups to the form of demand; in particular, for a large family (including Pareto, log-normal, and Fréchet), the distributions of productivity and output are the same if and only if demand is “CREMR” (Constant Revenue Elasticity of Marginal Revenue). We then use the Kullback-Leibler Divergence to quantify the information loss when a predicted distribution fails to match the actual one; and we find that, to explain sales and markups, the choice between Pareto and log-normal productivity distributions matters less than the choice between CREMR and other demands.

Heterogeneous Effects of Tariff and Nontariff Trade-Policy Barriers in Quantitative General Equilibrium

Katharina Erhardt (with P.Egger)

Most applied work in international economics treats trade policy (a) as exogenous and (b) as to be linearly related to log trade costs. This paper proposes a structural modelling approach that allows for the estimation of (possibly) non-parametric partial effects of potentially endogenous tariff and nontariff trade policy. The findings suggest that non-log-linear direct effects of tariff and nontariff trade policy lead to different average effects and add substantively to the degree of heterogeneity of trade policy in quantitative general equilibrium. For instance, the average and median general-equilibrium effects of tariff changes on trade flows are up to three times as high when allowing for nonparametric direct effects of trade policy in comparison to the standard log-linear approach. Moreover, the variance of the effects is larger by a factor of 13 with nonparametric relative to conventional, parametric, log-linear direct effects. Overall, trade policy changes appear to be effective only for countries and sectors where the import tariffs in place are low to medium-high.

Inequality and Demand-Driven Innovations: Evidence from International Patent Applications

Christian Kiedaisch (with S. Dorn)

We analyze a model with non-homothetic preferences in which rich households consume a larger variety of goods than poorer households, and in which inequality affects the incentives to innovate through the channel of demand. We show that the relative importance of market size and price effects depends on the size of the population and on total income and that inequality is more likely to be harmful for innovation the higher GDP per capita is. The model is extended to a multi-country setting in order to make predictions about how population size, GDP and the level of inequality within a country affect the number of international patents that are validated in the country. In an empirical analysis based on PATSTAT data, we find a positive association between inequality and international patent flows in countries with low GDP per capita and a negative association in countries with high GDP per capita. These results are in line with the model predictions and robust to the inclusion of several control variables.



Skill-biased Imports in China

Li Lei (with H. Li and H. Ma)

Importing capital equipment and machinery is crucial for a developing country to acquire advanced technology and achieve economic growth. In this paper we show that imported capital goods also drive up demand for skills because foreign technology is skill complementary. As a result, skill premium rises where more machines and equipment are imported. Using micro level data from China, we find that about 46% of the increase in skill premium and 21% of increase in skilled labor share could be explained by capital imports.

Estimation of Trade Costs

Reto Föllmi (with S. Legge, L. Schmid and J. Zweimüller)

The estimation of trade costs is crucial to determine the welfare gains of trade liberalization. We review existing techniques for the estimation of trade costs and provide new empirical evidence on the distribution of estimated bilateral trade costs. We document that traditional estimation approaches lead to absolute magnitudes of trade costs that are often implausible, especially when assuming a small elasticity of substitution. We also discuss the importance of the no-arbitrage condition as well as the absence of destination country-specific effects in the estimation. Our results document the distribution of estimated bilateral trade costs for a variety of empirical models



Abstracts for Poster Presentations

Does Democratization Foster Trade? An Empirical Case Study of African Countries using the Synthetic Control Method

Mirjam Bächli

This paper investigates the effect of democratization on exports and on imports using data from 1976 to 2011. The case study encompasses Sub-Saharan Benin, Cape Verde, Kenya, Madagascar, Mali and Senegal because they all became democratic between 1991 and 2002. For economic data I draw on a balanced panel with UN Comtrade data and for the democratization index on the Polity IV database. The nonparametric synthetic control method that I apply for the estimation provides a systematic data-driven way to build the counterfactuals. There are indications that exports grow slower after a systemic transition.

The Impact of Migration on Foreign Direct Investment

Irene Fensore

In this paper, I investigate whether the presence of migrants has an impact on foreign direct investment decisions. Using a novel data set on bilateral FDI stocks, I show that migration is a key factor in determining bilateral investment allocation. I also identify other important drivers mostly overlooked in the literature, namely bilateral linguistic, genetic and religious distance. Finally and contrarily to initial expectations, the effect of migrants does not seem to be stronger for more distant countries.

Communal Land and Agricultural Productivity

Charles Gottlieb (with J. Grobovšek)

This paper quantifies the aggregate impact of key characteristics of communal land tenure arrangements that prevail in many developing countries. Such tenure regimes follow a “use it or lose” principle, imposing limits to land transferability via the threat of expropriation. We measure the distortionary impact of such policies in a dynamic general equilibrium selection model where individuals make occupational and operational choices. The model, calibrated to Ethiopia, provides the following findings. Lifting restrictions to land transferability lowers agricultural employment by 19% and increases GDP by 7%. It also results in a large increase in agricultural relative to non-agricultural labor productivity, 68% in real and 78% in nominal terms. Limited land transferability can therefore rationalize a substantial fraction of the large agricultural productivity gap in poor economies. The associated loss in aggregate productivity, though, is comparatively minor.

Heterogeneity and Technology Diffusion

Adrian Jäggi

In this project, I will explore inequality as a potential driver of technology diffusion. A lot of research in the economic growth literature has tried to explain how technology comes into existence (e.g. Romer [1990 JPE], Aghion and Howitt [1992 Etca, 1996 JEconGrowth]). Many countries, however, are not concerned with technology creation, but are rather technology adopters. Hence, this project will focus on these countries that adopt technologies from the frontier. Since it has been found that technology (or productivity) is vital for sustained economic growth (e.g. Solow [1957 REStat]), exploring what drives technological progress is an important question to answer, since it has been found that lags in technology adoption might explain large parts of cross-country differences in TFP (Comin, Hobijn and Rovito [2008 JEconGrowth]).



The role of inequality in the process of technology adoption is largely unexplored; and this project tries to provide some answers. Intuitively, a more unequal society fosters technology adoption, because a rich class is needed in order to create demand for new technologies. On the other hand, however, in a more equal society a larger share of the population might be able to afford the technology over time. Hence, one can imagine that one has to differentiate between an extensive and an intensive margin when trying to explain the effect of inequality on technology adoption. Indeed, it has been found that technology diffusion curves have two margins, where we see convergence across countries for the extensive margin but divergence for the intensive margin (Comin and Mestieri [2014 Handbook Econ Growth]).

The first part of this project therefore empirically explores the question if and in which way inequality affects technology adoption. Using Gini coefficients as well as quantile shares of income to measure inequality, I will investigate how inequality can explain certain measures of technology diffusion across countries and time. To make data about technology diffusion comparable across technologies, I will calculate technology usage lags (Comin, Hobijn and Rovito [2008 JEconGrowth]). This reflects the intensive margin of technology diffusion, which is more interesting to explore, because first it might explain divergence across countries and second it has been found that the intensive margin can explain a larger fraction of variation in GDP across countries than the extensive margin (Comin and Hobijn [2010 AER]). The main question to be answered here is whether income inequality can help explain cross-country differences in technology diffusion.

In the second part of the project I want to develop a neoclassical model that features both macroeconomic inequality (as in Foellmi, Wuergler and Zweimueller [2014 JET]) on the household side as well as a production side that is characterized by productivity growth due to technology adoption (as in Comin and Hobijn [2010 AER]). The aim here is mainly to derive an equilibrium (technology) diffusion curve, which can again be brought to the data to estimate equilibrium adoption lags (extensive margin) and penetration rates (intensive margin). The main question to be answered here is how different aspects of inequality shape technology diffusion at the intensive and extensive margin in the context of a neoclassical growth model.

Beyond Severance Pay: Labor Market Responses to the Introduction of Occupational Pensions in Austria

Andreas Kettemann (with F.Kramarz and J.Zweimüller)

This paper studies how a major policy change in Austria – the introduction of mandatory occupational pensions and the abolition of employer-provided severance pay – affects job mobility. The new rules were applied to employment relationships that started on January 1, 2003 or later, whereas jobs having started before that date continued to be subject to the old system. The new rules brought about two major changes. First, under the old system only laid-off workers were subject to a severance payment, whereas under the new system both quitters and laid-off workers are able to transfer their pension account with the associated separation payment to a new employer. Second, the system abolishes a discontinuous payment scheme (with severance payments jumping at tenure thresholds) to a continuous payment scheme (with monthly employer contributions smoothly increasing the balance on one's pension account). We find that workers subject to the new system are more than 20 percent more likely to leave a distressed firm (where a plant closure or a mass layoff will take place in the near future) than workers subject to the old system in a similar situation. We set up a model of on-the-job-search in which demand shocks to firms generate heterogeneous layoff probabilities, predicting that workers are more likely to leave when their firm is in a bad shape. Estimating the model by Simulated Method of Moments, we study the quantitative response in job mobility when a voluntary quit (but not a layoff) is penalized with loss of a payment upon job separation compared to a situation where this is not the case. We find that the estimated model can fit the mobility response generated through abolishing severance pay and introducing occupations pension under realistic parameter values.



Ancestral Distance as a Barrier to International Trade

Stefan Legge (with I. Fensore and L. Schmid)

We investigate the impact of ancestral distance on international trade flows. Using a new data set covering the universe of global trade, we document that ancestral distance is an important barrier to bilateral trade in addition to transportation costs. We use genetic differences between populations as a proxy for ancestral distance. Our results show that country pairs with a high genetic distance are less likely to trade with each other (extensive margin) and if they do trade, we find that genetic distance negatively affects the volume and number of goods traded (intensive margin). These findings are robust to including a vast array of micro-geographic controls as well as linguistic and religious distance variables. We provide evidence suggesting that the inverse relationship between bilateral trade flows and ancestral distance arises from both increased trade costs.

Beggar-Thy-Neighbour Tax Cuts: Mobility after a Local Income and Wealth Tax Reform in Switzerland

Isabel Martínez

Tax competition between cities and states raises the question to what extent taxpayers respond to differences in income tax rates by migrating to low-tax areas. This paper analyzes two large cantonal tax reforms in Switzerland in 2006 and 2008. The canton of Obwalden first introduced a regressive income tax with the explicit purpose of attracting affluent taxpayers, followed by a flat rate tax, lowering taxes for all taxpayers. DiD estimations comparing Obwalden with neighboring cantons confirm that the reform was successful in increasing the canton's tax base by increasing the share of rich (+20-30%) and their average income (+13-23%). Using individual tax data I apply a 2SLS approach to estimate how responsive migration was to the tax reduction. I find a large elasticity of the inflow of rich taxpayers with respect to the average net-of-tax rate ranging from 3.1 to 6.7. The elasticity of the stock of rich taxpayers is 2–2.6. These large elasticities can be explained by (i) the large pool of intentionally treated in the present institutional setting, which puts almost no restrictions on taxpayers to take advantage of the low tax, and (ii) the initially low share of rich taxpayers in Obwalden combined with the small size of the canton. DiD estimates of cantonal revenue, however, suggest that the tax cuts despite attracting and retaining a substantial number of rich taxpayers, did not lead to an increase in cantonal tax revenue per capita.

A Tale of Two Tails: Productivity Distribution and the Gains from Trade

Sergey Nigai

I use firm-level data to show that neither the Log-normal nor the Pareto distribution can approximate the shape of the productivity distribution along the entire support. While the former underpredicts the thickness of the right tail, the latter does not capture the shape of the left one. Using empirical distribution as a benchmark, I show that such inaccuracies lead to sizable errors in the estimates of the gains from trade in models featuring firm selection. I propose using a mixed distribution which models the left tail as Log-normal and right tail as Pareto and produces negligible errors in quantitative analysis.