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PRIVATISATION

SIZE AND IMPACT OF PRIVATISATION – A SURVEY OF EMPIRICAL STUDIES

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During the past quarter-century, privatisation has emerged as a very effective tool for improving the performance of state-owned enterprises (SOEs), and has been embraced by governments around the world. Global privatisation proceeds rose from US$40 billion in 1988 to a peak of US$180 billion in 2000, before sliding back to less than US$50 billion during 2003. Last year saw a sharp rebound, however, and global privatisation proceeds reached US$95 billion in 2004. Looking forward, it seems likely that privatisation programs will continue growing and will expand to regions and industrial sectors that have thus far lagged – particularly the large Asian economies of China and India as well as the electricity supply and distribution and petroleum exploration and production sectors.

In general, governments launching privatisation programs tend to have similar goals. These include: (i) raising revenue for the state; (ii) promoting economic efficiency; (iii) reducing government interference in the economy; (iv) promoting wider share ownership; (v) providing the opportunity to introduce competition; (vi) developing the national capital market; and (vii) exposing former SOEs to market discipline. These objectives were first articulated by the first Thatcher government in the United Kingdom, which launched the first large-scale privatisation program during the early 1980s, and all subsequent governments that have embraced privatisation assert similar goals.

Given its economic and political importance, it is unsurprising that privatisation has been examined intensely by academic researchers over the past decade. Megginson, Nash and Van Randenborgh (1994) document economically and statistically significant increases in output (real sales), operating efficiency, profitability, capital investment spending, and dividend payments, as well as significant decreases in leverage, for their sample of companies divested by OECD countries between 1961 and 1990. Boubakri and Cosset (1998), using a sample of 79 companies privatised by developing country governments between 1980 and 1992, confirm these results. Most subsequent empirical analyses have also shown that privatisation tends to improve the performance of divested companies.

The size of privatisation in different countries

After the successful initial public offering (IPO) of British Telecom in November 1984, privatisation became a core economic policy of all British governments. The UK privatisation program raised over US$120 billion between 1981 and 1995, and involved completely selling off some two-dozen large enterprises, including British Aerospace, British Airways, British Gas, British Steel and British Petroleum. The success of the UK privatisation program prompted other Western European countries to start their own privatisation programs. The French government started divesting their SOEs during Jacques Chirac's first administration, and his government privatised 22 SOEs, accounting for US$12 billion, between 1986 and 1988. Over the next five years, the French privatisation program was inactive, but it became active again during the early 1990s. France executed a series of large offerings, beginning with Total in 1992 and including Rhone-Poulenc, BNP, UAP, Usinor Sacilor and Pechiney during 1993–95 and France Telecom in 1997. Since then the French privatisation program has covered finance, telecommunication, manufacturing, petroleum and transportation industries.

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Italy has been actively divesting its SOEs since 1994 and has raised over US$110 billion during this past decade alone. Major sales included the public offering of ENEL in 1999, which remains the largest IPO in history, as well as massive sales of ENI, Telecom Italia and all the major state-owned banks. There has been a relatively small number of large privatisations in Germany, but these still include Deutsche Telecom, Lufthansa, Deutsche Post, and Deutsche Bahn. Perhaps the most spectacular and concentrated privatisation programs have been implemented by the Iberian countries Spain and Portugal, which transformed both economies from highly interventionist to truly market based during a few years of the 1990s. Large Spanish sales included Telefonica, ENDESA, Argentaria, and Empresa Nacional de Autopistas. Portuguese companies were smaller, but the privatisation program was even larger as a fraction of total economic output.

Asian privatisation programs have been led by Japan since it began divesting Japan Air Lines in 1985 and Nippon Telegraph and Telephone in 1987. In fact, the three Nippon Telegraph and Telephone share offerings between February 1987 and October 1988 raised almost US$80 billion, and one of those three offerings remains the largest single security offering in history at US$40 billion. Elsewhere in Asia, governments tried to exploit opportunities to privatise their SOEs when market conditions were attractive, or when there was a need to raise cash to reduce budget deficits. As noted earlier, however, the two Asian countries that loom the largest in terms of privatisation potential are China and India. There have been numerous small partial divestments by the Chinese government, but there have been relatively few outright sales of SOEs. Furthermore, Chinese SOEs are typically burdened with many social welfare responsibilities that make it far more difficult to implement a true privatisation program. There is an interesting phenomenon in China where the non-privatising reform measures, such as price deregulation, market liberalisation and increased use of incentives, can improve the efficiency of SOEs, but it is likely that these reforms would be even more effective if coupled with privatisation. Since 2000, the Chinese privatisation program has picked up considerable momentum, and the list of large partial divestments includes Unicom, Bank of China, China Telecom, Petro China, China Unicom and Sinopec. India adopted a major economic reform and liberalisation program after a major economic crisis in 1991. The reform program first tried to improve the poor performance of India's SOEs, then attempted to privatise several of the larger companies. The government's attempt to divest the SOEs was resisted fiercely by labour groups and politicians, who were afraid of losing control. India finally privatised Bharat Aluminum Co (BALCO) in 2001, and many other sales are scheduled to take place in the future.

Elsewhere in Asia, Singapore has also been divesting SOEs. Interestingly, privatisation does not appear to significantly improve the performance of Singaporean firms because Singaporean SOEs were unusually well managed before divestment. There was only one large privatisation implemented in Singapore which is the privatisation of Singapore Telecom. Taiwan has been trying, with signal lack of success, to privatise Hunghwa Telecom for several years, but has been stymied by the government's reluctance to offer any pricing discounts on the sales. On the other hand, Korea was forced into nationalising numerous private companies following the 1997–98 economic crisis, and has since been busily – and successfully – selling most of these and its remaining SOEs to private buyers.

Latin America truly embraced privatisation during the 1990s, though its ardour has cooled significantly during the past five years. Chile's program was particularly important, both because it was Latin America's first and because the 1990 Telefonos de Chile privatisation, which used a large American Depository Receipt (ADR) share tranche that was targeted towards US investors, opened the first important pathway for developing countries to directly tap Western capital markets. Mexico's program was both vast in scope and remarkably successful at reducing the state's role in what had been a highly interventionist economy. La Porta and Lopez-de-Silanes (1999) report that, in 1988, Mexican SOEs contributed 14 percent of GDP, received net transfers and subsidies equal to 12.7 percent of GDP and accounted for 38 percent of fixed capital investment. By June 1992, the government had privatised 361 of its roughly 1,200 SOEs and the need for subsidies had been virtually eliminated. Several other countries in Latin America have also executed large divestment programs. For example, Bolivia's innovative "capitalisation" scheme has been widely acclaimed. However, the most important program in the region is Brazil's. Given the

size of Brazil's economy and its privatisation program, and the fact that the government has been able to sell several very large SOEs (CVRD in 1997 and Telebras in 1998) in spite of significant political opposition, this country's program has been very influential.

Privatisation in sub-Saharan Africa has been something of a stealth economic policy. Few governments claim to be actively privatising, but more sales have occurred than most people think. Nigeria has been one of the most frequent sellers of SOEs, using public share offerings, although they were very small. The experience of the African National Congress after it came to power in South Africa also shows the policy realities that governments with interventionist instincts face in this new era. Though nationalisation and redistribution of wealth have been central planks of ANC ideology for decades, the Mandela and Mbeki governments have almost totally refrained from nationalisations, and have even sold off several SOEs (though use of the word "privatisation" remains taboo).

The last major region to adopt privatisation programs comprises the former Soviet-bloc countries of Central and Eastern Europe. These countries began privatising SOEs as part of a broader effort to transform themselves from command into market economies. Therefore, they faced the most difficult challenges and had the most restricted set of policy choices. After the collapse of communism in 1989–91, all of the newly elected governments of the region were under pressure to create something resembling a market economy as quickly as possible. However, political considerations essentially required these governments to significantly limit foreign purchases of divested assets. Since the region had little financial savings, these twin imperatives compelled many – though not all – governments throughout the region to launch "mass privatisation" programs. These programs generally involved distributing vouchers to the population, which citizens could then use to bid for shares in companies being privatised. Although these programs resulted in a massive reduction of state ownership and were initially popular politically, they became unpopular in many countries (especially Russia) because of the largely correct perception that they were robbery by the old elite and the new oligarchs. The net effect of voucher privatisation programs has varied, ranging from disappointing to disastrous.

Although different regions have embraced privatisation at varying speeds, governments have found the lure of revenue from sales of SOEs to be attractive – which is one reason the policy has spread so rapidly. According to *Privatisation International* (Henry Gibbon 1998, 2000), the cumulative value of proceeds raised by privatising governments exceeded US$1 trillion sometime during the second half of 1999. By the end of 2004, the cumulative amount raised had surpassed US$1.25 trillion. Approximately two-thirds of this total has been raised by Western European governments. As an added benefit, this revenue has come to governments without raising taxes or cutting other public services.

The historical discussion above suggests that state ownership has been substantially reduced since 1979, and in many countries this has occurred. Sheshinski and Lopez-Calva (1999) report that the role of state-owned enterprises in the economies of high-income (industrialized) countries has declined significantly, from about 8.5 percent of GDP in 1984 to less than 6 percent in 1991. The low-income countries show an even more dramatic reduction in state ownership. From a high point of almost 16 percent of GDP, the average SOE share of national output dropped to barely 7 percent in 1995 and has probably dropped to about 5 percent since then. The middle-income countries also experienced significant reductions in state ownership during the 1990s. Since the upper- and lower-middle-income groups include the transition economies of Central and Eastern Europe, this decline was expected given the extremely high beginning levels of state ownership.

The impact of privatisation on financial markets

Privatisation programs have always been adopted at least partly in order to develop national capital markets. The logic underlying this expectation is that privatisation through public share offerings will significantly increase both the amount of common equity outstanding and the volume of share trading. Empirical research now clearly documents that share issue privatisation (SIP) programs do indeed develop stock market trading and new share listings. Table 1 describes the growth in the total market capitalisation, and in the value of shares traded, on the world's stock exchanges from 1983 to 2003. Much of this period witnessed rapid growth in the capitalisation of markets in every country except Japan, which suf-

Table 1

Growth of world stock market capitalisation and trading volume, 1983–2003

	1983	1986	1989	1992	1995	1998	1999	2000	2001	2002	2003
Market Capitalisation											
Developed countries	3,301.12	6,378.23	10,957.46	9,921.84	15,842.15	24,530.69	32,820.47	30,036.29	25,801.65	21,393.05	28,979.35
United States	1,898.06	2,636.60	3,505.69	4,485.04	6,857.62	12,926.18	16,642.46	15,214.42	13,826.48	11,055.46	14,266.02
Japan	565.16	1,841.79	4,392.60	2,399.00	3,667.29	2,495.76	4,554.89	3,157.22	2,264.53	2,069.30	2,953.10
United Kingdom	225.80	439.50	826.60	927.13	1,407.74	2,372.74	2,855.35	2,612.23	2,164.71	1,856.19	2,460.06
Developing countries	83.22	135.06	755.21	1,000.01	1,939.92	1,908.26	2,184.90	920.36	794.53	1,441.06	2,222.95
Total World	3,384.34	6,513.29	11,712.67	10,921.86	17,782.07	26,519.77	35,005.37	30,956.65	26,596.18	22,834.11	31,202.30
World ex US	1,486.28	3,876.69	8,206.99	6,436.82	10,924.45	13,593.60	18,362.91	15,742.23	12,769.70	11,778.65	16,936.28
US as % of world	*56.10*	*40.50*	*29.90*	*41.10*	*38.60*	*48.70*	*47.50*	*49.10*	*52.00*	*48.40*	*45.70*
Trading Volume											
Developed countries	1,202.55	3,495.71	6,297.07	4,151.57	9,169.76	20,917.46	35,187.63	48,527.53	36,096.94	31,813.64	31,777.67
United States	797.12	1,796.00	2,015.54	2,081.66	5,108.59	13,148.48	19,993.44	31,804.24	22,240.64	18,206.83	17,322.98
Japan	230.91	1,145.62	2,800.70	635.26	1,231.55	948.52	1,891.65	2,641.07	1,834.42	1,688.26	2,221.25
United Kingdom	42.54	132.91	320.27	383.00	510.13	1,167.38	3,399.38	4,558.66	4,520.18	4,001.34	3,609.72
Developing countries	25.22	77.97	1,170.93	631.28	1,046.55	1,956.86	2,320.89	805.95	1,521.19	1,303.55	1,552.03
Total World	1,227.76	3,573.68	7,468.00	4,782.85	10,216.31	22,874.32	37,508.52	49,333.48	37,618.13	33,117.19	33,329.70
World ex US	430.64	1,777.68	5,452.45	2,701.19	5,107.72	9,725.84	17,515.08	17,529.24	15,377.49	14,910.36	16,006.72
US as % of world	*64.90*	*50.30*	*27.00*	*43.50*	*50.00*	*57.50*	*53.30*	*64.50*	*59.10*	*55.00*	*52.00*

Notes: This table details the growth in the aggregate market capitalisation and trading volume, in millions of US dollars, over the 21-year period 1983–2003. Market capitalisation figures are year-end values, translated from local currencies into US dollars at the contemporaneous exchange rate, while trading volumes represent the total value of all trades executed during the year.

Sources: 1983–98, the World Bank's *Emerging Markets Fact Book* (various issues); data from1999 to 2003 from the statistics section of the World Federation of Exchange's website (www.world-exchanges.org).

fered a four-year, 70 percent decline in total market capitalisation after reaching a value of US$4.4 trillion in 1989. Total world market capitalisation increased over ten-fold (to US$35.0 trillion) between 1983 and 1999, and the total capitalisation of the US market increased almost nine-fold (from US$1.9 trillion to US$16.6 trillion) over the same period. The growth in markets outside the United States was even greater. It is also in these markets where privatisation's impact has been greatest, since there have been only two significant SIPs in the United States in the modern era (Conrail in 1987 and US Enrichment Corporation in 1999). Between 1983 and 1999, the total capitalisation of non-US stock markets increased from US$1.49 trillion to US$18.36 trillion. This fell to US$11.8 trillion in 2003, but has since rebounded back over US$17 trillion. The total market capitalisation of developing country stock exchanges increased by 26 times between 1983 and 2003. Developing country market capitalisation fell by more than half between 1999 and 2001, but has since rebounded to record levels.

The increase in market capitalisation since 1983 has been accompanied by an even larger increase in trading volumes. The total value of shares traded worldwide between 1983 and 2003 rose from US$1.2 trillion to US$33.3 trillion. As before, non-US markets experienced the greatest increases, where the value of shares traded on developing countries financial markets increased from US$25 billion

in 1983 to US$1.5 trillion in 2003.

What role has privatisation played in this remarkable growth in market capitalisation and trading volume? At the end of 1983, the total market capitalisation of the handful of British, Chilean and Singaporean firms that had been privatised was less than US$50 billion. By the middle of 2000, the 152 privatised firms listed in either the *Business Week* "Global 1000" ranking of the most valuable companies in developed-nation stock markets or the *Business Week* "Top 200 Emerging Market Companies" ranking had a total market capitalisation of US$3.31 trillion. This equals approximately 13 percent of the combined market capitalisation of the firms on the two lists, and is more than 27 percent of the non-US total. Privatised firms accounted for an even higher percentage of total non-US stock valuation in the July 2004 *Business Week* Global 1000 ranking.

Table 2

Market values of the largest publicly-traded privatised firms

Company Name	Country	Global 1000 rank	Country rank	Market value million US$	Market value as % market
BP	UK	7	1	193,054	3.56
Total	France	23	1	122,945	8.26
NTT DoCoMo	Japan	32	2	92,165	1.59
ENI	Italy	37	1	82,072	10.37
NTT	Japan	40	3	79,016	1.37
Telefonica	Spain	45	1	72,078	7.65
Gazprom	Russia	47	1	70,784	42.06
Deutsche Telecom	Germany	48	1	70,535	5.89
Aventis	France	59	2	63,654	4.27
France Telecom	France	64	3	59,248	3.98
China Mobile	Hong Kong	70	1	56,664	6.58
BNP Paribas	France	71	4	55,724	3.74
Enel	Italy	86	2	49,606	6.27
EON	Germany	89	4	48,116	4.02
ING Groep	Netherlands	92	2	46,576	11.70
TIM	Italy	93	3	46,528	5.88
Banco Bilbao Vizcaya Argentaria	Spain	102	3	44,844	4.76
Telefonica Moviles	Spain	103	4	44,580	4.73
Telecom Italia	Italy	105	4	43,987	5.56
Telstra	Australia	112	2	42,264	5.49
Societe Generale	France	126	7	37,198	2.50
Axa	France	131	8	36,612	2.46
Credit Agricole	France	132	9	36,276	2.44
Assicurazioni Generali	Italy	147	5	33,143	4.19
National Australia Bank	Australia	162	3	32,465	4.22

Notes: Stock market value, total sales and total profits – in millions of US dollars (translated at the contemporaneous exchange rate) – of the 25 most valuable publicly-traded privatised firms as of 31 May 2004.

Sources: Data are from Morgan Stanley Capital International, as reported in "The Business Week Global 1000", *Business Week* (9 July 2004). Global 1000 rank refers to the company's global ranking based on market valuation, while country rank refers to its relative position among those firms from their country on the Global 1000 List.

An examination of the historical evolution of non-US stock markets since 1980 suggests that large SIPs played a key role in the growth of capital markets almost everywhere, especially because they are generally among the largest firms in national markets. Using the *Business Week* 2004 Global 1000 data, Table 2 details the total market value and relative size of the world's 25 most valuable privatised firms. Columns 1 and 2 give the company names and domicile countries. Column 3 shows each firm's ranking in the Global 1000 list. Column 4 gives the firm's ranking within its home market, and column 5 lists the firm's total market capitalisation. Column 6 expresses the single firm's market capitalisation as a percentage of the entire national market's year-end 2003 capitalisation.

Table 2 and a study by Boutchkova and Megginson (2000) disclose the relative importance of SIPs in most non-US financial markets. Privatised firms are the most valuable companies in Britain, France, Germany, Greece, Italy, Norway, Portugal, Spain, China, Russia, Brazil, Mexico, India, Singapore, Poland, the Czech Republic and Hungary. Privatised companies are the three most valuable companies in nine countries, including France, Italy, Norway, Portugal, China, Russia, Poland, Hungary and the Czech Republic.

Another way to measure the impact of privatised firms on capital market development is to see how important SIPs have been as security offerings, and here the impact is even greater. Table 3 shows that the 11 largest share offerings and 28 out of the 30 largest share offerings in history have been privatisations. Since 1984 there have been some 125 SIPs that raised

at least US$1 billion, which is a size that rarely happens, even in the United States, and 28 SIPs have raised more than US$7 billion.

The importance of knowing the impact of privatisation on the development of financial markets comes from knowing that new share listings can directly create some net new wealth and a handful of new (albeit well-paying) jobs. However, the principal economic payoff from increasingly efficient and liquid capital markets comes from the financing opportunities and monitoring possibilities they provide. Many empirical studies conclude that efficient capital markets promote economic growth and will allow individual firms to fund investment opportunities they otherwise would have to forgo. Therefore, privatisation deserves credit for whatever direct role it has played in promoting stock market development (through new share offerings), and for the indirect role it has played in bond market development. This catalytic role can be assumed because several studies find development of one market also promotes development of related markets.

Table 3

Details of the world's largest share offerings

Date	Company	Country	Amount million US$	IPO/ SEO
Nov 87	Nippon Telegraph & Telephone	Japan	40,260	SEO
Oct 88	Nippon Telegraph & Telephone	Japan	22,400	SEO
Nov 99	ENEL	Italy	18,900	IPO
Oct 98	NTT DoCoMo	Japan	18,000	IPO
Mar 03	France Telecom	France	15,800	SEO[a)]
Oct 97	Telecom Italia	Italy	15,500	SEO
Feb 87	Nippon Telegraph & Telephone	Japan	15,097	IPO
Nov 99	Nippon Telegraph & Telephone	Japan	15,000	SEO
Jun 00	Deutsche Telekom	Germany	14,760	SEO
Nov 96	Deutsche Telekom	Germany	13,300	IPO
Oct 87	British Petroleum	United Kingdom	12,430	SEO
Apr 00	*ATT Wireless (tracking stock)*	*United States*	*10,600*	*IPO*
Nov 98	France Telecom	France	10,500	SEO
Nov 97	Telstra	Australia	10,530	IPO
Oct 99	Telstra	Australia	10,400	SEO
Jun 99	Deutsche Telekom	Germany	10,200	SEO
Dec 90	Regional Electricity Companies[b)]	United Kingdom	9,995	IPO
Dec 91	British Telecom	United Kingdom	9,927	SEO
Oct 04	ENEL	Italy	9,600	SEO
Jun 00	Telia	Sweden	8,800	IPO
Dec 89	U.K. Water Authorities[b)]	United Kingdom	8,679	IPO
Feb 01	NTT DoCoMo	Japan	8,200	SEO
Dec 86	British Gas	United Kingdom	8,012	IPO
Jun 98	Endesa	Spain	8,000	SEO
Jul 97	ENI	Italy	7,800	SEO
Apr 00	*Oracle Japan*	*Japan*	*7,500*	*IPO*
Jul 93	British Telecom	U.K.	7,360	SEO
Oct 93	Japan Railroad East	Japan	7,312	IPO
Dec 98	Nippon Telegraph & Telephone	Japan	7,300	SEO
Oct 97	France Telecom	France	7,080	IPO

Notes: Offers are reported in nominal amounts (not inflation-adjusted) and are translated into millions of US dollars (million US$) using the contemporaneous exchange rate. *Private-sector offerings* are presented in bold face, italicized type, while share issue privatizations (SIPs) are presented in normal typeface.

[a)] Rights offering, in which the French government participated proportionately, so not a SIP in the traditional sense. Though a share offering by a state-owned firm, government ownership did not decline. – [b)] Indicates a group offering of multiple companies that trade separately after the IPO.

Source: Table 12 of William L. Megginson and Jeffry M. Netter. 2001. "From State to Market: A Survey of Empirical Studies on Privatization", *Journal of Economic Literature* 39, 321–89. Updated by author.
Source of the data: Amounts reported for SIP offers are as described in the *Financial Times* at the time of the issue. Private-sector offering amounts are from the *Securities Data Corporation* file or *Financial Times*.

The impact of privatisation on corporate governance

Before we can answer the question of how privatisation impacts corporate governance, we need to understand several findings that affect the interpretation of the effects of privatisation. First, there is increasing interest in corporate governance and securities laws. This is caused by the large increase in the total value of security issues on global capital markets and the increase in mergers and acquisitions around the world. Second, poor corporate governance played a major role in the East Asian economic contraction beginning in July 1997. Finally, studies by La Porta, Lopez-de-Silanes, Shleifer and Vishny (1997, 1998, 1999 and 2000) and by La Porta, Lopez-de-Silanes and Shleifer (2000a and 2000b) provide us with evidence that corporate governance in general and corporate legal systems in particular, significantly influence capital market size, ownership structure and efficiency. The differences between legal protections to investors in different countries will affect the development and operation of external capital markets. Countries with common law systems, that provide better investor protection, unsurprisingly have more developed financial markets than do countries with civil law systems that provide weaker investor protection. While Rajan (2000) suggests there might be some other

factors correlated with the legal system of a country that might explain the above findings, the legal system clearly impacts the operation of financial markets and corporate governance in a country.

Likewise, the structure and operation of a country's legal system will affect the impact of privatisation. Privatisation is often the catalyst for major change in the governance structure of a firm. The success of privatisation is partially determined by how well the legal system protects investors (Sachs, Zinnes and Eilat 2000). This assumption is supported by the evidence in the transition economies case (Djankov and Murrell 2000a, 2000b). Furthermore, privatisation usually accompanies changes in a country's legal system. Privatisation also changes the legal system in many countries. There is a tendency for governments to sell shares to a large number of citizens (often one million or more). Therefore democratic governments are usually acutely aware of the political fall-out that could result if small investors suffer losses on their SIP investments because of the inadequate shareholder protection or insider dealings. Thus, when the governments initiate the privatisation program, they want to make sure that they establish a properly functioning regulatory body and adequate legal protection for investors.

At the beginning of large privatisation programs, national stock exchanges are often illiquid and non-transparent. This forces governments to establish listing and other regulations that will assure potential investors that the market is a reputable place to invest and trade. Jones, Megginson, Nash and Netter (1999) find that sometimes governments like to retain some kind of decisive voting rights in privatised firms, even after a majority of the income rights have been sold. For example, 90 percent of British SIPs have allowed government to retain a golden share. Government can use this special share to veto mergers, liquidations, asset sales and other major corporate events. An alternative method of retaining ultimate control is for the government to insert some control restrictions directly into the SIP's charter.

Boutchkova and Megginson (2000) evaluate the development of share ownership in large SIPs. They examine how many individual stockholders are created in a sample of large SIPs, as well as how the ownership structures change over time. They find that privatised companies emerge with larger numbers of shareholders than do matching private-sector companies with similar capitalisation. This result holds even though in most cases governments retain sizable stakes in these firms, thus reducing their effective total capitalisation since these stakes have not yet been sold to private investors. They conclude that the number of shareholders in the privatised companies is significantly higher than the number of shareholders in the matching private-sector (non-privatised) sample companies. Examining how the total number of shareholders in a company evolves during the years following the SIP, they demonstrate that the extremely large numbers of shareholders created by many SIPs are not a stable pattern of corporate ownership. For SIPs with less than 100,000 initial investors, the number of shareholders increases steadily from one year to four years after the privatisation. However, for the 39 SIPs that initially have more than 100,000 shareholders, the total number of shareholders declines steadily. The total number of shareholders in the largest privatisations (those with 500,000 or more initial investors) declines by 33 percent within five years of the share offering.

The implications of this finding for government efforts to develop an effective corporate governance system or equity culture are unclear. Many new stockholders do not retain the shares they purchase. Other evidence suggests that retail investors in privatisations generally own only that one stock, hardly indicative of a class of well diversified stockholders. On the other hand, since the long-run returns to investors in SIPs are generally positive, the first experience of these new retail investors in stock market trading is a positive one. Furthermore, the fact that governments are able to entice large numbers of investors to return for subsequent share offerings suggests that these programs are indeed creating (at least minimally) effective governance systems and stock markets capable of absorbing large new stock issues.

"Lessons" from privatisation

The existing literature on privatisation suggests the following conclusions:

1. Over the last twenty-five years, privatisation programs have significantly reduced the role of SOEs in most countries. The SOE share of "glo-

bal GDP" has declined from more than ten percent in 1979 to less than six percent today.

2. Current research supports the proposition that privately owned firms are more efficient and more profitable than otherwise-comparable SOEs. There is limited empirical evidence, especially from China, that suggests that non-privatising reform measures, such as price deregulation, market liberalisation and increased use of incentives, can improve the efficiency of SOEs, but it seems likely that these reforms would be even more effective if coupled with privatisation.
3. There are three basic techniques that governments use to privatise their SOEs: share issue privatisations (SIPs), asset sales and voucher or mass privatisations. We are beginning to understand the determinants of the method selected in specific circumstances. However, there is great variation within all the techniques, because privatisation is a complex process involving a host of political and economic factors. For example, voucher privatisations are the least economically productive divestment technique, but those governments that use it generally have few other realistic options.
4. Governments attempt to craft the offering terms of SIPs to balance competing economic, political, and financial objectives. Most governments underprice share offerings (particularly initial offerings) and then use targeted share allocations to favour domestic over foreign investors. SOE employees are particularly favoured, receiving preferential allocations in 91 percent of offers. Governments frequently retain golden shares that give them veto power over certain control changes, and also insert various other control restrictions into the corporate charters of privatised firms.
5. Privatisation "works" in the sense that divested firms almost always become more efficient, more profitable, increase their capital investment spending and become financially healthier. These results hold for both transition and non-transition economies, though the results vary more in the transition economies. The question of whether privatisation generally costs at least some SOE workers their jobs are still unresolved. The answer is ultimately based on whether sales increase faster than productivity in privatised firms. Most studies find that employment in privatised firms usually does fall, though three large-sample studies document employment increases. What is clear is that whenever employment is cut, there is almost invariably a large compensating performance improvement. Several studies also highlight the need to bring new entrepreneurial management into privatised firms to maximize performance improvements. However, there is little empirical evidence on how privatisation affects consumers.
6. Investors who purchase initial SIP shares at the offering price and then sell those shares at the first post-issue trading price earn significantly positive excess (market-adjusted) returns. Additionally, there is now convincing evidence that initial returns on privatisation IPOs are significantly higher than the initial returns earned on private-sector IPOs. Investors who purchase privatisation IPO shares at their first post-offer trading price and then retain those shares for one-, three-, or five-year holding periods also earn significantly positive net returns.
7. Though it is difficult to pinpoint causality, it appears that countries that have launched large-scale SIP programs have experienced rapid growth in their national stock market capitalisation and trading volume. Countries (other than the United States) that have either not launched major privatisation programs or have emphasised asset sales and vouchers over public share offerings appear to lag behind in market development. Privatised firms are one of the two or three most valuable companies in most non-US markets, and the 10 largest (and 30 of the 35 largest) share issues in financial history have all been privatisations.
8. Emerging (largely anecdotal) evidence suggests that adopting a large-scale SIP program is often a major spur to modernising a nation's corporate governance system. Transition economies that launch privatisation programs must create such systems largely from scratch, and the record of success here is decidedly mixed. Many governments try to develop an equity culture among their citizenry through SIP programs, also with mixed results. Share ownership has dramatically increased in most non-transition countries over the past 15 years, but the share ownership patterns that are created when SIPs are sold to large numbers of investors (often one million or more) are not stable. However, it seems clear that privatisation programs lead to significant improvements in securities market regulation, information disclosure rules and other required components of modern financial systems.

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Political Institutions and Privatisation Policy

Bernardo Bortolotti*

Privatisation is a landmark economic policy of the last two decades. This massive transfer of ownership initiated in the United Kingdom gained momentum thanks to the large scale programs implemented in Asia and Europe in the mid-1980s and early 1990s. In the mid-1990s, privatisation became the cornerstone policy in the transition from central planning to a (fledgling) market economy in several post-communist countries. Throughout the period, international lending agencies strongly endorsed privatisation in their recommendations and conditionality in developing countries. State sell-offs culminated in 1998 when sales in public and private equity markets brought to governments' coffers more than $100 billion of revenues.

Explaining privatisation cycles

At the turn of the century privatisation programs abruptly slowed down. With only $50 billion raised on average, the 2001–03 period marked the end of the big cycle of the 1990s (Figure 1).

During this cycle, financial assets worth $1.26 trillion have been transferred from the state to the private sector. This sustained privatisation policy caused a substantial contraction in the share of value added produced by state-owned enterprises (SOE), spurring the efficiency of privatized firms and changing dramatically the financial landscape in developed and developing nations. These facts beg some important questions: Is privatisation a one-off policy of the 1990s, or a cyclical phenomenon? If so, what drives privatisation cycles?

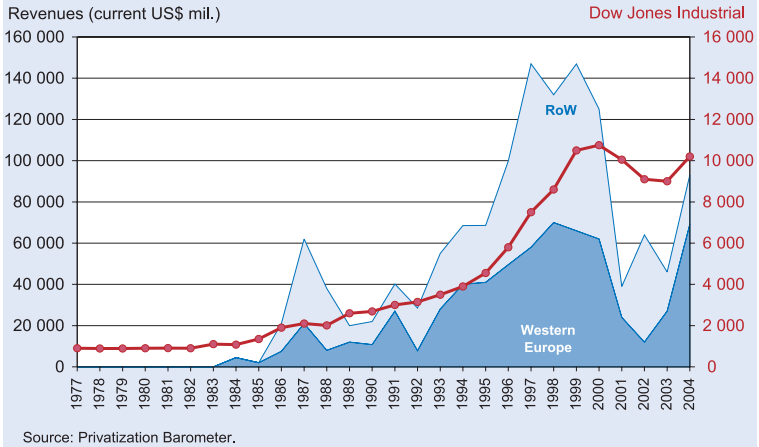
Indeed, the massive transfer of ownership of the 1990s may have exhausted the SOE sector. Governments may have no more property left to sell or may own less-performing assets for which it is more difficult to find buyers. Even if there is some room to apply the law of decreasing returns in the context of privatisation, this effect does not seem to explain the end of privatisation. Indeed, government ownership is still pervasive, the state being a major shareholder even in privatized firms.

Clearly, after a decade of state sell-offs, the form of state ownership in firms has changed considerably. Direct stakes owned by ministries have sometimes been replaced by indirect stakes in privatized spin-offs from large public holding companies. Elsewhere, pyramiding occurred and shareholdings have been transferred to financial institutions with private shareholders, but under public control (i.e. KfW in Germany, Cassa Depositi e Prestiti in Italy, Caisse des Dépôt et Consignations in France, or other agencies).

But when ultimate ownership and pyramiding is fully taken into account, we find that governments are still in business and own large chunks of the

Figure 1

Privatisation and Equity Markets, 1977 - 2004



Source: Privatization Barometer.

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largest and often more profitable domestic companies. To provide a rough figure, as of 2000 governments are the largest (ultimate) owner of about one third of privatized companies in OECD economies, and this share increases considerably in strategic sectors such as energy, transports, and utilities (Bortolotti and Faccio 2004). The same snapshot taken in 1996 shows that the large scale privatisations of the late 1990s did not alter dramatically ownership structures. Indeed, in this year we find a close share (34 percent) of government controlled firms.

Even if we limit our view to direct holdings in privatized (listed) companies, a conservative estimate for the governments' retained stake market valuation is $800 billion (Privatisation Barometer 2005). Indeed, the sheer size of the residual SOE sector suggests that supply effects are not responsible for the slowdown in privatisation.

The real explanations for this stylized fact are found in the empirical literature on the determinants of privatisation. Panel data analysis – and common sense – suggest that market conditions are the main drivers of state sell-offs. Issuers, both private and public, are reluctant to sell shares in depressed markets. And this is the reason why we observe a co-movement in privatisation and other financial phenomena, such as M&A (Bortolotti, Fantini, Siniscalco 2003).

From 2000 to end 2002, stock markets experienced one of the most acute crises in recent financial history. The Dow Jones Industrial fell by 35 percent and volatility measured by the VIX index raised from 24 percent to 55 percent in August 2002. The bad outlook in equity markets halted privatisation sales. In the same period, global revenues fell by 46.9 percent (61.6 percent in Europe), bringing back privatisation activity to the levels observed in the mid-1980s, when only one country – the UK – was seriously engaged in divestiture.

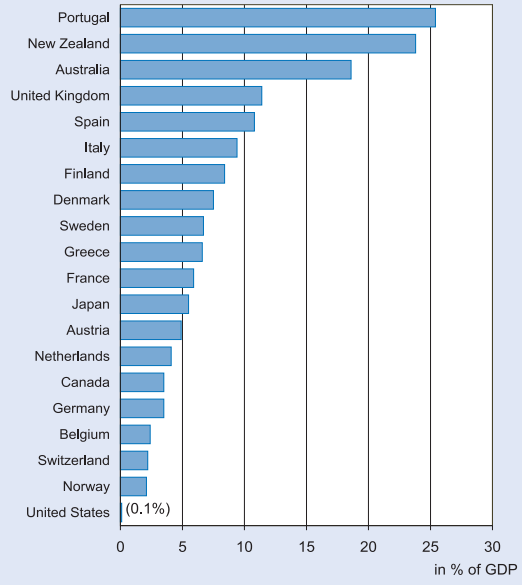
From 2003, the global economy started slowly to recover. Higher economic growth, pushed by low inflation and interest rates, contributed to a steady increase in market capitalisation. This trend of equity markets consolidated in 2004. Not surprisingly, with the bear market finally put to rest, privatisation activity resumed with a vengeance (Figure 1). Europe (including new accession countries) had the lion's share of activity in year 2004. Overall, European governments implemented 80 privatisations worth $69 billion. Interestingly, the last year marks the comeback of IPOs and global offerings earmarked to the retail investors.

Privatisation is therefore a cyclical phenomenon, largely following stock market swings, with waves of state sell-offs associated with hot markets. However, the empirical literature has shown that privatisation is not simply market-driven, but also strongly affected by governments' budget constraints and public finance conditions. Governments in financial distress tend to design privatisations in order to maximize the fiscal impact of divestiture, which could affect the debt ratio but also indirectly budget deficits via a reduction of interest payments and an increase of tax revenues. This argument – in combination with the improved outlook in equity markets – explains the resumption of the process especially in the European Union, where governments facing sluggish growth rates are trying hard to meet Maastricht criteria.

Common factors seem to affect then the cyclical behaviour of privatisation. Yet the extent of privatisation varies greatly across countries, and a large part of its variability remains unexplained also when we control for the initial size of the State-owned enterprise and for the level of economic development. Indeed, stark differences emerge

Figure 2

PRIVATISATION REVENUES IN OECD COUNTRIES, 1977 - 2002



Note: Privatisation Revenues relative to GDP are Total Privatisation Revenues in US$1995 from 1977 to 2002 scaled by 2002 GDP in US$1995.

Sources: Privatization Barometer and World Bank.

also within OECD economies where we find deep a privatizing country such as New Zealand (with privatized assets worth more than 20 percent of GDP over two decades) together with countries like Switzerland or the United States which almost never privatized at all (Figure 2).

We claim that a political economic approach could be useful in understanding one country's ability of implementing policy with important distributional consequences, such as privatisation. Particularly, political institutions, i.e. the set of constitutional rules governing the functioning of political systems, should matter in explaining the extent of privatisation across countries and overtime.

The role of political institutions: theory

The theoretical underpinnings of our claim can be found in some contributions on the political economy of stabilisation policies. One of the main contribution on this topic is Alesina and Drazen (1991). Indeed, privatisation is often a key policy of a fiscal stabilisation package so their model can be suitably adapted to our context. The assumptions are that the benefits of privatisation accrue to all citizens and stem from abandoning a highly distortionary method of financing the SOE sector. However, the costs of privatisation are apportioned differently among interest groups, with one group bearing a disproportionate fraction of the social cost of privatisation (typically workers). Under these assumptions, the process leading to privatisation becomes a "war of attrition" between groups, characterized by political stalemate until one group concedes. Concession occurs at equilibrium when the group-specific cost of waiting equals the expected benefit from waiting. Importantly, the model shows that countries characterized by political cohesion (i.e. where stabilisation/privatisation costs are distributed more equally between "winners" and "losers") privatize sooner. If one country's political system favours the formation of large coalitional cabinets, the interest group of "losers" from privatisation has a voice in the political arena, and engages in a "war of attrition" which delays the efficient policy change.

Standard models of electoral competition with opportunistic politicians provide also explanations about the role of political institutions in privatisation. Persson and Tabellini (2000) contrast majoritarian and proportional systems to show how the electoral rule affects policy outcomes and rent-seeking behaviour. Particularly, majoritarian elections foster competition for votes in marginal districts, where the most mobile voters are concentrated; in turn, enhanced electoral competition reduces rents for politicians.

These models have been developed to study explicitly the size of government and the distribution of public expenditure in terms of public good provision and targeted redistribution. However, the rent-seeking behaviour by politicians induced by different electoral rules has important implications also in terms of privatisation policy. It has been largely documented that state-owned enterprises are an important source of political rent for elected politicians, who can interfere in the operating activity of the company in order to cater specific interest groups. First, they can maintain the political support from employees by forcing the managers of state-owned enterprises to keep redundant workers and high wages (Shleifer and Vishny 1994). Second, they can extract outright rents in the form of corruption or enjoy other private benefits of control (Dyck and Zingales 2002). Majoritarian elections (and stiffer electoral competition) should keep politicians "on their toes", mitigating rent seeking behaviour and moral hazard problems arising from the political control of state-owned firms. Ceteris paribus, politicians should be less reluctant to privatize in countries with majoritarian electoral rules, as the equilibrium level of rents they can extract via political interference in state-owned firms is lower.

A political economy approach has been recently applied also in the finance literature to explain the degree of investor protection. Pagano and Volpin (2004) develop a model where the relevant stakeholders in society are entrepreneurs, minority shareholders and workers. In this setting, there exist a "corporatist" political equilibrium between entrepreneurs and workers where low investor protection is traded for high employee protection. The former allows entrepreneurs to enjoy freely large benefits of control, while the latter allows low productivity workers to extract rents in the form of severance pay. By striking this political agreement, both classes preserve their rents at the expense of minority investors. This agreement is more feasible in "corporatist" countries, i.e. where the political system favours the formation of large coalitional governments with the participation of diverse interest

groups. This result may also hold in a model where the entrepreneurs are the managers of public firms and the policy choice is privatisation vs state ownership of firms. Minority investors would prefer state-owned enterprises to be privately owned as they could obtain a fraction of the efficiency gains from privatisation. But bureaucrats strike a political agreement with workers trading public ownership for employee protection. A corporatist agreement may also emerge in this context, where bureaucrats protect the rents associated with political interference in state-owned firms and workers obtain wages above their marginal productivity.

The political economy models suggest that majoritarian political systems, as opposed to "consensual-corporatist" democracies, should be more likely to privatize, and should be associated with a more intense privatisation effort. But what do the data say? In order to answer this question, objective quantitative indicators about the functioning of political systems are needed.

Measuring political institutions: the FEEM DPI

Comparative political science is very helpful in identifying the right dimensions through which political systems can be evaluated and (possibly) measured. Lijphart (1999) provides a classification of political-institutional systems based on two benchmark models, majoritarian and consensus. Both systems acknowledge the right of the majority to take decisions that bind all other citizens. However, whereas the majoritarian model relies upon the bare majority, the consensus model tries to broaden its size by dispersing decision-making power both within and between different institutional bodies, and by increasing the number of veto players, i.e. political agents enjoying veto power.

The majoritarian model is characterized by an extreme predominance accorded to majority will in winner-takes-all systems, which in turn favours government stability; in contrast in consensual models, stability is traded for the protection of minority rights. The balancing between majority and minority rights entails a trade-off between government stability and representativeness, which in turn affects political outcomes.

Stability in majoritarian systems is achieved by the means of institutions such as electoral thresholds, which aim at reducing the number and political power of veto players. On the other side, consensus models foster representation and even over-representation of minor parties and constituencies, increasing in this way the number of veto players and the political fractionalisation. The convergence to either one model or the other polar model is achieved by the body of laws, rules and customs that shape the power accorded to minorities while aggregating political preferences. Within modern democracies, such an aggregation takes place mainly by legislative election and cabinet formation. Thus, the "political technologies" which transform electoral votes into parliamentary seats and these, in turn, into executive power, are key factors.

Comparative political scientists claim that the main dimensions to look at when one wishes to locate different political systems along the "majoritarian-consensus" spectrum are: the electoral rule, and particularly the power it affords to minorities, the party structure and the type of executive.

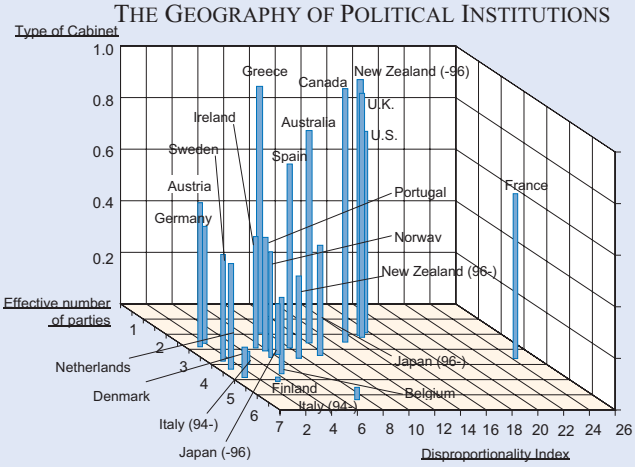
The literature makes these notions operational by developing three measures. The first is the *disproportionality index* (DISPR) which takes into account the divergence between parties' votes distribution and seats distribution implied by different electoral rules. Such divergence mainly consists of overrepresentation of major parties and partial or complete exclusion of minor ones. The second is the *effective number of parties* (ENP), which parallels the Herfindal concentration index commonly used in industrial economics, by giving more weight to those parties holding higher "coalition potential", i.e. substantial bargaining power in terms of seats. The third one is the *type of cabinet* (TOC) which classifies the executives in term of different degrees of stability. The minimal winning (including only parties whose support is necessary to achieve parliamentary majority) one party cabinet (MWOP) obtains the maximum score, while minority or oversized coalition governments get lower scores.[1] Higher values of DISPR and TOC and lower values of ENP are associated with a political system closer to the majoritarian model.

Although the three measures refer to a specific feature of the political institutional setting they are strongly interrelated and maybe jointly determined.

[1] For a more accurate definition of these indexes and sources see Bortolotti and Pinotti (2003).

Indeed, one might argue that electoral rules affect the ENP and this in turn determines the type of coalition formed. For this reason, the three indexes are usually considered as complements, rather than as substitutes. Therefore, following Lijphart (1999) we also standardize the three indexes on the whole sample and then compute their mean, which yields the POLINST variable.[2]

Figure 3



Source: Bortolotti and Pinotti (2003); graph design: Ifo Institute.

The FEEM Database of Political Institutions (FDPI) contains the political indexes described above that we have computed for 21 OECD economies from 1997 to 2002, updating and cross-checking the data originally compiled by Lijphart using electoral data. An important feature of these political variables is that they are time varying, as they change around election years in a given country and around institutional reforms, allowing the use of panel data estimation techniques.

The table shows the mean values for the disproportionality index, the effective number of parties, type of executive, and the POLINST variable for the countries of our sample. Three countries implemented institutional reforms in our sample period: Italy modified its electoral system in 1992, New Zealand and Japan in 1993. The two means presented for these countries are computed on the two subperiods, before and after the first post-reform election. Figure 3 plots the same cross-country means on a three-dimensional graph.

Majoritarian electoral rules, which are associated with greater disproportionality, allow fewer parties to gain seats in the parliament; in turn, a lower number of parties is associated with a higher probability of observing MWOP ruling coalitions. This "pattern of democracy" is well represented in Figure 3 by the cluster including the five Anglo-Saxon countries: Australia, Canada, United Kingdom, United States and New Zealand (before 1993). At the opposite, proportional electoral institutions produce fragmented parliaments and government coalitions. Proportional countries comprise the Low Countries (Belgium and Netherlands), the Scandinavian Countries (Denmark, Finland, Norway and Sweden), Italy and, finally, Switzerland, which is cer-

[2] Obviously, the sign of the ENP has been reversed as a *higher* effective number of parties fits with the consensus model.

Political and privatisation data

Countries	Dis-proportion-ality index DISPR	Effective number of parties ENP	Type of cabinet TOC	POLINST	Total privatisa-tion reve-nues/GDP
Australia	10.829	2.425	0.816	0.864	0.186
Austria	1.614	2.779	0.548	–0.109	0.049
Belgium	3.699	4.623	0.298	–0.847	0.024
Canada	13.641	2.343	0.985	1.248	0.035
Denmark	1.492	4.885	0.123	–1.258	0.075
Finland	3.347	5.109	0.017	–1.332	0.084
France	24,390	3,350	0,633	1,203	0.059
Germany	2.094	2.652	0.462	–0.133	0.035
Greece	7.729	2.231	0.973	0.906	0.066
Ireland	4.264	2.869	0.437	–0.096	0.072
Italy (–94)	3.505	3.955	0.048	–0.916	0.008
Italy (94–)	7.105	6.390	0.042	–1.486	0.086
Japan (–96)	6.087	2.990	0.184	–0.297	0.044
Japan (96–)	8.801	3.145	0.431	0.088	0.011
New Zealand (–96)	14.858	1.965	1.000	1.461	0.187
New Zealand (96–)	7.419	3.404	0.326	–0.194	0.051
Norway	4.483	3.680	0.413	–0.369	0.021
Portugal	4.536	3.010	0.445	–0.116	0.254
Spain	7.851	2.733	0.712	0.468	0.108
Sweden	1.829	3.642	0.412	–0.523	0.067
Switzerland	3.059	5.578	0.000	–1.519	0.022
The Netherlands	1.308	4.282	0.390	–0.785	0.041
United Kingdom	14.852	2.174	0.953	1.343	0.114
United States	15.699	1.936	0.789	1.293	0.001
Means	7.270	3.423	0.477	–0.046	0.118

Source: Bortolotti and Pinotti (2003).

tainly the most consensual country of our sample. Southern European countries (Greece, Portugal and Spain), the German-speaking countries (Germany and Austria), Japan (the only Asian country in the sample) and Ireland (the exception among the Anglo-Saxon countries) occupy half-way positions. Geographic proximity may have played a role in determining these clusters, as political and commercial spheres of influence may also have shaped historically political institutions.

As we already mentioned, three cases of electoral systems' reform are reported. Since they are rare events (3 out of 483 country-years in our sample), it may be interesting to evaluate their impact on our political indicators. In New Zealand, the 1993 reform from majoritarian to proportional electoral system resulted in an increased number of parties and in a decreased index for the government coalition. Japan and Italy, attempting to curb corruption and improve government stability, moved instead in the opposite direction, shifting from proportional to majoritarian systems. However, these reforms did not pay off as expected. In Japan, the government coalition index increased, but the number of parties increased as well, even if only slightly. Italy even faced a sharp increase in the number of parties (in the first graph, Italy moves perpendicularly to the regression line), leaving unaffected the mean score for the government coalition index. These last findings suggest that in order to get an adequate characterisation of complexity of the political-institutional systems, it is particularly useful to construct aggregate measures taking into account the various dimensions of political decision making.

Empirical results

We have performed multiple analyses in order to test the effect of political institutions on privatisation policy. In what follows we will briefly describe the main evidence that we provide. The interested reader may refer to Bortolotti and Pinotti (2003) for a complete presentation of the empirical results.

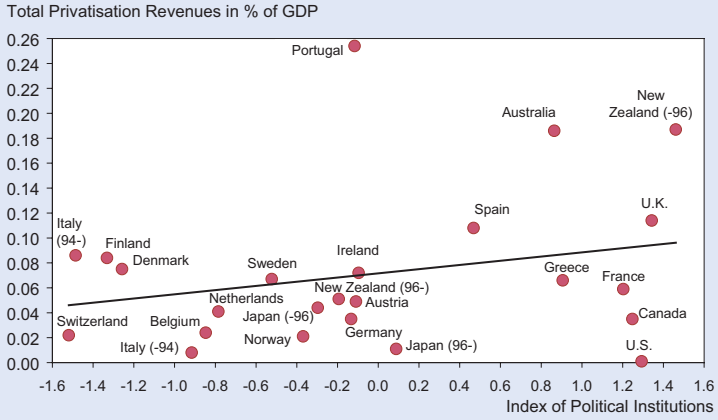
We start by looking at Figure 4, which plots the average values of our aggregate index POLINST and the total privatisation revenues raised in the country (in constant dollars) to GDP. The positive slope of the regression line suggests that privatisation activity may be correlated with political institutions. Indeed, we find strong privatizing countries such as the UK and New Zealand associated with higher values of our index. Conversely, a typical proportional country such as Switzerland lies very close to the origin. Nevertheless we find also several outliers, such as Portugal and importantly the US.

Univariate analysis allows us to corroborate these preliminary findings. We find a strongly statistically significant difference of 0.25 between the average value of the (standardized) POLINST index in country-years when a large-scale privatisation occurred, and the same average when it did not occur. The likelihood of privatisation seems therefore affected by the presence of majoritarian political institutions. Among the individual components, the disproportionality of the electoral rule appears to drive up the significance, immediately followed by the type of cabinet indicator. A quite similar picture emerges by looking at revenues. We find a strongly statistically significant difference between the average values of DISPR in the top and bottom quartile of the distribution of revenues to GDP.

These preliminary findings suggest that our political institutional variables may have explanatory power. We therefore performed a set of econometric regressions estimating the timing, the likelihood and the extent of privatisation in a panel data setting, including our institutional measures as regressors. A first important result is that political fragmentation within the executive (measured by the TOC) seem to explain why privatisations are de-

Figure 4

PRIVATISATION AND POLITICAL INSTITUTIONS



Source: Bortolotti and Pinotti (2003).

layed. The time elapsing from the first privatisation in our sample (British Petroleum in 1977) to the year corresponding to the median value of revenues to GDP for a given country is longer the stronger the presence of veto players within the government. The same variable affects significantly also the probability of observing a privatisation in a given year. Finally, we find the disproportionality index strongly affecting privatisation activity measured by the revenues in tobit regressions. Similar results are obtained when we estimate the coefficients of the aggregate index. Results are robust to the inclusion of different control variables and do not appear to be affected by simultaneity bias.

This bulk of econometric evidence allows us to conclude that political institutions matter in privatisation policy: as predicted by the theory, majoritarian countries privatize more than proportional/consensual democracies.

Conclusions

Our analysis shows that political institutions are an important determinant of privatisation policy. However, our conclusion does not imply any judgment of value on different patterns of democracy. Each model has advantages and disadvantages. Majoritarian political institutions streamline policy implementation and structural reforms by reducing the impact of minorities on the decision-making process. Conversely, a more consensual system favours representation and pluralism to smooth political and social tensions while creating stalemate in economic policy. Both systems have proved themselves to be valuable and equally compatible with solid democracies and with the most developed nations of the world.

The main point that we highlight in this note is the existence of a trade-off in the choice of a given constitutional setting. In some cases, this dilemma vanishes. Deeply divided societies (by language, religion, race, or ideology) will badly fit in with a purely majoritarian system, and it is likely that the introduction of such a model would generate further division and social conflicts. Indeed, social polarisation represents a formidable hurdle to carry out experiments in constitutional engineering. But in the more numerous intermediate cases, the costs of highly consensual systems should be carefully gauged, especially where deep structural reforms (including privatisations) are badly needed.

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The Challenges of Infrastructure Privatisation

Ioannis N. Kessides*

During the past two decades we have witnessed a profound reassessment of public policy towards the infrastructure sectors in both the advanced industrial and developing and transition economies (World Bank 2004). It is part of a much broader policy reform movement that is going on all over the world – the breaking up of centralised planning, privatisation, regulatory reform and deregulation, and a renewed reliance on the market mechanism. This paper presents a brief overview of this massive policy redirection, with a special focus on the infrastructure sectors (network utilities) and within the historical, economic and institutional context of developing and transition economies.

Deregulation in the US and the EU

The assault on regulation began in the United States (Joskow and Noll 1994). There were several historical forces that created the "perfect economic storm" and propelled the revolutionary deregulation of a wide variety of economic activities and much of the country's public utility industries in the late 1970s and early 1980s: double-digit inflation, "energy crises", stagflation, heightened environmental concerns, the virtual bankruptcy of a backbone industry (rail), and a perceived erosion of the country's productivity edge and its international competitiveness. Proponents of deregulation emphasised its potential to combat inflation and restore the growth in productivity by unleashing market forces of competition. The promise of deregulation to contribute to the resolution of the country's macroeconomic dilemmas had considerable political appeal. Moreover, concerns about the energy crises and environmental protection facilitated the introduction of economically efficient pricing that would discourage wasteful consumption (Kahn 2001).

Roughly during the same period, major sectors of the British economy also underwent far-reaching regulatory reform. Deregulation and new methods of regulation were introduced in the financial services and the professions, and radical regulatory reform accompanied the privatisation of the utility industries (Newbery 2000). In the process, several new regulatory institutions were established and new tasks were given to existing agencies such as the Monopolies and Mergers Commission (Armstrong et al. 1994). In the European Union, a series of directives beginning in the late 1980s sought to achieve the ultimate political objective of creating a single market – an area without internal borders in which free movement of goods, persons, services, and capital is ensured. These directives spelled out common rules for telecommunications, electricity, natural gas and transportation markets across the Member States. Taken together, they provided a roadmap for the development of a common regulatory framework and the extensive liberalisation of these industries. In fact, water is the only EU network utility where liberalisation is still in its infancy.

With the exception of the United States, almost all other countries in the past have chosen nationalisation over regulation as the instrument for control of monopoly power in the network utilities.[1] While the US deregulatory policy was being implemented and as the EU directives (which called for extensive liberalisation but remained silent on the issue of ownership) were building the policy foundation of a single market, another revolution begun to sweep the globe – privatisation.

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[1] This refers mainly to the period after World War II. For example, private ownership in electricity was initially the norm in many countries in Europe and South America. State ownership spread later, especially after World War II, either because of ideological reasons (as in England and France) or because political constraints on prices forced private firms into bankruptcy (as in Latin America). Similar situations prevailed for railroads and water in many countries. Telephone services became captive of state-owned post offices in Europe and Japan, but not in Canada, or, initially, Latin America.

The privatisation revolution

Since the early 1980s, privatisation has been a key component of structural reform programs in both developed and developing and transition economies. National leaders burdened by sizeable budget deficits and stagnating economies have been outspoken on the need to foster private initiative in the interests of productivity and growth, and have been taking substantive steps to move economic activities from governmental to private control in all sectors, including infrastructure (Willig 1994; Megginson and Netter 2001).

The initial impetus for privatisation in the developing countries was provided by the debt crises that emerged in the early 1980s. In many of these countries, the external sovereign debt problem led them through a decade of low to negative growth, macroeconomic instability and a series of forced adjustments. Developing countries simply could not continue absorbing the fiscal burden of their state-owned enterprises. (Lieberman 1997). At the same time, there was abundant evidence accumulating that the state-owned enterprises in core sectors of their economies, like infrastructure, were suffering from severe performance problems (Shirley and Walsh 2001).

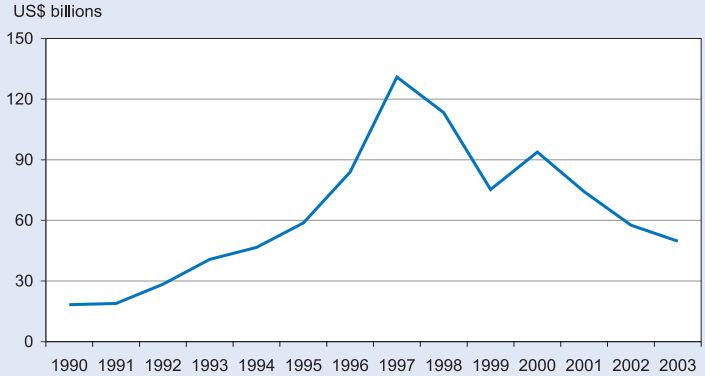
State-owned entities were forced to pursue multiple, poorly-defined and conflicting objectives. They were frequently used as instruments of stabilisation policy through price controls and investment targets. Their management was often appointed on the basis of political loyalty rather than professionalism, and their employment and investment patterns reflected bureaucratic preferences rather than market demand and supply conditions. Scarce public investment funds allocated to the infrastructure sectors were in many cases squandered through policies reflecting political expediency and other short-run objectives rather than careful long-run planning in the public interest. Moreover, price controls were imposed in disregard of their performance implications, subjecting the operating entities to considerable financial distress and substantially impairing their ability to provide reliable service (Kerf and Smith 1996).

Attempts at reforming the public enterprises largely failed (World Bank 1995). These efforts either did not bring the desired results or the improvements were not sustained. Very few governments, if indeed any, were able to introduce and maintain the large number of complex and demanding policy measures needed for efficient public enterprise performance. In the meantime, the costs of state ownership were increasing because of dramatic technological changes, increased globalisation, and ever increasing scarcity of public funds. In many countries, inefficient public enterprises, especially in the infrastructure sectors, were draining the state budgets, diverting resources from health and education, undermining the banking sector and impeding the development of the private sector. In the context of a globalised economy, the poorly performing state-owned infrastructure sectors were increasingly seen as constraining economic growth and undermining international competitiveness. It became evident to policymakers throughout the world that the long-term solution to the problems of poor service delivery, lacklustre growth and damaging political interference required radical structural change – privatisation, with the public's role mainly restricted to that of regulation which seeks to ensure a fair policy development and recognition of social and other policy goals.

The dimensions of the privatisation revolution in both the developed and developing and transition economies (DTEs) has been huge. Between 1990 and 2003 more than $890 billion was invested (in the form of divestitures, green field projects, and management and operational contracts with major capital expenditures) in approximately 2,700 private infrastructure projects in developing and transition

Figure 1

INVESTMENT IN INFRASTRUCTURE PROJECTS WITH PARTICIPATION IN DEVELOPING COUNTRIES, 1990 - 2003

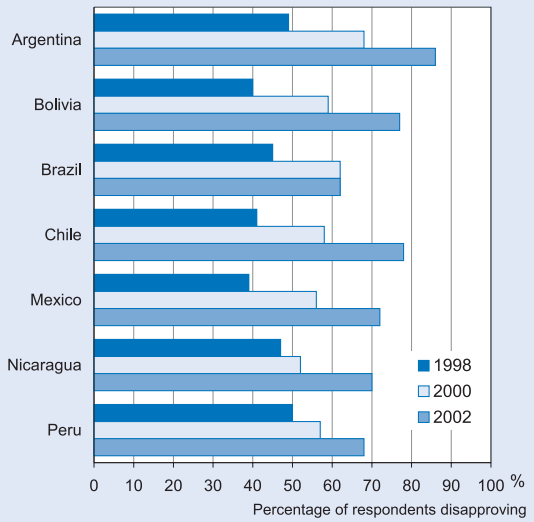


Source: Izaguirre (2004).

countries alone (Figure 1). However, annual investment flows peaked at around $130 billion in 1997 and have since dropped by more than half – for example, investment totalled $47.5 billion in 2002, falling back to 1994 levels (Izaguirre 2004). The steep decline in overall investments since 1997 has been arguably a consequence of both the continued lack of deeper economic reforms, often beyond just the infrastructure sectors, as well as the deteriorating market environment for private financing of infrastructure assets. The Argentina crisis, the Enron debacle and its impact on investor confidence, together with developments in developed financial markets, such as a sharp drop in equity valuations, widening credit spreads and a withdrawal from banks in response to increasing loss provisions, provided a hostile external environment for emerging market financing over the last few years.

Figure 2

PUBLIC OPINION ON PRIVATISATION IN LATIN AMERICA



Source: Latinobarometro (2002).

Promises, perils and tradeoffs

Just a few years ago, privatisation was heralded as the elixir that would transform ailing and lethargic state-owned enterprises into sources of creative productivity and dynamism for the public interest. National leaders burdened by sizeable budget deficits and stagnating economies were outspoken on the need to foster private initiative as a means of promoting growth and prosperity and enhancing the economic opportunities of all citizens. Multilateral institutions offered advice and added stimulus to this movement among their national recipients of aid. The world-wide press provided a near harmony of voices in praise of the new trend in policy thinking (Willig 1994).

However, as with all economic elixirs, privatisation was oversimplified, oversold and ultimately disappointing in delivering less than promised. Recently, the alleged "failures" of privatisation, improper restructuring, and too rapid regulatory decontrol, have led to street riots, sceptical press coverage and mounting criticism of multilateral institutions. Today, privatisation is undergoing a multifaceted revisionism and its critics are numerous and vocal. This hostility is not limited to a few radical protesters. Opinion polls in several DTEs, especially in Latin America, reveal growing public dissatisfaction and disenchantment with privatisation. The disapproval ratings in 2002 were higher than in 2000, and the latter were higher than in 1998. In 2002, almost 90 percent of the Argentines and 80 percent of the Chileans polled disapproved of the privatisation process even though there were demonstrable performance improvements (Figure 2).

At the same time, however, many of privatisation's current critics are unduly impatient and suffer from a measure of illusion and misunderstanding. One of the distinguishing characteristics of most DTEs was the extraordinarily low level of objective performance in their infrastructure sectors compared to the equivalent sectors of advanced industrial economies. However, the structure of ownership was not necessarily the key explanatory variable for the observed differential in performance. After all, during the same period state ownership in these sectors was also prevalent in most developed economies where performance was reasonably good. The deeper explanation arguably lies elsewhere.

It can be plausibly argued that the performance of the state-owned network utilities has been an accurate summary statistic of a variety of country-specific observable and unobservable characteristics (institutional development, nature of organised interest groups and patterns of social conflict, business culture and code of conduct, etc.). It would be utterly unrealistic to expect that these characteristics would change on a time scale comparable to that of executing privatisation transactions, or that their less prepossessing attributes would disappear overnight. Even in the advanced industrial econo-

mies it took a long time for their institutions to develop. It would be difficult to create such institutions overnight in societies that do not have the supporting constitutional, political and legal traditions, or infrastructure to support them. Thus, achieving the public interest objectives of privatisation is likely to require a longer time period than that which has elapsed since the reforms were introduced in the majority of the DTEs. It should be noted that several decades were required in the "miracle economies" of the Far East before the invested effort began to produce any noticeable results (Baumol 1993).

Disappointment has been engendered by the price increases and reductions in jobs that often accompany infrastructure reforms, as well as by the high profits of the firms that are successful in improving physical operating performance, an outcome that has occurred in most cases. However, it is important to note that one of the key problems of the old utility model was underinvestment, in large part caused by underpricing. The state-owned utilities were hopeless at attributing the right cost of capital, particularly during periods of high inflation, so prices often fell to levels that could not sustain a rate of investment out of retained profits to meet demand growth. Government subsidies simply perpetuated the problem until the fiscal crunch occurred. The choice was either more taxation or higher prices. The latter would generally fall on those who benefit from existing services – the middle class and richer consumers – while the former was likely to be felt partly via inflation taxes which hit the poor, or other groups without protective assets. A sensible, and arguably less regressive, response was to realign prices with underlying costs. Thus, the fact that privatisation renders such price adjustments mandatory before investors are willing to invest is actually one of its main attractions.

In the pre-reform era, the operations of state-owned utilities in most DTEs were characterised by extremely high levels of excess employment. Efficiency and competitiveness, on the other hand, require the elimination of redundant jobs. Restoring efficiency is especially important in the infrastructure sectors because they provide services that are critical inputs in manufacturing, transportation and commerce – services that are essential to boosting economic activity and increasing competition through the expansion of product lines and geographic spheres of distribution. Therefore, failure to improve efficiency in these sectors risks their becoming a serious burden on the economy in general and on the evolution of competitive markets in particular. Moreover, the market's key incentive mechanism is founded upon the prospect of profits for those firms that succeed. Thus, while prevention of monopoly profits is a legitimate public policy goal, it should not lead to artificial limits on post-privatisation profits or restrict such profits on the basis of mechanistic formulas or populist demands. Otherwise, the incentives for investment, efficiency, productive growth and innovation – badly needed in the network utilities of most DTEs – would be undermined or eliminated.

Efficiency impacts of privatisation and liberalisation

The future course of privatisation and regulatory reform in the DTEs will be determined not only by the prevailing economic and political philosophies, and macroeconomic conditions, but also by the collective assessment of the record so far. A review of the evidence suggests that while there have been disappointments, there have been substantial gains that are not always obvious. However, seeing a clear picture of results is difficult because the performance of each network utility is multi-faceted, and different observers may weigh various aspects of performance differently. It is even less possible to reach an unequivocal verdict about the effects of privatisation and regulatory reform on the diverse collection of network utilities and countries that have experienced them in varying ways and degrees – these industries and countries are just plain different and should not be lumped into a single cookie cutter reform model. Assessment is further complicated by the very short time span of privatisation, restructuring and major regulatory reforms in the majority of DTEs; by the severe measurement problems with respect to important economic variables; and by the fact that privatization and regulatory reform were implemented simultaneously, so it is virtually impossible to econometrically identify their separate effects. Only in the United States, where the structure of ownership remained constant, can changes in performance be confidently traced to changes in the regulatory regime.

All of the above measurement difficulties notwithstanding, most of the empirical evaluations of privatisation and restructuring seem to be favourable

(Gray 2001, Megginson and Netter 2001). At the microeconomic level, the emerging empirical evidence provides support to the view that privatisation has positive effects on efficiency (labour and total factor productivity), financial performance of utilities and service expansion. This empirical support is derived from a variety of studies that analyse the pre- and post-privatisation performance of specific firms, a cross-section of firms from different industries within a given country and a cross-section of firms from different countries (Galal et al. 1994, Bourbakri and Cosset 1998, Dewenter and Malatesta 2001, Sheshinski and Lopez-Calva 2000, Delfino and Casarin 2001).

Reforms have expedited service expansion in a variety of sectors and countries. Telecommunications coverage has seen the largest jump, but significant increases have also occurred in electricity, transportation and access to safe water (Harris 2003). The size of such changes depends enormously on the extent to which the market is liberalized and the effectiveness of regulation. For example, increased competition has been particularly powerful in boosting telecommunications coverage. Networks have expanded almost twice as quickly in Latin American countries that have allowed competition in telecommunications after privatisation as in countries that simply converted to private monopolies. But even private monopolies have expanded faster than public ones (Figure 3).

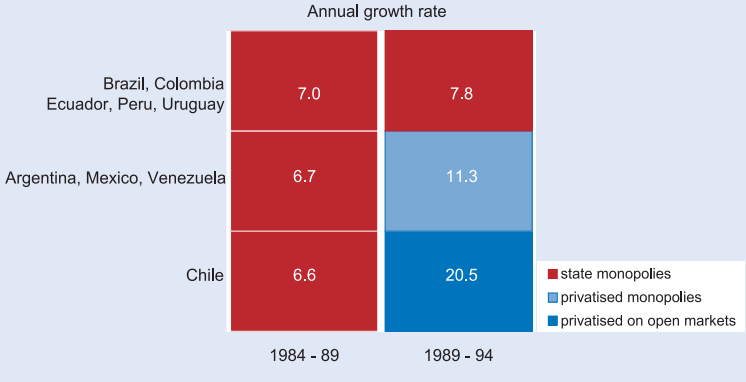
Privatisation and deregulation have significantly improved physical performance, service quality and other aspects of efficiency in many developing and transition economies. Railroad privatisation has led to spectacular gains in labour productivity (Thompson 2003). For example, in many Latin American rail systems output per employee (measured as the sum of ton-kilometres and passenger-kilometres) has doubled, tripled, or even quadrupled after privatisation (Thompson and Budin 2001). Reforms have also led to significant improvements in the operating performance of ports. Privatisation generated significant efficiency gains in the operations of Kelang Port Authority, Malaysia's largest port (Peters 1995). Crane handling improved from 19.4 containers an hour in 1985 to 27.3 in 1987, bringing Kelang's performance close to Singapore's (Tull and Reveley 2001). The return on fixed assets grew at an average annual compound rate of just 1.9 percent in 1981–86, but jumped to 11.6 percent in 1986–90, a result of improvements in productivity and throughput, not higher prices. Workers also benefited from the gains in productivity: by 1990 they were paid 60 percent more an hour in real terms, put in 6 percent more hours and produced 76 percent more than before privatisation (Galal and others 1994).

Reforms have had remarkable effects on the quality of electricity supply. In Chile the average time for emergency repair service declined from 5 hours in 1988 to 2 hours in 1994. In addition, power outages due to transmission failures have fallen steadily since privatisation (Rudnick and Zolezzi 2001). Energy losses, including theft, have also shrunk, from 21 percent in 1986 to 9 percent in 1996 (Fischer and Serra 2000). In Argentina, Edenor's losses fell from 26 percent of its distributed electricity in 1993 to just 10 percent in 2000. In the greater Buenos Aires area the hours of supply lost per year dropped from 16.8 in 1994 to 5.0 in 2001. Technical losses in transmission also fell, from 6 percent in 1992 to 4 percent in 2000.

Before reforms, the failure of many governments to adequately increase service rates, especially during periods of high inflation, effectively decapitalised their infrastructure systems. In the past few years, many countries have begun dismantling long-standing policies of underpricing and cross-subsidies. Electricity reforms have better aligned prices with underlying costs to reflect

Figure 3

GROWTH IN TELECOMMUNICATIONS LINES IN LATIN AMERICA UNDER DIFFERENT FORMS OF OWNERSHIP, 1984 - 1994



Source: Wellenius (1997).

resource scarcity, as efficiency requires. In many countries this has meant increasing prices that previously were too low (Joskow 2003). But in some countries prices have been falling because of the efficient exploitation of regional natural gas networks and new production technologies (mainly combined-cycle gas turbines). In Argentina the average monthly price per megawatt-hour in the wholesale electricity market fell from about $45 (with peaks of more than $70) in 1992 to about $15 in 2001. Similarly, in Chile the node price (including energy and capacity charges) of power delivered to Santiago fell from $30 per megawatt-hour in October 1982 to $23 per megawatt-hour in October 2002 (in October 2002 dollars; Pollitt 2003). Between 1986 and 1996 wholesale prices dropped 37 percent and final prices fell 17 percent.

Post-reform pricing in several developing and transition economies has provided considerable benefits to rail users. Among 17 privatised railroads (mostly in Latin America), 15 had lower freight tariffs in 1999 than when the concessions started (mostly in the mid-1990s). Rates dropped 8–54 percent in Latin America and 14 percent in Côte d'Ivoire. For the six countries involved these tariff reductions saved about $1 billion a year in transport costs (Thompson, Budin and Estache 2001). Moreover, these estimates understate the total savings because they do not reflect the competitive pressures that lower rail tariffs exerted on trucking and other competing transport modes.

Effects on distributional equity

To mitigate the public discontent associated with restructuring and privatisation, more comprehensive assessments are needed of their welfare effects – moving beyond standard analyses of their impacts on firm profitability and industry performance to include their effects on workers and households at different income levels. Moreover, distinctions between low- and middle-income countries need to be made more carefully. In low-income countries nearly all rural and many poor urban residents lack access to basic infrastructure services. Thus the policy reforms that normally accompany restructuring and privatisation – such as eliminating cross-subsidies and moving toward cost-reflective prices – mainly affect higher-income groups. But in middle-income countries – such as those in Latin America and especially transition economies – such reforms can hurt poor people because many of them (mainly in urban areas) have access to basic services. The solution is not to halt the needed reforms but to put in place safety nets and tariff rebalancing schemes that do not involve radical, across-the-board price increases.

Recent empirical work offers insights on the distributional effects of infrastructure reforms. Studies in Argentina, for example, have found that all income classes benefited from the efficiency, quality and access improvements resulting from the utility privatisation that began in 1990. More efficient infrastructure services also affect most other economic activities and promote general economic growth – enhancing economic opportunities for poor people. When these general effects are taken into account, the poorest groups seem to benefit the most from the increased productivity and access brought about by privatisation and related reforms (Benitez, Chisari and Estache 2003).

Recent research analysing the welfare effects of utility privatisation in four Latin American countries (Argentina, Bolivia, Mexico and Nicaragua) found no clear pattern in price changes – in about half the cases, prices fell. But there were adverse distributional effects on the bottom half of the income distribution due to job cuts in the privatised utilities. Against these negative distributional effects of layoffs have to be offset the improvements in service quality, increased access for poor people and the changed structure of public finances, which benefited poor people more than other income groups (McKenzie and Mookherjee 2003).

Agenda for further policy analysis

There is compelling evidence that restructuring and privatisation, when designed and implemented well, can significantly improve infrastructure performance. Still, critics of reform are right to point out the many cases where privatisation has been undertaken without institutional safeguards and conducted in ways widely viewed as illegitimate. Under those circumstances transferring state assets to private control may have been a dubious achievement (Stiglitz 1999). Moreover, concerns are growing about the distributional effects of privatisation and market liberalisation – especially their effects on basic services for poor households and other disadvantaged groups.

Thus there is an urgent need to analyse the successes and failures associated with past reforms and to identify the instruments and policies that should guide ongoing and future efforts. Such an agenda should focus on the efficiency and distributional effects of restructuring and privatisation programs and on several second generation regulatory reforms – of pricing, access to bottleneck facilities, and subsidies – that will be needed if such programs are to achieve their public interest goals.

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Privatisation in Austria: Response to Internal and External Pressures

Ansgar Belke and
Friedrich Schneider*

Privatisation has been a key element of structural policy reforms in most European Union countries including Austria during the last decade. Governments undertaking privatisation have pursued a variety of objectives: achieving gains in economic efficiency, given the extensive prevalence of poor economic performance of public enterprises in many countries and limited success with their reforms; and improving the fiscal position, particularly in cases where governments have been unwilling or unable to continue to finance deficits in the public enterprise sector. In addition, budgetary-constrained governments, facing fiscal pressures, have sometimes privatised mainly for the reason of financing fiscal deficits with the privatisation proceeds.

The issues of privatisation (and sometimes deregulation) have been reviewed in numerous studies that have emphasised the potential efficiency gains.[1] Hence, the goal of this paper is twofold: first, to provide some theoretical reasoning why privatisation is useful as well as profitable for an economy and, second, to empirically present the extent of privatisation in Austria and other European Union countries. Therefore, in the next section, the reasons why privatisation is necessary are elaborated. In the following part, the specific pattern privatisation proceeds for Austria relative to other EU and OECD countries is presented. A final section concludes.

Reasons for privatising public enterprises

For at least the last century, economists have employed a positive economic theory to explore the implications of profit maximisation by private firms operating in private property contexts. It is only since the late 1960s that empirical studies have been undertaken dealing with the behaviour of publicly operated firms.[2] Since then a large number of studies on a variety of activities of public or private enterprises now exists, and their main focus is the question of how public firms differ from their private equivalents.

Basically two approaches are employed. The first is the *Property Rights* approach. It concentrates on the differences in the ease of captureability of economic surplus of a resource and the rights to direct an asset's use, alter its from or transfer its claims among existent and potential owners. In short, this approach explores the differences in incentives between public and private agencies caused by variation in the ability of owners to monitor management and the problems that emerge when the goals of "owners" and their agents, "managers", diverge.[3] Numerous studies have been undertaken, which have tested this proposition. The suggestion that public enterprises are less efficient than private ones, is confirmed in most of them.[4] The second one is the *Public Choice* approach and concentrates on political coalitions and their effect on input usage and reward and/or product characteristics. The Public Choice approach also includes the theory of bureaucracy (Niskanen, 1971, 1975). The Public Choice approach appears to provide a broader analysis than the Property Rights one. The

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[1] Surveys of the literature on privatisation are provided in Megginson and Netter (2001), Boes and Schneider (1996), Bartel and Schneider (1991), and a summary of the earlier discussion is given in Borcherding, Pommerehne and Schneider (1982).

[2] See e.g. Borcherding, Pommerehne and Schneider (1982) and Boes and Schneider (1996).

[3] The first approach was developed by Alchian (1961, 1965) and more recently by Baron and Myerson (1982), Grossman and Hart (1983) and MasColell, Winston and Green (1995).

[4] See the studies by Boes and Schneider (1996), Schneider (1997 and 2002), Schneider and Hofreither (1990). As these results are so well known, they are not reported here.

Table 1

Privatisation proceeds in small open economies in the years 1993, 1995, 1997, 1998 and 2000

Country	Privatisation proceeds in small open economies														
	1993			1995			1997			1998			2000		
	$ million	In % of total	Rank	$ million	In % of total	Rank	$ million	In % of total	Rank	$ million	In % of total	Rank	$ million	In % of total	Rank
Austria	142	4	7	1,035	9	4	2,020	17	2	2,935	12	5	2,083	11	3
Belgium	956	29	1	2,681	22	2	1,562	13	3	1,467	6	7	–	–	–
Denmark	122	4	8	10	0	9	45	0.5	8	4,502	18	2	111	1	8
Finland	229	7	6	363	3	7	835	7	5	1,999	8	6	1,827	10	4
Ireland	274	8	4	157	1	8	293	3	7	4,864	19	1	1,458	8	5
Island	10	0	9	6	0	10	4	0	10	129	0.5	10	–	–	–
Netherlands	780	24	2	3,993	33	1	831	7	6	335	0.5	9	310	2	7
Norway	–	–	–	521	4	6	35	0,5	9	28	0	11	1,039	6	6
Portugal	500	15	3	2,425	20	3	4,968	43	1	4,271	17	4	3,256	18	2
Sweden	252	8	5	852	7	5	1,055	9	4	172	1	8	8,082	44	1
Switzerland	–	–	–	–	–	–	–	–	–	4,426	18	3	–	–	–
Total	**3,265**	**100**		**12,043**	**100**		**11,648**	**100**		**25,128**	**100**		**18,166**	**100**	

– = zero or insignificant.

Source: Own compilations. Source for the years 1990-1996 is the Worldbank and SBC Warburg; for the year 1997 the source is IFR Securities. All other sources: National statistics, and OECD Financial Market Trends, No 72, (1999), Paris.

Public Choice approach assumes that politicians, bureaucrats, managers of public enterprises are selfish utility maximisers subject to constraints.[5] In this approach it is assumed that a politician, for example, will act selfishly in order to reach his ideological or personal goals under the constraint of winning the next election. Since for a politician to stay in power is the most important constraint (or even sometimes goal), he will also use public utilities for his own selfish goals.

The amount of privatisation in Austria and other OECD economies

Privatisation in small open economies

If one first considers eleven small open economies in Europe, of which one is Austria, the results presented in Table 1 and in the Figure emerge. Table 1 shows that the amount of privatisation was quite moderate at the beginning of the 1990s with the exception of Belgium. The Belgium government privatised in 1993 public utilities with proceeds of USD 956 million, which is roughly 30 percent of all privatisation proceeds of the small open economies in Table 1 and the Figure. The second highest privatisation proceeds in this year were achieved by the Netherlands with USD 780 million, followed by Portugal, which had a quite ambitious privatisation program over the years 1993–98, with privatisation proceeds over USD 12 billion. A lot of well known public utilities in Portugal were privatised like the power plant EDP, the highway system BRISA and cement factories ZINPOR. Also in Austria the privatisation proceeds were quite large. In 1998 the Austrian government privatised firms with proceeds of USD 2.94 billions. In Austria the selling of 25 percent of the public Telecom was the biggest deal, where proceeds of USD 2.33 billion were achieved. Starting with rank seven in 1993, Austria improved its performance in percent of total privatisation

[5] Cf. Schneider and Frey (1988), Bartel and Schneider (1991), Pardo and Schneider (1996) and Schneider (2002).

proceeds among small open economies steadily with a peak in 1997 and at the end of the sample ranks number three out of eleven. However, one should not overemphasize this pattern, since the amount of privatisation proceeds in small open economies increased in general over 1993–98. In the year 1993 it was USD 3.26 billion and in 1998 USD 20.246 billion.

In the Figure, the privatisation proceeds of small open economies are shown in relation to GNP. One clearly realises the dominant position of Portugal over time, followed by the Netherlands and Belgium, which display enormous privatisation proceeds in the years 1993 and 1995. In Austria, privatisation proceeds in percent of GDP amount over the years to the average of the small open economies under consideration. However, we cannot detect any systematic correlation between the degree of openness of an economy and its privatisation intensity. In general, this makes external impact on the speed and intensity of privatisation less plausible.

However, in Belke and Schneider (2003, 2005) we show that this was not the case for Austria. At most, the (announcement of) the launch of the euro seems to have speed up the privatisation wave in Europe. In general, one realises that the privatisation issue and the proceeds from privatisation have been a considerable and policy-relevant issue in the 1990s also for the small open economies.

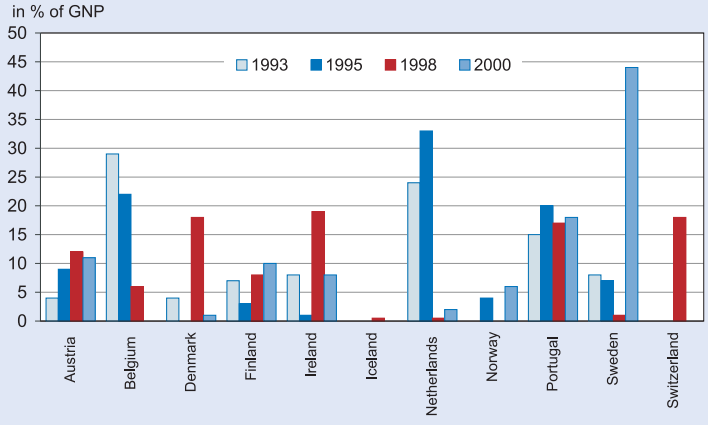
Privatisation in Austria

Among those industrialised countries now awaiting further privatisation, Austria is special in that historically it is characterised by strong governmental intervention. Large parts of the manufacturing and the electricity sector were nationalised after World War II, in part to safeguard the country's economic independence after German occupation and in part in order to finance the rehabilitation of large-scale industries that were destroyed. Jointly with public ownership in telecommunication, transport, and banking this generated one of the largest public sectors in Europe.[6]

Seen on the whole, Austria's economy has been characterised by a relatively important state-owned industry, a lack of own capital funds due to the comparatively small company size, and a predominantly bank-based investment system. In 1998, Austria was characterised by 17 percent market capitalisation relative to GDP, i.e. an even lower valuation ratio than Italy (30 percent) and Germany (39 percent; Boutchkova and Megginson, 2000, p. 9, Table III). Globalisation and Austria's accession to the EU have revealed the structural problems of this system. Those sectors of the Austrian economy which have been protected from international competition such as, above all, telecommunication, energy supply and the food industries had to be integrated in the internal market. As a consequence, restructuring programs have recently been launched focusing on liberalisation and the privatisation of Austria's economy. In addition, joining the European Union represented a structural break for Austria with respect to the incentives to delay necessary deregulation and privatisation measures.[7]

The Austro-Keynesian era of stabilisation policy which lasted from the beginning of the 1970s to the mid 1980s can be viewed as an attempt at "direct employment policy" in the public utilities and the public industrial sector, mainly in the basic (e.g. steel) machinery and chemical industry. In a sense, relatively large budget deficits and a continuously increasing debt-to-GDP ratio have in the past often been excused by pointing at the fight against

PRIVATISATION PROCEEDS IN SMALL OPEN ECONOMIES



Source: Compilation of the authors.

[6] See among others Aiginger (1999). Nowotny (1998), pp. 39 ff., discusses different meanings of "privatisation" more deeply in the context of Austria.

[7] See Clemenz (1999) and Nowotny (1998), pp. 37 ff., on Austrian public enterprises as instruments of economic and social policy as a means of avoiding labor market hysteresis (Theory of Co-operative Economics or "Gemeinwirtschaft").

unemployment. The primary goal of this type of short-term policy in private goods markets was to stabilise employment and real income in the nationalised industry and, by means of the Austria-specific industrial relations, in the private sector as well. To achieve this political target various steps were taken by public management: the maintenance of the greatest possible level of production in the face of diminishing prices and demand; the greatest possible hoarding of employees even in situations when rationalisation measures (dismissals) were required (resulting in unemployment on the job); an over-dimensioned propensity to invest (primarily with regard to the income effect of investment); an expansionist wage and fringe benefits policy with respect to buying power (causing high labour costs); and the financing of the firms' deficits out of the federal budget.

With regard to social and re-election problems arising from unemployment and low incomes, the direct employment policy in public industrial firms intended to smooth the inevitable adjustment process to the rising requirements of global competitiveness in the long run. Naturally the pursued type of stabilisation policy immediately caused substantial effects on the public industrial firms' productivity, thriftiness and profitability, thus reducing international competitiveness and augmenting deficits in the short run (Nowotny 1982). Nonetheless, production and employment could not be maintained permanently at a high level, because the rationalisation measures could not be postponed any longer. Since the mid 1980s, the Austro-Keynesian stabilisation policy has been increasingly criticised with respect to its long-term efficacy. Finally, the troubling rise in the financial losses of the state-owned firms in the iron and steel, chemical, machinery and vehicle industry caused a turn in public opinion and economic policy.

The amount of subsidies to public industrial firms with the aim of covering the deficits and financing investment was limited to a fixed total and to the period until 1989. This change of policy emerged when the government realised that, due to the critique of the opposition, mass media and private entrepreneurs as well as to the people's fear of tax increases, a majority of voters would not tolerate further subsidies to public industrial firms any longer. In this sense, the feedback from the voters to the government worked quite well in Austria. Prior to this change in opinion, politicians had formed coalitions with the management of the relatively large and locally concentrated public firms in order to secure the subsidies which rendered inefficiencies possible and served their local constituency. Moreover there were powerful shop stewards who were also members of the legislating National Council and therefore succeeded in financing the expansionist enterprise policy from the federal budget.

From the end of the 1980s there was a turn around in Austrian policy with respect to the public industrial sector and public utilities. Not only did quite a considerable privatisation take place in the 1990s but also these enterprises where much less used for re-election purposes partly due to the fact that – as emphasised above – after joining the European Union and the deregulation of former monopolies into competitive markets it was much less attractive to use the public utilities and industries for re-election purposes, mainly due to increasing public budget problems induced by fierce tax competition within the EU context. But also Austrian voters reacted to political business cycles, their voting behavior was more and more in line with the Ricardian equivalence theorem. In the 1990s the privatisation of Austrian state-owned industrial firms and state-owned utilities reached USD 6 billion (compare Table 1) between 1993 and 1998.

These dramatic changes in Austrian policies, which gained momentum in the 1990s led some authors even to speak of "New Austrian Public Policies" (see, e.g., Clemenz, 1999, p. 1). Although a substantial privatisation took place, the privatisation potential in Austria is still quite large. In most cases, the Austrian government kept substantial shares of partly privatised enterprises. Taking into account the federal, state and community level and including all public utilities, there is a privatisation potential of 45 billion euro from which the federal government owns 62 percent, the city or state of Vienna 13 percent, all other states (e.g. Upper and Lower Austria) 14 percent and the communes (without Vienna) 11 percent. The latest privatisation proceeds of the federal government over the years 1999 up to 2001 are presented in Table 2.

In 1999 a part of the Austrian tobacco (9.4 percent) was privatised, which brought 6.8 billion euro. On 28 February 2000, the Austrian Federal Government authorised the Minister of Finance to issue the privatisation mandate to the Österreichische Industrieholding AG (OeIAG), the Republic of

Table 2

Latest privatisation proceeds in Austria (Federal government) over 1999-2001

Year	Public enterprise	Proceeds € million
1999	Privatisation of 9.4% of the Austrian Tobacco AG	6.8
2000	100% PSK (Postal Bank)	969.5
	24.4% Telecom (to Telecom Italia)	763.8
	100% State Printing Office	2.2
		1,742.3
2001	17.38% Airport Vienna AG	54.1
	41.1% Austrian Tobacco AG	582.2
	100% Dorotheum	55.6
	100% Strohal Rotary Printing	21.1
		713.0
Sum	**1999–2001**	**2,455.3**

Source: Ministry of Economic Affairs (2002).

Austria's holding and privatisation agency at the annual general meeting on 17 May 2000. In accordance with the mandate, OeIAG was required to transfer 100 percent of the following companies or interests in companies to completely new shareholders, strategic partners or the general public: Österreichische Staatsdruckerei GmbH, Dorotheum GmbH, Print Media Austria AG, Flughafen Wien AG, Österreichische Postsparkasse AG, Telekom Austria AG, and Austria Tabak AG.

In carrying out this privatisation mandate in the interests of the Austrian people, the OeIAG had to "obtain the maximum revenue possible, taking into consideration the companies' and Austria's interests" (OeIAG 2003). It is important to note that the OeIAG depends on the instructions issued by the Republic of Austria. A second phase was envisaged at that time, which involves examining the possibility of even further privatisation. In the meantime, the OeIAG has already privatised further companies or parts of companies like Österreichische Staatsdruckerei GmbH, Dorotheum GmbH, Flughafen Wien AG (17.4 percent), Österreichische Postsparkasse AG, Austria Tabak AG, Print Media Austria AG, and Telekom Austria in compliance with the privatisation mandate of the federal government. In the year 2000 100 percent of the Postal Bank was privatised, and the proceeds amounted to EUR 970 million. Also 24 percent of the state owned Telecom utility was privatised with proceeds of EUR 763 million via an initial public offering. In total in the year 2000 EUR 1.742 million privatisation proceeds were acquired by the federal government. In the year 2001 41.1 percent of the Austrian tobacco state-owned utility was privatised, which brought privatisation proceeds of EUR 582.2 million. In total, from 1999 to 2001, privatisation proceeds amounted to EUR 2.455 billion. This is quite sizeable and helped the Austrian government reduce its federal debt. However, some Austria-specific features deserve more attention.[8]

Policy lessons from Austrian privatisation experience

Privatisation has certainly been a key-element of structural reform in the European Union countries including Austria, and proceeds from privatisation have been substantial in most of these countries. Gross receipts that can be transferred to the budget are affected by actions prior to sale, the sales process and the post-privatisation regime. An evaluation of the potential uses of privatisation receipts or proceeds should reflect the implications for government net worth and their macroeconomic impact. In so far as government net worth is concerned, proceeds from privatisation do not often indicate themselves that the government is better off. Privatisation has longer term implications in terms of revenues forgone and/or expenditures that will not be made in the future and government decisions on the use of proceeds should reflect this inter-temporal effects. Government net worth will rise to the extent that private sector ownership leads to an increase in efficiency and the government shares in this gain.

The macroeconomic effects of privatisation depend, in part, on whether receipts/proceeds are from domestic or foreign sources, the degree of capital mobility and the exchange regime. Broadly the effects of a decrease in the deficit financed by privatisation receipts would be similar to those resulting from a debt-financed fiscal expansion. Both the economic recovery and privatisations lead to receipts which can be used to lower the deficit. The use of proceeds to reduce external debt provides for an automatic sterilisation of what may be substantial capital inflows associated with privatisation. The reduction of domestic debt may impact on domestic stability.

This contribution has shown that there are good reasons for privatisation in general although this strategy raises some opportunity costs and that the privati-

[8] An additional comprehensive and informative source on the history of privatisation in Austria is Clemenz (1999), pp. 5ff. For economic consequences of privatisation in Austria in terms of performance measures, see in detail Belke and Schneider (2005).

sation proceeds are able – under certain circumstances – to enhance the welfare of these countries. With regard to Austria we are skeptical about whether Austria's privatisation potential has been exploited up to now and whether the speed of privatisation, although quite sizeable, has really been sufficient. However, future prospects for quick and full privatisation in Austria are rather gloomy although economic theory (Alchian and others) and also empirical evidence suggest that only full as opposed to partial privatisation is successful with respect to a better economic performance in the long run (Boardman and Vining 1989, 1991). However, as long as politicians interfere with this process, there will be no unhindered development towards full privatisation. This assessment is all the more valid when considering the Austrian habit of appointing former members of the Austrian government as CEOs of the Austrian privatisation agency OEIAG, in which the state is still determined to keep a strategic stake.

In Belke and Schneider (2003), we elaborate on some further idiosyncratic extensions for the Austrian case. Especially in the Austrian case, any discussion of privatisation cannot be reduced to observing cash flows, employment performance and the stock-exchange ratings of the privatised, formerly state-owned, enterprises (SOEs). Politoeconomic aspects relating to income distribution and ideology play an important role in explaining the manner, extent, speed and the economic effects of privatisation and must also be considered.

The *Maastricht debt criterion*, one of the conditions for EMU entry was a likely incentive for privatisation. Already in 1998 Germany and France were said to have sold their "family silver" in order to push their debt below the 60 percent of GDP threshold. However, there was a considerable accumulation of privatisation efforts towards the end of the1990s. Hence, it appears logical to also ask how much of Austria's privatisation efforts in the 1990s was enacted in order to fulfil the Maastricht debt criterion and later on to obey the stability pact, or at least was sold to the public as such.[9] In this sense, governments were tempted to use privatisation receipts in order to reduce their public debt in order to meet one convergence criterion.

We already pointed out that in France privatisation activities were highest in 1998, the year before the launch of the euro, due to the privatisation of France Telecom. Based on similar motives, the current Austrian government has generally pursued a (in economic terms) liberal and market-oriented economic policy, which has focused on privatisation and a reduction of state influence on business. In line with this, the electricity sector was opened to competition in September 2001 leading to lower prices for customers and more competitiveness of Austria's electricity industry. In addition, bureaucratic procedures in doing business in Austria have been simplified. One of the government's main concern, however, has been to achieve a balanced budget in order to satisfy the EU's Stability and Growth Pact (SGP).[10]

In 1999, Austria's budget deficit exceeded the EU-set Maastricht criterion of a maximum deficit of 3 percent, which drew severe criticism from the EU. (The irony of history being that at the end of 2003 Austria was legitimised to accuse the large euro area countries of disregarding the rules of the Stability and Growth Pact). While aiming to reach a zero budget in 2002, the Austrian finance minister Grasser was able to announce achievement of this goal in November 2001. In our understanding, this was primarily due to an unexpectedly sharp increase in Austrian tax revenue in 2001, as revenues from corporation tax and income tax rose significantly and debt-servicing costs decreased. In addition, the states and municipalities assisted in balancing the federal budget as they accrued budget surpluses. The need to lower the budget deficit, however, also served as a strong (but only indirect) stimulus for privatisation efforts in order to raise additional revenues by increasing the efficiency of the Austrian economy.[11]

It is important to note, however, that privatisation proceeds are only allowed to have an impact on the public debt but not on the public deficit. Privatisation proceeds may not be included in the

[9] This question was raised by Aiginger (1997), p. 351, with respect to the very early second privatisation wave in Austria in the second half of the 1980s, which he answered as follows: "Sie war durch den Regierungseintritt der ÖVP initiiert und wohl wegen der Budgetengpässe durchsetzbar" [It was initiated when the ÖVP took over the government and enforceable because of the budget shortage]. Analogously, Jeronimo, Pagan and Soydemir (2000) analyze whether deficits and indebtedness in the 1990s in Spain, Italy, Portugal and Greece were associated with a shift from privatisation as a tool of economic restructuring, to privatisation as a tool of European monetary convergence. Their empirical results suggest that privatisation funds accruing from the sale of state-owned enterprises in southern European countries might have been used to tackle budget deficits and meet the stringent debt criterion for monetary integration.

[10] See, among others, Clemenz (1999), p. 1.

[11] However, even under the "New Austrian Public Policies" the EU commitment could not prevent the emergence of a political cycle. Even shortly after the Maastricht Treaty came into force, the Austrian government deficits and debt increased systematically for three consecutive years before the general elections of 1994. See, e.g., Clemenz (1999), p. 4.

public deficit in Maastricht definition according to the EC directive 3605/93 of the Council from November 22, 1993. This is a point often neglected by authors writing on Austrian privatisation and the fiscal Maastricht criteria and also not always clear in Austrian political circles (see, e.g., Nationalrat der Republik Österreich 1996, p. 19). Seen on the whole, thus, the Austrian case is a good example of how external constraints can discipline a "consensus-oriented" country. It seems fair to state that without EU-membership and the strive for meeting the Maastricht criteria, the evidence in favour of "New Austrian Public Policies" and increasing privatisation activity would have been much weaker than it already is.

Although beneficial it itself, the main aim of privatisation should not as a rule primarily be to finance and lower the public debt for political purposes. Otherwise privatisation would tend to serve short-run objectives instead of promoting long-run goals, such as fostering productivity. In this case, the standard purpose of privatisations, the improvement of competitiveness and profitability of former SOEs is under-emphasised in favour of repaying outstanding debt which, however, is not necessarily welfare enhancing. However, the latter was given a high priority in recent Austrian laws and directives (Austrian Parliament 2000). Instead, the revenues from privatisation should only be used for the creation of new assets in the areas of education, R&D, technology and infrastructure (Katsoulakos and Likoyanni 2002, p. 13, Schneider 2002).

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Privatisation Experiences in France

Michel Berne and Gérard Pogorel*

After a long period of nationalisation, France started to privatise state-owned firms in 1986. We will first show why and how such a dramatic change happened, then we will concentrate on the impact of privatisation policies based on the cases provided by major firms. The next section reviews the privatisation status of major state-controlled enterprises. Then we study the performance of privatised firms and summarise our findings with some conclusions.

Privatisation in France – why and how

The peak of the privatisation policy can be found during the period when the Socialist Party and their allies ruled France from 1981 to 1986. At that time, the total public sector represented 21 percent of production, 23 percent of wages earners, 28 percent of GDP, 30 percent of exports and 49 percent of gross capital formation (Mamou 1996). However, it soon became clear that this situation could not go on forever for five major reasons:

1. Besides the theoretical critics of state ownership of firms, basically resting on the theory of incentives, the French state behaved as a weak and erratic "shareholder", hesitating between the maximisation of short-term financial or political benefits and a "laissez-faire" approach allowing the state firms to develop as they wished in spite of the bureaucratic control of their activities.[1] Adverse effects of poor state control can be felt by the firms themselves, by the state treasury as well by other French investors.[2] One radical way to solve the problem was privatisation. Another was to better manage state investments: the Ministry of Finance created in 2003 a state agency, *Agence des Participations de l'Etat*, to bring more consistency and vision to the management of state holdings (Barbier de la Serre 2003; Minefi, 2003; Minefi 2004).
2. The co-existence of state-run and private companies (as in the car industry since 1945 or in the telecom industry more recently) is awkward and could prevent nationalised companies from expanding freely at home and abroad.
3. Even though they can boast an outstanding technical level, state monopolies suffered from time to time from traditional problems like high prices, low regard for customers, bureaucratic attitude (see Giraud 1987 for a discussion within the field of telecommunications). They also engaged in uncontrolled and costly expansion policies because of the weakness of government control.
4. A major liberalisation and privatisation drive started internationally in the 1980s and France followed the trend. Even though European competition policy does not demand privatisation, it imposes severe restrictions on government intervention in the economy (like state aids); at the same time, deregulation policies (telecom, electricity, railways etc.) permit other companies to enter the market – private companies that nearly automatically complain about the former state-owned monopoly leading to difficulties with the European Commission.
5. The size of the state budget deficit also provides a permanent incentive to privatise state firms as France has constantly experienced budget deficits since 1981.

Despite all former initiatives to privatise, in 2003 there were still a huge number of state-controlled enterprises:1,447 enterprises with 1.1 m employees (in France) and a wage sum of 5.2 percent of total wages in the economy.

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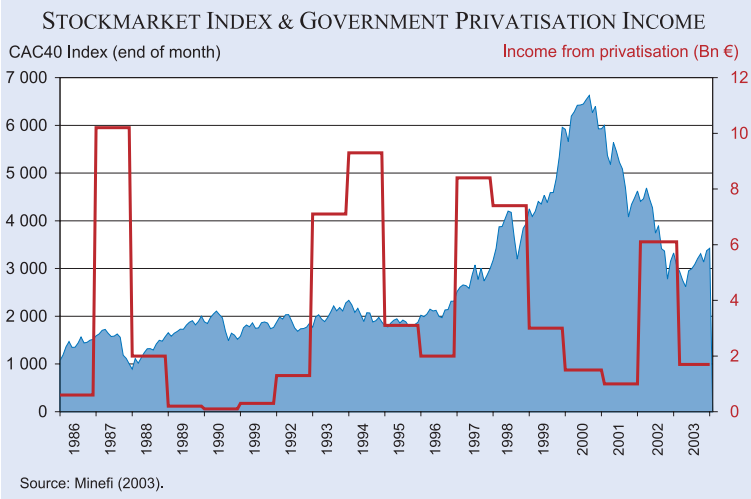
[1] Several severe audits of state management of public firms can be found, including a report of the National Assembly (Diefenbacher 2003).

[2] In the case of a large, partly state-owned company listed on the stock exchange, any poor performance will have two impacts : on stock price indexes and on financing conditions.



When a centre-right government was formed in 1986, it started dismantling the then enormous state sector. It benefited from favourable conditions on the Paris Bourse. The Socialists came back to power in 1988 with a fragile majority in the National Assembly. They enforced a policy that was then dubbed "neither-neither" (*ni-ni* in French): no privatisation carried out by the previous government was overturned, but no significant further privatisation was allowed. Since 1993, privatisation was the norm and the succession of right and left governments has not really slowed the process (see Figure).

Since 2002, the centre-right government of Jean-Pierre Raffarin has gone on privatising state-owned companies with a very pragmatic approach:

- Selling when favourable conditions appeared (for example, Crédit Lyonnais, sold over a week-end to Crédit Agricole in 2003 after some hectic bidding),
- taking into account the long-term interests of the companies (as in the Snecma-Sagem merger in 2004), and even
- trying to "re-nationalise" companies in deep trouble: (for example, to rescue Alstom, the troubled electric and transportation equipment manufacturer in the summer of 2003, the French government wanted to buy 300 M€ shares in Alstom. But this plan was not approved by the European authorities and the government backed off).

Table 1

Gross privatisation income 1986–02 – Major phases

Government	Coalition in power	Dates	Income billion €
Chirac	Right	1986–88	13
Balladur	Right	1993–95	17
Juppé	Right	1995–97	9.4
Jospin	Left	1997–2002	31
Note: More than 6 bn € was spent in 1983 on a major nationalisation plan.			

Source: Mauduit (2002) based on Baert (2000) and Orange & Rocco (1999).

The large number of firms sold and their size can make privatisation a profitable operation for the government. According to (Minefi 2003), the gross privatisation income from 1986 to July 2003 amounted to €65.8 bn, used in the following way:

- €9 bn to reduce the public debt (mostly between 1986 and 1988);
- €1.6 bn allocated to a special pensions fund set up to ease the impact of demographic changes on the French pensions system;
- €50.5 bn allocated to the firms as equity injection;
- €4.7 bn for the regular state budget (in the early 1990s).

As can be expected, different figures have be computed by other sources, but we can safely conclude that privatisation has had a positive impact on the state budget (Mauduit 2002).

Impact of privatisation

Changes of ownership

Two very different cases can be distinguished regarding changes in ownership. Some companies were swiftly and totally privatised (the smaller ones or the industrial firms nationalised in 1982), but a large number of state-controlled companies went through a very long and sometimes painful privatisation process: after a partial IPO, the state gradually sold additional chunks of shares until its participation became nil or reduced to a "golden share" (*action spécifique*). In a few extreme cases, this last step has not yet been possible, either because of legal problems or because of the poor financial health of the company.

The legal framework includes three major acts dating back to 1986 (JO 1986a; JO1986b; JO 1993). For the largest companies, a special privatisation act is

needed to prepare the procedure. A government decree is enough for smaller firms. A special system was set up to allow entry and exit into and from the state-owned sector for the many subsidiaries owned by large state-owned firms. Since 1993, most of these subsidiaries as well as local public services (*sociétés d'économie mixtes locales*) can be sold under two simple declarative procedures (Minefi 2004). From 1993 to 2003, 442 sales of subsidiaries involving 210,781 employees were performed.

The privatisation process of France Telecom required three steps. The first one was the transformation of the PTT administration into two parastatal entities – done by an act (JO 1990a) creating La Poste and France Telecom. The unions were satisfied by the guarantees offered that the personnel would remain mostly public servants and that no further significant change was planned. However more changes were soon needed to cope with the decision, taken in 1993 at the European level, to have full competition in 1998 in the telecommunication sector leading to a second telecommunications act which was passed in 1996 (JO1996a).

Another act was also adopted in 1996 transforming the basically state-run entity France Telecom into a quasi-standard private company (JO 1996b). Moreover, in 1997, France Telecom paid €5.7 bn to the state as a lump sum to be used to pay the extra costs for the pensions of its retiring civil servants: the government was happy to receive funds lowering the budget deficit while France Telecom was happy to get rid of a sizeable pension debt looming in the future.

The French government, pushed by the top management of France Telecom, decided in 1995 to go for an initial public offering (IPO) of the company. The change of statute was mainly justified by the international ambitions of France Telecom, above all a strategic alliance with Deutsche Telekom and Sprint.

After a long delay, the Initial Public Offering (IPO) of France Telecom finally took place successfully in 1997 and netted €29 bn (Bertolus 2003, 35–70). The state kept 75 percent of the capital; individual shareholders got 10.55 percent of the capital. Financial institutions obtained 11.95 percent and 70 percent of the personnel of France Telecom bought 2.5 percent. A second public offering took place in 1998 and netted €9 bn. Since then, the percentage of France Telecom owned by the state has decreased in several stages. As permitted by a 2003 act (Mer 2003; JO 2004a), the government sold 9.6 percent of France Telecom and retained 42.2 percent in September 2004.

A major problem blocking the privatisation of France Telecom was the status of most of its staff who were civil servants. After the IPO, France Telecom stopped hiring civil servants and the remaining ones were allowed to stay in the company until their retirement.

Who owns the privatised firms ?

One major concern of the French government was to keep control of the companies while selling their capital, or at least to prevent the privatised companies from falling into foreign hands. During the first privatisation phase, in 1986–88, the government tried to set-up stable groups of investors (in French *Noyaux durs* for "hard core"). This decision generated a long controversy about the choice of these friendly and stable investors (mostly banks). The percentage of foreign ownership has nevertheless grown to very high levels for some companies. In an extreme case, in 2003, the Canadian firm Alcan has launched an offer for Pechiney – so the later will no longer be under French management. One can safely conclude that the globalisation of business has dealt a fatal blow to any dreams of national independence that might have inspired French governments in the past.

Another impact was the creation of a large class of small shareholders, tempted by the initial public offering of blue-chip stocks (banks, large industrial firms and France Telecom). The France Telecom IPO generated a tremendous interest in the general public, who was severely affected by the incredible rise and precipitous decline of the share price in later years. The staff of privatised companies has also consistently bought the shares reserved for them by law (at very sweet prices).

Changes in competition

Privatisation has played a role in the increase of competition in the French economy. In the network industries, barriers to entry can be extremely high for economic reasons – the so-called natural monopoly problem. Therefore, the privatisation of a state monopoly will give various results depending on barriers to entry and sector regulation, as shown by

the contrasted situation of airlines and telecommunications. Until the arrival of low-cost companies in the twenty-first century, Air France has kept a strong grip on the French market and all moves to create a viable competitor to the flag carrier have failed.

On the other hand, France Telecom has steadily lost market share to its competitors: at the end of 2002, it held less than 50 percent of the mobile market and 64 percent of the long- distance market. It has kept 81 percent of the local telecommunications market, but the unbundling of the local loop is progressing fast.

Table 2

Major state-owned companies in France, 2003

Consolidated figures	Sector	Sales billion €	Profits million €	Employees
Air France	Airline	12.4	98	717,000
Areva	Nuclear industry	8.3	473	491,000
DCN	Shipyard (Navy)	1.9	24	140,000
EdF	Electricity (utility)	44.9	935	1,697,000
France Télécom	Telecommunications	46.1	3200	221,700
France Télévisions	Television channels	2.4	49	7,000
GdF	Natural gas	16.7	980	38,300
GIAT	Army vehicles, weapons	0.7	–640	6,200
La Poste	Postal services	18.0	205	314,100
SNCF	Railways	22.5	66	243,900
SNECMA	Aerospace	6.4	185	39,700

Source: Minefi (2004).

Privatisation status of state-controlled firms

At present state-owned firms can be found in four major categories:

- Public services. Privatisation is following European Union deregulation policies, usually with some delay. The case of EdF, the electricity producer is discussed below. SNCF, the national railways, is in poor financial condition and trade unions are very powerful: no IPO and privatisation plans are possible.
- Defence and other strategic industries. Privatisation or at least a transformation of state administrations into standard companies is a must to participate in the construction of the new European defence industry. As GIAT-Industries, which produces weapons and armoured vehicles and has been a firm since 1990, is in bad shape, no further move is possible. On the contrary, DCN (*Direction des Constructions Navales*, the former Navy shipyards) was transformed into a private firm in 2003 and is presently in good shape.
- TV and radio. Back in 1987, the first state channel, TF1, was privatised and sold to the Bouygues group. France Télévision is the holding company managing the remaining state TV channels, notably France 2 and France 3. Even though rumours regularly surface as to the privatisation of one or several of these channels, the government had no official plans at the end of 2004.
- Miscellaneous firms: Charbonnages de France (coal mines, closing down), Française des jeux (lottery), toll highways etc. They are sold one by one, when possible.

An interesting example of the difficulties of privatisation policies for public services is provided

Table 3

Privatisation status of major state-controlled companies (January 2005)

	Percent state-owned	Status	Remarks
Air France	18	SA	Government share below 50% when Air France and KLM merged (2004)
Areva	95	SA	IPO planned, 2005
DCN	100	SA since 2003	Alliances being signed, IPO possible after act is adopted
EdF	100	SA since 2004	IPO planned, 2005
GIAT	100	SA	Evolution blocked due to poor financial results
France Télécom	42	SA	
France Télévisions	100	SA	No official privatization plans
GdF	100	SA since 2004	IPO planned, 2005
La Poste	100	"Exploitant public"	Impacted by European deregulation
SNCF	100	EPIC	No privatization plans
SNECMA	40	SA	Merger with Sagem in 2004
Note: The normal legal status for large business firms in France is *Société Anonyme* (SA). SNCF, is an EPIC. The legal form of La Poste is unique but it is close to an EPIC.			

Source: company information.

by situation the national electricity producer EdF found itself in at the end of 2004. European deregulation policy means that competition has arrived on the French market. EdF would like to be in good shape when competition becomes stronger: ability to supply other energies, reform of its specific pension plan, job cuts. But it is prevented by law from expanding outside of the electricity sector and the main trade union, CGT, has blocked a change in the specific pension plans of EdF-GdF employees in early 2003. So both the management of the firm and the French government have planned a change of statute and a slow move to competition, a policy that would solve most of the problems of EdF. Despite the opposition of CGT, the change of statute was implemented by a law voted in August 2004 (JO 2004b).

But EdF, as a former EPIC (see the box below), has benefited from the financial guarantee from the state, a clear advantage anytime it has to borrow money. Also, in 2003 the European Commission believed that EdF benefited from an undue competitive advantage and it has declared its intention to ask the operator to pay back to the state more than 1 bn (mostly unpaid taxes, because of the EPIC statute).

Performance measures

It is extremely difficult to give clear and objective performance measures for French privatisation policies. However, we will study three major areas for performance: prices, productivity/cost structure and finance.

EPIC

An EPIC (*Etablissement public à caractère industriel ou commercial*) is a state entity with mixed features. On one side, it belongs to the state system: its mission is defined by law and cannot be easily extended; it cannot default financially as it benefits from state backing; it does not always pay taxes like a normal company; it has a Board nominated by the state and all its main decisions have to be approved a posteriori. On the other hand, it conducts quasi-normal commercial operations, can enter partnerships and own subsidiaries. Variations exist in the actual statute of the many EPICs found in France. (Minefi 1991).

Prices

In this section, we will concentrate on prices for public services. In competitive sectors, like cars, banks etc., prices are market-oriented and price controls are very limited. The situation is very different for public services like La Poste or EdF as they have to have their tariffs approved by the relevant ministries.

In the emblematic case of France Telecom again, the retail prices decrease in general, and significant marketing efforts take place (ART 2003; France Telecom 2003a). These moves follow a complex tariff "rebalancing" strategy where local call prices and subscription fees increase while long distance call price decrease, following a pan-European trend. Moreover, France Telecom (as all other state companies) has to have its main prices approved by the ministers in charge of Telecommunications and the Economy, after ART, the sector regulator, has presented a specific report. From 1997 to 2000, a minimum decrease in prices had been imposed by the Ministry of Economy (9 percent per year in 1997–98 and 4.5 percent per year in 1999–2000; these figures apply to a selected basket of basic services). ART is especially careful about predatory pricing by France Telecom. Thus France Telecom is walking a tightrope: if its prices are too high, it will lose market share; if its prices are too low, they will not be approved.

Productivity and cost structure

Privatisation introduces changes in cost structures for a number of reasons:

1. Starting and stopping activities is easier. International expansion is also easier.
2. There is also more flexibility as regards human resources management in all its components: hiring, compensation, promotion;
3. After privatisation, specific tax systems disappear (usually leading to higher taxes). For example, France Telecom has declared its 1997 IPO cost the company more than 300 million euros in additional taxes in France (mostly local taxes, excluding income tax) that year.

When we look at the figures of France Telecom in France, the number of employees decreased from 160,700 to 141,100 between 1996 and 2002. In 1997, each employee of France Telecom in France was responsible for 207 main lines and 10 mobile lines. In 2002, (s)he was responsible for 241 fixed lines, plus 136 mobile lines and 28 internet customers.

Privatisation is only one possible cause of this increase in labour productivity, the two main fac-

tors being the development of new services (like mobile phones) and the age structure: Starting in 1996, a large number of older employees retired, with additional incentives being provided for early retirement for civil servants (22,000 early retirees between 1996 and 2002). Since 1992, various reforms have also increased the flexibility of workforce use. For example, in 2002, 9,500 employees have been retrained and mostly transferred to customer relations, information systems and multimedia (France Telecom 2003a; France Telecom 2003b). Full privatisation should make these changes easier to implement, but they are feared by trade unions.

Finally, privatisation made it easier to give additional compensation to the top management of France Telecom and to offer them stock options.

Innovation

French public services have long had a reputation for innovation and technical prowess.[3] All these innovations were possible because tariffs were set by the state and were based on large-scale cross-subsidies between services, at least during the launch of the new services or production tools. European regulation, as it opens public services to competition, prohibits cross-subsidies from regulated to unregulated activities as detrimental to competition. Moreover, the state had a long-term view of technical innovation and financial performance so that pay-back periods could be long. In privatised firms, the private shareholders are more impatient about financial rewards, less enthusiastic about technical innovation (Munari 2002) and unable to deal with social and political controversies (as EdF with nuclear energy, dealing with environmental issues).

The case of France Telecom, again, provides interesting insight. France embarked in the 1970s and 1980s on developing several innovative technologies (digital switching, videotex [Berne 1997], cable television). Most of these innovations came from the renowned research centre, CNET, (*Centre National d'Etudes des Télécommunications*), founded in 1944 as a national research institution dealing with fundamental research coupled to a traditional operator R&D centre. Following the IPO of France Telecom, CNET, renamed France Telecom R&D and completely refocused on internal needs, mainly for the development of new services (France Telecom 2003a). Costs figures for R&D show a steep decline as a percentage of sales after the IPO. In 2003, the percentage of sales devoted to R&D is up again.

Finance

Financial indicators, like profits, debt ratios and stock prices provide another set of measures of performance but methodological reasons could flaw the results. For example, the financial health of the public sector was poor in 2002/03, but now that the government has privatised nearly all the profitable companies, it is mostly stuck with the unprofitable ones (Minefi 2003). One very positive impact of the privatisation process is that it forces the government to make the firms profitable (debt reduction, fresh capital, restructuring). Thomson, Air France, Usinor, Crédit Lyonnais have all gone through very difficult times: yet, after some painful years, it was possible to privatise them as soon as they were in good shape and since then (at least until 2004) most of them have developed normally.[4]

Again, the case of France Telecom is interesting. After its IPO, France Telecom expanded very fast, particularly abroad and in new sectors (mobile, internet, television). When it bought Orange in 2000 at a price of €43.2 bn as well as several UMTS[5] licenses, most of these purchases were paid in cash: issuing new stock would have lowered the share of the state below 50 percent, a move then forbidden by law. France Telecom had to borrow massively for this purchase. Even though overall operational results were quite acceptable at group level, some of these purchases failed to produce financial returns, and servicing the debt was nearly impossible. A rescue plan devised in 2002 called for €15 bn of fresh money, a debt refinancing of €15 bn and €15 bn in savings.

As regards stock prices, the introduction price for France Telecom shares was €24.03 and after one trading day it was up to €31.5; the share peaked at

[3] To name a few examples, EdF has conducted an outstanding program in nuclear energy; rail transport has been transformed by the introduction of the TGV high speed train by SNCF and Air France has, jointly with British Airways, operated the supersonic Concorde plane.

[4] Out of the 1000 largest firms in the world (listed by Business Week according to market value in May 2004), 44 firms were French. There were 23 privatised firms on the list. Amongst them, with their world rank: Total (23), France Telecom (64), BNP (71), Vivendi (170), Alcatel (276), Saint-Gobain (303), Autoroutes du Sud de la France (626), TF1 (813), etc. (Business Week 2004).

[5] Universal Mobile Telecommunications System, the European version of the third mobile generation.

€219 on 2 March 2000, then fell to an all-time low of 6.94 on 30 September 2002. In January 2005 the price was around €23.

Conclusions

The changing role of ideology

The privatisation process in France has been heavily loaded in terms of ideology as has the case for nationalisation itself. The reluctance to privatise has been especially high due to the combination of three political ideologies. The Socialist ideology states that "people" or state-ownership are in all cases superior to private ownership. The "Dirigiste" (Colbertiste, Bonapartist, and Gaullist) tradition, highlights the superior knowledge and vision of the state. A Christian inspired Social Doctrine advocates public property in the name of the public good and social solidarity.

This combination resulted not only in the above-mentioned nationalisation, but in provisions for "public ownership" to be included in the 1946 constitution when the government coalition was composed of those three political forces. Until the early 1980s, this combination had remained prevalent in terms of popular support. The radical changeover in ideology and reality in the United States and the United Kingdom began to induce, but with some delay, changes in French political doctrines. It, combined with the disastrous economic situation which followed the phase of nationalisations carried out by the "Union of the Left" coalition (1981-1986), paved the way for the protracted and not yet finalised privatisation process.

Perception of privatisation policies

Privatisations are now a widely accepted in principle. However, trade unions and social forces often fight successfully to oppose them in order to preserve special workers and social conditions in the public sector. It often takes imperious "strategic" moves, as in the Air France KLM merger case, to assuage this reluctance.

It has to be said that the reluctance demonstrated recently by this blue-ribbon, global corporation to comply with the governance and information transparency rules they preach has not helped in promoting the image of private corporations.

Lessons to be learned?

The implementation of sound governance rules for the private sector seems to have to go hand in hand with the promotion of the privatisation process. Succeeding French governments have learned the hard way that privatisation is a slow process and that one should pay as much attention to corporate governance of partially privatised firms as to privatisation moves. As an example, the IPO of France Telecom was a resounding success in 1997; the results of the company were disastrous in 2001 and 2002 – not only because of the burst of the telecom bubble. Another sad example is provided by the computer manufacturer Bull: the state has been unable to revitalize the firm, despite massive injections of public money (much disliked by the European Commission, as to be expected).

Reaction to EU directives

EU directives have played a very important role in the evolution of economic ideologies and realities. In many cases, French governments have taken advantage of them to promote internal policies they actually supported without daring saying so. We know no directive can be taken without the explicit agreement of member countries Governments. "Brussels constraining demands", however, have often been invoked by French governments as forcing them to take not-so-popular or unpopular measures and decisions. It is a well established principle that European policy is neutral as regards the ownership of firms. However, European policy promotes competition in most sectors. These changes have a deep impact on state firms. Actually, they cannot survive in the new, deregulated, environment without drastic changes. Probably, privatisation is the only way for them to meet the challenges of deregulation. After France Telecom and Air France, the government has decided on IPOs for both EdF and GdF. After France Telecom again, EdF will be a testing ground for the success of the privatisation process: it is a well-run company, renders vital services, employs sensitive technologies, makes huge long-term investments, and is, at the same time, under deregulation constraints.

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Dual Income Taxation in EU Member Countries*

Wolfgang Eggert and Bernd Genser**

Dual income taxation has become an increasingly important blueprint for income tax reforms in Europe. Originally constrained to the Nordic countries in the beginning of the 1990s, final withholding taxes on capital income have been introduced in several European countries and tax reform proposals in favour of a dual income tax system have been made for Germany (Spengel/Wiegard, 2004) and Switzerland (Keuschnigg, 2004).

The characteristic features and the economic background behind the dual income tax (DIT) has been surveyed recently by Boadway (2004) in this journal. The purpose of our paper is to complement this discussion by providing an overview of implemented income tax structures. This discussion shows that existing tax systems in many countries resemble some characteristic features of a dual income tax system. The scope of our analysis is not restricted to the Nordic countries, we also include other European countries, which according to our view have made steps towards a dual income tax system. Based on this evidence an EU wide adoption of a dual income tax system as sketched recently in a reform agenda for European business taxation (Cnossen 2004) does not seem a completely unrealistic scenario.

The paper is organised as follows. We shortly review the pros and cons of a comprehensive, Schanz/Haig/Simons type, income taxation. We then discuss some aspects of the implementation of the DIT in selected countries. Finally we assess some of its problems and end our discussion with some concluding remarks.

* The article relates to a discussion which was held in a previous issue of this journal (3/2004).

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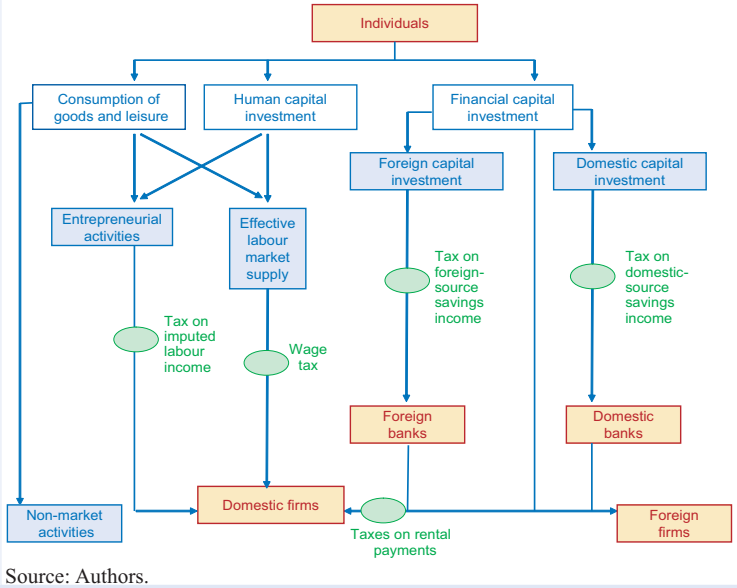
The case for a dual income tax

The income tax system in Germany and in many advanced countries is supposed to follow the principle of comprehensive income taxation. Comprehensive income is defined as the net growth in the tax payer's personal wealth during one taxable year. Comprehensive income has been favoured as the best economic indicator of ability-to-pay, ensuring horizontal equity – since tax payers with the same ability-to-pay bear the same tax burden – and vertical equity according to a graduated schedule on different levels of comprehensive income. Technically, under the Schanz/Haig/Simons system, income from all sources is aggregated and total income is subjected to the respective tax rate defined by the progressive rate schedule.

Before presenting the main features of the DIT we would like to identify some basic obstacles against comprehensive income taxation. For this purpose, let us sketch a simple view of the world where individuals choose their labour supply and invest in human capital and financial wealth. The latter two decisions are intertemporal in nature, as human and financial capital formation are two alternative investment strategies to increase future consumption. The figure illustrates the resource flows and the tax handles in such a basic model.

The skill acquired through human capital investment and the hours worked in the labour market determine theses individuals' effective wage income. Alternatively, the individual can act as an

Flow of Resources in a Simple Model



Source: Authors.

entrepreneur and receives imputed labour income from business activity.

Intertemporal consumption smoothing can be financed out of human or financial capital formation. Human capital investment will increase future labour income, financial capital investment increases future capital income but also allows for using up the principal. Let us assume that savers can directly invest in firms or save in domestic and foreign bank accounts. The banks will lend the savings to domestic or foreign firms.

The market returns from the flows of resources are taxable income for a government which is faced with a given revenue requirement. Under a comprehensive income tax income from all sources is subject to the same tax rate. Optimal taxation, however, requires considering all tax handles separately.

Economic growth

In an intertemporal setting with savings in each period, the tax burden on capital income accumulates under comprehensive income taxation: the tax is levied on income from investment which has been financed out of income that has already been taxed. Hence, any positive capital tax will discourage savings and, thus, capital supply to firms. In the long run only a zero tax on capital income is compatible with a positive level of savings because the tax burden on capital grows exponentially over time. A similar case can be made for human capital investment. A tax on labour income discourages human capital formation because part of the return on investment is taxed in all subsequent periods (Jones, Manuelli and Rossi 1997) and double taxation of the returns can only avoided by a zero wage tax. These arguments suggest that positive taxes on the income of any factor that accumulates over time are hard to justify. It is therefore necessary to shortly explore the robustness of results.

The result in Jones, Manuelli and Rossi (1997) hinges on the assumption that no pure rents can be created by investment in human capital. The zero tax result does not hold if the accumulation technology is non-linear. Nielsen and Sørensen (1997) demonstrate that the wage tax might be positive if education costs are tax deductible. The intuition is that the tax deductibility eliminates any distortions of wage taxation on human capital investment. A case for a non-zero capital tax is discussed in Correia (1996), who makes a case for capital taxation assuming that the set of tax rates is constrained. Essentially, the argument here is derived from an argument that also underlies the analysis of open economy tax policy in Bucovetsky and Wilson (1991): The government makes use of capital taxation in order to control the supply of labour in an economy. This is, of course, a typical second-best argument.

Tax competition

The internationalisation of capital markets supports arguments against capital taxation. Let us return to the model we sketched above in the figure and assume that only the domestic government raises a tax on domestic-source savings income. What will be the consequence? The German government tested this policy in 1989, when it announced a 10% withholding tax on interest income. The reaction of tax payers becomes clear from a short inspection of the figure. Economic intuition suggests that savers will avoid this tax by investing in foreign banks. Even though foreign banks might invest in domestic firms, the domestic government is not able to raise revenue from capital taxation. This nicely explains the huge capital outflows Germany experienced in 1989, mainly to affiliates of German banks in Luxembourg. Luxembourg banks used a large fraction of the portfolio capital from German investors for investment in German firms. Furthermore, inspection of the figure suggests the simple argument that the foreign government has no incentive to increase the capital tax, since undercutting always increases tax revenue as long all taxes on savings income are zero.

Other arguments rationalise a zero rate of the tax on firms' rental payments: Any positive tax rate would reduce the net interest rate and cause a capital outflow. The capital outflow reduces the capital intensity in domestic production and thereby wages. However, wage income can be taxed more directly using the wage tax. Along these lines, any positive tax on capital might not be sustainable in an open economy under the assumption that optimal wage taxation is possible (Bucovetsky and Wilson 1991).

Informational problems

The German experiment we analysed on the basis of the figure supports the view that the foreign-

source income of residents is unobservable to the government. The government has to rely on the willingness of the foreign tax authorities to exchange information about the foreign-source income of residents in order to enforce a tax on foreign-source and domestic-source capital income. This exchange of information allows for residence-based capital income taxation, which is at the heart of the EU interest directive of 2003. International information exchange is vital if comprehensive income taxation calls for capital income to be taxed at the same rate as labour income.

However, comprehensive income taxation avoids another information problem. The tax authority need not know the imputed wage income of firm owners included in entrepreneurial profits, since labour and capital income components are subject to the same tax rate. These tax rates might differ, however, under a DIT. This might create an incentive for entrepreneurs to manipulate the capital/labour income structure in order to minimise tax payments.

It is evident from this discussion of the figure that comprehensive income taxation would certainly be dominated by tax patterns which account for margins of substitution that determine the intratemporal and intertemporal decisions of rational tax payers.

The characteristic features of a dual income tax

The DIT is a schedular tax regime which divides total income into capital and labour income and regards them as different tax bases. This increases an additional degree of freedom for tax policy, which can potentially be used to attack some problems of comprehensive income taxation.

Under the DIT, capital income includes business profits, dividends, interest income, rents, but also rental values as well as capital gains on real capital and property. Labour income consists of wages and salaries, non-monetary fringe benefits, pension payments and social security transfers. Capital income is taxed at a flat rate, labour income on the other hand is subject to progressive tax rates. Costs of earning capital and labour income are tax deductible from both tax bases.

The tax rate on capital income is equal to the labour income tax rate in the lowest income bracket, which intends to ensure that labour and capital income are taxed at similar rates. There is no general recommendation in DIT proposals whether negative capital income can be offset against positive labour income in the same period or can be carried forward or backward and offset against future or past capital income. However, personal allowances are deductible from labour income and thereby induce an element of indirect progressivity already in the first income bracket.

The DIT proposals do not seem to solve the problem of double taxation of dividends on distributed profits at the corporate and the personal level in a unique and definite way. Classical corporation tax regimes would double tax dividends, but DIT is also compatible with partial or full imputation of the corporate income tax. Under imputation the corporate income tax on distributed profits becomes a prepayment of the DIT on capital. Under full imputation DIT administration can thus be simplified by choosing the corporation tax rate equal to the DIT rate. The corporation tax credit would exactly cover the DIT liability.

Why is a dual income tax attractive?

Tax codes in virtually all industrialised countries contain specific exemptions from the Schanz/Haig/Simons standard, but nevertheless politicians pay lip service to it. Most exemptions have been implemented in a seemingly ad hoc manner to maintain the assertion of redistributive capital income taxation and, at the same time, to master the challenges caused by the new economic developments on capital markets. The result is a low level of tax revenue combined with high compliance and collection costs. The DIT is a well defined alternative variant of a schedular system. It intends to create a level playing field for capital investment by taxing all capital income at the same flat DIT rate.

The DIT recognizes that the scope for progressive capital income taxation is limited. Taxing capital income by a final withholding tax at a flat and lower rate significantly reduces tax compliance and collections costs compared to the present tax system in Germany where a savings allowance (Sparerfreibetrag) is operated. A proportional DIT can be levied as a source tax without filing requirement. A flat capital tax has the additional advantage of reducing the tax rate differential between domestic taxes and source taxes in foreign countries, thereby limiting the incentives for capital flight. In addition, lower

tax rates also reduce the problem of negative after-tax returns on real wealth under inflation. Finally, a flexible adjustment of capital income taxation to changing economic conditions as well as multilateral co-ordination, e.g., in the EU, is possible under DIT.

Implementation of the dual income tax in the Nordic countries

Table 1 surveys the main properties of the Nordic tax systems. The Nordic countries implemented dual income tax systems in the early 1990s, which exhibit some common features (see e.g., Sørensen 1994, 1998; Cnossen, 1999). Capital income is taxed at a flat rate close to the corporation tax rate and close to the labour tax rate in the first income bracket. Labour income is taxed progressively. Indirect progression enters in the first bracket due to personal exemptions, then graduated marginal tax rates are applied to labour income levels exceeding the first brackets. The gap between labour taxation and capital taxation is reinforced by the fact that most social security contributions are included in the labour tax base.

A common problem in schedule systems is the misdeclaration of income. In order to distinguish labour and capital income in practice, an income splitting model was constructed. Active owners, who are working in their firms as managers or primary workers are forced to split their business income into a labour and a capital component. Basically, capital income is defined as the imputed return on the stock of business assets and the difference between business income and imputed returns is classified as labour income. The calculation of the imputed rate of return is defined in national tax codes and differs between the Nordic countries. Income splitting is mandatory for sole proprietorships and partnerships, but also for corporations with active owners, who must own a substantial share of their business (e.g., two thirds) and work in their firm for a minimum number of hours per year.

All Nordic countries allow for some integration of capital and labour income, if capital income is negative. There is also integration of corporate and capital income, although there are considerable differences between the four Nordic countries, ranging from full integration in Norway and Finland to substantial double taxation in Sweden and Denmark. A final characteristic feature of the Nordic countries (with the exception of Denmark) is that DIT is supplemented by a net wealth tax.

Sweden

In Sweden small corporations with active owners are taxed by splitting dividend income into capital income and labour income. Dividends are taxed as capital income only if the imputed return on the stock of business assets is higher than the actual return. This imputed return is calculated by adding a premium of five percentage points to the interest rate on 10-year government bonds. If actual returns are higher than the imputed return the residual is treated as labour income and taxed at the higher labour tax rate. There is, however, a further qualification to the splitting method. Residual income above a certain threshold is considered as capital income and taxed at the capital income tax rate. Sweden operates a classical system of corporate income taxation, although a reduced tax rate applies at the personal level. Furthermore, part of the labour

Table 1

The Nordic dual income tax (2004 tax rates in %)

DIT reform	**Norway** 1992	**Finland** 1993	**Sweden** 1991	**Denmark** 1987
PIT rates – Capital income – Earned income	 28 28 – 47.5	 29 29.2 – 52.8	 30 51.5 – 56.5	 28/43 38.1 – 59
Basic allowance for capital income	Yes	No	No	Yes
Offset of negative capital income	First bracket	Tax credit	Tax credit	yes
Integration of CIT and PIT	Full CIT imputation	Full CIT imputation	Reduced PIT rate, since 1994	Reduced PIT rate
CIT rate	28	29	28	30
Additional PIT – Dividends – Capital gains	 0 28 (net of retained earnings)	 0 29	 30 30	 28/43 28/43
Withholding tax – dividends – interest	 0 28	 0 29	 30 30	 28 0
Net wealth tax	0.9 – 1.1	0.9	1.5	No

Source: BMF (2003), BMF (2005).

costs may be added to the acquisition price of the shares.

Finland

Finland uses a similar method of income splitting. The main difference is that the imputed return is calculated on the net assets of the business. As in Sweden, the difference between actual and imputed dividends is taxed as labour income. Double taxation of dividends is completely eliminated by imputation.

Norway

Norway also splits corporate income into a labour and a capital component similar to Sweden and Finland. However, the imputed rate of return is equal to the interest rate on five year government bonds plus a premium of 4 percent. In Norway, imputed profits are calculated and the difference to the profits (before interest payments) is taxed at the labour tax rate, even if profits are retained. There exists an upper bound for residual profits, above which profits are taxed as capital income. Moreover, entrepreneurs are entitled to make a salary reduction of 20 percent in their wage bill from the residual profits, which increases the share of lower taxed capital income in dividend income.

Denmark

Denmark was the first country to implement a DIT as early as 1987, but deviated from the government DIT proposal immediately by taxing dividend income progressively. Since 1994 a higher rate (currently 43 percent instead of 28 percent) is applied if dividend income exceeds a threshold. Dividends are subject to a 28% withholding tax, which is final for dividend income below the threshold and credited against PIT for dividend income above the threshold. The Danish income tax code distinguishes personal income, capital income and income from shares. But only income from shares is taxed at a reduced rate, while personal and capital income is jointly taxed according to the progressive schedule. Contrary to the other three Nordic countries Denmark implemented tax reforms, marking a retreat from the DIT concept, which guided the tax reform of 1987 (Sørensen 1998, p. 24).

Final withholding income taxes in Austria, Belgium and Italy

Austria, Belgium and Italy did not introduce a fully fledged DIT but a final withholding tax on interest income and dividend income. Labour income as well as earned business income labour income is subject to a progressive schedule. There is, however, a DIT element in corporate and non-corporate income taxation in Austria and in Italy, as a share of business profits, calculated as an imputed return on newly injected capital, is subject to a reduced tax rate. In contrast to the Nordic countries there is no integration of earned income and negative capital income, but Austria and Belgium allow for a filing option for low capital income earners, which implies that filed capital income is taxed according to the progressive earned income tax schedule.

All three countries tax dividend income at the corporate and the personal level. The corporation tax on dividends is supplemented by a final withholding tax on dividends at the personal level. The combined tax burden on equity profits is therefore close to the top PIT rate on earned income.

Table 2

Final withholding taxes on capital income (2004 rates in %)

Tax reform	Austria 1994	Belgium 1993	Italy 1991
PIT rates – Final withholding tax – Earned income	 25 21 – 50	 15/25 26.88 – 54	 12,5/27 24.15 – 46.15
Basic allowance for capital income	Filing option	Filing option	No
Offset of negative capital income	No	No	No
Integration of CIT and PIT	Reduced PIT rate	Reduced PIT rate	Reduced PIT rate
CIT rate	34/25	34 (35.02)	33 (37.25)/19
Additional PIT – Dividends – Capital gains	 25 25	 25 33	 12,5 27
Withholding tax – Dividends – Interest	 25 25	 25 15	 12,5 12.5/27
Net wealth tax %	No	No	No

Source: BMF (2003), BMF (2005).

DIT elements generating a lower tax rate on capital income are restricted to interest income, which is subject to the low final withholding tax. In addition, dividend income on newly injected capital is taxed at a reduced CIT rate of 25 percent (instead of 34 percent) in Austria and at a reduced CIT rate of 19 percent (instead of 33 peercent) in Italy.

It should also be noted that Italy operated an imputation system up to 2003 and moved to a "classical system" with PIT rate reduction only in 2004.

Special regimes for capital income taxation in Greece and the Netherlands

The Netherlands and Greece recently also moved towards DIT, even though the tax relief for capital income is based on specific regulations which do not show precisely the features of the Nordic DIT. The Netherlands implemented a comprehensive tax reform in 2001 which subjects dividend and interest income to a presumptive income tax at the personal level. The presumptive PIT is levied at a rate of 30 percent on capital income, which is calculated by applying an imputed return of 4 percent on the average net value of assets in the tax period. The imputed PIT is equivalent to a 1.2 percent wealth tax on net assets and covers capital income of asset holders from dividends, interest and royalties. Personal allowances cause an indirect progression at the personal level of this "Box 3" type investment. Dividends, interest and capital gains from substantial shareholding are classified as "Box 2" type investment income and are taxed at a flat PIT rate of 25 percent.

Greece is the only EU country which exempts dividends at the personal level. Thus, dividends are taxed at the CIT rate of 35 percent, which is only slightly lower than the top PIT rate of 40 percent. The tax relief is more pronounced for interest income, which is subject to a final withholding tax (10 percent on bonds and 15 percent on bank deposits).

Table 3

Special tax regimes on capital income (2004 rates in %)

Tax reform	**Netherlands** 2001	**Greece** 1993
PIT rates – dividends – interests – earned income	 30 (Box 3)/25 (Box 2) 30 (Box 3)/25 (Box 2) 33.4 – 52	 0 10/15 15-40
Basic allowance for capital income	for Box 3	No
Offset of negative capital income	No	No
Integration of CIT and PIT	Reduced PIT rate	Dividend exemption
CIT rate	34.5	35
Additional PIT – dividends – capital gains	 30 (Box 3)/25 (Box 2) 30 (Box 3)/25 (Box 2)	 No No
Withholding tax – dividends – interest	 25 No	 No 15
Net wealth tax %	1.2 (levied as presumptive PIT)	No

Source: BMF (2003), BMF (2005).

Problems of running a dual income tax

While it is recognized that the Nordic DIT has a number of advantages over the hybrid and widely eroded comprehensive income tax systems, there is no doubt that the DIT system implemented by the Nordic countries should not be regarded as an ideal solution for income taxation in practice. There have been a series of amendments to improve the DIT systems and further reform steps are called for (Sørensen, 2003).

One major problem of operating a DIT is the separation of business income into capital and labour income. Calculation of capital income by imputing an average return on business assets is a crude measure and does not pay proper attention to the opportunity costs of capital. Moreover, the prescription of the imputation rate by the tax code has to be regarded as the outcome of a political game. Multiple imputation rates reduce transparency of the social bargaining process and will almost certainly not generate economically desirable results.

Separating capital and labour income by imputing a normal rate of return to capital investment is a procedure open to criticism. The residual income does not only comprise labour income but includes economic rents, risk premia and windfall profits which may be regarded as capital returns rather than labour returns. Thus the question arises if these components of residual income should qualify for preferential taxation as well. The Norwegian experience of residual income thresholds and salary deductions characterise the scope of political lobbying for preferential tax treatment (Christiansen 2004).

While a level playing field for highly mobile capital investment is a crucial desideratum, non-integration of CIT and PIT, preferential treatment of capital returns and nominal interest taxation provoke tax arbitrage and investment distortions. At the same time, however, capital tax arbitrage is less of a problem under DIT as a matter of a lower tax rate.

Finally one major advantage of DIT, the substantial reduction in compliance, collection and control costs has not been exploited fully in the past. The filing option for capital income owners, the possibility for labour income earners to offset capital losses or the different treatment of domestic and foreign capital income are costly methods of tax administration and certainly deserve further attention in DIT reform steps.

Concluding remarks

Starting out in four Nordic countries, dual income taxation has gained broad support in many European countries. Although evidence in those countries as well as in other countries following an impure DIT approach reveals that it is not an easy task to implement separate taxation of capital and labour income, there seems to be little pressure in these countries to return to comprehensive income taxation.

One major advantage of DIT is the easy integration of CIT and PIT. Although the current picture of corporate income taxation in Europe exhibits a clear affinity towards classical double taxation (mitigated by low CIT rates and a reduced PIT rate) Finland and Norway show that imputation can be easily administered by CIT credits, which fully cover the DIT on dividends if CIT and DIT rates coincide.

Incentives for strategic income shifting between capital and labour income can be considerably reduced if the PIT rate of the first income bracket and the DIT rate coincide. Gains in compliance and collection costs due to this tying of tax rates must nevertheless be confronted with the costs of reduced flexibility. Flexibility seems to be an important factor if the national CIT rate has to be adjusted in international tax competition or as a result of negotiated tax harmonisation.
The economic attractiveness of DIT is emphasised by recent reform proposals for Germany (Spengel/Wiegard 2004) and Switzerland (Dietz/Keuschnigg 2004) calling for DIT system in both countries. DIT is also regarded as a desirable starting point for co-ordinating corporate income taxation in the EU (Cnossen 2004). If the tax rates on capital and labour differ then co-ordination steps in capital income taxation should face less opposition by national governments because the tax rate autonomy on labour income remains unaffected and might even be extended to sub-federal levels without provoking capital flight.

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Inherent Inequality and the Extent of Redistribution in OECD Countries

Hannu Tanninen and Matti Tuomala*

The OECD's postwar history can be divided, at least roughly, into two phases (see Kanbur 2000). From 1945 to about 1980 the degree of inherent inequality or the inequality of market incomes (incomes from earnings and investment) decreased because of reduction in skilled/unskilled wage differentials and asset inequality. The second phase occurred between 1980 and the mid-1990s when the degree of inherent inequality reversed course and increased. It is striking that in a number of OECD countries inherent inequality increased between 1980 and the mid-1990s but, perhaps surprisingly, redistribution as well. This is nicely illustrated in the case of Canada in Figure 1.

What might be an explanation for this development of redistribution policy? There is now considerable literature on the relationship between inequality and growth (see Persson and Tabellini 1994; Alesina and Rodrik 1994; Perotti 1996; Tanninen 1999). A key element in this literature is the link between inherent inequality and the extent of redistribution. The explanation in this literature is the political mechanism (the median voter theory) through which greater inherent inequality leads to greater redistribution. The median voter theory implies that if there is a redistribution of income within the society, so that the income of the median voter increases, then the demand for redistribution in the society will rise even though the average income remains the same.[1] There are, however, some well-known and less well-known limitations of this theory. First, we know that in many OECD countries voter participation rates are relatively low. This means that the median voter is not the median income earner. Secondly, it is hard to believe that the middle income voters are able to determine that they belong to the fifth or sixth decile of the market income distribution.

An analytical framework for thinking through the relationship between inherent inequality and the extent of redistribution is put forward by James Mirrlees in his Nobel Prize winning paper (Mirrlees 1971). It captures the central features in thinking about the evolution of redistribution policy. Three elements of the Mirrlees model are useful for our purposes. The first is the concept of inherent inequality which reflects, among other skilled/unskilled wage differentials, asset inequality and social norms. If there is no intervention by the government, the inherent inequality will be fully reflected in the disposable income. However, if the government wants to intervene – as it seems to be the case in OECD countries – it will find the second component of the Mirrlees model, the egalitarian objectives of the government. And if the government tries to redistribute income from high-income people to low-income people, there will be incentive and disincentive effects. In other words the redistribution policy is the product of circumstances and objectives. Of course, distributional objectives differ from one coun-

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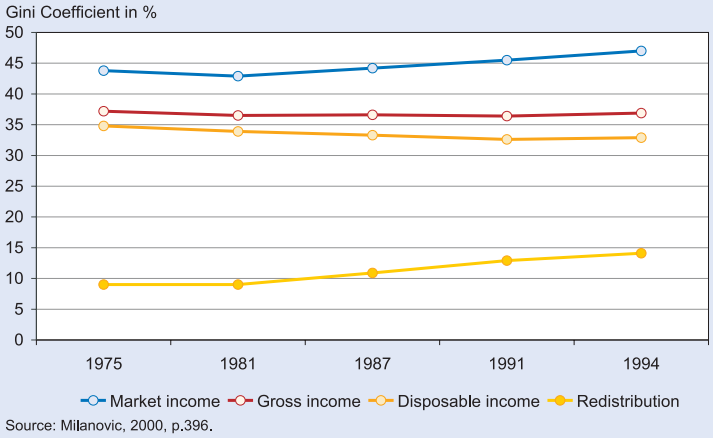
Figure 1

Income Inequality and Redistribution in Canada



Source: Milanovic, 2000, p.396.

[1] Greater inherent inequality is usually expected to increase the gap between mean and median incomes, leading to more redistribution because the loss to the median voter from an increase in the tax rate is now reduced relative to his or her gain from the increased amount available for redistribution (see Meltzer and Richard 1981; Persson and Tabellini 1994).

try to another and from one government to another, but there have not been significant changes in the overall progressivity of the OECD countries between 1985 and 1994 (see Messere 1998), given that we believe holding constant the degree of egalitarianism espoused and the level of incentive effects between the 1980s and the mid-1990s are not bad approximations.

What the data say

Most of the median voter studies mentioned above utilise data sets including the largest possible number of countries all around the world. For example a recent and widely used data set compiled by Deininger and Squire (1996) covers 108 countries and 682 observations. However, such data sets have many problematic features that are discussed in detail by Atkinson and Brandolini (2001). Furthermore, as Milanovic (2000) has recently pointed, in all mentioned studies inequality is measured from disposable income and, therefore, those studies do not properly make a distinction between inherent income and redistribution. Fortunately this distinction is taken into account in the Luxembourg Income Study (LIS), which is a comparable data on income distribution for a maximum sample of 25 countries. The income and recipient concepts employed here are market income (MI), gross income (GI) and disposable income (DPI) per household where the latter has been adjusted by the square root of household member (for different definitions of income see Atkinson, Rainwater and Smeeding 1995). We measure inequality with the Gini coefficient and our measure of redistribution is the difference between Gini coefficients calculated from market and disposable incomes.[2]

Table 1

Changes in the inequality between 1980 and the mid-1990s in 12 OECD-countries
(Gini coefficient for different income definitions)

Percentage point changes between "first wave" and "fourth wave" in the LIS database					
Country	Years	MI	GI	DPI	RD
Australia	81–94	5.6	3.3	3.2	2.4
Belgium	85–92	–4.2	5.1	–0.7	–3.5
Canada	81–94	4.1	0.4	–1.0	5.1
Finland	87–95	5.7	1.7	2.2	3.5
France	79–89	1.9	–2.2	–0.4	2.3
Germany	81–94	6.3	4.5	1.8	4.5
Italy	86–95	5.2	–	3.9	1.3
Netherlands	83–94	–5.5	–2.8	–0.2	–5.3
Norway	79–95	1.1	–2.1	–1.8	2.9
Sweden	81–95	4.1	1.7	2.0	2.1
UK	79–95	10.1	8.2	8.0	2.1
USA	79–94	6.2	5.7	5.8	0.4

Source: Milanovic (2000, p. 396–98).

As we are interested in the development of redistribution, our focus is on those 12 OECD countries with at least three or more observations (compared to a total of 24 countries and 79 observations available in Milanovic 2000). The evolution of the Gini coefficients in Table 1 can be summarized as follows. Over the sample period the inequality of market income as well as the extent of redistribution has risen in all selected OECD countries, except Belgium and the Netherlands, where the opposite is true.

We investigate the relationship between inherent inequality and the redistribution by utilising the following linear version

$$RD = \alpha CONST + \beta MI + \gamma_i X_i + \varepsilon$$

where RD is the extent of redistribution measured in terms of the difference between the inequality measure for market income (MI) and the inequality measure for disposable income (DPI). X_i denotes our three control variables, namely dependence ratio (DEP_R), public employment as percent of total employment (GE) and natural logarithm of openness (LOPEN), and country dummies.[3]

Table 2 reports the results for the relationship between inherent inequality and the extent of redistribution for 12 OECD countries with three or more observations between 1967 and 1997.[4] Given our control variables for population structure, government employment, openness and unobserved country differences, Table 2 (column 5) indicates that one standard deviation increase in the Gini coefficient for market income (i.e., 4.42) will increase the redistribution by 2.8 percentage points. In terms of standard deviations this is

[2] Note that in the empirical literature the overall size of the public sector is conveniently used as an approximation of redistribution (see e.g. Perotti 1996; Tanninen 1999; Bjornvatn and Cappelen 2003). In our case the correlation is 0.7.
[3] Full assessment of the extent of redistribution would also take into account various publicly provided services at less than market value, which in Nordic countries are considerable. Many of these items – health care, education and social services – are very extensive.
[4] It should be noted that our data set is an unbalanced panel with regards to the number of observations for individual countries and to the division of observations between different decades or between different waves of collection.

around 0.60 standard deviations of the extent of redistribution. [5]

Of our three control variables, the percentage share of government employment in total employment enters significantly into our regression equations in Table 2. Interestingly, when comparing columns (3) and (5) we can find some evidence that redistribution has been organised through public employment in the Nordic countries and to a lesser extent in Canada, France and Belgium. Our second control variable, dependency ratio does have a negative but statistically insignificant effect on redistribution. Our third control variable, logarithm of openness enters with a significantly positive coefficient into our regression equations only in column (2) where we do not have country dummies. Finally, to control fixed effects, country dummies give us some indication of the general attitude towards redistribution in the society compared to that in the United States. Not surprisingly, all of the coefficients have a positive sign.

[5] The results are in line with Milanovic (2000) who mainly concentrated on the development of income share gain between the market and the disposable income of particular income groups (i.e. bottom half, bottom 20 percent or the middle class).

Table 2

Inherent inequality and redistribution in 12 OECD-countries
(Gini coefficient, OLS)

	(1)	(2)	(3)	(4)	(5)
CONST.	–7.270 (–1.24)	–22.709 (–2.56)	–24.595 (–7.07)	–19.528 (–2.34)	–30.615 (–10.16)
MI	0.467 (3.70)	0.529 (7.38)	0.699 (10.10)	0.620 (8.93)	0.637 (11.02)
GE		0.443 (5.99)		0.600 (5.05)	0.581 (5.66)
DEP_R		–0.329 (–1.50)		–0.246 (–1.58)	
LOPEN		4.042 (5.49)		–0.727 (–0.58)	
D-Australia			4.346 (6.22)	4.057 (4.77)	3.883 (7.22)
D-Belgium			13.537 (17.75)	12.197 (5.06)	11.229 (13.46)
D-Canada			4.537 (4.99)	1.527 (0.91)	1.261 (1.34)
D-Finland			11.904 (11.95)	7.607 (3.49)	7.507 (5.88)
D-France			5.391 (6.95)	2.531 (2.05)	2.012 (2.22)
D-Germany			8.253 (9.80)	8.607 (6.21)	8.472 (12.87)
D-Italy			4.298 (3.84)	3.017 (1.99)	3.250 (2.99)
D-Netherlands			5.693 (7.09)	7.360 (3.33)	6.812 (10.44)
D-Norway			10.575 (11.13)	4.135 (1.59)	3.173 (2.33)
D-Sweden			11.886 (6.44)	5.155 (1.89)	4.314 (2.33)
D-UK			4.677 (4.28)	3.607 (2.32)	2.671 (3.02)
n. obs.	55	55	55	55	55
Adj. R^2	0.186	0.742	0.838	0.937	0.936
SEE	4.172	2.393	1.899	1.187	1.191

Notes: White heteroscedasticity-consistent t-statistics are reported in parenthesis. Redistribution and inherent inequality are measured in Gini coefficients from Milanovic (2000). Data for other variables are from OECD data base (Economic Outlook).

Of course, there are several reasons to be cautious about our results. Our sample is relatively small. There may be problems with measurement errors and with endogeneity of our explanatory variables. It is possible that the redistributive policy has itself caused rising inequality of market incomes (cf. Lindbeck 1997). In principle we can distinguish two ways of redistributing income, a direct one, transferring income between different individuals and an indirect one, through manipulation of equilibrium quantities and prices (wages). For example an increase in the statutory progressivity of the tax/transfer system could make members of lower-income group worse off, because it reduces their before-tax wage rates. Empirically it is not easy empirically to separate out these two effects.

Possible explanations

Optimal non-linear tax theory

The statistical association between the extent of redistribution and inherent inequality appears to be a robust one. The question is why this relationship exists. The simplest model in which incentives, inherent inequality, preferences for equity, and revenue requirement can be

integrated in a coherent framework, and which can provide a useful background for the questions we are interested in, turns out to be the Mirrlees (1971) model of optimal non-linear income taxation. In this model there is inherent inequality because individuals differ in their labour productivities. The government chooses a non-linear income tax and transfer schedule to maximize a welfare function, which is in principle sensitive to inequality, but does so with the added constraint that individuals choose their labour supply in response to the tax function. The government must also satisfy the overall budget balance constraint, with tax revenues equal to outlays. Unfortunately, however, as well recognised in the literature, closed form analytical results are few.

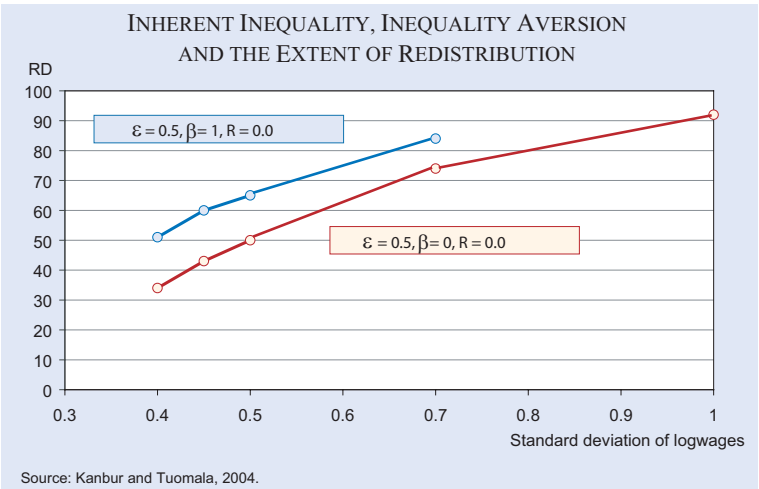
However, in the tradition of the non-linear tax theory, we can provide better understanding of the form of optimal redistribution policy through numerical simulations. With these techniques, we can compute post-tax income at each level of marginal productivities (in the sense of wage rates), and thus calculate inequality of pre- and post-tax/transfer income as well as total income, for different values of key parameters (for an exposition and discussion see Tuomala 1990 and Kanbur and Tuomala 2004). Using the Mirrlees model of optimum income taxation, Kanbur and Tuomala (1994) ask what happens to the extent and nature of the optimal degree of redistribution (i.e. redistribution which takes into account incentive effects, which in turn are based on empirically plausible labour supply estimates) when inherent inequality increases.[6] Using numerical simulations with empirically plausible estimates, the answer is that the optimum tax/transfer system becomes more progressive.

Figure 2 (from Kanbur and Tuomala 2004) summarizes the key findings on the relationship between inherent inequality, inequality aversion and the extent of redistribution. Increase in inherent inequality (standard deviation of logwages) is shown in the horizontal axis and RD, the extent of redistribution (in percentages), is shown in vertical axis. As we can see from Figure 2, the amount of redistribution increases as the inherent inequality increases. Furthermore, as the degree of inequality aversion in social welfare function (β) decreases so does the amount of redistribution, which still, however, increases as the inherent inequality increases. R is revenue requirement and ε is the elasticity of substitution between consumption and leisure.[7]

In sum, Kanbur and Tuomala (1994; 2004) show that when inherent inequality increases, the optimum income tax/transfer system becomes more progressive, taxing the better off at higher rates to support the less well off. Thus, one of the policy responses in view of inherent inequality should be a greater willingness to redistribute through the tax and transfer system. And similarly, if the inherent inequality decreases, the redistributive role of the government budget decreases.

The Mirrlees (1971) model treats differences in observed income as being due to unobserved differences in ability, which means that in his model the individual knows exactly what income he or she will receive at each possible level of effort. One might well argue that both high-income and low-income people do not owe their (un)success entirely to ability, but part of the income differentials are due to luck. The critical question is whether differ-

Figure 2



Source: Kanbur and Tuomala, 2004.

[6] Changes in the global trading and production environment can be interpreted as having increased the inherent or underlying inequality in developed countries.

[7] For example in Kanbur and Tuomala (2004) ε (= the elasticity of substitution between consumption and leisure) ranges from 0.3 to 1. Given any ε between 0.3 and 1, the optimum income tax/transfer system becomes more progressive when inherent inequality increases. The result also holds for higher values of the degree of inequality aversion in social welfare function (β) than 0 and 1as in Figure 2, including the Rawlsian case (β=∞). It is also true for different revenue requirements (R), ranging from – 0.1 to + 0.2 (as a proportion of total output).

ences in income come mostly from luck or from ability. If luck plays a substantial role in the determination of income it makes sense to have a progressive tax, creating a form of social insurance in which the lucky subsidize the unlucky. There is another strand of optimal redistribution literature (see Mirrlees 1974; Varian 1980; Tuomala 1990) that stresses the social insurance role of redistributive taxation. In this framework, an increase in variability of income would also increase the optimal degree of progressivity, because it increases the insurance value of the progressivity.

Other explanations

The prediction of ("rational") public choice theory for the size of government proposed by Meltzer and Richard (1981) is also that a greater inherent inequality should also increase the amount of redistribution. In their model increased inequality increases mean income relative to the income of the decisive voter and, thus, makes redistribution more attractive to him or her. Persson and Tabellini (1994) and Alesina and Rodrik (1994) among others incorporate versions of this result in constructing models of why greater pre-tax-and-transfer inequality is harmful for economic growth.

Perhaps most surprisingly, some authors have suggested that redistribution is greater the less inherent inequality there is (see e.g. Peltzman 1980; Persson 1995; Lindert 2000; Bjornvatn and Cappelen 2003). Peltzman's (1980) starting point was his observations that in the US greater inherent inequality seemed to lead to less redistribution. He attempts an explanation in a model in which the total support for redistribution increases if income inequality between middle and lower income groups narrow. The problem with this explanation is that because income inequality tends to increase both within group and between group inequality, a decomposition analysis of income inequality says that the net effect on redistribution is indeterminate. Bjornvatn and Cappelen (2003) argue that such a positive relationship is a result of spatial segregation among rich and poor. The more segregated societies are the less there is willingness to redistribute. Persson (1995), in turn, provides an explanation based on the notion that people care not only about the level of their own incomes but also about their incomes relative to others. Thus people neglect the envy their incomes cause others so that introducing a linear income tax with relatively little inherent inequality can yield Pareto improvement. It is not easy to see how the relationship might go in this way. Keen (1997) writes "such preferences imply, for example that the non-poor would actually gain by taking resources away from the poor and simply throwing them away". At least our empirical study does not support that redistribution is negatively correlated to inherent inequality.

Conclusions

Our finding that redistribution in OECD countries is positively associated with inherent inequality is not a new one. The point we have made here is that such a stylized fact can be explained through the Mirrlees model. If the inherent inequality increases (decreases) for any given incentive effects and the degree of espoused egalitarianism so will the society's redistributive effort.

Our empirical results are based on the assumption that the degree of espoused egalitarianism has remained constant over the period considered. There is, however, some recent individual country evidence that there could have been a shift in norms causing governments to become less willing to finance transfers and to levy progressive taxes (e.g. in the UK and Finland; see Atkinson 1999) leading to reduction in the extent of redistribution. One could argue in line with Atkinson that these kinds of changes have been episodic rather than long-term and therefore rather difficult to justify in the context of median voter models.

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Who is Reaping the Gains from Globalisation? – The Role of Labour Market Flexibility

Tobias Seidel*

The speed of globalisation has been accelerating in recent years. China has entered the global stage and became a member of the WTO. The coastline area between Beijing and Shanghai belongs to one of the most booming regions in the world. Low tariffs and negligible transport costs as well as capital mobility allow production on Chinese territory for the global market. For Western Europe, more new competitors have emerged who are even closer – literally in their front garden. The former communist countries have overcome their transition crises in the mid-1990s and are now catching up with the industrialised world. Market integration with these regions implies substantial adjustment pressure for high wage countries.

Many economists and politicians do not see any problems connected with increased global competition and praise the gains from globalisation. They predict welfare gains for all participating countries. Apart from the fact that not everybody wins and welfare gains occur on an aggregated national level only, the crucial underlying assumption is that markets are flexible. Results of standard trade theories are based on full employment. How do the results change, however, if labour markets, say, are rigid?[1]

As is common knowledge from the factor price equalisation theorem, trade can have the same implications as capital mobility and migration. All three channels basically create a pressure towards convergence of goods and factor prices. However, with downwardly rigid wages, unemployment will be the residual adjustment mechanism. In industrialised countries, less skilled workers are typically affected most from global competition. Consequently, for these income groups real wages have been falling in the United States within the last three decades. In some European countries, however, unemployment rates – especially among the poorly educated – have been increasing instead. With regard to national income, globalisation can in principle also lead to a deterioration of the aggregate income position if unemployment arises since fewer factors of production are employed relative to the situation before. Is globalisation in that case still beneficial?

This article examines some causal links between the integration of goods and factor markets and national labour market outcome. It is organised as follows: the next section summarises some brief facts on globalisation within the last decades. Flexibility of labour markets is analysed across some major countries in Section 3. Section 4 relates national labour market outcomes to global competition. The last section concludes and discusses policy implications.

Some brief facts on globalisation

Historically, there has already been an era before World War I when the extent of globalisation was comparable to contemporary levels. But the Great Depression and the deterioration of international relations at the eve of World War II led to a sharp fall in international trade and factor flows. Globalisation was reversed. Recovery took place only slowly in the second half of the 20th century.

Since World War II, the integration of commodity markets has been progressing rapidly. According to the World Bank (2003), world trade flows as a share of world GDP have increased from 25 percent in 1971 to 58 percent in 2001. Germany, for instance, has undergone a similar development. In 1950, the ratio was one fifth of GDP whereas in 2003, it had increased to 56.1 percent.[2] Integration of markets was stimulated by a continuous decline in trade barriers. GATT and later WTO were founded for that purpose only.

Migration is nowadays generally more restricted than it used to be before World War I. Industrialised countries have become target regions and regulate in detail whom they allow to immigrate. Labour mobility is either restricted between poor and rich countries or very low as in the European internal market. Thus, it is inadequate to talk about

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[1] Rigidity of commodity markets can create frictions as well but are not further examined in this context.

[2] German Federal Statistical Office, by request; own calculation.

a world labour market. However, migration flows have been peaking in the 1990s again. The share of the foreign-born labour force relative to the entire labour force has been increasing in all major OECD countries in the last decade (OECD 2004). However, the general impact of immigrants on national wage levels is found to be rather small (see e.g. Borjas et al. 1997 or Friedberg and Hunt 1995).

Capital flows were already very high (relative to GDP) during the Gold Standard Era. After the downturn in the interwar period international capital transactions grew again in the second half of the 20th century. But pre-World-War-I levels were only reached again in the 1990s. The unprecedented characteristic of recent capital market development, however, is the steep rise in foreign direct investment. While in 1990, FDI made up only 5 percent of gross fixed capital formation on average, its share rose to about 20 percent at the turn of the century UNCTAD, FDO Database). This pattern illustrates that investors more than ever have the global perspective with regard to their investment decisions.

Labour market flexibility

With globalised markets, price flexibility is the key issue. Shocks can be more severe and markets need to adjust to the new equilibrium level. Since the focus of this discussion lies on the effects of globalisation on labour markets, we want to take a look at their flexibility in several countries. Labour market flexibility is determined by several factors. The role of trade unions can be mentioned as one of them. Compared to Anglo-Saxon countries, trade unions have a stronger influence in many European states. In Scandinavia, trade union density reaches about 80 percent. However, relocation of firms or bankruptcy have brought about job losses and reduced the bargaining position of trade unions substantially in some countries. Germany, for example, has seen a decline of union membership by about 40 percent between 1993 and 2001. That amounts to 4.4 million in total and a density of 29.7 percent (see www.dgb.de and EIRO, 2004). Another indication is the coverage rate of collective bargaining agreements. In Belgium and France, more than 90 percent of all employees are affected by such agreements. Germany also ranks high with 79 percent. In the UK and the US, collective bargaining is much less dominant and reaches only 39 and 15 percent respectively (European Commission 2003; for US see EEAG 2004). Although collective bargaining on the sectoral level is still common in many OECD countries, many elements in the contracts already allow flexible handling.

Another source of wage rigidity could be minimum wages. In Anglo-Saxon countries, minimum wages do not seem to play a large role since they are set too low to be binding for a large share of employees. In the US, the UK and Ireland, the share of employees earning the minimum wage is lower than 2 percent. In France and Luxembourg, however, the fraction is substantially higher (about 15 percent).[3] Employment effects of minimum wages are widely and controversially discussed in the literature. While Dolado et al. (1996) do not regard minimum wages as a more serious constraint on the labour market than in the 1960s, Nickell and Bell (1995) and Card et al. (1995) explain the rise in unemployment rates as trends against the less-killed in connection with imperfect wage adjustments.[4] However, the overall effect on employment seems to be rather small.

There is considerable evidence that the generosity of the benefit system has a negative impact on employment as unemployment benefits and social aid create a reservation wage under which the market wage cannot adjust (OECD 1994, ch. 8; see also Nickell 1997 and OECD 2002a). The general picture shows that Anglo-Saxon countries – with the exception of Canada – have installed the least generous unemployment benefit scheme. Hence, in these countries wages can adjust to lower levels than in many continental European states.

Labour market flexibility is also determined by strictness of employment regulation. The OECD (1999) has calculated an indicator comprising strictness of individual and collective dismissal regulation and the allowance of temporary work agencies (TWA). The Table summarises the results and states that Anglo-Saxon countries show the least regulation of their labour market whereas continental European states belong to the more regulated countries in this regard.

[3] Paternoster (2004), see also European Commission (2003), pp. 79-80. Other studies like OECD (1999) have different figures since other references are used. However, the ranking basically remains identical.
[4] Card and Krueger (1995) do not find large employment effects of the federal minimum wage in the US.

Summary indicators of the strictness of employment protection legislation

Rank	Late 1990s	Indicator (0-6)	Rank	Late 1990s	Indicator (0-6)
1	United States	0.7	16	Slovakia	2.4
2	United Kingdom	0.9	17	Belgium	2.5
3	New Zealand	0.9	18	Korea	2.5
4	Canada	1.1	19	Estonia	2.6
5	Ireland	1.1	20	Sweden	2.6
6	Australia	1.2	21	Norway	2.6
7	Switzerland	1.5	22	Germany	2.6
8	Denmark	1.5	23	France	2.8
9	Hungary	1.7	24	Spain	3.1
10	Poland	2.0	25	Italy	3.4
11	Finland	2.1	26	Slovenia	3.5
12	Czech Republic	2.1	27	Greece	3.5
13	Netherlands	2.2	28	Turkey	3.5
14	Japan	2.3	29	Portugal	3.7
15	Austria	2.3			

Source: OECD (1999), p. 66; Riboud et al. (2002).

Although it is difficult to generate one single indicator reflecting the degree of labour market flexibility, the mosaic shows a pattern that Anglo-Saxon countries regulate least and allow for highest flexibility in various fields. This supports the commonly stated view that labour markets in continental Europe are more rigid than in the US or the UK.[5]

Wage structure, unemployment and gains from globalisation

How does the integration of China in the world economy relate to national labour market outcome? Theory suggests that factor mobility directly leads to factor price convergence whereas trade can create factor price equalisation via convergence in commodity prices. If rich OECD countries integrate their markets, there is only limited pressure on national markets since factor price differentials are rather small. It might only be that the structure of the economy changes in the sense that firms merge or grow in order to exploit scale economies. Welfare gains accrue due to a larger variety of products available for consumers and lower goods prices because of cost advantages at higher output levels. This is the one line of argument, but it is not the main focus here. The effects are different if a rich country and a poor country integrate their markets. Then, wages are much more affected due to larger factor price differentials. This brings us back to the central question: What role do institutional labour market characteristics play in this case?

Trade

Heckscher-Ohlin type trade models indicate that trade between two countries that possess different relative factor endowments (and hence, different marginal productivities) will equate factor prices if both countries continue to produce all goods. Specialisation, however, would prevent full convergence of wages. The basic mechanism is that factors of production are shifted between national industries to exploit comparative advantages. The country which possesses relatively high amounts of labour will produce more of the labour-intensive good in order to export some of it. The relatively capital-abundant country produces more of the capital-intensive goods. Thereby, goods prices will converge and hence, factor prices as well. Global output is thereby maximised.

Adrian Wood (1994) among others provides evidence that OECD countries import more manufactured goods from low-wage countries relative to the past. In 1955, only 6 percent of the South's exports to the North were manufactured goods. This share rose to 71 percent in 1989.[6] Especially less skilled workers in the North using labour-intensive production technologies were affected by this development. According to the theory, their wages must fall to sustain employment levels whereas the marginal return of capital and wage income of the highly skilled can rise. This creates a divergence of wage income. If wages cannot fall, unemployment emerges.

Factor mobility

In the case of vertical FDI, firms will relocate parts of their production since low wage costs promise higher profits. As workers in target regions (low-wage countries) are generally less skilled than in industrialised countries, firms export the production of labour-intensive goods. This, as in the trade

[5] Bauer, Bonin and Sunde (2003) argue that wages were rigid in West Germany between 1976 and 1997.

[6] Wood (1994), p. 2. Wood divides the world into rich countries (North) and poor countries (South).

example above, creates the same downward pressure on unskilled wages in the North. One example is the textile industry that has mostly settled in Romania and now is again on the move to Ukraine and other countries with even lower wages.[7]

Although immigration to OECD countries is restricted, the share of the foreign-born labour force has been increasing in the 1990s in all major countries (OECD 2004 and Eurostat). For Germany, for instance, the share rose from 7.6 to 8.4 percent between 1992 and 2001. Moreover, foreign workers tend to have a lower education than natives and concentrate in certain sectors of the economy (OECD 2004). In Germany, about one third is employed in manufacturing (OECD 2003). This shows that downwards pressure on wages might well be substantial in some sectors of the economy although the share of foreigners in the labour force is small on an aggregate level.

Inequality versus unemployment

The quintessence of the previous analysis is that relative wages in industrialised countries have to increase if wages for less skilled workers come under pressure and highly skilled employees in these states tend to benefit from the division of international labour. Figure 1 illustrates the dispersion of earnings for France, the United States, Germany and the UK. as measured by the ratio of the upper limit of the ninth decile relative to the upper limit of the first decile of the income distribution. The expected development can be observed in the United States and also in the United Kingdom. However, relative wages stayed relatively constant in France and even decreased slightly in Germany.

How can this be explained? In France and Germany, wages in the lower part of the income distribution could not fall for some reason. Either minimum wages or other institutional regulations like benefit payments are usual suspects. Since Germany has not installed an explicit minimum wage floor, the expansion of the welfare state delivers an alternative explanation.[8] In fact, social aid increased by 450 percent since 1970 whereas industrial real wages increased "only" by 350 percent (Sinn 2004). The wage structure could thus be compressed. However, pressure from international competition can never be absorbed by defending wages or guaranteeing an alternatively high income. Some adjustment always has to take place. The residual in this case is unemployment. It is well known that Germany has experienced a continuous increase in unemployment. In 1970, only 150,000 people were registered as being unemployed. The figure has risen to nearly 4.5 million in 2004.[9] The upwards trend was mostly driven by unemployment of less skilled workers. As Figure 2 shows, unemployment among the poorly educated is by far the highest in Germany with 15.6 percent.

Many studies blame the welfare state for the inflexibility of low wages (see e.g. Siebert 1990; Nickell 1997; OECD 2002a). Especially the high share of long-term unemployment can be attributed to long-term generous welfare benefits. This is the big difference between Germany and Scandinavian countries that grant high benefits for the first months but cut them rigorously thereafter. In Germany, the share of long-term unemployment in total unemployment exceeded 50 percent in 2000 (OECD 2002b, p.192).

Who is reaping the gains from globalisation? If trade and factor mobility cause unemployment in the industrialised world, then potential gains from the international division of labour

[7] With regard to Eastern Europe, one has to admit that also some R&D departments have been relocated to Eastern European countries due to lower wages for engineers and other highly skilled workers.

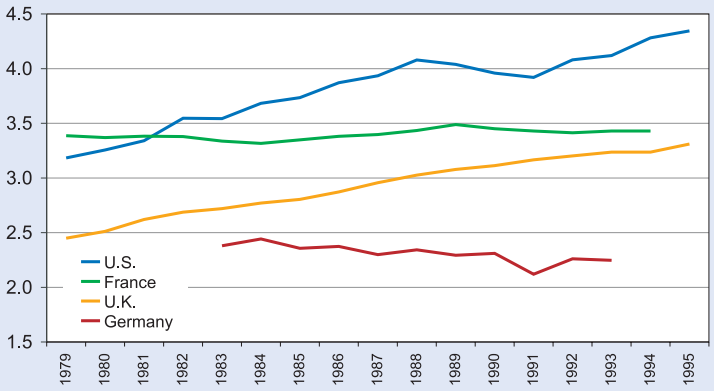
[8] Of course, trade union power can also be an explanation.

[9] Reunification in 1990 has just shifted the trend-line upwards.

Figure 1

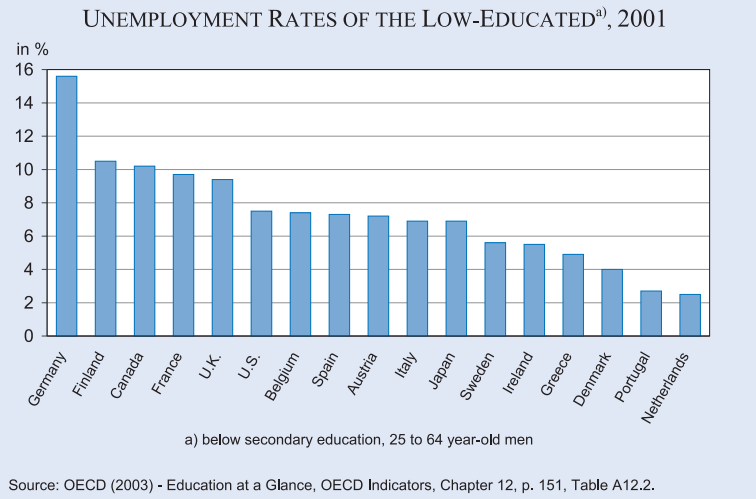
TRENDS IN EARNING DISPERSION, D9/D1

male persons



Source: OECD (1996) Employment Outlook, p. 61-62, table 3.1.

Figure 2



Source: OECD (2003) - Education at a Glance, OECD Indicators, Chapter 12, p. 151, Table A12.2.

are forgone – at least to some extent.[10] This result is straightforward since national income ceteris paribus must be suboptimal if a fraction of the production factors lie idle and can no longer contribute to national income. The size of the cake will be smaller than it could have been. It is hard to tell, though, whether net gains from globalisation are still positive if unemployment emerges. What is clear, however, is that countries with the most flexible factors (and goods) markets benefit most.

Conclusions and policy implications

I have argued that welfare gains from globalisation cannot be exploited entirely if labour markets are inflexible. If global competition creates unemployment, it is even possible that a country experiences net welfare losses on an aggregate level. Anglo-Saxon countries are hence in the best position to reap the gains from globalisation since their labour markets were found to be the most flexible ones. In continental European states, however, generous benefit payments are regarded as the major cause for rigidities in the low-wage segment of the wage distribution.

It seems that economies face the choice between the pest and cholera. Either a country allows for an increase in wage inequality to reap the benefits or it will generate unemployment – especially of the unskilled – by keeping the wage distribution constant. The latter outcome is only sustainable if the welfare state guarantees the unemployed a reasonable income. However, a small open economy – and nearly every country is relatively small compared to the rest of the world – cannot redistribute an increasing share of the shrinking cake by levying taxes on the employed. It seemed to have worked in Germany and other European states for the last 30 years. Compared to 1970, however, more low-wage countries are catching up with the industrialised world and competing with their highly paid jobs. To avoid a total collapse of the social insurance system, more wage flexibility has to be allowed for. It will just not be financially feasible to distribute unemployment benefits and social aid to a growing share of the population.

[10] Although there has been a wide discussion to what extent globalisation, namely trade, is responsible for the shift in relative labour demand in favour of highly skilled workers, even supporters of alternative explanations like technological change do not doubt that this mechanism was and still is at work. The alternative view blames technological change for this shift. Krugmann/Lawrence (1993) among others support this view whereas Wood (1994 and 1995) is a prominent representative of the globalisation story. The impact of trade, for instance, is stated to be between 20 and 70 percent.

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Should Energy Taxation "Go Dutch"?

Herman R. J. Vollebergh*

One particular area for green tax reform has been the use of the tax system to provide proper incentives to reduce climate change emissions, in particular carbon-dioxide (CO2). Indeed, the burning of fossil-fuel-based energy products contributes significantly to climate-change-related emissions. Therefore also the European Commission commissioned a new Directive (see COM(2003) 96 final) for raising and harmonizing energy taxes across the European Union (EU). In fact, this EU Directive is the culmination of a long-lasting effort to introduce a broader (implicit) tax on the use of fossil fuels and its associated climate change emissions (Ekins and Speck 1999).

Interestingly, the Netherlands, like the Scandinavian countries and Austria, introduced similar energy taxes long ago. This led to an energy tax structure that is in line with the recent EU Directive on energy taxes and therefore did not require any serious reform when the Directive became effective at the beginning of 2004. This suggests that the Dutch experience with energy taxation could be seen as a prototype model for other countries to follow when implementing the EU Directive. Up to some point this is certainly true. It is interesting to see what experience a small, open as well as energy-intensive economy like the Netherlands has had with energy taxation.

As usual, however, the devil is in the details, and several caveats lurk around the corner. One serious caveat is that at some point revenue considerations start to dominate energy tax design. This might lead to suboptimal tax structures from both a revenue raising as well as a corrective tax perspective. Some recent reforms in the Netherlands – although in line with the EU Directive – are a case in point as this article will illustrate. In fact, the recent EU Directive provides interesting opportunities to exploit international coordination to avoid at least some of these drawbacks provided that the focus is on regulation, not on revenue raising energy taxes.

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Energy taxation in the Netherlands

In the last two decades, several tax policy initiatives have caused a major shift in the way in which energy products were treated in the Netherlands. Taxation as a means of creating direct incentives to reduce the climate change impacts of energy products has already had a long history, albeit its revenue-raising impact has always been modest. Clearly, taxes on energy use other than motor fuels, e.g. for heating or power generation, have always had a very limited role in the overall tax and excise structure from a revenue perspective. As in most European countries today, excises on mineral oils (MOE) were also the only relevant energy taxes before the introduction of an explicit tax on energy use in the Netherlands, the so-called Fuel Tax (FT) implemented in 1988. Still, together both taxes were responsible only for 4 percent of total tax revenue in that year.

Since 1988, however, this picture has changed remarkably in the Netherlands (Vermeend and Van der Vaart 1997; Heineken 2003). First, the FT became gradually more important as a revenue-raising instrument. This tax replaced a set of small charges with a rather complicated tax base (including air pollution and noise) for financing purposes. After these charges were transformed into a transparent tax on fuels in 1988, their rates were raised substantially at the beginning of the 1990s. Second, the Dutch government introduced a completely new tax in 1996 to regulate energy consumption and to reduce CO_2 emissions. This tax, the regulatory energy tax (RET), was introduced despite the failure of the European Commission to introduce an EU-wide carbon tax in 1995 (see COM(95) 172). All energy taxes together accounted for almost 9 percent of total tax revenue in 2002 and the role of the MOE declined from almost 100 percent of overall energy tax revenue in 1988 to only 66 percent in 2002 (see Table 1). Both the major tax reform in the Netherlands in 2001 and recent tax initiatives of the Dutch government continued to reinforce this trend.

The shift in the tax treatment of energy products underlying the rise in revenue is further illustrated in Table 1. The table not only reveals large differ-

Table 1

Total excise rates on specific energy products in the Netherlands in 2002 and for the EU Directive COM(03) 96 (in Euro)

Energy product	Unit (thousands)	Mineral oil Excise	Fuel tax	Regulatory energy tax	Total energy excise tax	EU Directive
Mineral oils: motor fuels						
– Leaded gasoline	Liter	685[a)]	12		698	421
– Unleaded gasoline	Liter	615[a)]	12		627	359
– Diesel/light fuel oil – low S[b)]	Liter	332[a)]	14		345	302
– Diesel/light fuel oil	Liter	346[a)]	14		359	302
– LPG	Kg	104	16		120	125
Mineral oils: other use						
– Diesel	Liter	53[a)]	14	131	197	21
– Light fuel oil	Liter	53[a)]	14	132	198	21
– Heavy fuel oil	Kg	16	16		32	15
– LPG	Kg		16	156	172	0
Coal						
– Coal	Kg		12[c)]		12	4.05/9.1[e)]
– Blast-furnace, coke-oven,						
– Coal and refinery gas	GJ		117[d)]		117	n.a.
– Coal gasification gas	GJ		462		462	n.a.
Natural gas						
– Gas (0–5,000)	m^3		11	124	135	4.75/9.5[e)]
– Gas (5,000–170,000)	m^3		11	58	69	4.75/9.5[e)]
– Gas (170,000–1mn)	m^3		11	11	21	4.75/9.5[e)]
– Gas (1mn–10mn)	m^3		11		11	4.75/9.5[e)]
– Gas (> 10mn)	m^3		7		7	4.75/9.5[e)]
Electricity						
– Electricity (0–10,000)	KWh			60	60	0.5/1[e)]
– Electricity (10,000–50,000)	KWh			20	20	0.5/1[e)]
– Electricity (50,000–10mn)	KWh			6	6	0.5/1[e)]
– Electricity (> 10mn)	KWh					0.5/1[e)]
Energy tax revenue	million Euro	5.8	0.6	2.4	8.8	
Percentage energy tax revenue	%	66	7	27	100	

[a)] Includes strategic storage tax of EUR 6 per unit. – [b)] Sulfur content below 50 ppm. – [c)] Taxpayer may opt for GJ and carbon content as a tax base, with a rate of EUR 0.198 per GJ or EUR 2.4493 per 1,000kg CO_2. – [d)] If traded; the rate is zero if these gases are produced and used in the same plant. – [e)] Low (high) tax rate applies to (non)commercial use .

Source: Statistics Netherlands; Dutch Ministry of Finance; COM (03) 96.

ences in the current treatment of energy products resulting from the different energy taxes, but also shows how the newly introduced taxes, in particular the FT and the RET, broadened the tax base and how they together relate to the minimum tax rates set by the EU Directive. These taxes are responsible for the inclusion of energy products such as coal, natural gas and (small-scale consumption of) electricity as well as mineral oils used for heating purposes. In particular, the RET is responsible for from over 50 to 100 percent of the excise burden of some products. Note also that large differences exist between tax rates on energy products used as motor fuels, heating fuel, feedstock or for other applications. In general, MOE tax rates are highest for gasoline and lowest for mineral oils used for heating purposes. All excises are specific per unit of energy volume. The FT has had a hybrid tax base since 1990. Initially, a fixed CO_2 component was added to the initial tax base by energy content. Since 1992, the different fuels have been (more or less) taxed according to their relative energy and carbon content, each counting for 50 percent of the overall tax base.

The RET started as a tax on energy products used for heating purposes (mainly gas in the Netherlands) or power generation (electricity) by small-scale consumers, such as households and small firms. Since the RET's introduction in 1996 its tax base has been broadened and now also includes consumption by intermediate firms. Tax rates are regressive with the level of consumption for each connection to the grid, and very large electricity consumption levels faced a zero rate in 2002. Recently the electricity tax base was brought further

in line with the requirements of the EU Directive and now also applies to large scale energy consumers (although with some allowed exemptions). In fact, both the FT and RET were brought into one legal framework – called the Energy Tax – at the beginning of 2004.

Together, the FT and RET created the incentive structure on energy products used for heating or power generation. Note, first of all, that *mineral oils* not used as motor fuels are subject to all the taxes. The much lower MOE on mineral oils used as heating fuel is compensated partly by the RET. Crude oil is only taxed indirectly, i.e. downstream *after* the refinery process, by the taxation of refined mineral oils (gasoline, etc.). Accordingly, the energy consumed (and emissions caused) by refining is excluded from the tax base, as are particular refinery products, such as petrocokes and liquid and gaseous residuals, which are often recycled in the same plant.

The Netherlands is one of the few countries that taxed but did not subsidize coal, although at a low rate (coal mines were closed at the end of the 1960s). Special provisions exist for typical energy products produced and recycled in production processes based on coal, such as steel production. For instance, there are exemptions for blast-furnace and coke-oven gas, if recycled within a particular (large) plant. Only if these products are traded does the tax apply. Note also that the EU Directive does not apply to these products either.
Consumption of *natural gas* (NG) is taxed through the FT, although the tax rate for large-scale consumption is very low. The regressive tax rates of the RET, however, are much stronger, with even no tax applying to large-scale NG consumption. Also, an exemption existed for consumption up to 800m^3 between 1996 and 2001, but this has recently been changed into a tax credit with equal value in terms of income loss (Euro 142). Finally, reduced tax rates apply to gas consumed for horticulture.

The consumption of *electricity* is, like the consumption of NG, taxed through the RET, including also a regressive rate structure and an exemption for very large consumers. Note that NG input for *electricity production* is exempted from the RET, and all inputs have been exempted from the FT since 2001. Originally electricity producers also had to pay FT for the use of fuels, such as coal and NG, and a uranium tax was due for nuclear power generation between 1997 and 2001. In 2001, this regime was changed in favor of what is called an 'output' tax. Now, all fuels used for electricity generation are exempted, including the fuels used in combined heat and power (CHP) plants (with electric efficiency over 30 percent). Simultaneously, the tax rates on electricity were raised under the RET regime.

Note, finally, that several energy products were originally exempted from these energy taxes, like consumption and production of electricity from *biomass, wind and solar power*. However, these products have been taxed at a reduced rate since 2003.

Characterising the Dutch energy tax structure

Tax policy design of an energy tax to lower the levels of CO_2 emissions is rather straightforward in a world of only one distortion, i.e. a competitive economy with a negative externality from climate change which is directly linked to CO_2 emissions. In this case a corrective Pigovian tax would correct this externality simply by using the carbon content of energy products, by allowing for exemptions of energy products that are free of carbon content, by including tax rebates for carbon abatement, and by setting the tax rate equal to the level of the (expected) environmental damage involved (see Cnossen and Vollebergh 1992). In practice, however, governments refrain from the implications of such a tax for various reasons. One important reason is that they may also have a keen interest in the revenues of such a tax. Even an optimal corrective tax raises revenue in the optimum and this revenue is never redistributed lump-sum in practice as is assumed in a Pigovian world. For instance, governments may like to signal that they care about green tax reform, and one measure to illustrate this signal is, paradoxically, a higher share of green tax revenue. However, a high share of tax revenue from an energy tax base might also reflect a highly inefficient tax from the Pigovian perspective if this tax is not designed properly.[1]

The choice and development of the energy tax structure of both the FT and the RET in the Netherlands reveals this interesting paradox.

[1] To find a proper balance between corrective and revenue raising goals of government, in particular with the use of an indirect corrective tax like an energy tax, requires a balancing act which is far from straightforward (see for instance Bovenberg and Goulder, 2002 and Cremer and Gahvari, 2002).

Whereas the FT was designed for revenue-raising reasons, its tax rate is rather low and its tax base is remarkably broad including (relatively) elastic fuel consumption from (very) large consumers of coal and natural gas. The newly introduced RET with its regulatory focus, however, raises much more tax revenue than the FT applying much higher tax rates on a (relatively) less elastic tax base, i.e. consumption of energy for heating by households! I summarize the main characteristics of both the FT and the RET in 2002 as a point of reference in Table 2.

A first observation is that the FT, not the RET, is mainly responsible for the remarkable comprehensiveness of the Dutch energy *tax base* from a climate change perspective (see also Table 1). The FT taxes coal and NG upstream (if produced or used as 'raw' fuel or if distributed to others for domestic use) and oil through a tax on refined oil products. In contrast, the RET mainly focuses on downstream consumption of the major energy products consumed at the household and small-firm level in the Netherlands, i.e. NG and electricity. Only the direct taxation of electricity has been added to the energy tax base by the RET, while NG is now also being taxed at the household level.

Second, as far as *linkage* between energy use and emissions is concerned, which is the main issue from a regulatory perspective (see Smulders and Vollebergh 2001), the paradox is even more clear. First of all, upstream taxation of energy products is considered particularly distortive from the revenue perspective (Bovenberg and Goulder 2002), but downstream taxation of energy products implicitly exempts upstream emissions (Pearson and Smith 1992). Thus, the choice of tax base is precisely opposite to the main purpose of both taxes. One wonders why a *specific* excise, like the FT, was introduced for revenue reasons because energy consumption is already taxed through VAT. The explanation for this 'anomaly' is that the FT replaces a system of small environmental charges. Therefore its tax base had to be linked to 'the environment' (even though its revenue no longer has to be used for environmental expenditures). In contrast the RET has always been regarded as a unilateral environmental tax which should exempt exposed energy consumption, i.e. upstream energy use by energy-intensive industries and electricity producers (see also Bovenberg 1993). Interestingly, the original (as well as current) design for a European carbon tax was hardly different in this respect (Ekins and Speck 1999).

Third, the *exemptions* as related to specific characteristics of production processes, like steel production and refineries, provide further evidence for the paradox mentioned above. The heterogeneity of energy use involved here, in particular due to complex joint production, justifies special treatment (e.g. Poterba and Rotemberg 1995). Much of the current rationale of the Dutch energy tax structure follows from a sometimes even accidental recognition of this heterogeneity. For instance, the current FT does exempt residual gases, which is clearly optimal from the regulatory perspective. The taxation of residuals favors substitution towards untaxed elements in the steel making or refinery process, in particular towards flaring. Although taxation of residual fuels would certainly be favorable from a revenue-raising perspective, it is very likely to result in *more*, instead of less CO_2-emissions. The current exemption of residual fuel use clearly benefits the environment, but its existence is only due to a ruling of the Dutch Supreme Court on completely different grounds.[2]

Table 2

Comparison of fuel tax and regulatory energy tax in the Netherlands in 2002

	Fuel Tax (FT)	Regulatory Energy Tax (RET)
Main purpose	– Revenue raising	– Regulation (climate change emissions)
Tax base	– All energy products except electricity	– Only small-scale consumption of natural gas and electricity
Linkage	– Upstream coal and natural gas – Downstream oil	– Downstream
Exemptions	– Residual energy products – Fuels used for electricity production	– Large energy-intensive industries – Horticulture
Abatement incentives	– No	– Carbon sequestration – Subsidies for non-fossil-fuel products
Tax rate structure	– Specific (hybrid)	– Specific (hybrid)
Level	– Low	– High, but decreasing with higher levels of consumption

Source: author.

[2] See Vollebergh (2004), for an extensive discussion of the justification of this exemption.

The recent tax reform with respect to *electricity* is another example of the paradox that the revenue-raising FT serves regulatory incentives better than its explicit regulatory alternative. Electricity is taxed directly under a so called 'output-based' RET regime, which exempts carbon emissions during electricity production. Until 2001, however, the FT also applied to the main inputs for electricity production in the Netherlands – NG and coal. Since 2001, the energy products used for electricity production, including CHP installations, have been exempted from the FT in favor of higher rates of the output-based RET. Accordingly, input substitution by electricity producers to reduce CO_2 emissions is no longer directly addressed by the energy excise structure now.

The main reason behind this remarkable tax shift is a compensation for CO_2 abatement measures as promised by electricity producers according to the so-called 'coal covenant'. Moreover, the measure sustains the promotion of (NG-based) CHP generation in the Netherlands. After the termination of a generous subsidy to any (potential) producer of CHP several years ago, the booming CHP business came to a sudden standstill and even existing installations were threatened.[3] Broadening the NG tax base to include firms of medium size under the RET would impose a further disincentive to CHP. Shifting the tax burden from the FT to a tax on 'output', i.e. the RET on electricity, would lower the tax burden on the generation of electricity. Because the different modes of power generation are treated similarly under this reform, large-scale power plants no longer face input and abatement incentives to reduce climate change emissions.

Finally, *carbon abatement incentives* are particularly small for both taxes. Even the incentives that applied in 2002 have recently been reconsidered and will be abolished. Apart from stimulating CHP generation, the FT has no provisions for 'carbon' rebates, which is in line with the revenue-raising purpose of the tax. Their absence in the RET, however, is remarkable. Also proposals to favor carbon sequestration through afforestation by providing offsets in the RET have never been put into practice.[4] Yet the RET used to have incentives for nonfossil-fuel-based energy production, but now even taxes renewable resources, though at a reduced rate.

As far as the *tax rates* are concerned, both taxes are specific with a hybrid structure, while FT rates are much lower than RET rates. With its upstream orientation, the FT also taxes energy-intensive consumers but only at low rates, while the RET taxes mainly the consumption by small firms and households of NG and electricity, the main energy products consumed by these agents, at high rates. Even though all agents are due to pay RET over their inframarginal consumption of energy, energy-intensive industries face no tax at the margin at all.

Again, tax rates on the different energy products hardly follow the logic as implied by the purpose of both taxes. The much lower tax burden for energy products consumed by industry reflects the Ramsey perspective.[5] In general, (energy-intensive) industry is more sensitive to the energy tax base, and distortions are more likely for intermediate inputs, such as heavy fuel oil, coal, (large-scale consumption of) NG and electricity. Thus to tax energy substitutes for households and small firms at a much higher level through the RET primarily makes sense from a revenue perspective (ceteris paribus). Again the Pigovian element is exactly opposite to what one would expect. The FT clearly favors NG over oil and coal for the relevant substitutes at the industry level (for details see Vollebergh 2004). Coal faces a total tax burden almost twice as high as the tax burden on NG which closely follows the Pigovian logic of indirect taxation according to the (relative) pollution intensity of these products. In contrast, the relative (normalized) total tax burden of heating products for households and small firms, such as NG, light fuel oil and electricity, is similar. Clearly, this burden, which is mainly caused by the RET, appears not to follow the Pigovian logic.

[3] CHP was subsidized in the Netherlands through a fixed price per kWh delivered to the national grid. This price was considerably above the market price for electricity and therefore stimulated a fast expansion of CHP in the Netherlands. Note that CHP is still subsidized by a reduction of the RET on electricity produced from these plants (not larger than 200 GWh).

[4] Firms distributing NG and electricity would have received tax rebates for certified afforestation (under the Carbon Offset Verification System), but not for other carbon abatement investments.

[5] A more appropriate comparison requires standardization of tax rates in relation to energy and/or carbon content of the fuels, however. The problem with the (common) representation of the energy tax structure (like Table 1) is its poor informative content with respect to its (regulatory) incentives. The volume of fuels is a poor indicator of the relative performance of energy products for heating purposes. Although an increase in the tax rate per unit of volume always induces agents to look for cheaper alternatives, the impact of a similar rise in tax differs across products due to differences in, for instance, heating potential. Using several tax ratios that account for this standardization, Vollebergh (2004) provides a much more detailed description and analysis of the energy tax structure in the Netherlands.

Some tax policy lessons

What can we learn from the Dutch experience with energy taxation? The most challenging lessons are:

- Higher tax revenues from an environmental tax base, like 'energy' or even 'fossil fuels' need not signal optimal green tax reform. Higher tax revenues on some energy inputs may even exacerbate emissions (residual fuels), whereas alternative tax bases may raise revenue at lower (distortionary) costs (e.g. broad based consumption tax, like VAT). Indeed, the newly introduced regulatory energy tax (RET) in 1996 signals green tax reform because of its high amount of revenue raised on a 'green' tax base, i.e. energy use by households and small firms. However, although the RET might be (relatively) efficient from a Ramsey perspective, a simple increase in the tax rates of the existing tax on fuels would probably have been much better from a regulatory perspective. Thus the revenue-raising tax on energy accommodates important exemptions from the regulatory perspective, whereas the regulatory tax mainly taxes relatively inelastic uses of (fossil-fuel) energy. This just illustrates that higher tax revenues from energy tax bases do not always signal Pareto improvements, even if one restricts the evaluation to the environmental dividend alone.
- In line with the previous remark, an *uniform* corrective taxation is not always the best solution to 'repair' an externality. Specific sectors or production processes might be optimally exempted from indirect environmental taxes, for instance if emissions and inputs are substitutes, or if administrative cost are prohibitive (relative to the abatement potential). Although the fundamental idea that more direct instruments are beneficial to society still remains valid, these benefits should be weighed against efficiency losses due to other second-best elements, such as heterogeneity in informational or abatement costs. A clear example is the choice of the EU not to tax residuals recycled in refineries and steel making plants.
- The Dutch energy tax as well as the EU Directive for a coordinated EU-wide energy tax account for comprehensive taxation of energy products. All upstream and downstream fossil-fuel products, except crude oil, are subject to some tax. However, the energy tax structure in terms of the composition of the tax base, its choice of the tax base (energy-content), options for tax rebates for carbon abatement and its rate structure leaves room for improvement. Upstream taxes with their strong linkage, the limited (cheap) options for direct emission abatement and their low transaction costs seem to provide an interesting alternative for the relatively high energy tax burden for households. Even low tax rates would already trigger large energy-intensive firms to invest in carbon abatement options, in particular if a tax would allow for (self-enforcing) tax rebates, whereas such options do not exist at the household level. Higher 'output' tax rates on refined oil and electricity never compensate for the loss of abatement potential from these plants, in particular because they are usually large and energy-intensive. Other ways to improve the effectiveness of the existing taxes would be to introduce at least a hybrid *carbon* tax base, allow for tax rebates for abatement and to relate the tax rates even more explicitly to product characteristics.
- Finally, the recent EU Directive is a useful step forward and provides interesting opportunities to exploit international coordination to avoid at least some of the drawbacks mentioned before provided that the focus is on regulation, not on revenue raising energy taxes. For instance, the recent shift from an input to an output electricity tax in the Netherlands could be reconsidered if all countries would commit to at least taxing their electricity production energy inputs at some minimum rate. However, the many exemptions allowed in the current Directive render this rather unlikely, which makes Member States reluctant to implement this type of energy tax. Also the lower tax rates for commercial use do not fully exploit the regulatory potential of a European wide energy tax. It would be much more efficient to apply (at least) similar tax rates to commercial rates together with proper carbon abatement rebates. Indeed, these as well as other examples demonstrate that the opportunities for regulation are not fully exploited yet. If there is a reason for the taxation of energy it is regulation, since an energy tax base does not seem to be the best choice as a revenue raising source.

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Health-care Reform in Slovakia

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The market for health-care services has been described as a place where people yearning for immortality meet the unforgiving world of finances. Although most of the reforms, ongoing in many countries, are hardly ever acceptable to the citizens, many partial steps bring forth almost immediate palpable improvements that are important for gaining and maintaining financial stability and trust of the society. This is the basic lesson from Slovakia's health-care reform.

OECD countries spend on average 8.4 percent of their GDP (OECD 2003a) on health care. In 2003, Slovak health-care expenditure amounted to 6.9 percent of GDP, which is lower than the OECD average but slightly higher than the average of the seven new EU member states (6.7 percent of their GDP, WHO 2003).

The goal of the health-care policy is the financially sustainable provision and fair distribution of health services. Fair distribution is considered a mechanism that would provide care according to everyone's needs. A system is considered financially sustainable when it respects given budget constraints, does not create conditions for the systematic accumulation of debt, and complies with priorities of citizens and policy makers (Evans 2001).

Reasons for the reform

The socialist health care system offered its services free at the point of delivery. However, patients were constantly under-treated and deprived of the latest advances in pharmacological technologies, diagnostics and treatment. A vast network of physically available, yet inefficient hospitals was built. Excess demand was balanced by nepotism and corruption.

At the present time, treatment in Slovakia has already become more effective. This is shown by a significant growth in the mean life expectancy: From 1990 to 2002, the annual growth was 0.18 years for females (1960–90 only 0.10 years annually) and 0.27 years for males (previously –0.04 years annually). This improvement was driven mainly by increased expenditures on new technologies and pharmaceuticals, because no significant structural changes except the privatisation of primary and secondary care on the supply side of the system took place between 1990 and 2002.

The health-care system used to pride itself in providing a high level of equality in access to care, which was, furthermore, delivered for free. In reality, neither of these points were true. Disequilibrium on the market was corrected by informal payments, which further deepened inequalities (OECD 2002b).

Thanks to the generous scope of benefit packages provided, free access to health care, inherited extensive supply, spreading of noninfectious and chronic diseases and limited solvency, demand as well as the supply exceeded available resources. The high demand for health-care services can be illustrated with the following figures: While the annual number of physician consultations in OECD countries was 5.6 (OECD 2003b), the number in Slovakia was 9.2. According to estimates by the Slovak Ministry of Health, 41 tons of prescribed and unused drugs are wasted each year.

Table 1

Revenues and expenditures of the health care system
in % of GDP

	Revenues	Expenditures	Deficit
1995	6.1	6.2	–0.1
1996	7.2	7.2	0.0
1997	7.0	7.6	–0.6
1998	6.9	7.6	–0.7
1999	6.4	6.9	–0.5
2000	6.4	7.3	–0.9
2001	6.4	7.3	–0.9
2002	6.8	7.7	–0.9
2003	6.5	6.9	–0.4
2004[e]	6.4	6.6	–0.2
2005[f]	6.5	6.5	0.0

e = estimated; f = forecast.

Source: Ministry of Health of the Slovak Republic.

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The article is based on a longer paper which contains more details: Zajac, R., P. Pažitný. and A. Marcinčin, 2004.

Until 2001, this inequality resulted in continuous growth of deficits, mounting costs (Table 1) and prolonged waiting periods. The financial problems reached a peak in 2002. If public finances are not capable of covering the actual costs of health care, it is possible to react on the revenue side by increasing private financing (co-payments by patients via private insurance and cash payments), on the supply side by increasing system efficiency, and on the demand side by lowering expectations of the patients towards the publicly financed health-care system.[1]

Fundamentals of the reform

Politically, health-care system reform is a complex issue because in the short-term there are no clear winners: patients lose free health care, providers of health care are deprived of soft budget constraints and producers of technologies and pharmaceuticals lose part of their market. The reform aims to lower the expectations of citizens associated with the health care system and to strengthen their responsibility for their own health. From the public finance perspective, it means the introduction of a clearly defined system in three categories: fully covered, partially covered and non-covered health-care.

The reform is based on a critical assessment of the (mal-) functioning of the pre-reform system. The most critical characteristics have been:

- Moral hazard,
- unsustainable coverage,
- dominance of soft budget constraints,
- management by physicians, and not by enterprises,
- inability of the system to react to the changing structure of diseases.

From these functional distortions the main objectives of the reform heave been derived:

1. Creating an environment supportive to incentive mechanisms to improving the health of the population, increasing the safety of treatment and trust of patients in the health-care system. The position of the state shifts from a health-care services producer, price maker, network manager and distributor of finances to the position of a regulator. The patient takes over higher responsibility for her or his own health status, including covering some prevention as well as treatment costs. The provider takes over higher responsibility for correct provision and quality of health-care, including the possible risk of penalties. A health-care insurer takes over responsibility especially for the management of patients within the system, and solvency in purchasing health-care complying with hard budget constrains, with the risk of facing bankruptcy.
2. Maintaining balanced financing of the health-care system.
3. Increasing the flexibility of the health-care system so that it will respond to the needs of citizens, changing environment, shifts in structures of disease, and technological progress.
4. Providing financial protection of individuals from so-called catastrophic expenses for health-care.

The reform measures undertaken can be grouped into stabilizing measures and measures of systemic change[2].

Stabilizing and systemic measures

Stabilizing measures

First steps: The main goal of the stabilizing measures was to stop the accumulation of debts and limit excessive consumption of health-care services and pharmaceuticals. To start any changes it was first of all necessary to create a proper definition of the term "health-care" and differentiate health-care services proper from those services which are only related to health-care (e.g. food, lodging and transportation).

User fees: The second new element was the introduction of user fees (Table 2) for physician consultations, for issuing prescriptions and providing related services (started 1 June 2003). This step was meant to increase the responsibility of patients for their own health, and was not intended to secure massive additional resources into the system. Fees are of a symbolic nature, while certain groups of patients, such as children under 1 year or the chronically ill are exempt. Poor patients, at first, paid lower fees; however, this proved to be administratively complicated; exemptions were thus canceled and the poor receive a monthly contribution from the social system of SKK 50 per household member to compensate for health expenses.

[1] For further analysis of the Slovak health sector, see Pažitný and Zajac, 2002.

[2] Both the stabilizing and reform measures are profoundly described in Pažitný and Zajac, 2001, and then later in governmental documents in 2003 and 2004.

Table 2

User fees introduced since 1 June 2003

Type of care/provider	User Fee	Per	Who keeps it?
Primary outpatient care	SKK 20	visit	Doctor
Specialized outpatient care	SKK 20	visit	Specialist
Hospital (i.e. room and board)	SKK 50	day	Hospital
Transport	SKK 2	km	Transport
Prescription	SKK 20	Prescription	SKK 5: pharmacy; SKK 15: HIC

Source: Ministry of Health (2003).

The introduction of user fees led to a 10 percent decline in visits to general practitioners and a 13 percent decline in first aid calls (Table 3). Interestingly, the public does not complain that these fees jeopardize the access to care. According to a public poll in January 2004, only 1.5 percent of respondents (FOCUS January 2004) claimed that they stopped visiting the doctor after the introduction of user fees. This means that user fees were able to reduce artificial demand with only a negligible impact on the patients. The lower number of visits might also lead to higher quality of care, because physicians can devote more time to serious illnesses. Fees thus had the effect of reducing excessive demand, while concerns about compromised availability of care proved to be unjustified.

The introduction of fees improved cash income of physicians by SKK 7,000–9,000 per month. Payments in hospitals for food and lodging provided patients with incentives to demand higher quality of services. The significant immediate effect is that patients started to feel that health-care is not free of charge (source: similar polls as mentioned above).

Another likely impact of introducing fees was a drop in corruption. While in November 2002 as many as 32 percent of respondents associated health-care with corruption, in January 2004 it was only 10 percent. There was a drop in the frequency of providing bribes and gifts – to specialists from 18 percent in summer 2002 to 14 percent in the autumn 2003, and in hospitals from 14 percent to 11 percent respectively over the same period (source: public opinion polls in 2002 and 2004).

The general design of the new system of user fees was further developed and ended up with a complex co-payment scheme, which is part of the Reform Acts with the following main objectives[3]:

[3] The fundamental points of the general design of the system of user fees was discussed during a conference on health-care reform in Bratislava in 2004. The issues raised by Osterkamp's presentation on the subject (Osterkamp 2004) were influential in shaping the final design of the system.

Table 3

Number of visits per quarter in 2002 and 2003

Period	Number of visits to outpatient departments				Number of hospitalizations	
	General practitioners, pediatricians, gynecologists	Dentists	First aid	Specialized outpatient care	Hospitals	Other medical establishments
1 Q 2002	3,955,031	652,062	219,141	3,391,103	206,352	33,015
2 Q 2002	3,867,676	640,379	241,975	3,361,904	196,638	33,742
3 Q 2002	3,457,192	558,015	254,146	2,965,542	189,765	30,987
4 Q 2002	3,892,173	620,004	250,615	3,241,337	193,305	29,582
2002	15,172,072	2,470,460	965,877	12,959,886	786,060	127,326
1 Q 2003	4,141,886	638,254	260,616	3,371,764	196,378	31,496
2 Q 2003	3,619,596	623,961	235,854	3,302,044	199,175	34,821
3 Q 2003	3,042,471	542,567	219,884	2,867,805	185,309	32,313
4 Q 2003	3,596,287	621,555	219,419	3,216,420	189,156	32,197
2003	14,400,240	2,426,337	935,773	12,758,033	770,018	130,827
Relation of 2004 to 2003						
1 Q	1.05	0.98	1.19	0.99	0.95	0.95
2 Q	0.94	0.97	0.97	0.98	1.01	1.03
3 Q	0.88	0.97	0.87	0.97	0.98	1.04
4 Q	0.92	1.00	0.88	0.99	0.98	1.09
Year	0.95	0.98	0.97	0.98	0.98	1.03

Source: VšZP (General Health Insurance Company).

1. Separation of non-healt-care services (setting minimal flat user fees).
2. Definition of the national priority list (uninsurable risks that are costly, rare and severe diseases) with no co-payment only user fees that are approved by the parliament. Currently 6,700 diagnoses..
3. Establishing catalogization committees for defining the catalogue of procedures for every diagnosis.
4. Establishing categorization commissions that define the financial co-payment on the non-prior diagnosis (currently 4,300 diagnoses, which are cheap and privately insurable).
5. Increasing the patient's responsibility and involvement by setting rules on compliance and misuse of health-care.

Pharmaceutical policy: The third stabilizing measure has focused on pharmaceutical policy. Several measures have been taken to support the decrease of drug expenditures both as a result of price and volume decrease:

1. Introduction of user fees for drug prescription (SKK 20).
2. Introduction of a fixed ratio after categorization (since June 2003). If a pharmaceutical company decreases the price of a drug after the positive list is published, then the ratio between the reimbursement (paid by the Health Insurance Company) and co-payment (paid by the patient) must remain the same.
3. Introducing personal changes in the structure of categorization committee, favoring economists before doctors (since June 2003).
4. Changes in the process of setting maximal prices.
5. Price negotiations via internet – introducing transparent market mechanisms with clear rules.
6. Changes in margins for wholesalers and pharmacies for "very expensive" drugs. The definition of "very expensive drug" is more flexible than fixed (depending on dosage), but it corresponds approximately to drugs more expensive than SKK 20 000 per month.
7. Higher frequency of categorization and the reimbursement process. It now takes place four times a year, instead of once annually before 2003. The result of the categorization committee is a positive list stating the reimbursements and is published 4 times a year. In adopting these rules Slovakia is attempting to follow the EU legislation on drug reimbursement in terms of the Transparency Directive 89/105/EEC.
8. Introduction of a "fast track" regime in drug policy.

"Fast track" means that for a drug in question there is no requirement for a price evaluation by the reimbursement committee. The fast track procedure is granted, when a pharmaceutical company decreases the price of a product by 10 percent or more compared to the cheapest drug in the cluster (based on: active substance, route of application, pharmaceutical form and strength). Having one drug of the cluster on the "fast track" leads to price reductions for the other drugs in the cluster. Moreover, the patients benefit from using the fast track drug. Table 4 gives an example.

Table 4

Comparison of "normal" and "fast track" regime, in SKK

	Price	Reimbursement from HIC	Co-payment of the patient
Current status of drugs A, B, C	1,000	800	200
Normal price decrease of drug A before introduction of fast track	800	640	160
Fast track of drug A with 25% bonus	800	680	120
The status of drugs B and C after fast track of drug A	1,000	680	320
Result A-(B and C): Clear comparative advantage of drug A	–200	0	–200

Source: Ministry of Health, 2004.

Table 5

Case study on fast track in ATC group NO5AXO8 (Risperidon)

Date of publishing of positive list	Price for DDD in SKK	Price decrease in %	Comment
15 Nov. 2003	180.0		
1 Feb. 2004	160.0	–11.1	1st generic entered the market
15 March 2004	144.0	–10.0	
1 May 2004	80.0	–44.4	2nd generic entered the market
1 July 2004	68.4	–14.5	
1 October 2004	44.1	–35.5	Total decrease –75.5%

Source: Ministry of Health, 2004.

The fast track procedure led to a significant price reduction. Table 5 gives an example for a specific drug.

Decrease in prices and volumes of pharmaceuticals led to a substantial slowdown in the growth of expenditures allocated to drugs. While in previous years that growth was regularly in the double digits, in 2003 it dropped to 8.9 percent. Figures for the first half of 2004 were also encouraging, with drug expenditures falling by 11 percent year-on-year (Table 6).

Table 6

Expenditures for pharmaceuticals

	Drug expenditures in million EUR	Annual growth in %
1996	165.2	
1997	193.6	17.2
1998	229.0	18.3
1999	239.0	4.3
2000	309.9	29.7
2001	360.9	16.5
2002	383.5	6.3
2003	417.8	8.9
2004*	368.8	–11.7

* End year projection after the real data for first half of 2004.

Source: IMS 2004.

Restructuring of hospitals: Fourth, the decentralization of selected hospitals made their restructuring process faster. At the same time, big hospital complexes in two large cities, Bratislava and Kosice, were consolidated, resulting in the sale of several buildings. Transferring hospitals to municipalities and regions led to their better monitoring and management. It seems that the changes and expectations of further changes provide incentives for self-governing processes in hospitals. The restructuralization path has been supported by decreasing the number of beds and by a strong reduction in employment in the health sector in the last two years (Table 7).

Five main sources for cost savings can be identified (Table 8). The stabilizing measures brought an annual savings of SKK 4.0 billion in 2003 and an estimated savings of SKK 6.4 billion in 2004, especially by reducing induced excessive demand. While in 2000–02 the new uncovered debt was growing by the average annual rate of SKK 7.0–9.0 billion (approx. 0.9 percent of GDP), despite injecting SKK 10.5 billion during 2000–02, in 2003 there was a SKK 4.8 billion growth and in 2004 the Ministry expects only SKK 2.4 billion. The adopted reforms have led to stricter adherence to budget constraints. After the adoption of systemic reform and its implementation in 2005 and 2006, the Ministry expects a balanced system with zero growth of debts. Due to the reduced costs of healthcare there was a significant decline in growth of indebtedness.

Systemic measures

The central goal of the systemic measures is to create a new system for providing health-care that would be fair and financially sustainable.

The political background: The adoption of the systemic measures, known also as "The Reform Puzzle", in such a sensitive area as healthcare cannot be described as the great political success of a minority government with only 68 out of 150 members in parliament. 81–88 MPs, depending on the specific act, voted for the reforms. This also shows the necessity for the government to find a political consensus with the independent MPs on the reform.

The objective of systemic measures is to create a new system of providing health-care, fair in distributing health-care services and commodities and financially sustainable in the long-run. Unlike in other areas of public finances, there is no benchmark of best practices for health-care. Therefore, this concept has to be innovative.

Table 7

Number of beds and health-care employees

	1999	2000	2001	2002	2003	2004[e]	2005[f]
Number of beds per 1000 inhabitants*	6.6	6.2	6.1	6.0	5.8	5.6	5.2
Employees in health sector	118,473	120,773	116,938	113,734	106,523	99,900	n.a.
Nominal annual change		+2,300	–3,835	–3,204	–7,211	–6,623	n.a.
Change per year in %		+1.9	–3.2	–2.7	–6.3	–6.2	–

* without psychiatric beds; e = estimate; f = forecast of authors.

Source: Statistical Office of Slovak Republic.

Table 8

Estimated efficiency of stabilizing measures in 2003 and 2004
in SKK billion

Measure	Effective	Savings in 2003	Savings in 2004[e]
Decentralization and establishment of NGOs	January 03	1.3	1.0
New definition of health care and introducing fees for physician consultations and pharmaceuticals	June 03	2.3	3.6
Introducing amendments to contracts of hospital directors	October 03	0.1	0.5
Restructuring hospitals in Bratislava and Košice	October 03	0.1	0.4
Pharmaceutical policy	November 03	0.2	0.9
Total savings		**4.0**	**6.4**
Expenditures on Health		**82.2**	**85.8**
Total savings as a % of total expenditures		**4.9**	**7.5**

e = estimate.

Source: Slovak Republic Ministry of Health, 2003, and calculations by the authors.

The new system contains first of all definitions of insurance, insurance companies, providers, health-care, and the basic package of care. The hottest political debates centered on two questions. First the question of constitutional compatibility of the Act on Scope of Health-Care which reduced the part of health costs to be covered by public health insurance, and second on the transformation of the Health Insurance Companies from public funds into joint stock companies.

Health-care insurance and supervision: The basic function of health-care insurance is to generate resources based on the solidarity principle. That means specifically that also those risks must be covered which have already occurred and are, thus, not insurable under market conditions (or insurable only for a premium which is equal to the costs of treatment).

Public health-care insurance is based on the following principles:

1. Universality and solidarity. Every citizen has guaranteed access to equal treatment for an equal need regardless of one's social standing or income.
2. The necessary financial means are collected from the public on an obligatory basis and redistributed on the basis of the solidarity principle, while there is competition between providers of social insurance. The Health-Care Supervision Authority (HCSA) shall supervise the redistribution of the financial resources between the Health Insurance Companies. The effective rate of redistribution should reach 85.5 percent of the prescribed insurance premiums.
3. Every insured person is guaranteed free choice of the health-care insurance company, which cannot refuse insurance to anyone.
4. Contributions are 14 percent of wages up to a given ceiling (three times the average wage). The state pays 4 percent of average wages for vulnerable groups.

Additional individual health-care insurance is allowed. It reimburses the costs of treatments that are not paid by public health-care insurance. Individual health-care insurance is a product that is to be offered by commercial insurance companies. These will be supervised by the Financial Market Authority.

The goal is to introduce hard budget constraints, transparent financial relationships and transfer responsibility for patient management onto Health Insurance Companies (HIC). HIC must obtain a license from HCSA and are joint-stock companies, i.e. entities of private law. HIC are allowed to generate profits – however, if there are waiting lists in place, up to 100 percent of the profits must be used for the benefit of those on the waiting list. The state is the 100 percent owner of the largest HIC ($^2/_3$ of the market) and a specialized HIC for army and policemen (8 percent of the market), both are also joint stock companies. There are three other HIC on the market with approximately 26 percent market share who have private owners.

Health insurance companies work under supervision of the HCSA, which is funded by their contributions. The authority issues licenses and supervises solvency and the performance of the HIC. Solvency, i.e. the ratio of own resources to revenues from insurance after redistribution, must not fall under 3 percent. If necessary, the authority may issue fines and order a remedy plan, forced administration or liquidation of insurance companies.

The act aims at stimulating competitiveness and introducing market rules for health-care insurance and provision. Currently, health-care providers claim finances from HICs for services provided, regardless of their quality, efficiency or competitiveness. In future, patient management will bring about higher competitiveness and change in payment mechanisms from service mix to case mix.

The selection of providers by HIC is allowed, while respecting the minimum network and quality standards. Together with modern payment mechanisms these shall be the principal tools of competition. HIC shall not compete in collecting contributions for public insurance, but in the efficient purchasing of health-care. We presume that managed care will appear, as well as organizations similar to HMO.

The act introduces clear rules for handling finances for health-care to avoid inefficient and discriminatory behavior of HIC towards health-care providers. The act also changes the role of the state which is only to formulate the health-care policy, to set health-care priorities, to regulate and to control.

Health-care providers: The goal is to increase the decision-making autonomy and responsibility of providers. At the same time, the controlling and supervisory function of the state is strengthened. The new system is based on the following principles. First, artificial barriers to entry erected by professional chambers are to be eliminated. Second, new types of health-care providers, like providers of one-day care and houses of custodian care, are to be introduced. Third, the number, position and tasks of professional organizations in health-care are to be regulated. Compulsory registration and membership of health-care professionals in chambers as the condition for practice is to be abandoned. However, at the same time compulsory registration with the supervisory authority is necessary to ensure continuous retention and renewal of professional competence.

Very important is the new definition of the public network of health-care providers. HIC are allowed to sign contracts directly with providers, but must observe the condition of a minimal public network, related to the regional demographic situation. The minimal public network is set by the ministry as the minimal number of providers in a given field of specialization in a given geographical area. The supervision authority and local government authorities have to monitor whether HICs contract the predefined minimum number of health-care providers.

There will be contract-based and other providers functioning within the system. While a contract-based provider will be reimbursed directly by the HIC and the patient will pay only a user fee (SKK 20 or 50), other providers will charge costs directly to the patients. Following a prior consultation, the patient may ask HIC for reimbursement, but only up to the amount of usual reimbursement of the contracted provider. The hospitals and other budgetary or state owned facilities providing health-care will be transformed to joint-stock companies, with minimal 51 percent state ownership.

Redefining the scope of benefits covered by public health insurance: The definition of a specific scope of benefits which is covered by the public health insurance companies is derived from the principle that an insured person has the right to equal treatment in case of an equal need. Due to the infinite nature of needs it is, however, necessary to define a certain maximum extent of care – the benefit package – based on a list of priorities that is in line with the fiscal capacity of the Slovak economy. Therefore a clear policy of rationing has to be implemented.

The presently applied "silent" rationing is becoming a serious ethical problem and source of corruption. Decision making is done in a micro-level system, i.e. by physicians. The solution would be to replace it by explicit rationing, i.e. define clear and transparent rules binding for every participant in the system while respecting medical, ethical and economical criteria and maintaining the quality of health-care.

The definition of priorities is arrived at in three steps which redefine the mechanism of defining, cataloging and categorization of sicknesses and the related benefits provided.

The effects of redefining the list of priority diseases is shown in Table 9. The priority list contains approximately 6,700 diagnoses, which is almost two thirds of the total list of diagnoses (11,000) listed in ICD 10. Provided prices and demand remain constant, patients would pay in total almost SKK 3 billion for non-priority treatments. This creates a market for commercial health insurance companies. The average co-payment for the patients per diagnosis per case would reach approximately SKK 50–200.

Table 9

Break-down of diagnoses to the priority list and others

	Unit	Priority list	Non-priority list	Total
Number of diagnoses	ICD 10	6,700	4,300	11,000
Present volume of payments by insurers	SKK billion	19,999	9,989	29,979
% of total costs of treatment	%	67	33	100
% of total cases of treatment	%	41	59	100
% of new payments from public insurance	%	100	0-95	
New volume of payments by HIC	SKK billion	19,990	6,992	26,982
New volume of co-payments by patients	SKK billion	0	2,997	2,997
Average payment by patients per case (per diagnosis)	SKK		50-200[a)]	

[a)] Per diagnosis based on complexity.

Source: HIC, calculated by the Ministry of Health and authors.

Table 10

Private household expenses for health-care

	2000	2001	2002	2003	1st half of 2004	2004e
Monthly health consumption per capita in 1st half of the year, in SKK	87	95	102	135	242	
Total health in SKK million	6,354	7,856	8,440	10,209	7,694	15,500
Total consumption in SKK million	519,596	577,522	623 146	667 453	356,889	715,000
Total health as a % of total consumption	1.22	1.36	1.35	1.53	2.16	2.17

e = estimate, Ministry of Health.

Source: Family accounts, Statistical office of the Slovak Republic.

Table 11

Resources and expenditures in the health sector, SKK billion

	2002	2003	2004e	2005f
Total resources in health care sector	**75.0**	**77.4**	**83.4**	**91.1**
HIC	57.0	58.6	62.6	71.6
MOH (without payments to HIC) and other budgetary chapters	4.7	4.8	4.8	3.5
Out of pocket – legal	6.8	9.5	12.5	13.5
Out of pocket – informal payments	6.5	4.5	3.5	2.5
Total expenditures	**84.2**	**82.2**	**85.8**	**91.1**
Deficit	**9.2**	**4.8**	**2.4**	**0,0**
GDP	**1,096.0**	**1,196.0**	**1,311.0**	**1,408.0**
Nominal Debt Growth, in SKK billion	+9.2	+4.8	+2.4	+0.0
Health resources as % of GDP	6.8	6.5	6.4	6.5
Health expenditures as % of GDP	7.7	6.9	6.6	6.5

e = estimate; f = forecast.

Source: Ministry of Health, 2004, in compliance with Ministry of Finance, budget proposal for 2005–07.

Conclusion and outlook

Reforming the health-care system requires not only a clear concept but also the execution of a number of detailed steps, the description of which was beyond the scope of this article. Yet even immediate changes in management could lead to substantial savings and improved care. However, no concept can be successful without public and political support. Although the majority of changes do not have clear winners in the short term – direct expenditures by patients are increasing, while revenues of strong interest groups are declining (e.g. pharmaceutical industry) – many partial steps bring forth almost immediate palpable improvements that are important for winning and retaining public trust.

Table 10 shows that health-care costs of private households have indeed increased but remain a small part of total private consumption.

Since 2002 the fiscal position of the public health-care sector in Slovakia has improved considerably at a constant rate. It is expected that the system will reach financial stability from 2005 onwards (Table 11).

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Fiscal Policy in Euro Countries

The current discussion on a possible revision of the Stability and Growth Pact, signed by the member countries of the euro area, centres on the question of whether the main fiscal rules of the pact – the budget should be nearly at zero balance or even exhibit a surplus; a budget deficit should not exceed 3% of GDP unless in exceptional circumstances – are too inflexible, i.e. do not provide enough leeway for discretionary (stimulating) fiscal policy in specific situations, or whether the occurring violations of the rules are more due to an inappropriate fiscal policy. A recent OECD publication (Buti and van den Noord, 2004) tries to shed some new light on that question.

The authors construct an indicator which characterises the discretionary property of fiscal policy (see Table). They start from the concept of a neutral primary fiscal stance (part 1 of the Table) which is met when primary expenditure develops as does trend real GDP plus the inflation target of the ECB (taken as 1.5%) and when the growth of revenue is in line with actual nominal GDP (i.e. undisturbed by tax rate changes). That neutral fiscal stance is then compared with the actual primary fiscal balance (part 2). The discretionary policy effect (part 3) is the difference between the neutral and the actual budget position.

However, the discretionary policy effect, so far, entails two non-discretionary elements, namely a "growth dividend" and an "inflation dividend" (part 4 and 5, respectively). The former occurs when the expected GDP growth is larger than the trend growth; the latter when the expected inflation rate is larger than the ECB target rate of inflation. Both types of dividends permit a non-debt financing of deficits and are subtracted from the (simple) discretionary policy effect. What results is called the "genuine" discretionary fiscal policy effect (part 6).

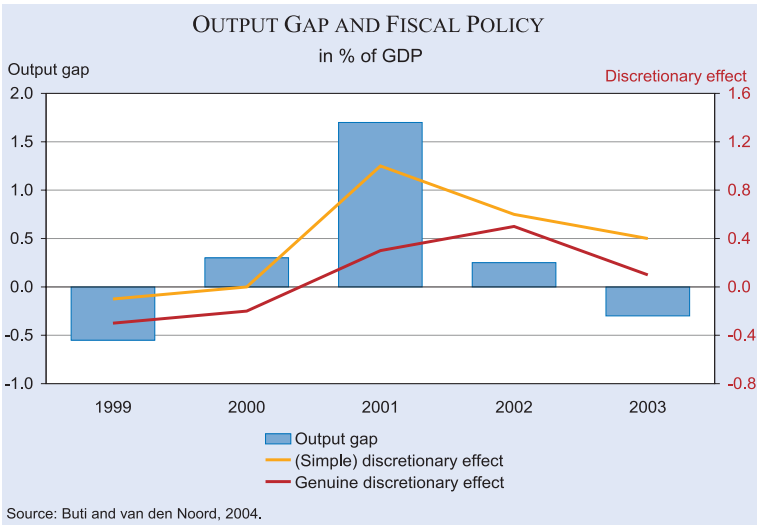
In the Table, negative figures for simple and genuine effects indicate a tightening, and positive figures a loosening fiscal effect. What can be observed is that in 1999, the first year of the euro, the majority of countries still pursued a restrictive fiscal policy course. In the following years, however, fiscal policy became more and more expansionary, with a reversal of this trend in 2003.

The obvious question is now whether the (discretionary) fiscal effects are reasonable or not, i.e. whether they have contributed to mitigating or stimulating the cyclically development of real GDP. The answer is given in Figure 1, which contains the two lines for the simple and the genuine discretionary effects and bars for the output gap (actual GDP – potential GDP, one year before). When there were recessionary tendencies, fiscal policy was tightening, while it was stimulating in years of higher economic growth. Hence, fiscal policy behaved, more or less, pro-cyclically.

The great difficulty of always exerting the appropriate fiscal effect is textbook knowledge. But apart from an inability there might also be bad intentions on the side of the governments. This has been discussed in the literature under the heading of "electoral cycles". The authors add to this discussion by relating the number of elections in the euro area to the discretionary fiscal effects. The result is presented in Figure 2. The bars indicate the number of countries that were in an election or pre-election year; the lines are again the discretionary effects. What we see is an astonishingly neat correlation between the discretionary effects and the number of countries in election years, specifically when one leaves out the year 1999.

It can be reasonably argued that the budget rules of the Stability and Growth Pact are, in a sense, "stupid".

Figure 1



Source: Buti and van den Noord, 2004.

Fiscal policy indicators, in percent of GDP

	Neutral primary fiscal stance					Actual primary fiscal stance					Discretionary policy effect				
	(1)					(2)					(3) = (1) - (2)				
	1999	2000	2001	2002	2003	1999	2000	2001	2002	2003	1999	2000	2001	2002	2003
Austria	0,1	0,3	–0,1	2,0	1,4	0,8	1,2	3,2	2,2	1,4	*–0,8*	*–0,9*	*–3,2*	*–0,2*	*0,0*
Belgium	7,0	6,8	6,1	6,2	5,7	6,2	6,6	6,4	5,7	5,2	*0,9*	*0,2*	*–0,3*	*0,5*	*0,5*
Finland	2,6	5,8	8,0	5,4	4,7	3,6	8,0	5,8	4,8	3,2	*–1,0*	*–2,2*	*2,2*	*0,6*	*1,5*
France	–0,2	0,9	0,7	0,4	–1,5	1,1	1,4	1,1	–0,5	–0,8	*–1,3*	*–0,4*	*–0,4*	*0,9*	*–0,7*
Germany	0,9	1,6	1,1	–0,4	–1,5	1,6	1,5	0,0	–0,8	–0,8	*–0,7*	*0,1*	*1,1*	*0,4*	*–0,8*
Greece	6,4	6,9	6,6	5,8	5,4	5,4	5,1	4,4	4,3	4,3	*1,0*	*1,8*	*2,2*	*1,5*	*1,1*
Ireland	5,2	4,2	5,4	2,0	–0,7	3,5	5,4	1,8	–0,2	–0,6	*1,7*	*–1,2*	*3,6*	*2,3*	*–0,1*
Italy	4,6	5,0	4,5	3,1	3,0	4,4	4,1	3,3	2,9	2,2	*0,2*	*0,8*	*1,3*	*0,3*	*0,8*
Netherlands	3,6	5,4	5,4	2,5	1,3	4,5	4,7	2,8	1,5	0,7	*–0,9*	*0,6*	*2,6*	*1,0*	*0,6*
Portugal	0,4	0,5	0,1	–1,1	0,1	0,4	0,0	–1,1	0,4	–0,1	*0,1*	*0,5*	*1,2*	*–1,4*	*0,3*
Spain	2,2	3,2	2,9	3,4	2,9	2,2	2,1	2,7	2,6	2,2	*0,0*	*1,1*	*0,2*	*0,8*	*0,7*
Unweighted avrg.	3,0	3,7	3,7	2,7	1,9	3,1	3,6	2,8	2,1	1,5	*–0,1*	*0,0*	*1,0*	*0,6*	*0,4*
	Projected "growth dividend"					Projected "inflation dividend"					"Genuine" discretionary policy effect				
	(4)					(5)					(6) = (3) - (4) - (5)				
	1999	2000	2001	2002	2003	1999	2000	2001	2002	2003	1999	2000	2001	2002	2003
Austria	0,2	0,0	0,1	–0,5	–0,3	–0,2	–0,3	0,1	0,3	0,0	*–0,8*	*–0,6*	*–3,4*	*0,0*	*0,2*
Belgium	0,1	0,1	0,0	–0,3	0,0	0,0	–0,2	–0,1	0,3	0,0	*0,8*	*0,3*	*–0,2*	*0,5*	*0,4*
Finland	0,4	0,5	0,6	–0,5	0,1	0,2	0,0	–0,1	–0,2	–0,1	*–1,6*	*–2,8*	*1,8*	*1,2*	*1,5*
France	0,2	0,4	0,5	0,2	0,1	–0,1	0,0	–0,1	0,1	0,0	*–1,4*	*–0,8*	*–0,7*	*0,6*	*–0,8*
Germany	0,2	0,5	0,5	–0,3	0,0	–0,2	–0,2	0,0	0,0	0,0	*–0,7*	*–0,2*	*0,6*	*0,6*	*–0,8*
Greece	0,2	0,3	0,8	0,2	0,1	0,3	0,2	0,3	0,5	0,6	*0,4*	*1,3*	*1,2*	*0,8*	*0,5*
Ireland	–0,3	0,2	0,5	–0,6	–0,6	0,3	0,4	0,8	0,6	0,6	*1,7*	*–1,8*	*2,4*	*2,2*	*–0,1*
Italy	0,3	0,1	0,4	0,2	0,2	0,2	0,1	0,4	0,4	0,2	*–0,3*	*0,7*	*0,5*	*–0,3*	*0,4*
Netherlands	0,0	–0,2	0,5	–0,6	–0,6	0,3	0,4	0,9	0,7	0,9	*–1,2*	*0,5*	*1,2*	*0,8*	*0,2*
Portugal	0,1	0,0	0,1	–0,2	–0,1	0,3	0,3	0,8	0,7	0,7	*–0,3*	*0,2*	*0,3*	*–2,0*	*–0,4*
Spain	0,3	0,2	0,2	–0,1	0,1	0,1	0,2	0,3	0,4	0,4	*–0,4*	*0,8*	*–0,2*	*0,5*	*0,2*
Unweighted avrg.	0,1	0,2	0,4	–0,2	–0,1	0,1	0,1	0,3	0,4	0,3	*–0,3*	*–0,2*	*0,3*	*0,5*	*0,1*

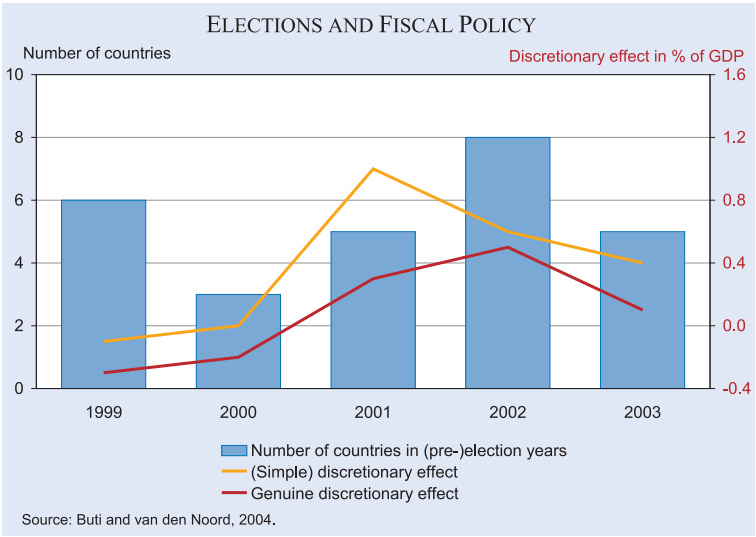
Example: Ireland in 2000: for neutrality, the primary budget should have been in surplus (4.2%). But the actual surplus was higher (5.4%). A tightening discretionary effect (-1.2%) resulted. Due to the growth and inflation dividend, the genuine discretionary (contractionary) effect was even larger (-1.8%).
Note: The figures do not always add up exactly.

Source: Buti and van den Noord, 2004.

However, wiser and more flexible rules might work only in a world where neither inability nor bad intention occur. In the world as it is, a strict observance of the "stupid" rules must finally lead to an inactive (non-discretionary) fiscal policy which, instead, relies on automatic stabilisers. Given the large size of the public (tax and social benefit) sectors in Europe, those automatic stabilisers are generally estimated to have a considerable impact, at least one which is not pro-cyclical.

R.O.

Figure 2



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Buti, M. and P. van den Noord (2004), "Fiscal Policy in EMU: Rules, discretion and political incentives", European Commission, *Economic Papers* no. 206.

Closing a Business

Recent economic crises in emerging markets have raised concerns about the design of bankruptcy systems and the ability of such systems to help reorganize viable companies and close down unviable ones. In countries where bankruptcy rules are inefficient, unviable businesses linger around for years, preventing assets and human capital from being allocated to more productive uses. Most often, the bottlenecks in bankruptcy are associated with the inefficient judicial process, and hence the unwillingness of banks and other lenders to push for a formal insolvency resolution.

The World Bank's report "Doing Business" identifies weaknesses in existing bankruptcy law and the main procedural and administrative bottlenecks in the bankruptcy process. The examination of bankruptcy is done through a survey of bankruptcy lawyers, accountants and judges. The survey covers the step-by-step procedures on filing for bankruptcy proceedings, initiation of bankruptcy, the petition hearing, the court's decision, the appointment of an insolvency practitioner, the assessment of claims and their ordering by priority, and the sale of assets. To measure the efficiency of foreclosure or bankruptcy procedures, "Doing Business" mentions three main indicators for closing a business, which measure the time and cost involved in insolvency proceedings. The following indicators are used:

- Average time to complete a procedure,
- Cost of the bankruptcy proceedings (as a percentage of the estate), and
- The recovery rate, which calculates how many cents on the dollar claimants (creditors, tax authorities, and employees) recover from an insolvent firm.

There are great differences in the time taken to close a business. On the average, it takes about one year in the developed countries. Exceptions are some of the middle and eastern European countries where it can take up to 9.2 years (Czech Republic) to complete a procedure. But Denmark (3.4 years) and Switzerland (4.6 years) too are facing procedural and administrative bottlenecks in the bankruptcy process.

The cost of the bankruptcy procedure is as high as 18 percent of the estate in some of the middle and eastern European countries. On the other hand, countries like Finland, Netherlands and Norway show how efficient bankruptcy processes can be. The costs amount to just one percent of the estate.

The recovery rate, which calculates how many cents on the dollar claimants recover from an insolvent firm is again low in some middle and eastern European countries. But in Switzerland too claimants just recover 37 percent on the dollar from an insolvent firm.

W. O.

Table

Closing a business[a)]

	Time (years)	Cost (% of estate)	Recovery rate (cents per dollar)
Australia	1.0	8	80.0
Austria	1.0	18	72.5
Belgium	0.9	4	86.2
Canada	0.8	4	89.1
Czech Republic	9.2	18	16.8
Denmark	3.4	8	59.8
Estonia	3.0	8	40.0
Finland	0.9	1	90.2
France	1.9	8	46.6
Germany	1.2	8	50.3
Greece	2.0	8	45.6
Hungary	2.0	23	30.8
Ireland	0.4	8	88.9
Italy	1.2	18	43.5
Japan	0.5	4	92.4
Latvia	1.1	4	85.0
Lithuania	1.2	8	52.4
Netherlands	1.7	1	86.2
New Zealand	2.0	4	71.4
Norway	0.9	1	87.9
Poland	1.4	18	68.2
Portugal	2.5	8	69.9
Slovak Republic	4.7	18	39.6
Slovenia	3.6	18	23.6
Spain	1.0	8	83.4
Sweden	2.0	8	73.2
Switzerland	4.6	4	37.0
United Kingdom	1.0	6	85.8
United States	3.0	8	68.2

[a)] As of January 2004.

Source: World Bank, "Doing Business" (http://rru.worldbank.org/DoingBusiness).

Reference

World Bank, "Doing Business" (http://rru.worldbank.org/Doing Business).

Waiting for Elective Surgery

The existence of waiting times for elective surgery is a fact of life in many industrialised countries. Often waiting times are so long that they constitute a cause for political concern. In several countries long and even growing waiting times have been evident for many years. By contrast, there is a number of countries where waiting times do not play a major role (Table 1).

Until recently, the empirical basis of an assessment of the roots and effects of waiting times was weak because there were no truly country-comparative data. The data had to be compiled from different publications of countries, as has been done e.g. in Osterkamp, 2002. It is only since 2004 that this situation has changed. Now we have the results of the OECD Health Project, a part of which is focussed on waiting times. The data have been gathered by questionnaires. But even now, more or less comparative data only exist for nine countries, some of which report only either mean or median values (Table 2). The economically and politically more relevant value is the median. The mean values tend to be somewhat higher, sometimes very much higher than the median due to a skewed distribution. Unfortunately – from an economic- and health-policy perspective – Japan is again not covered by figures on surgery (also missing in the OECD database Health Data). The country also seems not to have responded to the OECD questionnaire of the OECD Health Project, but is treated there as "not reporting waiting times".

Table 1

Waiting and not waiting for elective surgery

Waiting time	Countries
Yes (14)	Australia, Canada, Denmark, Finland, Greece, Ireland, Italy, New Zealand, Netherlands, Norway, Portugal, Spain, Sweden, UK
No (7)	Austria, Belgium, Germany, France, Luxembourg, Switzerland, USA

Note: Information is for 1999; Japan: missing information.

Source: Osterkamp (2002).

Table 2

Inpatient waiting times by surgical procedure, 2000
in number of days, median value

	Hip replacement	Knee replacement	Cataract surgery	Varicose veins	Hysterectomy	Cholesystectomy
Australia	98	120	120	94	28	48
Canada[a)]	112	136	80	n.a.	n.a.	n.a.
Denmark	87	90	36	69	n.a.	57
Finland	148	202	189	155	70	90
Norway	99	132	28	110	37	63
Netherlands[a)]	96	85	111	107	61	71
Spain[b)]	123	148	104	117	102	107
Sweden[b)]	n.a.	n.a.	199	n.a.	n.a.	n.a.
UK	211	261	182	178	110	97

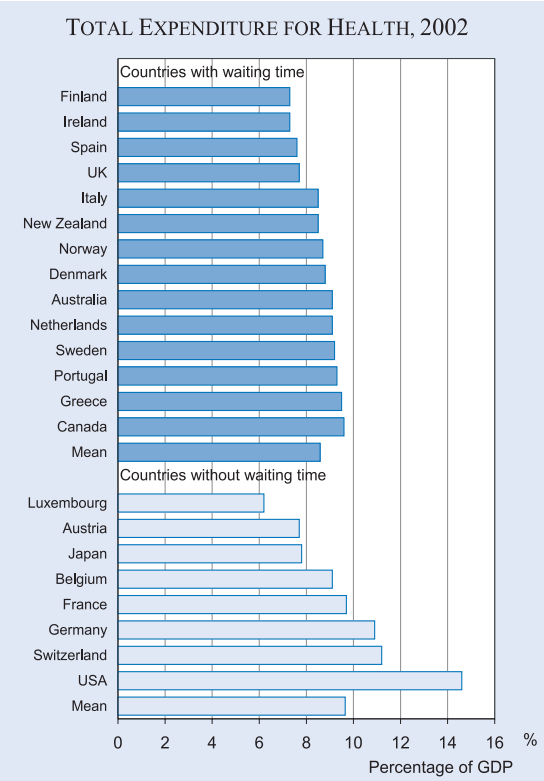
[a)] for the province of British Columbia. – [b)] mean instead of median value.

Source: OECD (2004).

The length of the waiting time is considerable in some countries and for some illnesses. According to Table 2 the majority of patients has to wait for a quarter, even for three quarters of a year. In certain individual cases the waiting time is even still longer. However, it should be noted that the figures relate to *elective* surgery, i.e. to not urgently necessary, life-saving surgery.

On general economic theory grounds, it is plausible that two main interacting causes are responsible for long waiting times: One is supply restriction and the other is no or low co-payments for surgery. Relatively strong supply restrictions are at work in countries with a high tax financing ratio of health-care costs (as opposed to financing through social security contributions). Spain is the only country with considerable waiting times and a *low* tax financing ratio. Moreover, countries with waiting lists spend relatively less for health care (see Figure) and are often characterised by a low level of co-payments. Most countries with waiting lists use general practitioners as "gatekeepers" for directing patients to specialist treatment and to surgical operations. However, it is more plausible to regard gatekeepers as a response to scarce treatment resources rather than as their cause.

Waiting times have the effect of rationing. The question is why that effect is not produced by the "normal" rationing instrument, the price. The usual answer by health politicians and public health economists refers to undesirable distributional effects (not treated by the OECD) of price-rationing. However, it is



Source: OECD Health Data 2004.

not easy to avoid these effects completely. In the UK, for example, patients are allowed to circumvent the waiting queue and have their surgery done in private clinics – for extra ("out of pocket") payment. Health treatment, thus, is more unequally distributed than it would be without this option. On the other hand, the private patients cannot avoid paying their share of the general health-care system through (progressive) income taxes. Norway, by contrast, is more consistent on the distributional question. Circumventing the queue is only possible by way of surgery *abroad*, not in Norway.

Waiting times must also be seen under the aspect of allocation. Forced waiting might be an effective instrument of rationing but it is hardly an efficient one. One reason is that the administration of waiting queues is costly. "Administration" here means continuous checking and re-checking of the health condition of the patients on the waiting list and of "prioritising" them, i.e. of placing them forward and backward on the list according to their changing health condition, relative to other patients. Thus, a major part of administering the waiting list must be done by the same health personnel that could also do surgery. The effect is that waiting lists, to a certain degree, feed themselves and are, thus, only a second-best instrument.

On the other hand, countries without waiting lists spend, on average, a clearly higher share of GDP on their health systems. The OECD estimates that it costs two additional percentage points of GDP to move from long to short waiting lists. Low or no waiting time countries conduct also more – for some types of surgery, much more – elective surgery operations per 100,000 inhabitants and per year, without exhibiting a significant effect on the health situation of the population. Hence, a health-care design package consisting of a parsimonious tax financing plus waiting lists (if not too long and not growing) might be regarded as a fairly good solution.

R.O.

References

OECD (2004), *The OECD Health Project: Towards High-Performing Health Systems*, specifically ch. 6: Tackling Excessive Waiting Times for Elective Surgery, Paris.

Osterkamp, R. (2002), "Warten auf Operationen – ein internationaler Vergleich", *ifo Schnelldienst*, 55/10.

Net Replacement Rates

The influence of the welfare system on reservation wages can be represented and quantified by the net replacement rate (NRR) defined as:

$$\text{NRR} = \frac{\text{Benefit income when unemployed} - \text{tax on benefit income}}{\text{Earned income} + \text{benefit income when employed} - \text{tax on earnings and benefits.}}$$

The net replacement rate is the fraction of current or potential income which the social system provides to a person if he or she does not work. It varies according to the type of household, employee, sector of industry, wage and salary group and the reasons for not working.

The Table shows the net replacement rates for an average production worker in the initial phase of unemployment and in the 60th month of benefit receipt in the year 2002. It demonstrates that – in practically all countries – the net replacement rate at the beginning of unemployment is relatively high for a couple with two children but lower for someone who is single. Hence, the bread-winner has little incentive to seek regular work. This is all the more true if the (participating) spouse is long-term unemployed. There are, of course, differences in the net replacement rate from one country to another. The net replacement rates for long-term benefit recipients are lowest in Italy, Greece and the United States and highest in the Scandinavian countries (except Norway), Slovak Republic, Netherlands, Austria and Germany.

The difference of the net replacement rates for singles between the first and the 60th month of benefit receipt is illustrated in the Figure. A small difference has a high impact on long term unemployment, whereas a large difference has the opposite effect. The difference is highest in Portugal, the United States, Greece, Spain and Canada.

Net replacement rates by family type at the APW level [a], 2002

	Initial phase of unemployment[b]		Long-term unemployment[c]	
	Single person	Couple[d] 2 children	Single person	Couple[d] 2 children
Australia	32	66	32	66
Austria	55	73	51	78
Belgium	66	61	55	61
Canada	64	76	22	59
Czech Republic	50	54	31	71
Denmark	59	76	50	78
Finland	64	82	51	85
France	71	76	41	70
Germany	61	78	61	68
Greece	46	50	0	3
Hungary	44	54	24	30
Ireland	29	55	51	73
Italy	52	60	0	0
Japan	63	61	34	71
Netherlands	71	78	58	72
New Zealand	37	67	37	67
Norway	66	73	42	64
Poland	44	51	30	73
Portugal	78	77	24	61
Slovak Republic	62	72	42	91
Spain	70	75	27	41
Sweden	81	83	51	78
Switzerland	72	82	51	71
United Kingdom	45	46	45	73
United States	56	53	7	41

[a] APW: Average production worker. – [b] In the initial phase of unemployment but following any waiting period; after tax and including unemployment benefits, family, and housing benefits; no social assistance "top ups" are assumed to be available in either the in-work or out-of-work situation. – [c] After tax and including unemployment benefits, social assistance, family and housing benefits in the 60th month of benefit receipt. – [d] One earner married couple.

Source: OECD, Benefits and Wages, OECD Indicators 2004, Paris 2004, pp. 95 and 98.

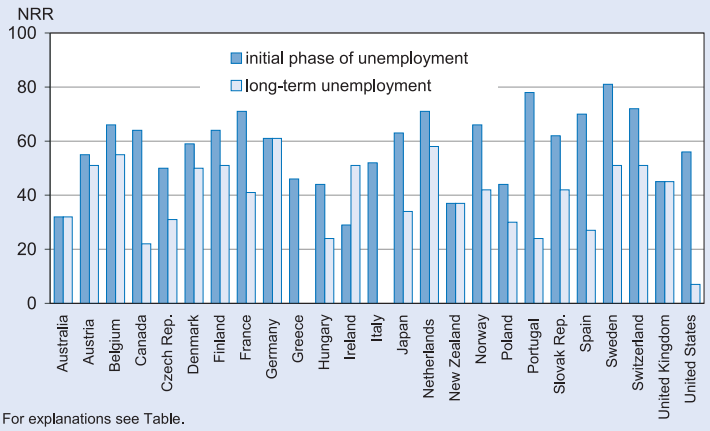
The replacement rate can be explained by the intended insurance function. However, a replacement rate also defines a minimum reservation wage, below which no one is willing to accept a job. In fact, for most people the minimum reservation wage may be even higher than that: When they decide to work they not only require a compensation for the lost special benefits but also for the time lost for leisure and for working at home or even for the loss of black market income. The higher the replacement rate, the better is the insurance protection, but the lower is the number of jobs which employers are willing to provide, given the skill distribution of the unemployed.

W. O.

Reference

OECD, Benefit and Wages, OECD Indicators 2004, Paris 2004.

NET REPLACEMENT RATES FOR SINGLES AT THE APW LEVEL, 2002



For explanations see Table.

Source: OECD, Benefit and Wages, OECD Indicators 2004, Paris 2004, pp. 95 and 98.

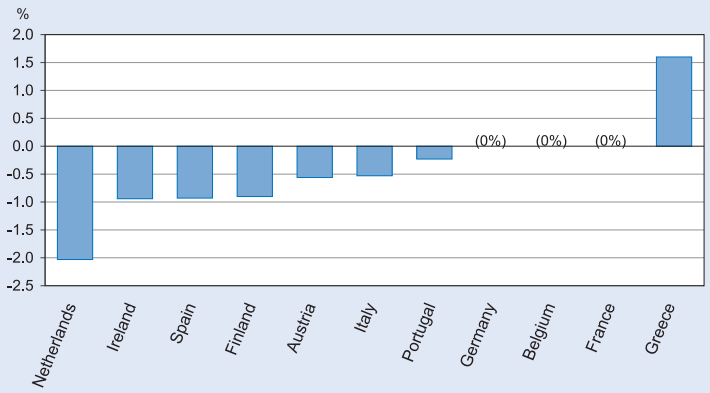
Tax Preferences for Housing

Prices of assets and durable goods, like houses, are more volatile than prices of non-durable goods. The reason is that demand fluctuations in durable goods markets meet an inelastic supply which reacts only slowly to demand and price incentives. Market price responses to fluctuations of demand are the more pronounced the lower is the price elasticity of demand. Preferential tax treatment for buying a durable good, like a house, reduces the after-tax cost of the good as well as the price elasticity of demand for it and, thus, increases the price volatility in the market above the level that would prevail if there were no tax preferences.

A recent OECD study (van den Noord, 2003) shows that tax preferences for owner-occupied housing in the countries of the euro area differ quite substantially. The amount of tax preferences is measured by the tax wedge, which here is the difference between the after-tax and pre-tax real interest rate on mortgage loans. In 7 out of 11 euro area countries, the tax wedge is negative, which means that there is a tax subsidy for housing (Figure 1). This subsidy is highest in the Netherlands, where it reduces the real costs of home financing (real after-tax interest rate) to about half a percent (not shown). In most other countries with a negative tax wedge, the real costs of financing are a little higher than in the Netherlands – between 1.5 and 2.5 percent – but also clearly below the usual real market interest rates. The exception is Greece, where housing is not tax-subsidised but, instead, heavily taxed. (Taxing real estate, which is relatively easy to assess and to administer, might serve in Greece to offset loopholes and tax evasion in the system of public revenues.)

Figure 1

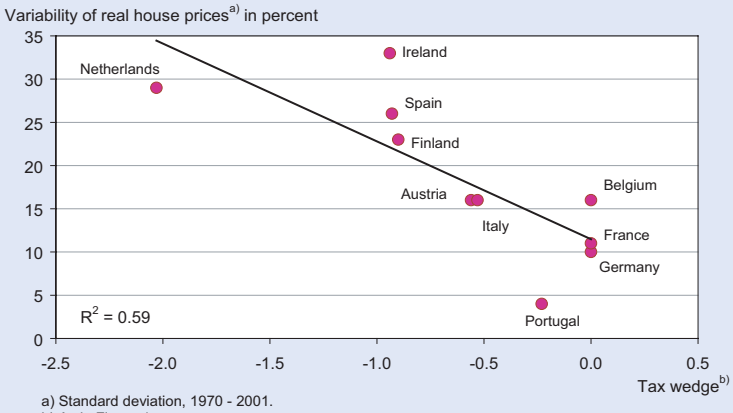
Tax Wedge in the Owner-Occupied Housing Market



Note: Tax wedge is here the difference between after-tax and pre-tax real interest rate on mortgage loans; 1999 tax rules, interest rates and inflation.
Source: van den Noord (2003).

Figure 2

Tax Wedge and Variability of House Prices



a) Standard deviation, 1970 - 2001.
b) As in Figure 1.
Sources: van den Noord (2003).

The relation between preferential tax treatment of a durable good and the price volatility in its market is clear on theoretical grounds. But it can also be established empirically for the market of owner-occupied dwellings in the countries of the euro area. Figure 2 depicts the correlation between the tax wedge for housing and the variability of real house prices (1970–2001, standard deviation; Greece has been excluded from the correlation analysis). Generally one can say: the higher the tax preferences for housing, the higher the volatility of house market prices.

There is an important implication of this analysis for macroeconomic policy making. Asset price fluctuations cause wealth effects for the asset owner in the same direction and may thus lead to a further reinforcement of an inflationary (or deflationary) tendency in the economy. The more the tax preferences for housing differ across countries, the more pronounced

might be the inflation differentials. Such an "asymmetry" could be an additional burden for monetary policy in a monetary union.

R.O.

Reference

van den Noord, P. (2003),"Tax Incentives and House Price Volatility in the Euro Area: Theory and Evidence", OECD, *Economics Department Working Paper* no. 356.

Decision Making in Education Systems

An important factor in educational policy is the division of responsibilities among national, regional and local authorities, as well as schools. Placing more decision-making authority at lower levels of the educational system has been a key aim in educational restructuring and systemic reform in many countries since the early 1980s. Yet, simultaneously, there have been frequent examples of strengthening the influence of central authorities in some areas. For example, a freeing of "process" and financial regulations may be accompanied by an increase in the control of output from the centre and by national curriculum frameworks.

There are many motives for changes in patterns of centralisation, and they vary from country to country. The most common goals are increased efficiency and improved financial control, reduction of bureaucracy, increased responsiveness to local communities, creative management of human resources, improved potential for innovation and creation of conditions that provide more incentives for improving the quality of schooling. Among the more controversial policy-related themes are a heightened interest in measures of accountability and equity. These last two issues sometimes provide the background for measures that are more "centralised", such as national assessment programmes and centrally established frameworks.

Various motives are attributed to the desire to increase the autonomy of schools, such as enhancing the quality, effectiveness and responsiveness of schooling. As far as equity is concerned, increased autonomy is more controversial. School autonomy is believed to foster responsiveness to local requirements but is also sometimes seen as involving mechanisms for choice that favour already advantaged groups in society. Setting a centrally determined framework system in which individual schools make decisions is a possible counterbalance against complete school autonomy.

The OECD has collected data on decision making at the lower secondary level of education (see Table). Overall, decisions are most highly centralised (taken at the central and/or state level of government) in Australia, Austria, Greece, Luxembourg, Mexico, Portugal, Spain and Turkey, with central government particularly dominant in Greece and Turkey. Decisions are more often taken at the school level in the Czech Republic, England, Hungary, New Zealand and the Slovak Republic and in particular in the Netherlands, where all decisions are taken at the school level.

Decisions on the organisation of instruction are predominantly taken by schools in all OECD countries, while decisions on planning and structures are mostly the domain of more centralised tiers of government. The picture is more mixed for decisions on personnel management and allocation and use of resources. Just less than half of decisions made by

Percentage of decisions relating to public sector, lower secondary education, taken at each level of government (2003)

	Central	State	Provincial/ regional	Sub-regional	Local	School	Total
Australia		76				24	100
Austria	27	22			23	29	100
Belgium (Fr.) [a]		32	25			43	100
Czech Republic	7		1		32	60	100
Denmark	19				38	44	100
England	11				4	85	100
Finland	2				71	27	100
France	24		10	35		31	100
Germany	4	30	17		17	32	100
Greece	80		4		3	13	100
Hungary	4				29	68	100
Italy	23		16		15	46	100
Japan	13		21		44	23	100
Korea	9		34		8	48	100
Mexico	30	45	2			22	100
Netherlands						100	100
New Zealand	25					75	100
Norway	32					37	100
Portugal	50		8		32	41	100
Slovak Republic	33		2		15	50	100
Spain		57	15			28	100
Sweden	18				36	47	100
Turkey [b]	49		27			24	100

Note: Blanks indicate that the level of government does not have primary responsibility for decisions.
[a] For Belgium (French speaking community), the level "provincial/regional" means: state level for 61% of the schools, provincial level for 21% and local level for 18% (adding up to 100% which corresponds to 25 in the Table). – [b] Data refer to primary education.

Source: OECD, Education at a Glance 2004, p. 432.

schools are taken in full autonomy, about the same proportion as those taken within a framework set by a higher authority. Decisions taken by schools in consultation with others are relatively rare. Schools are less likely to make autonomous decisions related to planning and structures than related to other domains.

Between 1998 and 2003, decision making in most countries became more decentralised, most notably in the Czech Republic, Korea and Turkey. The opposite trend was evident in the French community of Belgium and in Greece.

W. O.

Reference

OECD, *Education at a Glance 2004*, Paris 2004.

Recent Entries to the DICE Database

In the first quarter of 2005 the DICE Database (www.cesifo.de/DICE) received about 100 new entries which partly consisted of actualisations of existing entries and partly of new topics. Some topics are mentioned below:

- Supervision Authorities of Public Pension Schemes
- Distribution and Reimbursement Schemes of Pharmaceuticals
- Organisation of Medical Studies
- Inflation Targeting
- Earnings and Pay Dispersion
- Student Tuition Fees
- Trade Union Density
- Wage-setting Institutions
- Rules for Public Expenditure
- Inheritance Taxes
- Regulation of Covered Bonds (Mortgage Bonds)

Forthcoming Conferences

Public Sector Economics
22–24 April 2005, in Munich

The CESifo Area Conference gives an overview of the current research undertaken by members of the Public Sector Economics area of the CESifo network. It is to stimulate interaction and co-operation between area members.

Scientific organiser: Frederick van der Ploog

Employment and Social Protection
27–28 May 2005, in Munich

The CESifo Area Conference is to bring together members of the CESifo network. The papers to be presented may deal with any topic within the broad domains of employment, social policy and social conflict.

Scientific organiser: Kai A. Konrad

Munich Economic Summit
9–10 June 2005, in Munich

"Europe and the Lisbon Goals: Are We Halfway There?" is the general topic of the 4th Munich Economic Summit. There will be two panels. One will deal with "Speeding up European Reform: A Master Plan for the Lisbon Process". The other panel calls into question state-support for enterprises: "European and National Champions: Burden or Blessing?".

Understanding the Chinese Economy
10–11 June 2005, in Munich

Details to be announced.

Scientific Organiser: Gerhard Illing

Pension Reform
11–12 June 2005, in Copenhagen

The conference is jointly organised by the Centre for Economic and Business Research (CEBR) and CESifo. The aim of the conference is to take stock of the current debate and the various aspects of ongoing and potential reforms.

Scientific organisers: Panu Poutvaara, Marko Köthebürger and Andreas Wagener

CESifo Venice Summer Institute 2005
17–24 July 2005

This will be the 5th Venice Summer Institute, held in co-operation with Venice International University. Workshops will deal with subjects ranging from globalisation through health economics to economic psychology.

Macro-Fiscal Policies: New Perspectives and Challenges
22–25 August 2005, Jeju Island, South Korea

The conference is the 61st Congress of the International Institute of Public Finance.

Chairman of the Scientific Programme Committee: Jürgen von Hagen

Norwegian-German Seminar in Public Economics
16–17 September 2005

Details to be announced.

Scientific organisers: Andreas Haufler and Guttorm Schjelderup

The Institutions of Market Exchange
22 – 24 September 2005, in Barcelona

The International Society for New Institutional Economics holds its 9th Annual Conference.

New Books

Banking Regulation and World Trade Law: GATS, EU and Prudential Institution-building
Lazaros E. Panourgias
Hart Publishing, 2005 (forthcoming)

Competing with the Government: Anti-competitive Behaviour and Public Enterprises
R. Richard Geddes, David E. M. Sappington, J. Gregory Sidak (eds.)
Hoover Institution, 2005 (forthcoming)

Growth, Trade and Economic Institutions
Tapio Palokangas (ed.)
194 p., Springer, 2005

Lawlessness and Economics
Avinash K. Dixit
176 p., Princeton University Press, 2004

Institutional Change and Globalization
John L. Campbell
264 p., Princeton University Press, 2004

Labor Market Institutions and Public Regulation
Jonas Agell (ed.)
228 p., MIT Press, 2004

International Institutions and Multinational Enterprises
John-ren Chen (ed.)
226 p., Edward Elgar, 2004

Institutions in Legal and Economic Analysis
Aloys Prinz, Albert E. Steenge, Jörg Schmidt (eds.)
208 p., Münster, 2004

The Politics of Regulation
Jacint Jordana (ed.)
335 p., Edward Elgar, 2004

DICE

*D*atabase for *I*nstitutional *C*omparisons in *E*urope

www.cesifo.de/DICE

The database DICE was created to stimulate the political and academic discussion on institutional and economic policy reforms. For this purpose, DICE provides country-comparative information on institutions, regulations and the conduct of economic policy.

To date, the following main topics are covered: Labour Market, Public Finances, Social Policy, Pensions, Health, Business Environment, Capital Market and Education. Information about Basic Macro Indicators is added for the convenience of the user.

The information provided comes mainly in the form of tables – with countries as the first column –, but DICE contains also several graphs and short reports. Currently, the database consists of about 1 000 entries. In most tables all 25 EU and some important non-EU countries are covered.

DICE consists mainly of information which is – in principle – also available elsewhere. But we think that the access we provide is very convenient for the user, the presentation is systematic and the main focus is truly on institutions, regulations and economic policy conduct. However, many tables are based on empirical institutional research by Ifo and CESifo colleagues as well as the DICE staff.

DICE is a free access database.

Critical remarks and recommendations are always welcome.
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