

The choice of domestic policies in a globalized economy

Justina A.V. Fischer

Abstract

This paper describes the socio-economic adjustment effects exerted by globalization (taking as starting points competitive pressure, sectoral shifts, and financial market contagion) and discusses their relevance for domestic policy-making. I argue that these economic pressures and the resulting transformations in the domestic economy constrain government's policy choice set to an extent that actual policies are quite freed from any political ideological context. However, important government tasks in a globalized economy remain: remedying information asymmetries between buyers and sellers, regulating markets to combat externalities, as well as providing essential goods.

Key words: globalization, trade, domestic policy, deregulation, competition, financial markets, government intervention

JEL codes: F01, F15, F16, F18, F42, G15, H23, H41, H5, H7, I0, J0, D62, D82

Research for this paper was funded by the Swiss National Science Foundation under a grant to the National Centre of Competence in Research on Trade Regulation and the European Commission (COFUND fellowship), based at the World Trade Institute of the University of Bern, Switzerland. NCCR TRADE WORKING PAPERS are preliminary documents posted on the NCCR Trade Regulation website (www.nccr-trade.org) and widely circulated to stimulate discussion and critical comment. These papers have not been formally edited. Citations should refer to a "NCCR Trade Working Paper", with appropriate reference made to the author(s).

The choice of domestic policies in a globalized economy

Justina A.V. Fischer¹

World Trade Institute,
University of Bern

Version 30th March 2012

Abstract

This paper describes the socio-economic adjustment effects exerted by globalization (taking as starting points competitive pressure, sectoral shifts, and financial market contagion) and discusses their relevance for domestic policy-making. I argue that these economic pressures and the resulting transformations in the domestic economy constrain government's policy choice set to an extent that actual policies are quite freed from any political ideological context. However, important government tasks in a globalized economy remain: remedying information asymmetries between buyers and sellers, regulating markets to combat externalities, as well as providing essential goods.

Key words: globalization, trade, domestic policy, deregulation, competition, financial markets, government intervention

JEL codes: F01, F15, F16, F18, F42, G15, H23, H41, H5, H7, I0, J0, D62, D82

Acknowledgement

I thank Philipp Aerni, Lisa Bürgi-Bonanomi, Thomas Cottier, Joelle De Sépibus, Christian Häberli, David Herren, Dannie Jost, Matthias Oesch, Marion Panizzon, Anirudh Shingal, and Fitzgerald Temmermann for fruitful discussions. Research for this paper was funded by the Swiss National Science Foundation under a grant to the National Centre of Competence in Research on Trade Regulation and the European Commission (COFUND fellowship), based at the World Trade Institute of the University of Bern, Switzerland.

¹ Senior Researcher; World Trade Institute, University of Bern, Hallerstrasse 6, 3012 Bern, Tel.: +41 31 631 3432; Assoc.prof. at the University of Oradea, Oradea, Rumania; e-mail: justina.fischer@wti.org; mail@justinaavfischer.de

Contents

- 1. Introduction**..... 4

- 2. The impact of globalization on the domestic economy**..... 5
 - 2.1. Globalization pressures domestic economy to be efficient*.....6
 - 2.2. Globalization induces structural changes across economic sectors*.....7
 - 2.3. Globalization leads to dependence on international financial markets*.....11

- 3. Globalization constrains policy choices of domestic governments**.....13

- 4. Outlook to the future of domestic policy-making**.....14
 - 4.1. The role of human nature*..... 15
 - 4.2. Macro-economic stability*..... 16
 - 4.3. Redistribution and smoothing of transformation process*..... 17
 - 4.4. Improvements of resource and goods allocations*.....18
 - 4.4.1. Externalities*..... 19
 - 4.4.2. Information asymmetries*.....24
 - 4.4.3. Public provision of essential goods*.....27
 - 4.5. Multilevel governance*..... 29

- 5. Conclusion**.....31

- References**.....32

- Endnotes**.....52

1. Introduction¹

A new phenomenon is increasingly getting into the focus of socio-economic research: (economic) globalization and how it impacts people's socio-economic wellbeing. As such, international trade is not new to mankind – as its history, spanning from the Roman Empire, the middle-aged Hansa trade organization, to the trans-Alpine and the Sino-European silk trade routes, suggests. However, prior to the 19th century, cross-national and cross-regional exchange had its physical limits and was often restricted to highly profitable luxury goods: For example, trade of firm shares through financial markets was limited to the firms in the region close-by, with the financial market's reach determined by the horse speed of messengers traveling on streets that turned into mud in autumn. Also, most goods traded were profitable luxury goods consumed by the richer middle and upper classes, e.g. gold, wine, silk, salt, spices (one may recall the wine-cloth example in the Ricardo model, where British cloth at that time was of the highest quality). However, this picture of rather marginal economic international connectedness changed with the dawn of industrialization, as technologies for cheap mass production and new transport technologies became available, but also through its improvements in contract enforceability and abolishment of bridge tolls, import and export taxes.

With the dawn of industrialization rather small-scale international trade 'turned' into what we may call nowadays '(economic) globalization', or the 'globalized economy'. The new quality of this phenomenon is that it affects now not only an aristocratic or wealthy elite but the common man, in various dimensions: first, goods traded include now mostly normal goods (and its components) that are consumed on a daily basis, ranging from toilet paper to yoghurt, aiming at meeting a common man's wants; second, capital flows now freely across countries, seeking the most attractive investment opportunities, open to be taken up by the common man (and their portfolio managers). Globalization also affects the common man not only in his/her role as consumer and investor, but also as worker, as the opening-up of the domestic market to foreign imports pressures his/her employer to stay competitive – and this not only in a specific, small export sector, but in all economic sectors that are directly or indirectly exposed to foreign supply and demand. Finally, the common man in his/her role as laborer may decide herself to migrate to the best-paid job, transgressing borders between states. Economic globalization as such is a dynamic process that transforms the structure of the domestic economy, and once it has gained a certain momentum, it continuously accelerates and

becomes unstoppable. In such globalized world, development prospect of the domestic economy increasingly depends on international trade and capital markets, and, thus, at large, so does also the wellbeing of the common man.

This paper discusses whether the turning of the national economy into a globalized economy has an effect on governments' choice set of feasible policies. The underlying idea is that as a country globalizes, its economic development becomes more and more determined by external economic drivers, and lesser and lesser by internal processes; globalization forces the domestic economy to stay competitive, to deregulate markets, to lower government spending and tax levels, triggering brutal and unavoidable structural changes, causing much collateral social 'damage' such as growing sectoral unemployment and increasing income inequality. In addition, stronger financial linkages across countries make the single country more vulnerable to developments in their trading partners' economies. In consequence, national governments loose their discretionary decision-making power and influence over many areas of their domestic economies. This paper draws this conclusion by presenting classical and modern models of trade and providing illustrative examples of sectoral structural changes; the innovative contribution lies in discussing these otherwise quite known predictions and developments from a new angle - that is from the viewpoint of domestic governments' policy choices. It concludes with a discussion of which tasks remain for the domestic government in a globalized economy: namely combating the negative effects of globalization through smoothing socio-economic transformation processes, stabilizing the economy as protection against cross-country contagion effects, remedying information asymmetries in markets, imposing *Pigovian* taxes on imported goods produced abroad under violation of workers' or human rights, and, finally, publicly providing, or controlling the supply of, essential goods such as water, electricity, infrastructure, and food.

2. The impact of globalization on the domestic economy

Economic globalization, as described in the introduction, is the increasing integration of a country into the world markets for goods, capital, and labor. Domestically, such increasing exposure to international markets manifests in rising volumes of exported and imported goods and services, as well as in growing outflows of domestic savings into foreign investment

projects, and increasing inflows of foreign capital into domestic companies. With today's modern means of transportation and English as established 'lingua franca', economic globalization is also reflected in an increasing mobility of labor across countries, skilled and unskilled likewise.² Economic globalization also manifests in foreign direct investment (FDI) (such as in the re-location of entire production facilities into foreign countries), in joint ventures between domestic and foreign companies (inducing knowledge transfer across countries), and in services provided from 'abroad' for domestic companies and vice versa. Overall, economic globalization is a multidimensional dynamic process of integrating one country into the world economy that, once it has gained a certain momentum, continuously accelerates and becomes unstoppable (see, e.g., Proudman and Redding, 2000, for a dynamic model). The following sections discuss the socio-economic effects of globalization with a special focus on competitive pressure, on sectoral-structural changes, on financial international interdependencies, and how these processes generate strictly binding constraints for domestic policy choices.

2.1. Globalization pressures domestic economy to be efficient

The process of globalization forces the domestic economy to stay competitive; this has, from government's point of view, the disadvantage of restraining her policy choice set and, thus, limiting her discretionary power over the country. For example, integration of the domestic economy into goods and capital world markets forces local producers to increase their efficiency in production and to produce at competitive costs, in order to remain attractive for (foreign) investors and (foreign) consumers (similarly, Garrett 1995); consequently, as economic globalization increases, domestic firms may lobby for a deregulation of national labor markets. Domestic firms under pressure may also demand lower taxes and social security contributions, which both make the production factor 'labor' more costly, thus lowering their international competitiveness (see similarly, Blank and Freeman, 1994). Indeed, the model by Cai and Treisman, (2005) predicts that, under capital mobility, countries with an initially rich endowment in one production factor will have, in equilibrium, generated an attractive business environment with low tax levels and less government spending. A shrinking tax base, however, exerts pressure on governments to reduce their absolute and relative spending levels (Garrett and Mitchell, 2001; Hines and Summers, 2009). This welfare spending restraining effect is often referred to as the 'disciplining effect' of economic globalization (e.g., Garrett, 1995). On the empirical side, Garrett and Mitchell (2001) report a

restraining impact of trade openness on government spending, while Plümper et al. (2005) show analogous effects exerted by the amount of low-wage imports (for budget compositional effects, see, e.g., Garrett, 1995).³ In support of the labor-market related predictions, the accounts in Lindert and Williamson (2001) suggest that increasing trade openness is often accompanied by domestic market liberalization and a decreasing generosity of the welfare state. Similarly, Fischer and Somogyi (2012) and Dreher and Gaston (2007) have shown that over the last 20 years economic globalization in OECD countries has led to a decrease in worker's employment protection and union density.⁴ Taken altogether, in order to stay competitive in a globalized world, governments are under pressure to deregulate labor markets, to liberalize capital markets and, ultimately, to lower taxes and government spending. Most importantly for my argumentation, such economic pressures persist irrespective of the political ideology of the national party that is currently in power (e.g., Baldwin and Krugman, 2004; Qian and Roland, 1998).

2.2. Globalization induces structural changes across economic sectors

Another example for how the domestic government loses discretionary power over the domestic economy are the unavoidable long-run effects of economic globalization on the relative size of the sectors in an economy, the employment prospects of low-skilled and high-skilled workers, and the consequences for income distribution. According to the standard model of trade (e.g., Krugman and Obstfeld, 2012), integration into the world economy causes a country to specialize in the economic sector the country has a comparative advantage relative to the world market (e.g., because of a relative or absolute abundance of a certain production factor). In OECD countries, such specialization will be rather in the industrial than in the agricultural sector, rather in high-skilled than in low-skilled labor production, and rather in capital-intensive than in labor-intensive industries. Classical trade models which assume full employment predict then overall income inequality to increase as the immobile, sector-specific factor in the exporting sector gains from trade, while its sector-specific counterpart in the other sector loses (Ricardo-Viner model); applied to OECD countries, high-skilled labor would experience wage increases, while wage of low-skilled workers would fall. This development is exacerbated by productivity growth through learning-by-doing effects in the exporting sector (Proudman and Redding, 2000).⁵ In consequence, at the sectoral level, forces of globalization will attract production factors into those sectors and industries the domestic economy specializes in, while, on the other hand, setting free production factors in the

economic sectors that are destined to contract. This structural change is aggravated through international capital flows and FDI, transferring more efficient technologies from abroad into exporting local firms (Bernstein, 2000; Coe and Helpman, 1995; Mohnen, 2001; van Pottelsberghe and Lichtenberg, 2001), forcing inefficient competitors out of the domestic market (Haddad and Harrison, 1993). Also the classical Rybczynski–theorem predicts capital inflows to exacerbate this development: under fixed goods prices a rise in factor endowment should increase the output overproportionally of that economic sector that uses this factor intensively – leading to (further) (relative) specialization in that sector and shrinkage of the other. Thus, for OECD countries one may expect an inflow of capital that increases the production of capital-intensive goods, ultimately contributing to further contraction of the labor-intensive production.

With labor market rigidities, dislocations caused by such structural changes may include increased job turnover and short-run structural or frictional unemployment (for a model, see, e.g., Bernard et al., 2007). Assuming a two-factor two-good Heckscher-Ohlin model with capital and labor but allowing for unemployment, Davidson et al. (1999) predict unemployment to rise in the sector that uses labor intensively but does not export – caused by the endogenous sector-specificity of labor resulting from matching and searching costs. Supporting empirical evidence for the unemployment-increasing effect of trade liberalization can be found in, e.g., Trefler (2004) for the case of the NAFTA.⁶ In developed countries, specialization in the high-technology industry with high-skilled labor may then lead to mass dismissals of unskilled workers in the low-technology industry, exerting pressure on their wages. Krugman (1995) has shown that in the US with flexible labor markets wages for low-skilled workers (possibly employed in the contracting economic sector) have declined, while in Europe instead, with more rigid labor markets, unemployment of low-skilled workers has risen.

That globalization increases income disparities between workers and capital owners is concluded by, e.g., ten Raa and Mohnen (2008) who suggest that international competition in goods markets drives down rents on labor, while (positive) rent levels on capital persist for future R&D investments. Already the classical Rybczynski–theorem predicts that in developed countries international trade leads to higher rents for capital and high-skilled labor than for other production factors.⁷ Applying tax competition models to an international context, Baldwin and Krugman (2004) conclude that under strong economic globalization, in

developed countries with their larger capital endowments tax levels are lowered, implying less means for redistribution and a more skewed income distribution, when compared to developing countries that are abundant in labor. In general, economists hypothesize that globalization most possibly forces governments to tax bases that are least responsive to the forces of worldwide competition – implying that those production factors are taxed higher that are relatively less mobile than the other ones, such as immobile labor in classical trade models (Garett, 1995; see Bretschger and Hettich, 2002, for empirical evidence). Indeed, taxation of labor (wages) is rather observed in populous countries, while in small countries with higher international labor mobility rather goods, services, and imports are taxed (Hines and Summers, 2009) - reducing overall fiscal progressivity. Many other modern trade theories equally predict a more skewed income distribution, e.g., Egger and Kreickmeier (2009), Feenstra and Hanson (1997), and Gaston and Nelson (2002). That economic globalization causes particularly wage disparities in OECD countries to grow has been empirically shown by Wood (1994), Burtless (1995), Dollar (2002), Dreher and Gaston (2008), while the confirmatory study by Smeeding (2002) uses a micro-level approach.⁸

Empirical evidence on sectoral shifts

While there is ample empirical research on the linkages between international trade and income inequality and unemployment (see above), the evidence on the impact of globalization on sectoral shifts in the economy merits a separate in-depth investigation. That the forces of economic globalization cause structural changes in the involved economies can be concluded from country-sector-specific developments of sectoral (relative) export shares, sectoral employment, and sectoral contribution to GDP.⁹ Proudman and Redding (2000) show such industrial development patterns for the G-5 economies between 1970 and 1993: For example, a loss in comparative advantage is observed in the motor vehicle industries in France and the USA, the computer sector in Germany, the metal production in Great Britain, and the textile industry in Japan. In contrast, specialization occurred in the communication industry in the U.K., in the paper and printing industry in the U.S., in the aerospace industry in France, and in the motor vehicle industry in Japan. In general, since the 50ies Middle and Southern Europe experienced the closing down of footwear and cloth manufactures. Since the nineties the same occurred in post-communist Eastern Europe (see ILO, 1996); for example, in Latvia the shoe pair production shrank between 1990 and 2008 from some 20 million pairs to some mere 156'000 pairs (1996: 2,2 millions).¹⁰ In the same geographic region, this development was paralleled by the shrinking of the agricultural sector, resulting in a growing dependence on

agricultural imports from mainly developing countries.¹¹ In consequence, employment in these shrinking sectors decreased. For example, between 1980 and 1993 employment in the textile, clothing, and footwear industries declined by 40% in Germany, by 35% in Spain, by 51% in Poland, and by 30% in the USA (see ILO, 1996).¹² Prominent present-time examples of sectoral changes in Western Europe include the phasing out of subsidizing the coal and mining sectors as well as parts of the automotive sector, where the pressure to do so increased substantially because of the fall of the iron curtain and the emergence of the automobile sector in the South-East Asian countries. From 1985 to 2007, employment in British mines fell from 220'000 workers to 7'000 workers (Germany: 607'000 workers in 1957, then 166'000 in 1985, and 35'000 in 2007); main coal producer is now China.¹³ Between 1997 and 2005 the contribution of the automotive industry to GDP has substantially fallen in France, Great Britain, Italy, and Spain (with the exception of Germany which specialized in high-end products), while at the same time the car production has tripled in India and quadrupled in China (see Holweg et al., 2009).

Since the driving factors of these sectoral shifts are structural ones, namely the loss in comparative advantage in specific industries, subsidizing the production in such 'endangered' industries may only reduce the speed of these adjustment processes and appease the workers in the shrinking sectors. In the long-run, however, as globalization increases, subsidies will cause greater economic inefficiencies and welfare losses, ultimately becoming so large that budgetary and efficiency concerns will force governments to put this policy to an end. Notably, in Germany the decision in 2007 to cease subsidizing coal mining was made by a left-right pro-worker coalition government – being an illustrative example that globalization leads to economic necessities that supersede political ideology.¹⁴

Taken altogether, despite its positive impact on economic growth through innovation and efficiency gains, globalization exerts pressures on economic sectors with a comparative disadvantage, making them contract and letting entire industries disappear; the resulting sectoral unemployment and increase in overall income inequality will occur despite national government's efforts to gain control and possibly counteract this process, and irrespective of the colour of the political parties in power.

2.3. Globalization leads to dependence on international financial markets

Finally, economic globalization also manifests in the increasing linkages between foreign and domestic financial markets (through economic interdependencies, but also through herding contagion via the behavior of internationally acting investors, see Calvo und Reinhart, 1996; Dornbusch et al., 2000; Khan and Park, 2009). Thus, globalization is predicted to aggravate the impact of a recession or a financial market crash abroad on the domestic economy. The higher the degree of a country's economic integration is, the larger the effect of the world economy on the local economy will be; the strongerly interlinked national economies all over the world are, the more likely economic 'domino effects' are to occur (similarly, Hertz 1999).¹⁵ Due to the speed of the cross-national transactions in milliseconds ('high frequency trading') and the information transparency in financial and capital markets, as compared to goods markets, cross-country domino effects are more likely to be transmitted first through the financial channels before they start, with some time lag, working through the traditional international trade-in-goods-relations (Hernández and Valdés, 2001; Van Rijckeghem and Weder, 2001; Forbes, 2004).¹⁶

Illustrative examples for domino effects are various past- and present-time financial market crises, among others, the US stock market crash of October 1987, the Mexican crisis of 1994, the Asian crash of 1997, US-driven crisis of 2008-09, the new economy bubble-burst of 1999/2000, and the Eurozone crisis of 2011 (e.g., Kleimeier et al., 2008; Khan and Park, 2009; Markwat et al., 2009):¹⁷ the 1997 Asian crisis, for instance, started first with a currency crisis in Thailand, then spilled over to financial markets in Asian countries of the same region – one argues through herding contagion of Western investors, others argue owed to inefficient financial intermediation of moral-hazard-infected 'finance companies' and market prices of capital and land –; finally, the Thailand crisis spilled-over also to developed countries such as the U.S.A. and Western Europe (Ito, 2007; Krugman, 1998; Radelet and Sachs, 1998). In 2008/09, it was the break-down of the US American market for houses (after a deregulation of the domestic banking sector), followed by that for mortgages loans, then that for mortgage-backed securities, which then triggered first a local US-wide, and then finally a world-wide financial market crisis: the sudden collapse in mutual trust between then undercapitalized private and public financial intermediaries led to a liquidity crisis worldwide (on the role of trust, see also Guiso, 2010).¹⁸ In the case of the 2010-11 crisis, the over-accumulation of debts of the Greek government of up to 150% of GDP first affected the market for government

bonds of Greece only, where interest rates started to skyrocket,¹⁹ leading to a loss in sovereignty over their national budget to the IMF and the EU (Alessi, 2011). Then, via the EURO-currency-link and ‘wake-up-effects’ (Forbes, 2004)²⁰, the entire Euro-currency area got into the focus of international investors’ critical assessments, and interest rates for national treasure bonds increased, particularly strongly for the PIGS-countries.²¹ With the remaining Euro countries partly and temporarily bailing out Greece, Portugal, and Ireland²², the debt crisis of Greece became a EURO-collective one: first, with shrinking credibility and creditworthiness of the Greek government spilling over to other PIGS countries (‘sovereign debt contagion’), and, then, to the initially unaffected EURO-non-PIGS-countries, whose growing rescue efforts let their own debt-to-GDP ratios rise substantially (see Alessi, 2011, for an analysis of the Eurozone crisis).²³

There is empirical evidence that financial linkages via international capital markets ultimately spill over into the real economy. In particular, the financial market crises described above are shown to impact the real economy of countries all around the world – through triggering lower growth, causing considerable inflation, in addition to higher unemployment and larger government debt (Ito, 2007; Mishkin, 1992).²⁴ For example, “the October 1987 crash [...] reduced stock prices by over 20% in most developed markets” (Markwat, 2009, p.1996), leading to bankruptcies of banks and firms (Krugman, 1998). In 2008/2009, as a result of the US housing market crisis Irish banks collapsed, which led to a shrinkage of GDP by 10% and an increase in unemployment by 9 percentage points (e.g., Alessi, 2011). Similarly, the Eurozone crisis forced the Greek government to carry out (exogenously imposed) budget cuts, letting Greek unemployment rates skyrocket from about 12% to 18% (September 2011), compared to one year ago, and the youth unemployment rate reach 46% (September 2011).²⁵ Similarly for the other PIGS-countries, youth unemployment in Spain rose from 42.8% to 49.3% (from 10/2010 to 10/2011), and in Portugal from 27% to 31%, but stayed at 30% in Italy (November 2011; January 2012: 31%). In other EU countries during the same period, youth unemployment was falling, such as in Slovenia and Finland (18% to 12%, and 19% to 16%, respectively).²⁶ Taken altogether, my argument in these examples is not that in PIGS-countries globalization forces domestic governments to cut debts against their will (which would have become economically necessary anyhow); rather, my argument is that globalization exogenously imposes a specific timeline on domestic policy-making, in particular a certain speed and roughness in making reforms that might not be in congruence with local political preferences. Overall, growing global linkages through financial markets let

foreign economies and investors gain more and more impact on the domestic economy, taking the country out of the control of local policy-making.

3. Globalization constrains policy choices of domestic governments

The discussion so far has revealed that globalization exerts strong pressures on the domestic economy to stay competitive and to reduce government spending, that it triggers fast and rough sectoral shifts, and that it creates strong international financial dependencies. As an inevitable result, these pressures of globalization constrain domestic government's choice set w.r.t. economic policy-making: Globalization induces structural changes that are, in the long-run, unavoidable, possibly creating mass unemployment in one economic sector, while leading to economic growth and worker shortage in another sector, increasing income inequality not only within the group of workers, but also between workers and capital-owners. In addition, in order to stay competitive, globalization also exerts pressures to pursue policies of labor market deregulation, to shift the tax burden from capital onto less mobile labor and consumption, and to cut government and welfare spending. Finally, globalization creates vibrant trade and capital linkages across countries leading to strong cross-national economic dependencies and domino effects, with the potential to aggravate or even to cause national economic crises, exogenously determining the speed of domestic reforms. Obviously, globalization makes the domestic economy re-structure - which may be to the benefit of some societal groups (production factors), but equally to the disadvantage of others.²⁷

The argument here is not about assessing whether these economic adjustment processes are overall 'good' or 'bad'; the argument I develop here is about that these changes and most of their socio-economic consequences are not under the control of domestic politics. The idea here is that governments may be compelled to carry out policies that are entirely 'dictated' by the forces of economic globalization, that is the needs of investors, producers, and workers (in developed countries: high-skilled laborers) in the domestic exporting sectors and the demands in the importing markets abroad.

In its final consequence, globalization may free domestic government's policies from their ideological context: Irrespective of the ideology of the ruling party, under the pressures of

globalization *any* government may be forced to deregulate labor markets, to cut taxes and welfare spending, and to let domestic capital flow freely into more lucrative investment projects abroad. Expressed with the words of Garrett (1995, p.670): “From a neoclassical perspective, the ability of the left and organized labor to [pursue leftist policies such as to] increase government spending, tax capital heavily, and pursue expansionary fiscal and monetary policies would decrease with exposure to trade and capital mobility”. Nevertheless, I argue that a similar statement equally holds true for certain policies preferred by more conservative-minded voters: opening up the economy may force domestic industries, e.g., to pay competitive wages, reducing the premium on male labor (‘positive discrimination’), and to employ only the most productive workers, causing a higher female labor force participation (see Becker, 1957/1971); both changes would then result in the destruction of the traditional role model in society. In addition, already the decision to pursue a policy of trade openness constrains both left-wing and right-wing governments at home likewise, as such policy requires macroeconomic stability, in particular a low level of inflation - with all its labor-market, debt-related, and distributional consequences (Bhagwati and Srinivasan, 2002).

Taken altogether, economic globalization imposes a strictly binding economic constraint on national government’s discretionary power over domestic politics, forcing her to accept exogenously imposed economic adjustment processes and to pursue policies that may not be consistent with her (less binding) political ideologies. Consequently, globalization lets national governments seemingly lose steering power over their domestic economies.

4. Outlook to the future of domestic policy-making

The previous discussion provides evidence that the transformation of the domestic economy induced by (economic) globalization pressures ruling politicians (partly channeled by lobbying activities of the affected socio-economic groups) to pursue certain policies; these pressures may become so strong that their own ideological constraints become less binding for their political decision-making. A prominent real-life example is that of left-wing pro-worker governments that are forced to deregulate labor markets and to relax workers’ employment protection (Dreher and Gaston, 2007; Fischer and Somogyi, 2012; see section 2.1.). In the short-run, domestic governments may well try to compensate and counteract

certain ongoing structural changes in the economy; for example, in Europe and the U.S. the shrinking of the mining and agricultural sectors had been combated through government subsidies – which had kept costs of production artificially low. We have seen, however, that, in the long-run, such counteracting policies generate more inefficiencies than benefits to society and are, therefore, economically not sustainable – in the very end, both left-wing and right-wing governments likewise will prefer to put paying subsidies for dying industries to an end. Particularly in the light of limited government budgets, opportunity costs of such non-sustainable subsidies are high, as these financial resources could be more wisely invested in the prerequisites for economic growth in general, e.g. schooling, infrastructure, and R&D, and particularly in those sectors with a (potential) comparative advantage in the world market (see also sections 4.3., 4.4.2., 4.4.3.).²⁸

What would a sensible government policy in a globalized economy then look like? Where are its limits? Where do lie domestic governments' obligations to intervene?

4.1. The role of human nature

What governments cannot change is human nature as such – that is the striving for maximization of benefits from economic activities (be it gainful employment or profit-generating production), as classical economic theory assumes. Consequently, human beings in their role as traders are believed to always seek the most profitable investment opportunity, in their role as consumers and producers to choose the cheapest offer (of otherwise homogenous consumption goods/production factors), and in their role as employee to take the job that pays the highest wage. Owed to such rational human behavior, we all contribute to, and cause, the pressures exerted by globalization: choosing the cheapest consumption good induces pressures on managers to cut production costs through dismissal of (more costly) older workers, and seeking the most profitable investment projects forces firm owners to lobby for lower capital tax levels and labor market deregulation, while taking the job with the highest net pay pressures local governments to cut down income taxes and welfare state spending, etc. Human nature was also a main driving force in the recent financial market crises: young male investment bankers' choice of assets was and still is most possibly driven by their level of testosterone – compared to the average population, their higher levels make them less risk-averse and less patient (Coates and Herbert, 2008; Stanton et al., 2011).²⁹ Consequently, these also personally competing young men, then turning almost risk-neutral, are most likely to

invest in highly volatile assets promising higher returns, and to exploit marginal price differences between milliseconds in stock markets ('high frequency trading') – with the final economic consequences of exaggerated volatility, market destabilization and, possibly, financial crises.³⁰ Taken altogether, the mechanisms which these socio-economic pressures of globalization arise from are in-built in our human nature and cannot be eradicated.

So how much of, and what of, policy-making does remain then for domestic governments? We recognize now that certain structural changes triggered by globalization are inescapable and unstoppable – they will occur irrespective of domestic governments' political preferences and generate social and financial 'pain' for certain socio-economic groups that are now forced to undergo a process of adaptation. In the following sections I will discuss the tasks that are left to domestic governments in a globalized economy; in particular, I will argue that the classical government tasks as described by Musgrave (1959) not only remain but even gain in importance - which there are macro-economic stabilization, income redistribution through taxes and transfers, and optimization of resource allocation.

4.2. Macro-economic stability

We have already seen that macro-economic stability is a necessary prerequisite for reaping economic benefits from opening-up the domestic economy to foreign markets (Bhagwati and Srinivasan, 2002); robust economic fundamentals are also ways to protect the economy at home against contagious spill-overs from international financial markets (see also sections 3. and 2.3.). In particular, a sound macro-economic policy would include the correction of domestic market failures preventing healthy economic growth, e.g., through providing schooling (e.g., Barro 2001; Hanushek and Kimko, 2000; Krueger and Lindahl, 2001), communication and transport infrastructure (e.g., Esfahani and Ramírez, 2003; Munnell, 1992; Roeller, and Wavermann, 2001; Temple and Johnson, 1998), internal safety and regime stability (e.g., Alesina et al., 1996; Barro and Lee, 1994), through subsidizing R&D (e.g., Bayoumi et al., 1999; Segerstrom, 2007), but also through improving institutions that govern market processes, for example institutions which protect investments and intellectual property (e.g., Aidt et al., 2008; Castro et al., 2004, 2009; Gould and Gruben, 1996).³¹ Efficiency implications of liberalization and privatization policies for public goods provision are discussed in section 4.4.3. Furthermore, the importance of a sound macro-economic policy (promising future growth) and its credible communication to the public for re-establishing

(foreign) investors' trust can be shown in the recent example of the Euro crisis, in particular in the development of diverging interest rates on state bonds between the two PIGS countries Greece and Italy since January 2012.³² In sum, globalization is linked to growth-and-stability-promoting government policies not only as the latter is a prerequisite to the first (see section 3.), but also through direct and indirect impacts of openness on the domestic economy (e.g., Barro, 2001) or through local growth-promoting policy instruments that originate from trade policy (e.g., tariffs and quotas).

4.3. Redistribution and smoothing of transformation process

In a globalized economy the government task of income and wealth redistribution not only remains, but even grows in importance. Economic theory predicts that the transformation processes induced by globalization would not only generate social and financial 'pain' for certain socio-economic groups, but would also foster overall growth, lower general unemployment, and, in the long-run, facilitate the accumulation of national wealth (Bhagwati and Srinivasan, 2002; Dollar and Kraay, 2004; Felbermayer et al., 2011; Frankel and Romer, 1999; Krueger, 1983); societal groups that benefit from globalization would include producers who are now able to seek the cheapest or most productive labor around the world, investors who can reap maximum returns from highly profitable investment projects abroad, and, finally, laborers at home with the appropriate skills whose earnings increase as their exporting sector expands (for literature, see footnote 27). Not unexpectedly has globalization often been brought in correlation with an increase in income inequality (see section 2.2.) – with potentially growth-lowering effects (e.g. through weakening property rights, Keefer and Knack, 2002).³³ Despite the unavoidability of all these globalization-induced transformation processes in the domestic economy, within certain boundaries, governments may be able to compensate the 'losers' of this transformation, channel these changes, smooth certain transition processes, and exert influence on the speed by which the domestic economy is adapting. For example, particularly in wealthy countries, national governments may afford paying unemployment benefits for dismissed workers in the shrinking sectors and finance their acquisition of new, now-wanted skills – Barro (2001) emphasizes the importance of technology-compatible education of workers for economic growth. Similarly, governments may support the transition to employing state-of-the-art technologies in production – as illustrative example Fan et al. (2008) report positive effects of subsidizing technology change in Indian agriculture. Furthermore, governments may provide limited support to start-up

enterprises and the founding of innovative industries in existing and potential exporting sectors (e.g., through temporary tax exemptions for venture capital firms) (Keuschnigg and Nielsen, 2003).³⁴ While government's political ideology may possibly have an influence on the choice of compensation schemes and policy instruments for smoothing, retarding, or facilitating these adjustment processes in the domestic economy, in my view, it would not impact the general direction of the economic transformation processes as such.

Despite the distortive impact of government interventions in the market process when markets are 'perfect' in any aspect otherwise (*First Welfare Theorem*), the *Second Welfare Theorem* postulates that government's redistributive activities would achieve a *Pareto*-efficient allocation in equilibrium if they related to individuals' initial endowments only, equalizing agents' starting conditions (in classical economics, their wealth), prior to their income-generating economic interacting ('equal opportunities', similarly Rawls, 1971). However, such view neglects the unpredictable dynamics of transition processes in a globalized economy, by assuming a static world in which agents would be able to decide on their utility-maximizing choices at young age for the rest of their lives.

Overall, we may conclude that the unequal distribution of gains and losses from globalization calls for redistributive government activities, in particular in order to facilitate and to smooth these socio-economic transformation processes.

4.4. Improvements of resource and goods allocations

Globalization, however, does not exempt domestic governments from their traditional role as optimizer of resource and goods allocations when market mechanisms fail to achieve the *Pareto*-efficient allocation by themselves – by providing public goods, levying taxes, and setting regulations (Blankart, 2003; Musgrave, 1959).³⁵ Thus, letting the forces of globalization work does NOT imply admitting Neo-liberalism and Laissez-faire policies in the domestic economy as a whole: government interventions in the economy are still needed wherever market failures preventing *Pareto*-efficiency occur. Such classical failures include external effects like pollution of the environment (climate change), underprovision of public goods by private actors (infrastructure, army, education), but also information asymmetries in markets, e.g., with respect to so-called 'experience goods' (Nelson, 1970).

4.4.1. Externalities

Negative externalities

As my illustrations in the following will show, the bulk of the problems arising in a globalized economy may be discussed in light of the classical concept ‘internalization of negative externalities’. In case of a negative externality in production, the private costs of production do not fully reflect the costs imposed on society, so that production levels are too high according to the criterion of *Pareto*-efficiency (Arrow, 1969). In contrast to the classical closed textbook economy in which consumers and producers are located in one single country, in a globalized, open economy remedying market failures may become more complex. For example, a foreign good may be produced with a technology that pollutes the environment – be it traditionally through the by-product ‘waste’ or through negative externalities of its main active ingredients, such as nano-particles (‘nanotoxicology’, see also Jost, 2009; Oberdoerster, 2005)³⁶ – , lowering the production costs compared to a (possibly) domestic good that satisfies strict national environmental laws. Classical economic theory now predicts rational, selfish consumers to buy the cheaper, otherwise homogeneous foreign product (this prediction may be different if we assume strong other-regarding preferences, e.g., Fehr and Schmidt, 1999)³⁷; consequently, a high domestic demand for the foreign good causes a level of pollution that is not *Pareto*-efficient, while the environmentally-friendly, but more expensive domestic good faces a market demand of zero.³⁸ Without government intervention, the more expensive local producer leaves the market, while the foreign producer survives, suboptimally increasing worldwide pollution (Copeland and Taylor, 1994).³⁹

Analogous examples of social and environmental externalities generated abroad include any other good that is produced with a lower social standard as compared to the country they are exported to – be it under a weak employment protection scheme, child labor, under violation of human rights, with discriminatory practices, without a minimum wage, under a limited to non-existing welfare state, and/or without any type of social or health insurance. All these worsenings of working conditions serve to artificially lower the costs of (labor-intensive) production (in developing countries) and to, from the viewpoint of the importing (developed) countries with higher social standards, to swamp their markets with goods at dumping prices (Sinn, 2003) – as illustrative example, Busse and Spielmann (2006) show that child labor does lower production costs in developing countries. Overall, without domestic government intervention, so the public’s fear, the inflow of such goods into the domestic market will

either drive domestic firms into bankruptcy and/or induce a world-wide race to the bottom in terms of labor protection and social standards (see, e.g., Fischer and Somogyi, 2012, on employment protection; Dreher and Gaston, 2007, on union density; Sinn, 2003, for a more general treatment of social dumping).⁴⁰

In order to preserve certain social and environmental standards in the importing society, domestic governments may choose to intervene in their national goods markets so that foreign produce is sold at a price that internalizes the social and environmental externalities under which they had been produced. Means for internalizing such social standard and human rights externalities generated abroad may include classical trade policy instruments in the importing country applied to specific goods (quotas, tariffs), but also classical externality-correcting public choice instruments such as *Pigovian* taxes (Pigou, 1928) and licenses (as currently applied in international Climate-preserving CO2 reduction policies), as well as norm-setting ('rules of the game') through international treaties on labor standards/human rights in general (e.g., ILO convention; see the discussion of multi-level governance in section 4.5.).⁴¹ In case of environmental damage, another, alternative instrument to combat pollution may be the government-induced transfer of clean (green) production technologies (Copeland and Taylor, 1994).

An important, but non-classical example of an externality is that of price spill-overs across world markets for staple food and the resulting substitution effects regarding land use, both severely impacting food consumption and life expectancies of people in developing countries. Specifically, a rise in demand for a certain agricultural good as input factor in production will increase the price also for those who demand the same good for simple consumption – because arable land worldwide is rather fixed (at least in the short-run), supply is quite price-inelastic, leading to a large price spill-over from the production factor market to the consumption good market (see also Fischer, 2008). Current examples include maize that is an input factor in the production of electricity and of meat, but also used as staple food, or soy beans that also form the base for biofuel production (FAO, 2008).⁴² In addition, a growing world demand for one type of grain impacts the use of (worldwide fixed) plots for its (imperfect) substitutes, i.e. there is substitution of land use among different types of grain (Villoria and Hertel, 2011). Thus, a rising demand for meat or milk in the world market, for example because of taste changes in Asia, increases the price for all types of grain worldwide

likewise, thus jeopardizing the well-being of the impoverished who may not be able to afford their diaries any more ('food insecurity', FAO, 2008; Vadrot and Pohoryles, 2010).

While price externalities across close substitutes (for example, across goods 1 and 2, so that $\partial p_1 / \partial x_2 \neq 0$) as such are not regarded as classical externalities, the impact of the consumption of one part of world population (A) on the well-being of the other part (B) definitely is ($\partial U(B) / \partial x(A) < 0$), calling for government intervention. Improvement of worldwide staple food allocation would be achieved through policy means that internalize these negative externalities from meat/fuel consumption – for example through direct governmental regulation of the market (e.g., fixing the quantity of meat production). Alternatively, regulations concerning production technologies for meat and milk ('ethical husbandry') may serve the same purpose of increasing production costs and thereby lowering milk and meat consumption - a policy that may also raise the well-being of the animals involved. Finally, in analogy to the *Pigovian* 'junk food tax' or 'fat tax' proposed to internalize public health costs of obesity (e.g. Brownell et al., 2009; Mytton et al., 2007; Vartanian et al., 2007), negative spill-overs from meat, milk, and biofuel production to grain markets would be reduced through imposing a consumption tax on these commodities.

Briefly turning to the example of the selfish, young, risk-neutral male traders acting in the financial markets discussed in section 4.1., a small financial transaction tax on trade with financial derivatives such as options and futures, but also on that with stock shares, large enough to neutralize arbitrage gains from computer-based high frequency trading and from marginal course changes, might suffice to deter from further short-term investment and speculation. Such transaction tax has been proposed by, to name a few, economist J. Tobin, financier G. Soros, politician A. Merkel, and has now been implemented by the French government under the presidency of N. Sarkozy.⁴³ The danger of speculation in the essential goods markets (water, food, electricity, etc.) for the real economy became just recently evident again by an almost-break-down of the electricity distribution system in Germany (February 2012) due to an artificially created supply shortage (Spiegel, 2012), similar to the electricity crises that occurred in California in 2000 and 2001 (Sweeney, 2002; Weare, 2003).⁴⁴ In essential goods markets, securing supply at stable, reasonable prices would best be achieved by prohibiting short-term trade with assets linked to these essential goods, possibly combined with their government provision (see section 4.3.3.). All these proposed market regulations would substantially calm down international financial and essential goods

markets, reducing price volatility and preventing prices disconnected from the economic fundamentals, thereby reducing externalities from price jumps and price insecurity on the real economies worldwide. Like for any other *Pigovian* tax, while a financial transaction tax might raise substantial revenue for the government, one should not forget that its main purpose is not to generate revenue but to correct an otherwise *Pareto*-inefficient allocation of goods and resources.

Finally, many immigration issues can be discussed and viewed under the heading ‘externalities’ – either between two countries (the sending and the receiving country) or between the two labor markets in these countries. In principle, immigrants respond, like any other rational human being, to economic incentives, and weight the costs of emigrating (including the opportunity costs of leaving home – the ‘push factors’) against the expected gains to be reaped in the host country (the ‘pull factors’) (Borjas, 1989; Massey et al., 1993).⁴⁵ Recent examples include the large inflow of young Spanish, Italian, and Greek immigrants into Germany in 2011 – an increase up to 80% compared to 2010 –, the Euro crisis has let youth unemployment rates in the PIGS-countries skyrocket up to the 50 percent level (Sueddeutsche, 2011). This immigration into Germany (from the German point of view) creates positive spill-over effects in the PIGS labor markets (by diminishing their over-supply of labor), but also positive effects in the German market (as labor shortages, driving up employers’ labor costs, are remedied). According to neo-classical trade-theory, migration from countries with labor oversupply into countries with labor shortages constitutes a win-win-situation for both countries, a so-called *Pareto*-improvement (Krugman and Obstfeld, 2012). Immigration, however, might have negative, welfare-lowering effects on the host country: in case of already existing unemployment, or if skills of immigrants did not match employers’ needs, labor oversupply would be generated or acerbated, which not only would exert (further) wage pressure on the already employed, but also (even when wages were flexible) would increase unemployment (see e.g., Borjas, 2003, 2006).⁴⁶ In that case, the sending country would exert a welfare-lowering externality on the receiving country.

In either case of positive and negative externalities of immigration, government regulation may be useful: in the first case of *Pareto*-improvement, financial support for immigration (emigration) and government programs facilitating migration (e.g., language courses free of charge, etc.) may be considered, whereas in the second case of negative externalities skill- and demand-specific regulations in the receiving country may be called upon, possibly a national

government's fine-tuning of already existing supranational agreements (see, e.g., Panizzon, 2011; section 4.3.5.). As alternative to the direct regulation of migration inflows through quotas, receiving countries' governments might reduce externalities by letting immigrants pay an 'entry ticket' or sell/auction 'permits' for immigration (similarly, Becker and Becker, 1998) – while, in the publicly less often discussed case of a negative externality through emigration in the sending country, domestic governments could sell 'exit' tickets – possibly to be paid by the future employer abroad (an illustrative example for such externality-generating emigration is given when publicly-educated physicians and engineers leave Germany with an already-existing supply shortage for more attractive positions abroad). Selling exit/entry tickets to migrants constitutes a type of a *Pigovian* tax that internalizes possibly negative externalities from migration.⁴⁷

The Coase theorem

According to the *Coase theorem* externalities emerge as consequence either of missing property rights or of their missing enforcement ('rule of law') (Coase, 1960) – a view that leads to a set of internalization policies different from the already discussed *Pigovian* taxes, import tariffs, or harmonization of standards at the supranational level. In the *Coasian* view, externalities are simply caused by a deficiency in the legal institutions which establish markets, - while the externality-combatting government regulations discussed above constitute an intervention in assumedly already existing markets. In application to the externality 'air pollution' (and analogously for 'climate change'), the *Coase theorem* suggests that if the people were appropriated the 'good air' in their country, they could charge the polluting firm for her 'good air consumption'; however, if, instead, the 'property of good air' was assigned to the polluting firm, in order to achieve lower pollution levels the people had to compensate the firm owner for her profit loss (see Kahn, 2006, for an application to Hong-Kong). Environmental externalities across countries may also be combatted by allowing health-affected consumers in country A (being proprietors of their own bodies) to bargain with the polluting firm located in country B (that is to sue the polluting firm for compensation of health damages), so that the foreign company would reduce its pollution to the *Pareto*-efficient level. Overall, in the *Coasian* world international environmental externalities would be tackled in two ways: either through establishing a new market by assigning property rights, here in the first case regarding the 'good air', or, as in the second case, through creating cross-national law enforcement devices that would enable any person to sell the right to damage her

‘good health’ in the already-existing domestic ‘good health market’ of another country. *Coase* assumes these market transactions and the resulting *Pareto*-efficient allocation to be the outcome of a bilateral bargaining process. In principle, with no transaction costs, property rights assigned to either party (the polluter or the consumers) let market mechanisms bring about the *Pareto*-efficient allocation, but with stark differences in the resulting income distribution. In real life, however, this *Coase* solution fails because of coordination problems among the multitude of consumers (‘transaction costs’).

Positive externalities

Positive externalities in production or consumption equally call for government intervention, e.g., by means of a negative *Pigovian* tax (‘subsidy’) – in the case of a positive externality in production, the amount produced would be below the *Pareto*-efficient level as the additional benefits for society would not have been internalized by the private agent (Arrow, 1969). It is well known that private R&D investment with its positive knowledge-spillover into other firms, into other economic sectors (or even into foreign countries) is one area of economic activity in which private engagement is below the *Pareto*-efficient level, constituting a typical case for necessary government intervention (Arrow, 1962; for a literature review, see Klette et al., 2000). Indeed, government spending on cooperative R&D appears to successfully crowd-in private engagement (Fölster, 1995), letting such subsidies – contradicting a neo-liberal world view – become growth-enhancing and welfare-improving (e.g., Wooden et al., 2012, on the cost-effectiveness of government support for green technology). In the case of R&D, such negative *Pigovian* tax targeted in the right way may be recommended for the faster invention and adoption of new technologies.

In sum, also in the era of globalization allocation-optimizing national policies are called for that intervene in, and regulate, markets when negative or positive externalities occur.

4.4.2. Information asymmetries

The classical task of governments to intervene in, or establish, markets through providing institutional frameworks persists in a globalized economy also with respect to information asymmetry that creates uncertainty about goods’ characteristics (Akerlof, 1970). In classical textbook-models of a closed economy, information asymmetries between buyers and sellers lead to a *Pareto*-inefficient allocation and welfare loss, as goods of higher quality are ceased

to be produced and sold (Akerlof, 1970).⁴⁸ Particularly in a globalized economy, it may be even more difficult for domestic consumers to assess the quality of consumption goods that have been produced abroad through complex, thus intransparent and impervious production processes, under unknown societal circumstances (see Figure 1). In fact, most of the international financial crises described above were also caused by traders' uncertainty about financial products or the agents who sold them (be it national governments, commercial banks, financial agencies, fond managers, etc.). In such cases economic theory suggests governments to remedy this information asymmetry, for example by introducing warranties and labels that signal quality, based on assessments of some independent public agencies (Akerlof, 1970; Bond, 1982), either on the national or even on the supranational level (see also section 4.5. on multilevel governance).⁴⁹ Indeed, assuming ordinary, downward-sloping demand curves in a model of international trade, Levin (2001) predicts for normal consumption goods that gains from trade rise when buyer's information about the goods is improved.

Exhibit 7 – Illustrative supply chain for canned tuna

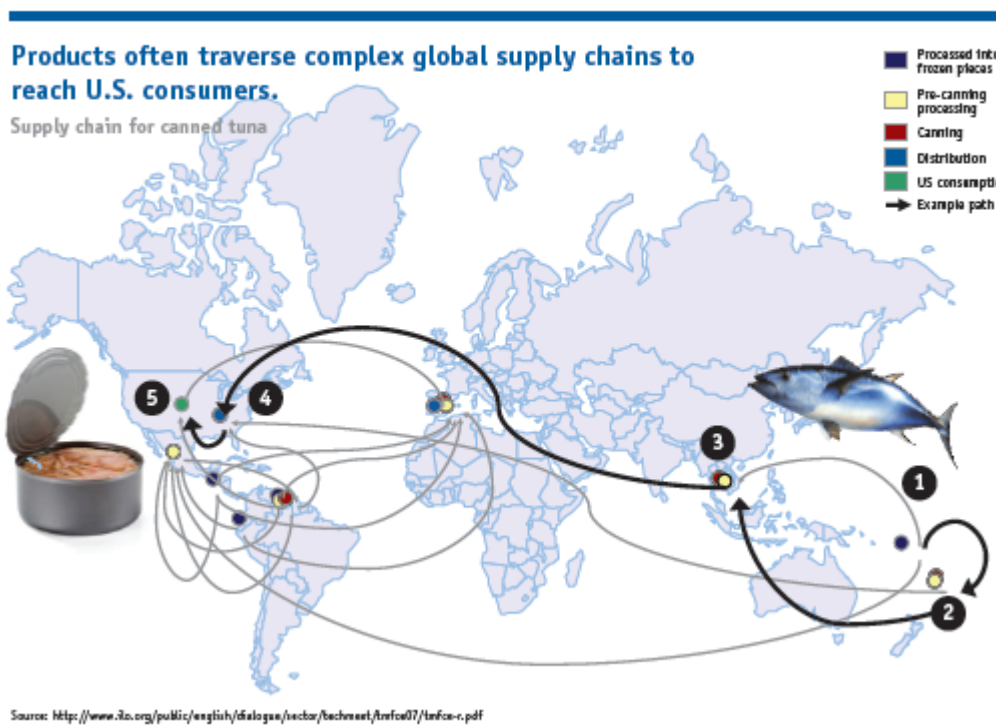


Figure 1: Complex production of canned Tuna

Source: FDA (2011), p. 14.

For disseminating to the public (as public good) otherwise private information on the quality of commodities, in the past, testing agencies have been founded either by concerned consumers themselves (originally as club good, e.g., the ‘Technischer Überwachungs-Verein’ (TÜV) in Germany) or by national governments concerned about public health (e.g., the ‘US National Food and Drug Administration’ (FDA), the NGO but tax revenue-financed ‘Stiftung Warentest’, etc.); in principle, also high-quality profit-maximizing firms should be interested in establishing an agency that signals the true quality of their products and thus aids to generate a consumer demand (alternative instruments include ‘brand names’, government-accredited in-firm test laboratories, etc., see Bond, 1982). Recently a debate started on the role of corporate social responsibility of so-called ‘lead sellers’ in global markets for setting food and product safety standards at the global level (Best and Mamic, 2008). In a globalized economy, not only international commodity exchange, but also various past crashes in financial markets, have revealed the need for such independent agencies that remedy information asymmetries in asset and goods markets (e.g., Guiso et al., 2010, on the role of trust in the interbank exchange) (including the necessity of bank regulations to avoid further outsourcing of business risks to the taxpayer).

Not only national testing agencies may impose a quality check on now-overwhelming masses of imports prior to their admission to the domestic market, but also international agreements on common technical safety and quality standards (e.g., ‘best practice’) may serve the purpose of combating information asymmetries between domestic buyers and foreign sellers (see also, FDA, 2011; see also section 4.5.). These quality-assessing agencies should be granted financial and administrative independence - on the one hand, from the sellers (who have an incentive as rational profit-maximizers to disguise the true (low) quality of their products; Akerlof, 1970), but, on the other hand, also from the government itself (which equally may act as seller in goods and assets markets, or may be inclined to instrumentalize the agency for other policy purposes) - ensuring that these agencies provide information that is both accurate and credible. Acknowledging these new government tasks in a globalized economy, the US FDA proclaimed on the 24th February 2012 to make its transformation into “a modern public health regulator in a globalized economy”, in order to “build a public health safety net for consumers around the world, created, supported, and maintained by global coalitions of regulators” (FDA, 2012) – the latter implying the strategic interaction with its counterparts abroad (FDA, 2011).

Thus, as masses of untested imports flood domestic markets and production processes become more complex and globalized, combating information asymmetries between sellers and buyers in markets is another classical government task which gains new importance in the era of globalization (e.g. FDA, 2011).

4.4.3. Public provision of essential goods

Globalization also underlines the importance of the classical, ‘public goods’-provision-task of domestic governments: Often, the process of opening-up domestic markets to the world is paralleled by a continuing privatization of formerly public industries – hoping that privatization would lower government spending and that competition between now-private suppliers would reduce managers’ rent-seeking and ensure production at competitive costs, which would also profit the common citizen, so supportive arguments go (Boyken et al., 1996; Megginson and Netter, 2001; Niskanen, 1971; Sappington and Stiglitz, 1987; Schmidt, 1996; Shleifer and Vishny, 1994; Stiglitz, 2002; Vickers and Yarrow, 1988; Williamson, 1964).⁵⁰ However, privatization shifts managers’ goal from pursuing a purely cost-covering, but population-wide supply to leading a profit-maximizing enterprise instead – consequently, management may lay off excess workers (e.g. Blanchard, 1997; Pint, 1991; Saal and Parker, 2001), but also actively lower firm’s search costs (e.g. Parker, 1997 for the UK), and simply shut down unprofitable branches, leaving some remotely living citizens without supply (Caves, 1990, for British railway; Pint, 1991).⁵¹ Furthermore, newly privatized, domestic firms may also use profits generated in their home countries to finance market expansion to foreign countries – all these factors triggering rising prices for consumers at home (e.g. Parker, 1997; Saal and Parker, 2000, 2001, on water supply privatization in England and Wales since 1989; Bel and Fageda, 2010, on airport charges).⁵² In addition, these formerly public, now privately-owned monopolies or oligopolies, which often supply in already concentrated markets, have a strong incentive to avoid competition by (jointly) exploiting their market power – despite potential government regulation (Parker, 1997; Yarrow, 1999). Indeed, in most principal agent models with asymmetric information between a monopoly firm and the regulating government the first-best (social-planner) allocation cannot be reached, leading in some cases to worse allocations compared to government ownership (e.g. Baron and Myerson, 1982; Laffont and Tirole, 1991; Shleifer and Vishny, 1994)⁵³. In contrast, privatization in ‘markets with perfect competition’ or under ‘competitive pressure’, combined with the absence of government corruption, may well have the expected production

cost-lowering and efficiency-increasing effects, despite its distributional consequences (e.g. Baron and Myerson, 1982; Frydman et al., 2002; Shleifer and Vishny, 1994; Zhang et al., 2010). Finally, the products of these newly privatized firms may now, like any other good in the world, be subject to the speculation of traders, causing a high volatility in world market prices – causing food insecurity, energy insecurity and black-outs, as well as unaffordable drinking water prices, etc. (see section 4.1.).

In sum, most privatization policies in Europe and other parts of the world appear to have failed as the following evidence would seem to suggest: these newly privatized firms generated highly concentrated national or regional markets, with prices for consumers often having quadrupled ten years after privatization, and little gains in economic performance, measured by amount supplied or growth in productivity (e.g. Stiglitz, 2002; Frydman et al., 2002, analyzing 500 state and privatized firms in post-communist Poland, Czech Republic and Hungary of 1994; Zhang et al., 2002, on privatization of the electricity sector in 51 developing countries from 1980 on).⁵⁴ Recent examples of rather failed privatizations of former state monopolies include electricity supply, train companies, postal systems and airports, but similar observations are made for water supply and grain production (e.g., Bel and Fageda, 2010; Saal and Parker, 2001; Zhang et al., 2002). While, in general, economic globalization, forcing to open up domestic markets (liberalization), creates competitive pressures, it does not appear to sufficiently do so in most parts of the concentrated, formerly public sector. While, owing to new production technologies, the production of electricity or the provision of transport services with trains is accompanied with lower sunk investments than decades ago, the grid system through which the service takes place (e.g. the rail tracks or the electricity grid) still meets the characteristics of a natural monopoly (‘subadditivity of costs’) – in which case having one single supplier is *Pareto*-efficient. In consequence, competition in newly liberalized markets was hampered either by incumbent firms’ ‘natural monopoly’ cost structure (e.g., sunk-cost-type distribution system and grids), inducing prohibitively high barriers to entry, or by incumbents firms’ collusive behavior against potential competitors (e.g., by charging discriminatorily high prices for third-party use of their grid system, or their unwillingness to prematurely cease long-term binding contracts with their customers, etc.).⁵⁵

Owing to such failures of privatization, the classical government task to organize and control the supply of essential goods (e.g., public utilities) such as water, electricity, infrastructure, and basic food remains and grows in importance in a globalized economy.

4.5. Multilevel governance

The classical tasks of domestic governments as described in Musgrave (1959) and as discussed in the previous sections 4.1. to 4.3. leave it open on which level of governance solutions for market failures are to be sought, and to what extent interplay between government tiers should be permitted – so-called ‘multilevel governance’, a term coined by Hooghe and Marks (2003). The *White Paper on multilevel governance* by the EU Committee of the Regions (2009) defines multi-level governance within the EU as “coordinated action by the European Union, the Member States and local and regional authorities [including cities], based on partnership and aimed at drawing up and implementing EU policies” (p.6).⁵⁶ Possibly, some essential goods may be better publicly provided or regulated at the local level, while others better at the state level. Similarly, some externalities may be better targeted at the national level, while for others solutions are better sought at the inter-governmental level. It is often the nature of the market failure itself that determines which governance level is the appropriate one – e.g., for securing a nation’s safety against external intruders the national level appears ‘naturally’ as appropriate (‘army’). In many cases, however, responsibility for achieving a certain policy goal has to be divided and shared across government tiers (White Paper, 2009).

Economic theory suggests that spill-overs across nations can most easily be internalized through coordination at the supranational level (international treaties and regulations, ‘horizontal multi-level governance’), viewing the involved sovereign states as players in prisoners’-dilemma/social-dilemma/public-goods-type games (Krugman and Obstfeld, 2012; Petersen, 2009). In laboratory experiments, communication among players and joint rule-setting with sanctions and rewards helps establishing the cooperative equilibrium (Bochet et al., 2006; Fehr and Gaechter, 2000; Isaac and Walker, 1988; Noussair and Tan, 2011).⁵⁷ Consistent with game theory, the White Paper (2009) and its Follow-Up (2012) propose “principles and mechanisms of consultation, coordination, cooperation and evaluation” (White paper, 1999, p.7) as such coordination and cooperation devices, also emphasizing the importance of mutual trust, with the aim to facilitate multilevel governance in general, but

particularly for areas where multilateral global governance is needed.⁵⁸ For example, a world-wide applied Tobin-type financial transaction tax would constitute such a regulatory device preventing cross-country externalities (see section 4.4.); another example is the coordination of sovereign states on a joint set of values in order to control governments' economic, political, and social activities worldwide, creating legal constraints ('international law') in a otherwise 'morality-free intergovernmental space' (Cottier and Hertig, 2003). Such "constitution of mankind" (Kadelbach and Kleinlein, 2007; Petersen, 2009; Tomuschat, 1997) may include both norms with a constitutional character that form part of some 'public administrative law', but also 'norms of an objective existence' that are rather grounded in fundamental philosophical principles on a meta-level (Kadelbach and Kleinlein, 2008); for example, 'the rule of law' and 'Human/Fundamental Rights' (e.g., Follow-Up, 2012; Rittberger and Schimmelpfennig, 2006) belong to the first group of norms, while proposed ethical norms with respect to the exploitation of the commons or the creation of supranational public goods may belong to the second (e.g., 'Common Concern', Cottier, 2012). However, supranational coordination devices are missing with respect to most of the other market failures identified above in section 4.4., of which many developed or were exacerbated through globalization (e.g. Castle, 2000; Baltensperger and Cottier, 2010), often paralleled by a shrinking state capacity to sufficiently regulate these failures unilaterally and autonomously ('denationalization', Cottier and Hertig, 2003; Grimm, 2005).

Unilateral national-level regulations may, to some extent, serve as substitutes for missing international coordination devices, economically leading to a second-best allocation (Petersen, 2009). In a game-theoretical social dilemma context, a unilateral regulation may be exemplary and serve as role model, constituting a form of leadership that, in the long-run, equally brings about the cooperative equilibrium (Güth et al., 2007; Levati et al., 2007).⁵⁹ Recent examples for such behavior may be the unilateral introduction of a Tobin-type tax in France in January 2012 or, half a year before, the decision by the German government to phase out producing nuclear energy. Complementing regulations by local authorities to national rules may be useful either for taking account of heterogeneity across jurisdictions that could not be addressed at the higher level, or for addressing commitment problems at the national level ('vertical multi-level governance'); a more local and decentralized approach in multi-level governance is recommended, e.g., for climate change, energy and ecological issues, by Betsill and Bulkeley (2006), Follow-Up (2012), for immigration and integration policies by Panizzon (2011), Follow-Up, (2012), for EU bioenergy policies by Söderberg (2008), Vadrot and

Pohoryles, (2010), for technical development assistance and political dialogue with developing countries (Follow-Up, 2012), and, finally, for EU common agricultural policy, maritime policy and implementation of the single market (Follow-Up, 2012).⁶⁰ Some authors go so far to conclude that while globalization disempowers the nation state, it “enhances the sovereignty of the local” (Ilgen, 2003, p.2). New forms of multi-level governance may also include the partnership between companies and local governments (‘cross-sectoral alliance’, Follow-Up, 2012).

Taken altogether, while the classical government tasks of providing macro-economic stability, remedying market failures, and redistributing income remain and gain new importance in the age of globalization, the governance level(s) at which specific policies and regulations are finally to be implemented is a question beyond the scope of this very generic analysis.

5. Conclusion

This paper uses predictions of theoretical models of trade and empirical evidence thereof to build an argument that economic globalization triggers unavoidable economic consequences and adjustment processes for the domestic economy. Moreover, I argue that, going beyond a purely ‘disciplining effect’ (Cai and Treisman, 2005), globalization constrains governments’ policy choice set in general, possibly to an extent that actual policy choices are mainly ideology-free, thus rather being driven by the demands and needs of investors and producers in the highly-profitable exporting sector. However, I also highlight and provide examples for (domestic) policy challenges that persist in a globalized economy - mainly the classical government tasks (Musgrave, 1959) of regulating the domestic economy in the presence of market failures (externalities, information asymmetries, public goods), in addition to stabilizing the national economy and smoothing transformation processes therein through redistributing income between winners and losers, - arguing that these classical government tasks become even more imperative as a country starts globalizing.

References

Afonso, A., L. Schuknecht and V. Tanzi, 2005. Public sector efficiency: An international comparison, *Public Choice*, vol. 123, 321-347.

Aidt, T., J. Dutta, and V. Senia 2008. Governance regimes, corruption and growth, *Journal of Comparative Economics*, vol. 36, 195–220.

Akerlof, G.A. 1970. The Market for "Lemons": Quality Uncertainty and the Market Mechanism, *The Quarterly Journal of Economics*, vol. 84, 488-500

Alesina, A., Özler, S., N. Roubini, and P. Swagel, 1996. Political instability and economic growth, *Journal of Economic Growth*, vol. 1, 189-211.

Alessi, C. 2011. The Eurozone in Crisis, version 2nd December 2011, Council on Foreign Relations (download: <http://www.cfr.org/eu/eurozone-crisis/p22055>)

Angelopoulos, K. and A. Philippopoulos 2007. The growth effects of fiscal policy in Greece 1960–2000, *Public Choice*, vol. 131, 157-175.

Antweiler, W., B.R. Copeland, and M.S. Taylor 2001. Is Free Trade Good for the Environment?, *American Economic Review*, vol. 91, 877-908.

Arrow, K.J. 1969, “The Organization of Economic Activity: Issues Pertinent to the Choice of Market versus Non-market Allocations”, in: *Analysis and Evaluation of Public Expenditures: The PPP System*. Washington, D.C., Joint Economic Committee of Congress.

Arrow, K.J. 1962, “Economic welfare and the allocation of resources for invention”, in: R.R. Nelson (ed.), *The Rate and Direction of Inventive Activity*, Princeton University Press, Princeton, NJ.

Baltensperger, E. and T. Cottier 2010. Monetary Regulation, The Role of International Law in Monetary Affairs, *Journal of International Economic Law*, vol. 13, 911-937

Baron, D.P. and R.B. Myerson 1982, Regulating a Monopolist with Unknown Costs, *Econometrica*, vol. 50, 911-930.

Barro, R.J. 2001. Human Capital and Growth, *The American Economic Review*, Papers and Proceedings of the Hundred Thirteenth Annual Meeting of the American Economic Association, vol. 91, 12-17.

Barro, R.J. and J.-W. Lee, 1994. Sources of Economic Growth, *Carnegie-Rochester Conference Series on Public Policy*, vol. 40, 1–46.

Barro, R.J., 1990. Government spending in a simple model of endogenous growth, *Journal of Political Economy*, vol. 98, S103–S125

Bauer, T.K. and K.F. Zimmermann, 2000. Immigration Policies in Integrated National Policies, IZA Discussion Paper No. 170.

Bayoumi, T., D.T. Coe, E. Helpman 1999. R&D spillovers and global growth, *Journal of International Economics*, vol. 47, 399–428

Bel, G. and X. Fageda, 2010. Privatization, regulation and airport pricing: an empirical analysis for Europe, *Journal of Regulatory Economics*, vol. 37, 142-161.

Bhagwati, J., and T.N. Srinivasan 2002. Trade and Poverty in the Poor Countries, *The American Economic Review*, vol. 92, Papers and Proceedings of the One Hundred Fourteenth Annual Meeting of the American Economic Association, 180-183.

Biaggini, G. 2000. Die Idee der Verfassung – Neuausrichtung im Zeitalter der Globalisierung?, *Zeitschrift für Schweizerisches Recht* 119, 445-.

Balassa, B. 1965. Trade Liberalization and ‘Revealed’ Comparative Advantage, *The Manchester School*, vol. 33, 99-123.

Baldwin, R.E., and P. Krugman 2004. Agglomeration, integration and tax harmonisation, *European Economic Review*, vol. 48, 1–23.

Becker, G. S. 1957/1971. *The Economic of Discrimination*, 2nd edition 1971, Chicago, University of Chicago Press.

Becker, G.S., G.N. Becker 1998, *The Economics of Life: From Baseball to Affirmative Action to Immigration: How Real-World Issues affect our Everyday Life*, McGraw-Hill, 1998.

Best, S. and I. Marmic 2008. *Global agri-food chains: employment and social issues in fresh fruit and vegetables*, International Labor Organization, Employment Working Paper No. 20

Betsill, M., and H. Bulkeley 2006. Cities and the Multi-level Governance of Global Climate Change. *Global Governance*, vol. 12, 141–159.

Bernard, A., S. Redding, and P. Schott 2007. Comparative advantage and heterogeneous firms, *Review of Economic Studies*, vol. 74, 31–66.

Bernstein, J.I. 2000. Canadian Manufacturing, U.S. R&D Spillovers, and Communication Infrastructure, *The Review of Economics and Statistics*, vol. 82, 608-615.

Blanchard, O. 1997. *The Economics of Post-Communist Transition*, Oxford: Oxford University Press.

Blanchflower, D.G., A.J. Oswald, and P. Sanfey 1996. Wages, Profits, and Rent Sharing, *Quarterly Journal of Economics*, vol. 111, 227–51.

Blank, R.M., and R.B Freeman, 1994. “Evaluating the Connection between Social Protection and Economic Flexibility”, in: R.M. Blank (ed.), *Social Protection versus Economic Flexibility*, Chicago, University of Chicago Press, 21-41.

Blankart, C. B. 2003. *Öffentliche Finanzen in der Demokratie*, 5th ed. Munich: Verlag Vahlen.

Bond, E.W. 1982, A Direct Test of the "Lemons" Model: The Market for Used Pickup Trucks, *The American Economic Review*, vol. 72, 836-840

Borjas, G.J. 2006. The Impact of Immigration and the Labor Market, presented at the Conference on Labor and Capital Flows in Europe Following Enlargement, January 2006.

Borjas, G.J. 2003. The Labor Demand Curve *is* Downward Sloping: Reexamining the Impact of Immigration on the Labor Market, *The Quarterly Journal of Economics*, vol. 118, 1335-1374.

Borjas, G.J. 1989. Economic Theory and International Migration, *International Migration Review*, vol. 23, Special Silver Anniversary Issue: International Migration an Assessment for the 90's, 457-485.

Boycko, M., A. Shleifer and R. W. Vishny 1996. A Theory of Privatisation, *The Economic Journal*, vol. 106, 309-319.

Brañas-Garza, P., and A. Rustichini 2011. Organizing Effects of Testosterone and Economic Behavior: Not Just Risk Taking. *PLoS ONE*, vol. 6: e29842, doi:10.1371/journal.pone.0029842

Brecher, R.A. 1974. Minimum Wage Rates and the Pure Theory of International Trade, *The Quarterly Journal of Economics*, vol. 88, 98-116.

Bretschger, L., and F. Hettich 2002. Globalisation, capital mobility and tax competition: theory and evidence for OECD countries, *European Journal of Political Economy*, vol. 18, 695-716.

Brownell, K.D., T. Farley, W.C. Willett, B.M. Popkin, F.J. Chaloupka, J.W. Thompson, and D.S. Ludwig 2009. The Public Health and Economic Benefits of Taxing Sugar-Sweetened Beverages, *Health Policy Report of the New England Journal of Medicine*, vol. 361, 1599–605.

Booth, A., D.A. Granger, A. Mazur, and K.T. Kivlighan 2011, Testosterone and Social Behavior, *Social Forces*, vol. 85, 167-191.

- Bürge-Bonanomi, L. 2012. *Sustainable Development Law in International Decision-Making: the example of trade in agriculture* (forthcoming).
- Burtless, G. 1995. International Trade and the Rise in Earnings Inequality, *Journal of Economic Literature*, vol. 33, 800-816.
- Busse, M. and C. Spielmann 2006. Gender Inequality and Trade, *Review of International Economics*, vol. 14, 362-379.
- Cai, H., and D. Treisman 2005. Does Competition for Capital Discipline Governments? Decentralization, Globalization, and Public Policy, *American Economic Review*, vol. 95, 817-830.
- Caliendo, M., 1998, Start-Up Subsidies in East Germany: Finally, a Policy that Works? IZA working paper No.3360.
- Calvo, S., and C. Reinhart 1996. Capital flows to Latin America: Is there evidence of contagion effect?, G.A. Calvo, M. Goldstein, E. Hochreiter (eds.) , *Private capital flows to emerging markets after the Mexican crisis*, Washington, D.C., Institute for International Economics.
- Castles, S. 2000. International Migration at the Beginning of the Twenty-First Century: Global Trends and Issues, *International Social Science Journal*, vol. 52, 269–281.
- Castro, R., G.L. Clementi, and G. MacDonald, 2004. Investor Protection, Optimal Incentives, and Economic Growth *The Quarterly Journal of Economics*, vol. 119, 1131-1175.
- Castro, R., G.L. Clementi, and G. MacDonald, 2009. Legal Institutions, Sectoral Heterogeneity, and Economic Development. *Review Of Economic Studies*, vol. 76, 529-561.
- Caves, R.E. 1990. Lessons from privatization in Britain: State enterprise behavior, public choice, and corporate governance, *Journal of Economic Behavior and Organization*, vol. 13, 145-169.

Cedervall1, T., L.-A. Hansson, M. Lard, B. Frohm, S. Linse, 2011. Food Chain Transport of Nanoparticles Affects Behaviour and Fat Metabolism in Fish, *PLoS ONE* vol. 7, e32254. doi:10.1371/journal.pone.0032254

Coase, R.H. 1960, *The Problem of Social Cost*, *Journal of Law and Economics* 3, 1–44.

Coates J.M., and J. Herbert 2008. Endogenous steroids and financial risk taking on a London trading floor, *Proceedings of the National Academy of Sciences of USA*, vol. 105, 6167–6172.

Coe, D.T., and E. Helpman 1995. International R&D Spillovers, *European Economic Review*, vol. 39, 859-887.

Copeland, B.R. and M.S. Taylor, 1994. North-South Trade and the Environment, *The Quarterly Journal of Economics*, vol. 109, 755-787.

Cottier, T. 2012. The Emerging Principle of Common Concern: A Brief Outline, University of Bern, mimeo,

Cottier, T. and M. Hertig 2003, “The Prospects of 21st Century Constitutionalism”, in: von Bogdandy, A. and R. Wolfrum (eds.), *Max Planck Yearbook of United Nations Law*, vol. 7, 261-328.

Daitzman, R., and M. Zuckerman 1980. Disinhibitory sensation seeking, personality and gonadal hormones, *Personality and Individual Differences*, vol. 1, 103-110.

Davidson, C., L. Martin, and S. Matusz 1999. Trade and search generated unemployment, *Journal of International Economics*, vol. 48, 271–299.

Davidson, C., L. Martin, and S. Matusz 1988. The Structure of Simple General Equilibrium Models with Frictional Unemployment, *Journal of Political Economy*, vol. 96, 1267-1293.

Davis, D.R. 1998. Does European Unemployment Prop up American Wages? National Labor Markets and Global Trade, *The American Economic Review*, vol. 88, 478-494.

Davis, E.P., and M.R. Stone 2004. Corporate financial structure and financial stability, *Journal of Financial Stability*, vol. 1, 65-91.

Deaton, A., and J. Dreze 2002. Poverty and Inequality in India: A Re-Examination, *Economic and Political Weekly*, vol. 37, 3729-3748.

De S epibus, J. 2008. The Liberalisation of the Power Industry in the European Union and its Impact of Climate Change: A Legal Analysis of the Internal Market Electricity, NCCR Trade Regulation Working Paper No. 2008/10.

Dollar, D. 2001. Globalization, Inequality and Poverty since 1980, Background paper, Washington, DC, World Bank (available online: <http://www.sfu.ca/~akaraiva/e455/dollar-glob.pdf>).

Dollar, D. 2002. Global Economic Integration and Global Inequality, in: D. Gruen, T. O'Brien, and J. Lawson (eds.), *Globalisation, Living Standards and Inequality: Recent Progress and Continuing Challenges*, Australia, J.S. McMillan Printing Group, 9-36.

Dollar, D., and A. Kraay 2004. Trade, Growth, and Poverty, *The Economic Journal*, vol. 114, F22–F49.

Dornbusch, R., Y.C. Park, and S. Claessens 2000. Contagion: Understanding how it spreads, *World Bank Research Observer*, vol. 15, 177–197.

Dreher, A. and N. Gaston 2008. Has Globalization Increased Inequality?, *Review of International Economics*, vol. 16, 516-536.

Dreher, A., and N. Gaston 2007. Has Globalisation Really had no Effect on Unions?, *Kyklos*, vol. 60, 165-186.

Dreher, A., M. Gassebner, and L. Siemers 2012. Globalization, economic freedom and human rights. *Journal of Conflict Resolution*, forthcoming.

Dreher, A., J.-E. Sturm, and H.W. Ursprung 2008. The impact of globalization on the composition of government expenditures: Evidence from panel data, *Public Choice*, vol. 134, 263-292.

Drouvelis, M., R. Metcalfe, and N. Powdthavee 2010. Priming Cooperation in Social Dilemma Games, IZA Discussion Paper No. 4963.

Dubini, P. 1989. The influence of motivations and environment on business start-ups: Some hints for public policies, *Journal of Business Venturing*, vol. 4, 11-26.

Edison, H.J., P. Luangaram, and M. Miller 1998. Asset Bubbles, Domino Effects and 'Lifeboats': Elements of the East Asian crisis, CSGR Working Paper No. 05/98

Egger, H., and U. Kreickemeier 2009. Firm Heterogeneity and the Labor Market Effects of Trade Liberalization, *International Economic Review*, vol. 50, 187–216.

Esfahani, H.S. and M. T. Ramírez, 2003. Institutions, infrastructure, and economic growth, *Journal of Development Economics*, vol. 70, 443-477.

Fan, S., G. Ashok, and T. Sudhakeo, Investment, subsidies, and pro-poor growth in rural India, *Agricultural Economics*, vol. 39, 163-170.

FAO HLC/08/INF/3, 2008. Bioenergy, food security and sustainability - towards an international framework. Summary of High Level Conference on World Food Security “The Challenges of Climate Change and Bioenergy”, Rome, 3-5 June 2008.

FDA 2012, *FDA Voice Interviews Deborah M. Autor, Esq.*, interview of the 24th February, http://blogs.fda.gov/fdavoices/index.php/2012/02/fda-voice-interviews-deborah-m-autor-esq/?utm_source=fda&utm_medium=website&utm_term=Globalization&utm_content=p2&utm_campaign=P2, (retrieved 3rd March 2012).

FDA (2011), Pathway to Global Product Safety and Quality: A special report, U.S. Food and Drug Administration, 9th July 2011.

Fehr, E. and S. Gächter 2000. Cooperation and Punishment in Public Goods Experiments, *The American Economic Review*, vol. 90, 980-994.

Fehr, E. and K.M. Schmidt 1999. A Theory of Fairness, Competition, and Cooperation, *The Quarterly Journal of Economics*, vol. 114, 817-868.

Feenstra, R., and G. Hanson 1997. Foreign Direct Investment and Relative Wages: Evidence from Mexico's Maquiladoras, *Journal of International Economics*, vol. 42, 371-393.

Felbermayr, G., J. Prat, and H.-J. Schmerer 2011. Globalization and labor market outcomes: wage bargaining, search frictions, and firm heterogeneity, *Journal of Economic Theory*, vol. 146, 39-73.

Fischer, J.A.V. 2012. Globalization and Political Trust, NCCR Trade Working Paper 2012/05, University of Bern.

Fischer, J.A.V., 2008; *Weltweit steigende Milchpreise: Ursachen und Bedeutung für den Thurgau? [Worldwide rising prices for milk: causes and consequences for the canton Thurgau]* (TWI Kolumne of the Thurgauer Zeitung), 9 May 2008

Fischer, J.A.V., and F. Somogyi 2012. Globalization and Protection of Employment, University of Bern, mimeo.

Follow-Up. 2012. Building a European Culture of Multilevel Governance: Follow-Up to the Committee of the Regions 'White Paper, Committee of the Regions, 94th plenary session 15-16 February 2012, CIVEX-V-020

Forbes, K.J. 2004. The Asian flu and Russian virus: the international transmission of crises in firm-level data, *Journal of International Economics*, vol. 63, 59-92.

Frankel, J.A., and D. Romer 1999. Does Trade Cause Growth? *The American Economic Review*, vol. 89, 379-399.

Frydman, R., C. Gray, M. Hessel, and A. Rapaczynski, 1999. When Does Privatization Work? The Impact of Private Ownership on Corporate Performance in the Transition Economies, *The Quarterly Journal of Economics*, vol. 114, 1153-1191.

Garett, G. 1995. Capital mobility, trade, and the domestic politics of economic policy, *International Organization*, vol. 49, 657-687.

Gaston, N., and D. Nelson 2002. Integration, Foreign Direct Investment and Labor Markets: Microeconomic Perspectives, *The Manchester School*, vol. 70, 420-59.

Gould, D.M., and W.C. Gruben 1996, The role of intellectual property rights in economic growth, *Journal of Development Economics*, vol. 48, 323–350.

Grimm, D. 2005. The Constitution in the Process of Denationalization. *Constellations: An International Journal of Critical & Democratic Theory*, vol. 12, 447-463

Guiso, L. 2010. A trust-driven financial crisis. Implications for the future of financial markets, Economics Working Papers ECO2010/07, European University Institute.

Güth, W., M.V. Levati, M. Sutter, and E. van der Heijden, 2007. Leading by example with and without exclusion power in voluntary contribution experiments, *Journal of Public Economics*, vol. 91, 1023-1042.

Haddad, M., and A. Harrison 1993. Are there positive spillovers from direct foreign investment? Evidence from panel data for Morocco, *Journal of Development Economics*, vol. 42, 51-74.

Haile, F., and S. Pozo 2008. Currency crisis contagion and the identification of transmission channels, *International Review of Economics & Finance*, vol. 17, 572-588.

Hanushek, E.A. and D.-D. Kimko, 2000. Schooling, Labor-Force Quality, and the Growth of Nations, *American Economic Review*, vol. 90, 1184-1208.

Helpman, E., and O. Itskhoki, 2010. Labour Market Rigidities, Trade and Unemployment, *Review of Economic Studies*, vol. 77, 1100-1137.

Hernández, L.F., and O.R. Valdés 2001. What drives contagion: Trade, Neighborhood, or financial links?, *International Review of Financial Analysis*, vol. 10, 203-218.

Hertel, T., A. Golub, A. Jones, M. O'Hare, R. Plevin, and D. Kammen. 2010. Global Land Use and Greenhouse Gas Emissions Impacts of U.S. Maize Ethanol: The Role of Market-Mediated Responses, *BioScience*, vol. 60, 223–231.

Hertz, S. 1999. Domino Effects in International Networks, *Journal of Business-to-Business Marketing*, vol. 5, 3-31.

Hicks, A.M., and D.H. Swank 1992. Politics, Institutions, and Welfare Spending in Industrialized Democracies, 1960-82, *The American Political Science Review*, vol. 86, 658-674.

Hines, J.R., and L.H. Summers 2009. How Globalization Affects Tax Design, *Tax Policy and the Economy*, vol. 23, 123-158.

Huber, E., and J. Stephens 1998. Internationalization and the Social Democratic Model, *Comparative Political Studies*, vol. 31, 353-97.

Holweg, M., P. Davies, and P. Podpolny 2009. The Competitive Status of the UK Automotive Industry, Buckingham: PICSIE Books, 2009. Download: http://www-innovation.jbs.cam.ac.uk/publications/downloads/holweg_competitive.pdf (26th December 2011)

Kadelbach, S. and T. Kleinlein, 2008. An Attempt at a Re-appraisal with an Analysis of Constitutional Principles, *German Yearbook of International Law*, vol. 50, 303-347.

ILO 1996. *Globalization of the footwear, textiles and clothing industries. Report for discussion at the Tripartite Meeting on the Globalization of the Footwear, Textiles and*

Clothing Industries: Effects on Employment and Working Conditions. ISBN 92-2-110182-7. International Labour Office, Geneva, 1996.

Ilgen, T.L. (2003), "Introduction", in: T.L. Ilgen (ed.), *Reconfigured Sovereignty: Multi-Layered Governance in the Global Age*, Hampshire: Ashgate Pub Ltd, chapter 1, 1-5.

Isaac, R.M., and J.M. Walker 1988. Communication and Free-Riding Behaviour: The Voluntary Contribution Mechanism, *Economic Inquiry*, vol. 26, 585–608.

Jost, D. 2009. Nanotechnology for Policymakers: An Introduction from the Physical Science Perspective, World Trade Institute, University of Bern, *NCCR Trade Regulation Working Paper No. 2009/21*

Kay, J.A., and D.J. Thompson 1986. Privatisation: A Policy in Search of a Rationale, *The Economic Journal*, vol. 96, 18-32

Kahn, M.E. 2006. Hong Kong, Air Pollution and the Coase Theorem, *Environmental and Urban Economics*, 13th October 2006

Khan, S., and K.W. Park 2009. Contagion in the stock markets: The Asian financial crisis revisited, *Journal of Asian Economics*, vol. 20, 561-569.

Keefer, P. and S. Knack, 2000. Polarization, Politics and Property Rights: Links Between Inequality and Growth, *Public Choice*, vol. 111, 127-154.

Keuschnigg, C. and S.B. Nielsen, 2003. Public Policy for Start-up Entrepreneurship with Venture Capital and Bank Finance. CESifo Working Paper Series No. 850.

Krugman, P.R. 1998. *What happened to Asia*. Global competition and integration, Mimeo, MIT. (download: http://www.econ.tuwien.ac.at/hanappi/FinMkt/pdf/Asia_Krugman.pdf)

Krugman, P.R. 1995. Growing World Trade: Causes and Consequences, *Brookings Papers on Economic Activity, Economic Studies Program*, The Brookings Institution, vol. 26 (1, 25th A), 327-377.

Krueger, A. 1983. *Trade and employment in developing countries, 3. Synthesis and conclusions*, Chicago, University of Chicago Press.

Krueger, A.B. and M. Lindahl, 2001. Education for Growth: Why and for Whom?, *Journal of Economic Literature*, vol. 39, 1101-1136.

Krugman, P. and M. Obstfeld, 2012. *International Economics: Theory and Policy*, Boston, Munich. Pearson.

Laffont, J.-J. and J. Tirole 1991. Privatization and Incentives, *Journal of Law, Economics, and Organization* vol. 7, special issue, 84-105.

Lazear, E.P. 2011. The Euro Crisis: Doubting the 'Domino' Effect, *The Wall Street Journal*, 31 October 2011

Levati, M. V., Sutter, M., and E. van der Heijden, 2007. Leading by example in a public goods experiment with heterogeneity and incomplete information. *Journal of Conflict Resolution*, vol. 51, 793-818.

Levin, J. 2001, Information and the Market for Lemons, *The RAND Journal of Economics*, vol. 32, 657-666.

Lindert P.H., and J.G. Williamson 2001. "Does Globalization Make the World More Unequal?", in: M.D. Bordo, A.M. Taylor, and J.G. Williamson, *Globalization in Historical Perspective*, Chicago, University of Chicago Press, 227-275.

Maiani F., 2008, Legal Europeanization as Legal Transformation: Some Insights from Swiss „Outer Europe“, EUI Working paper, No. MWP 2008/32.

Markwat, T., E. Kole, and D. van Dijk 2009. Contagion as a domino effect in global stock markets, *Journal of Banking and Finance*, vol. 33, 1996-2012.

Massey, D.S., J. Arango, G. Hugo, A. Kouaouci, A. Pellegrino and J.E. Taylor 1993. Theories of International Migration: A Review and Appraisal, *Population and Development Review*, vol. 19, 431-466.

Meggison W.L. and J.M. Netter, 2001. From State to Market – a Survey of Empirical Studies on Privatization, *Journal of Economic Literature*, vol. 39, 321-389.

Mehlum, H., K. Moene, and R. Torvik, 2006. Cursed by resources or institutions? *World Economy*, vol. 29, 1117-1131.

Mishkin, F. 1992. Anatomy of a Financial Crisis, *Journal of Evolutionary Economics*, vol. 2, 115-30.

Mohnen, P. 2001. International R&D Spillovers and Economic Growth, in Matti Pohjola (ed.), *Information Technology, Productivity, and Economic Growth: International Evidence and Implications for Economic Development*, Oxford University Press, 50-71.

Munnell, A.H. 1992. Policy Watch: Infrastructure Investment and Economic Growth, *The Journal of Economic Perspectives*, vol. 6, 189-198.

Musgrave, R.A. 1959. *The theory of public finance*. New York, McGraw Hill.

Mytton, O, A. Gray, M. Rayner, and H. Rutter 2007. Could targeted food taxes improve health?. *Journal of Epidemiology and Community Health*, vol. 61, 689–694.

Nelson, P. 1970. Information and Consumer Behavior, *Journal of Political Economy*, vol. 78, 1-329.

Niskanen, W.A., 1971. *Bureaucracy and Representative Government*. Aldine: Chicago, IL.

Oberdörster, G., E. Oberdörster and J. Oberdörster 2005. Nanotoxicology: An Emerging Discipline Evolving from Studies of Ultrafine Particles, *Environmental Health Perspectives*, vol. 113, 823-839

Ochel, W., 2001. Selective Immigration Policies: Point System Versus Auction Model, CESifo forum, vol.2, 48-52.

Oesch, M., 2011. „Die Europäisierung des schweizerischen Rechts“, in: *Kleine Staaten innerhalb und ausserhalb der EU*. Springer.

Oesch, M., 2009. Die einseitige Einführung des Cassis de Dijon-Prinzips, *Anwaltsrevue*, vol. 11-12, 519-522.

Noussair, C.N. and F. Tan 2011, Communication and punishment in voluntary contribution experiments, *Journal of Public Economic Theory* 13, 661-693.

Panizzon, M. 2011. Migration and Trade: Prospects for Bilateralism in the Face of Skill-selective Mobility Laws, *Melbourne Journal of International Law*, vol. 12, 95-140.

Parker, D., 1997. Price cap regulation, profitability and returns to investors in the UK regulated industries. *Utilities Policy*, vol. 6, 303–315.

Parker, D., 2003. Performance, risk and strategy in privatised, regulated industries: The UK's experience, *International Journal of Public Sector Management*, vol. 16, 75-100.

Perry, G., 2006. Are business start-up subsidies effective for the unemployed: Evaluation of Enterprise allowance, Working Paper, Auckland University of Technology.

Petersen, N. 2009. Rational Choice or Deliberation? Customary International Law between Coordination and Constitutionalization, *Journal of Institutional and Theoretical Economics*, vol. 165, 71-85.

Petrov, R. and P. Kalinichenko 2011. The Europeanization of Third Country Judiciaries through the Application of the EU Acquis: The cases of Russia and Ukraine, *International and Comparative Law Quarterly*, vol. 60, 325-353.

Pigou, A. C. 1928. *A study in public finance*, 3rd ed. 1947. London, Macmillan.

Plümper, T., V. Tröger and P. Manow 2005. Panel data analysis in comparative politics: Linking method to theory, *European Journal of Political Research*, vol. 44, 327–354.

Proudman, J., and S. Redding 2000. Evolving Patterns of International Trade, *Review of International Economics*, vol. 8, 373-396.

Rawls, J. 1971, A Theory of Justice, Cambridge, Massachusetts: Belknap Press of Harvard University Press, 1971

Reid, G.C., and J.A. Smith 2000, What Makes a New Business Start-Up Successful? *Small Business Economics* vol. 14, 165-182.

Ritteberger, B. and F. Schimmelpfennig 2006, Explaining the constitutionalization of the European Union, *Journal of European Public Policy* vol. 13, 1148–1167.

Rodrik, D. 1998. Why do more Open Economies Haver Bigger Governments?, *Journal of Political Economy*, vol. 106, 997-1032.

Roeller, L.-H. and L. Wavermann, 2001, Telecommunications Infrastructure and Economic Development: A Simultaneous Approach, *The American Economic Review*, vol. 91, 909-923.

Saal, D.S. and D. Parker 2001. Productivity and Price Performance in the Privatized Water and Sewerage Companies of England and Wales, *Journal of Regulatory Economics*, vol. 20, 61-90.

Saal, D.S. and D. Parker 2000. The impact of privatization and regulation on the water and sewerage industry in England and Wales: a translog cost function model, *Managerial and Decision Economics*, vol. 21, 253–268.

Sappington, D.E.M., and J.E. Stiglitz 1987. Privatization, Information and Incentives, *Journal of Policy Analysis and Management*, vol. 6, 567-582.

Searchinger, T., R. Heimlich, R.A. Houghton, F. Dong, A. Elobeid, J. Fabiosa, S. Tokgoz, D. Hayes, and T. Yu, 2008. Use of U.S. Croplands for Biofuels Increases Greenhouse Gases Through Emissions from Land-Use Change. *Science*, vol. 319, 1238–1240.

Segerstrom, P.S., 2007. Intel Economics, *International Economic Review*, vol. 48, 247-280.

Schmidt, K.M. 1996. Incomplete contracts and privatization, *European Economic Review*, vol. 40, 569–579.

Schulze, G., and H.W. Ursprung 1999. Globalization of the economy and the nation state, *The World Economy*, vol. 22, 295-352.

Shleifer, A., and R.W. Vishny, Politicians and Firms, *Quarterly Journal of Economics*, vol. 109, 995-1025.

Sinn, H.-W., 2003, “Social Dumping in the Transformation Process”, in: Helpman, E., and E. Sadka (eds.), *Economic Policy in the International Economy*, Cambridge, Cambridge University Press 2003, 405-430.

Smeeding, Th. 2002. “Globalisation, Inequality and the Rich Countries of the G-20: Evidence from the Luxembourg Income Study (LIS)”, in: D. Gruen, T. O’Brien and J. Lawson (eds.), *Globalisation, Living Standards and Inequality: Recent Progress and Continuing Challenges*, Australia, J.S. McMillan Printing Group, 179-206.

Söderberg, C. 2008. EPI in European Bioenergy Policy – a Multi-Level Governance Perspective, EPIGOV Papers No. 40, Ecologic – Institute for International and European Environmental Policy: Berlin.

Spiegel 2012. Stromhändler zocken fast bis zum Blackout, Spiegel Online, 16 February 2012, <http://www.spiegel.de/wirtschaft/service/0,1518,815587,00.html>

Srinivasan, T.N., and J. Bhagwati, 2001. “Out-ward Orientation and Development: Are Revisionists Right?”, in: Lal, D., and R. Shape (eds.), *Trade, development and political*

economy: Essays in honour of Anne Krueger, London, Palgrave; expanded version available online at (<http://www.columbia.edu/~jC28>).

Stanton, S.J., Mullette-Gillman O.A., McLaurin, R.E., Kuhn, C.M., LaBar, K.S., M.L. Platt, and S.A. Huettel, 2011. Low- and High-Testosterone Individuals Exhibit Decreased Aversion to Economic Risk, *Psychological Science*, vol. 22, 447-453.

Stiglitz, J., 2002, *Globalisation and Its Discontents*, Allen Lane/Penguin.

Sueddeutsche, 2011, Zuwanderung aus Spanien und Griechenland: Die Krise treibt sie nach Deutschland, Sueddeutsche online, 22.12.2011 (<http://www.sueddeutsche.de/karriere/zuwanderung-aus-spanien-und-griechenland-die-krise-treibt-sie-nach-deutschland-1.1241866>) (retrieved 23. February 2012).

Temple, J., and P.A. Johnson, 1998, Social Capability and Economic Growth, *The Quarterly Journal of Economics*, vol. 113, 965-990.

Sweeney, J.L. 2002. *The California Electricity Crisis*. Stanford: Hoover Institution.

Thijs, T.R., and P. Mohnen 2008. Competition and performance: The different roles of capital and labor, *Journal of Economic Behavior and Organization*, vol. 65, 573-584.

Thompson, M.A., and F.W. Rushing 1999. An Empirical Analysis of the Impact of Patent Protection on Economic Growth: An Extension, *Journal of Economic Development*, vol. 24, 67-76.

Tomuschat, C. 1997, "International Law as the Constitution of Mankind", in: United Nations (eds.), *International Law on the Eve of the Twenty-First Century. Views from the International Law Commission*, 37-

Van Pottelsberghe De La Potterie, B., and F. Lichtenberg 2001. Does Foreign Direct Investment Transfer Technology Across Borders?, *The Review of Economics and Statistics*, vol. 83, 490-497.

Van Rijckeghem, C., and B. Weder 2001. Sources of contagion: is it finance or trade?, *Journal of International Economics*, vol. 54, 293-308.

Vartanian, L.R., M.B. Schwartz, and K.D. Brownell, 2007. Effects of soft drink consumption on nutrition and health: a systematic review and meta-analysis, *American Journal of Public Health*, vol. 97, 667–675.

Vickers, J. and Yarrow, G. 1988. *Privatization: An Economic Analysis*, London-Cambridge MA, The MIT Press.

Villoria, N.B., and T.W. Hertel 2011. Geography Matters: International Trade Patterns and the Indirect Land Use Effects of Biofuels, *American Journal of Agricultural Economics*, vol. 93, 919-935.

Vollrath, T.L. 1991. A Theoretical Evaluation of Alternative Trade Intensity Measures of Revealed Comparative Advantage, *Weltwirtschaftliches Archiv*, vol. 127, 265-280.

White Paper, 2009. White Paper of the Committee of the Regions on Multilevel Governance, EU Committee of the regions, CdR 89/2009 fin FR/EXT/RS/GW/ym/ms

Weare, C. 2003. *The California Electricity Crisis: Causes and Policy Options*. San Francisco: Public Policy Institute of California. ISBN 1-58213-064-7

Weiss, F., and A. Leip 2012. Greenhouse Gas Emissions From the EU Livestock Sector: a Life Cycle Assessment Carried Out with the CAPRI Model. *Agriculture, Ecosystems and Environment*, vol. 149, 124–134.

Williamson, O.E. 1964. *The Economics of Discretionary Behavior: Managerial Objectives in a Theory of the Firm*. Englewood Cliffs, N.J.: Prentice-Hall.

Witt P., and A. Hack, 2008, Staatliche Gründungsfinanzierung: Stand der Forschung und offene Fragen, *Journal für Betriebswirtschaft*, vol. 58, 55-79.

Wood, A. 1994. *North-South Trade, Employment and Inequality: Changing Fortunes in a Skill-driven World*, New York, Oxford University Press.

Wooders, P., C. Beaton, R. Bridle, T. Moerenhout and T. Liebert, 2012. Assessing the Cost-Effectiveness of Renewable Energy Deployment Subsidies: Guidance for Policy-Makers, NCCR Trade Regulation Working Paper 2012/03.

Qian, Y., and G. Roland 1998. Federalism and the Soft Budget Constraint, *American Economic Review*, vol. 88, 1143-1162.

Yarrow, G. 1999, A theory of privatization, or why bureaucrats are still in business, *World Development*, vol. 27, 157-168

Zhang, A., V. Bilotkach, J. Clougherty, and J. Müller 2010, Regulation, Privatization and Airport Charges: Panel Data Evidence from European Airports, presentation at the IFSPA 2010 Conference in Chengdu,
http://www.icms.polyu.edu.hk/ifspa2010/IFSPA2010%20Conference%20pdf/ParallelSessions%E2%80%931/AVA-1_AVA-1_3.pdf (retrieved 3rd March, 2012).

Zhang, Y.F., D. Parker, and C. Kirkpatrick, 2002. Electricity sector reform in developing countries: An econometric assessment of the effects of privatisation, competition and regulation, University of Hamburg, Research paper 216

¹ Parts of this article are based on the working paper “Globalization and Political Trust”, NCCR Trade Regulation Working Paper No. 2012/05.

² In classical theories of trade, the production factor labor is assumed to be immobile, while capital is assumed to move easily across countries (Krugman and Obstfeld, 2012).

³ In general, the literature has not reached consensus on how globalization affects government spending. It may well be argued, and some empirical evidence points in that direction, that governments redistribute more to certain groups or protect some groups stronger than others as its economies globalize, possibly to appease the losers from this development or simply because of their lobbying power (Bretschger and Hettich, 2002; Fischer and Somogyi, 2012; Garrett 1995, 1998; Hicks and Swank, 1992; Huber and Stephens, 1998; Rodrik, 1998). In contrast, Dreher, Sturm, and Ursprung (2008) and Dreher (2006) do not find globalization to affect government or social spending.

⁴ See Schulze and Ursprung (1999) for a review of the early literature on the effects of globalization on social and welfare spending.

⁵ In principle, technological spill-overs across countries could cause a reversal of the current pattern of specialization, in case these more-than-neutralize the sector-size dependent learning effect.

⁶ Felbermayer, Prat, and Schmerer (2011) show empirically that, at least in OECD countries, in the long-run increased openness reduces unemployment. This finding contradicts textbook predictions that trade openness had no long-run effect on unemployment; Krugman (1993, p.25) states: “Trade policy should be debated in terms of its impact on efficiency, not in terms of phony numbers about jobs created or lost.” However, some modern trade theories predict an increase in long-run unemployment, possibly through frictional unemployment, minimum wage, or segmented labor markets (as in developing countries) (e.g. Baghwati and Srinivasan, 2002; Brecher, 1974; Davis, 1998; Egger and Kreickemeier, 2009; Helpman and Itskhoki, 2010).

⁷ See Burtless (1995) for an in-depth discussion of labor market models with free trade to explain increasing wage inequality.

⁸ Implicit evidence for growing wage inequality can be drawn from Blanchflower et al. (1996) who show that wages grow overproportionally as profitability of firms rise. The empirical evidence on income disparities in place of wage disparities is more ambiguous (e.g., Dollar, 2002; Dreher and Gaston, 2006).

⁹ The literature employs the revealed comparative advantage index which is based on sector-specific export shares. For a description, see Balassa (1965) and Vollrath (1991).

¹⁰ Source: <http://www.eurofound.europa.eu/eiro/2009/11/articles/lv0911029i.htm> (download: 28th December 2011)

¹¹ This may exclude very specialized industries producing high quality products, possibly luxury goods, e.g. high quality clothing and textiles, or high quality processed farm products, such as premium olive oil (see, e.g. <http://ec.europa.eu/trade/creating-opportunities/economic-sectors/industrial-goods/textiles-and-footwear/>, <http://ec.europa.eu/trade/creating-opportunities/economic-sectors/agriculture/>, downloaded 26th December 2011).

¹² Notably, this is the view of developed Europe, Japan, and the US. ILO (1996) also states that shifting the production to developing countries created jobs in these economies. For example, during the same period, sectoral employment rose by 33% in Turkey and by 85% in China.

¹³ Source: <http://www.spiegel.de/international/0,1518,463172,00.html> (downloaded 26th December 2011).

¹⁴ In 2007, the German subsidies for mining amounted to 2.7 billion Euros. Source: see preceding footnote.

¹⁵ “The domino pattern indicates that global crashes, which can hardly be diversified, do not occur abruptly but rather evolve out of prior local or regional crashes” (Markwat et al., 2009, p.1997).

¹⁶ Forbes (2004) proves the existence of the trade channel by showing that exporting firms are hit stronger by international financial crises than firms producing for the domestic market only. Focusing exclusively on the occurrence of currency crises, Haile and Pozo (2008) find a dominance of international trade linkages over having common lenders.

¹⁷ Lazear (2011) views the 2008/09 and the 2011 crises as ‘popcorn effects’ rather than ‘domino effects’. Edison et al. (1998) present a theoretical model explaining the domino effect in the 1998 Asian financial market crisis. See Kahn and Park (2009) for more empirical literature on contagion effects between 1987 and 2009. The Mexican crisis spilled over so far that the IMF provided financial assistance also to neighboring Latin American countries (Ito, 2007).

¹⁸ For a comprehensive summary, see, e.g., <http://cashmoneylife.com/economic-financial-crisis-2008-causes/> (28th December 2011). Spill-overs to European banks occurred because they had bought large bulks of those mortgage backed securities, often after decennials of fighting against national bank regulation laws that restricted investment in risky (but potentially more profitable) business.

¹⁹ The Maastricht criteria allow a maximum of 60% of GDP only.

²⁰ A ‘wake-up-effect’ lets investors check the creditworthiness of countries with characteristics similar to the country first in financial difficulties, in this case Greece (see Forbes, 2004).

²¹ The lowering of the PIGS-countries’ ratings of creditworthiness is a rational consequence of their governments’ present-time imprudent economic policy making, on the one hand, but also partly because of the many ‘old’ government debts originating from the US mortgage market crises back in 2008-09.

²² Greece received a \$163 billion loan in May 2011 (Alessi, 2011). A second loan of 130 billion Euro (that included a substantial haircut) was approved by the Euro countries on the 14th March 2012 (followed by a 28 million Euro credit of the IMF on the 15th March). A third bailout package is already in preparation.

²³ Davis and Stone (2004) provide an enumeration of banking and currency crisis episodes in developing and developed countries between the 1970ies and 2000.

²⁴ Higher inflation as predictor of exchange rate change particularly occurs in emerging economies (Ito, 2007).

²⁵ As reported by the Hellenic Statistical Authority (<http://www.statistics.gr/portal/page/portal/ESYE>), press release of 8th December 2011.

²⁶ Unemployment rates have been obtained from Eurostat (<http://epp.eurostat.ec.europa.eu/portal/page/portal/eurostat/home>) (29th December 2011).

²⁷ Under strict model assumptions, predicted positive effects of economic globalization include higher overall welfare, optimized consumption patterns, higher rents for production factors in the exporting sector (e.g. higher wages for low-skilled in developing countries), higher levels of general employment, and higher overall growth (predicted by, e.g., Bhagwati and Srinivasan, 2002; Davidson et al., 1988, 1999; Egger and Kreickemeier, 2009; Felbermayer et al., 2011; Mehlum et al., 1996; Krueger, 1983; Krugman and Obstfeld, 2012; Srinivasan and Bhagwati, 2001; for supporting empirical evidence, see, e.g., Bhagwati and Srinivasan 2002; Dollar, 2001; Dollar and Kraay 2004; Felbermayer et al., 2011; Frankel and Romer, 1999; Krueger, 1983). However, many

empirical studies also reveal strong distributional conflicts and biased within-sector technological progress (Deaton and Dreze, 2002; Srinivasan and Bhagwati, 2002).

²⁸ See, e.g., Fan et al. (2008) on optimal allocation of subsidies in the agricultural sector in India; e.g., Barro and Lee (1994) on growth-lowering effect of government – created market distortions and a large government size, and a an enhancing of effect on government investment spending.

²⁹ In explanation these effects, Coates and Herbert (2008) argue that “testosterone [...] have receptors throughout the brain region identified in neuroeconomic research as contributing to irrational financial decisions” (p.6170); high levels of testosterone were also found to lead to impulsivity and sensation seeking (Daitzman and Zuckerman, 1980). Brañas-Garza and Rustichini (2011) show experimentally that, in addition, testosterone levels also positively correlate with abstract reasoning ability.

³⁰ The fact that traders and investment bankers also compete on a personal level with each other may cause an additional rise in testosterone level, in analogy to what has been widely observed for sports competition among young adult men (for a review, see Booth et al., 2011).

³¹ Barro (1990) suggests that the government size-growth-relation is not monotonic; Afonso et al. (2005) suggest that the effect of government activities depend on government efficiency (similarly, Angelopoulos and Philoppoulos, 2007).

³² On the importance of a credible communication for establishing political trust see Fischer (2012).

³³ Contrasting empirical evidence is presented in Dollar (2001).

³⁴ The empirical literature on the effects of government grants on the performance of small enterprises and start-ups is inconclusive: e.g., no significant impact is found for businesses in the U.K. or Italy, while studies for East Germany and New Zealand reveal beneficial employment effects (Caliendo, 2008; Dubini, 1989; Perry 2006; Reid and Smith, 2000). For a literature review, see Witt and Hack (2008) (in German).

³⁵ Regulation as form of government intervention in markets is to be distinguished from general rule-setting task that provides the legal framework for exchange in markets (e.g. rule of law, property rights protection, etc.). Put more simply, regulations refer to existing markets which are established through legal frameworks.

³⁶ For example, Cedervall (2011) demonstrates that the ingestion of nano-plastic particles-(Polystyrene) contaminated algae changes the fat metabolism in fishes.

³⁷ Other-regarding preferences include forms of altruism and inequality aversion – which may be summarized as ‘moral or cooperative behavior’ in non-economic social sciences. Economists, in general, expect the weight on the self-regarding utility component to be larger than that on the other-regarding component.

³⁸ This is the theoretical prediction and the public fear. The empirical analysis by Antweiler et al. (2001) suggests that international trade has no effect on the level of pollution worldwide.

³⁹ The concept of *Pareto*-efficiency does not imply that optimal levels of world-wide pollution are zero.

⁴⁰ In contrast, Dreher et al (2012) find that economic globalization fosters human rights – probably with economic growth and national wealth as its transmission channels.

⁴¹ For a discussion on international treaties as means to protect such standards in a trade context, see Bürgi-Bonamoni (2012).

⁴² Besides the negative externality on food security in developing countries, through land-use change the production of biofuel, meat, and milk appears to contribute positively to greenhouse gas emissions, as former grassland and forest are converted into new arable plots (Searchinger et al., 2008; Hertel et al., 2010, Weiss et

al., 2012). In addition, the introduction of bioenergy politics became associated with problems of property rights protection and land grabbing in developing countries (Vadrot and Pohoryles, 2010).

⁴³ See “Jobs with Justice: Financial Speculation Tax” <http://www.jwj.org/jobs/speculationtax/index.html> (retrieved 23 February 2012), which also provides historical examples of financial speculation taxes.

⁴⁴ An account of the Californian electricity crisis can be found in http://en.wikipedia.org/wiki/California_electricity_crisis (retrieved 24th February 2012).

⁴⁵ See Castles (2000) for a critical assessment of this neo-classical economics explanation of migration

⁴⁶ Notably, producers profit from such development as their labor costs decline.

⁴⁷ For a general discussion of the auction model to channel immigration, see, e.g., Bauer and Zimmermann, 2000; Ochel, 2001.

⁴⁸ Akerlof (1970) assumes that consumer’s willingness to pay depends on the average quality of the goods (here: used cars) in the market; in consequence, suppliers of an above-average quality receive a payment too low and have to leave the market, reducing the mean quality in the market and letting market size shrink.

⁴⁹ Information asymmetries can be partly (but not fully) remedied by building-up of reputation by private agents (Bond, 1982).

⁵⁰ See Yarrow (1999) for the role of fiscal pressure to trigger privatization and an account of potential pitfalls in the process.

⁵¹ Pint (1991) compares the production decision of a government-owned monopoly with that of a government-regulated private monopoly firm and private information on its cost structure, assuming that both types are led by rent-seeking managers. She finds that the government-owned firm produces more labor-intensively and offers larger supply at a lower unit-price, compared to the government-regulated private firm, providing larger benefits to the consumer but generating only zero profits.

⁵² Parker (1997, 2001) provides examples that, initially after privatization, extraordinarily high profits have been achieved despite regulation and price-capping through the government.

⁵³ Notably, a government-owned company equally leads to an allocation deviating from the first-best. The theoretical question is which one of the two second-best allocations is to be preferred from a welfare-maximizing perspective.

⁵⁴ Frydman et al. (2002) show that privatization effects depend on who is given the control during the transformation process, to insiders (managers, employees) or to outsiders (foreigners or domestic financial firms). In either case, compared to state companies, no cost-reducing (employment-lowering) effects of privatization are found, contradicting Blanchard (1997). Only in case control is given to outsiders, revenue and productivity are observed to increase, but not so otherwise. The role of control during privatization processes was already raised in Kay and Thompson (1986) and Shleifer and Vishny (1994).

⁵⁵ On the liberalization policy of the EU in the European electricity market see de Sèpibus (2008).

⁵⁶ The EU documents (White Paper, 2009; Follow-Up, 2012) also emphasize the importance of subsidiarity, regionalisation and decentralization when implementing multi-level governance structures.

⁵⁷ Alternative measures include leadership, or priming players (see, e.g. Drouvelis et al., 2010; Güth et al., 2007).

⁵⁸ From a legal viewpoint, coordination and cooperation of sovereign states at the supranational level constitutes a form of ‘outsourcing’ of regulations and functions in the ante-globalization era stipulated at the constitutional level (Biaggini, 2000; Cottier and Hertig, 2003)

⁵⁹ This includes also the unilateral introduction of EU-regulations by non-members, see, e.g., Maini (2008), Oesch (2009, 2011), Petrov and Kalinichenko (2011).

⁶⁰ With respect to climate change, multi-level governance may be needed as cities are responsible for 75% of carbon emissions (Follow-Up, 2012).