SM/01/269
Correction 1

CONTAINS CONFIDENTIAL
INFORMATION

September 21, 2001

To: Members of the Executive Board

From: The Secretary

Subject: **Sweden—Selected Issues**

The attached corrections to SM/01/269 (8/22/01) have been provided by the staff:

Page 1, line 3, subtitle: "The Role of Government" added

Page 4, footnote 1, line 7: for "and.G. Tersman" read "and G. Tersman."

Page 11, Table, column 8, row 6: "280 4/" added
                        row 9: for "46,900" read "6,902"
                        row 17: "1,170" added

Page 12, footnote 3 as follows:
    "The essence of the compensation scheme is as follows. Let Y denote income and e
    the 7 percent social security contribution rate. Given T(.), the income tax schedule,
    and with no compensation, the income tax plus social security contribution liability
    is L = T(Y-eY) + eY. The compensation takes the form of an income tax credit for a
    proportion α of the social security payment, allowing only the uncredited portion
    1- α as a deduction. Thus, total liability is $L^* = T(Y - (1- \alpha)eY) + (1- \alpha)eY$, with α to
    be increased in four steps from 0 to 1."
    footnote 4, line 1: for "," read "are"
                    for "form" read "from"

Page 14, para. 16, line 2: After "combination of" insert "a 2 percent of GDP general
                    government structural surplus target set three years ahead,"

Page 18, para. 24, line 2: for (Griliche, 1991) read (Griliches, 1991).

Page 25, para. 39, line 3: for "The choice of two periods of weak relative Swedish
                    performance"
                    read "Thus, the choice of the sample's endpoints"

Page 25, para. 42, line 1: for "position" read "income"

Page 33, para. 46, line 8: no footnote after "Report"

Page 37, para. 53, line 17: for "Chapter II" read "Box 2"

Page 38, para. 55, first bullet point, line 2: for "central income" read "central income tax"
            third bullet point, line 1: for "VAT at 25 percent"
                                  read "a standard VAT rate of 25 percent".

Page 39, para. 58, lines 1-3: Topic sentence needs to be bold.
        footnote 10: for "1-(1-0.55)/(1+0.3292)(1+0.25))
                read "1-(1-0.55)/((1+0.3292)(1+0.25))

Page 41, para. 61, line 4: Insert "households" after "all".

Page 42, para. 64, line 1: for "is how" read "is how can"

Page 48, para. 78, line 5: for "by 1986" read: "by the 1980s"
        Table, source: for "Riksskatteverket" read "National Tax Board"

Page 51, footnote 21, line 1: Insert "more" before "closely".
        footnote 22, line 7:. Delete "effect of the" from the last line of the footnote.

Page 53, para. 89, line 8: for "payments, But" read "payments. But"

Page 54, para. 90, line 2: for "countries, While" read "countries. While"

Page 55, para. 92, lines 3: for "While this reflected one unusually large transaction"
                  read "While this mainly reflected two unusually large
                  transactions"

Page 57, para. 96, line 1: for "Use new" read "use of new".

Page 63, para. 106, line 10: for "performances" read "performance is"

Page 64, footnote 35, line 4: Delete "(discussed in Section D below)".

Page 70, para. 126, line 2: add "taxes on" before "these are optimally zero".

Page 74, Table on Indirect Tax Rates after para. 134.
        footnote 2: becomes "As percentage of price of most popular category."
        footnote 3: becomes "Euros per 1000 liters."
        footnote 4: delete "hectoliter per". Delete second footnote 4.
        footnote 5: delete reference to footnote in heading for "beer"

footnote 7: to be referenced in heading for "spirits (ethyl alcohol)"
becomes "Euros per liter of product".

Page 74, footnote 44, and page 75, footnote 45: for "Riksskatteverket"
read "National Tax Board."

Page 75, Table after paragraph 135, footnotes 2 and 3, and references to it: Deleted
Add "Source: Ministry of Finance and National Tax Board".

Page 78, para. 144, line 6: for "2 percent" read "2.5 percent".

Page 85, Box 3, line 21: for "G'" read "-G'"
line 24: for "1.71" read "0.71"

Questions may be referred to Mr. Thakur (ext. 34860), Mr. Keen (ext. 34442), Mr. Horváth (ext. 38529), and Ms. Cerra (ext. 38596).

Att: (26)

Other Distribution:
Department Heads

INTERNATIONAL MONETARY FUND

SWEDEN

Selected Issues

The Role of Government

Prepared by Subhash Thakur, Michael Keen, Balázs Horváth and Valerie Cerra

Approved by the European I Department

August 22, 2001

Contents   Page

Sweden: Basic Data

Demographic and other data:

Area	449,964 square kilometers
Population (mid-2000)	8.87 million
GDP per capita	$27,256
Exchange rate (2 August, 2001)	SKr 10.4 per US $1

Composition of GDP in 2000, at current prices	In billions of Kronor	Distribution in Percent
Private consumption	1050.0	50.4
Public consumption	552.9	26.5
Total investment (including stockbuilding)	372.7	17.9
Total domestic demand	1975.6	94.8
Exports of goods and services	993.0	47.6
Imports of goods and services	884.6	42.4
GDP at market prices (average estimate)	2084.0	100

Selected economic data	1998	1999	2000
Output and unemployment:	(Annual percentage change)		
Real GDP (at market prices, average estimate)	3.6	4.1	3.6
Open unemployment rate (In percent)	1.5	2.2	2.2
Earnings and prices:			
Hourly wages in manufacturing	3.6	2.0	3.6
Consumer price index	-0.1	0.5	1.0
Money and interest rates:			
M0 (end of period)	5.1	12.0	1.9
M3 (end of period)	2.1	9.9	2.1
3-month Interbank rate	4.2	3.1	4.0
10-year government bond yield	5.0	5.0	5.4
TCW-Index	2.2	1.3	-0.2
Real effective exchange rate (based on CPI)	-2.8	-3.2	-2.0
	(In percent of GDP)		
Public finance:			
General government balance	0.1	-4.1	-2.8
Structural balance 1/	5.3	4.2	4.1
General government debt	71.8	64.8	57.0
Balance of payments:			
Current account balance	2.9	3.5	2.6
Trade balance	9.1	8.3	7.8
Capital and financial account balance	0.1	-3.4	-2.6
Reserves (gold valued at SDR 35 per ounce, end of period, in billions of SDRs)	14.3	15.3	15.1

Source: Statistics Sweden; Riksbank; IMF, IFS; and staff calculations.

1/ Structural balance is in percent of potential GDP.

I. INTRODUCTION AND OVERVIEW [1]

1.   **Sweden has a mixed market economy with large, centralized institutions intended to reduce inequality, alleviate poverty and facilitate a close cooperation between the public and private sectors.** This macroeconomic paradigm—implemented most consistently among OECD countries by Sweden since the 1970s and hence aptly referred to as the Swedish model—assigns a major role to government and centralized institutions, trading off some economic efficiency for greater equality. The key features of the policy regime, which employs both fiscal and non-fiscal measures, include (see Lindbeck, et al (1994), Lindbeck (1997), and Atkinson (1995)):

- An active and large state with a broad political mandate to intervene in the market process to secure equality of income and wealth distribution at a socially desired level;

- Highly ambitious social security arrangements covering an unusually wide array of risks and providing generous income replacement when they materialize;

- High levels of taxation and social security contributions, needed to sustain the high level of transfers and sizable public consumption;

- Elaborate centralized institutions and structures aimed at facilitating effective cooperation between the private sector and a large, service-oriented public sector, with the latter responsible for the provision of most social services;

- Extensive regulatory and supervisory intervention (especially, but not only, in the labor market);

- Large-scale public ownership of enterprises, and extensive public employment;

- Wages and working conditions set in a framework of centralized bargaining (involving the government, employers and well-organized trade unions), aiming for full employment, stable labor income and peaceful conflict resolution.

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[1] Prepared by Subhash Thakur, Michael Keen, Balázs Horváth and Valerie Cerra based on the extensive literature on this subject, and drawing on discussions with policy-makers, and leading contributors to the debate on the Swedish model, including in roundtable discussions at the Stockholm School of Economics and Uppsala University. In addition to government officials, the staff benefited from discussions with Messrs A. Lindbeck, P. Edin, L. Svensson, J. Agell, J. Hassler, M. Lundholm, S. Blomquist, T. Lindh, H. Ohlsson, J. Södersten, M. Persson, K. Andersson, D. Andersson and G. Tersman.

International Comparison of Tax Rates

	Taxes on Capital and Capital Income				Taxes on Labor Income		
	Corporation Tax (In percent) 1/	Highest Marginal Rate on Interest (dividends, if different)	Wealth Tax Rate (In percent)	Wealth Tax Threshold in euros/2	Starting Marginal Rate (In percent)	Highest Marginal Rate (In percent)	Threshold /2 (In euros)
Austria	34	25		none	10	50	642
Belgium	39 (40.2)	15		none	27.6	60.8	5,156
Denmark	30	58.7 (40)		none	38.5	59	280 4/
Finland	29	28	0.9	168,188	23	55.5	7,905
France	33.33 (35.33)	25 (61)	0.55	716,946	18.1	61.6	3,979
Germany	25 (38.875)	48.5		none	19.96	48.5	46,900 6,902
Greece	35	0		none	5	42.5	3,255
Ireland	20	44		none	22	44	5,333
Italy	36 (41.25) /3	27 (12.5)		none	19.2	46.2	0
Luxembourg	30 (36.42)	42	0.5	34,705	14	42	6,693
Netherlands	35	52		none	2.95	52	3,993
Portugal	32 (35.2)	20 (25)		none	12	40	180 /4
Spain	35	48	0.2-2.5	108,182	18	48	3,306
Sweden	28	30	1.5	117,245 /5	30	55	1,170
United Kingdom	30	40		none	10	40	6,667
Canada	28 (34.1-46.1)	54.1		none	24.7	48.8	720 /4
Japan	47.8	20 (65)		none	15	50	3,032
US	35.62	46.6		none	20.6	45.8	2,602

Sources: International Bureau of Fiscal Documentation, *European Tax Handbook 2000*; Price Waterhouse Coopers *Corporate Taxes 1999-2000* and *Individual Taxes 1999-2000*, German Ministry of Finance.

1/ Figure in brackets includes local surcharges.
2/ For a single person.
3/ Notional return on equity taxed at 19 percent.
4/ Amount shown is a tax credit.
5/ The government proposed in August 2001 to raise this to 175,868 euros.

12.   **Social security contributions are high, and levied mainly on the employer.** The rate on earnings paid by employers is around 33 percent, while employees pay a further 7 percent. The government has embarked on a four-step plan of income tax reductions intended to compensate for the employees' contribution, two steps of which (each costing about 0.6 percent of GDP) remain to be enacted.[3]
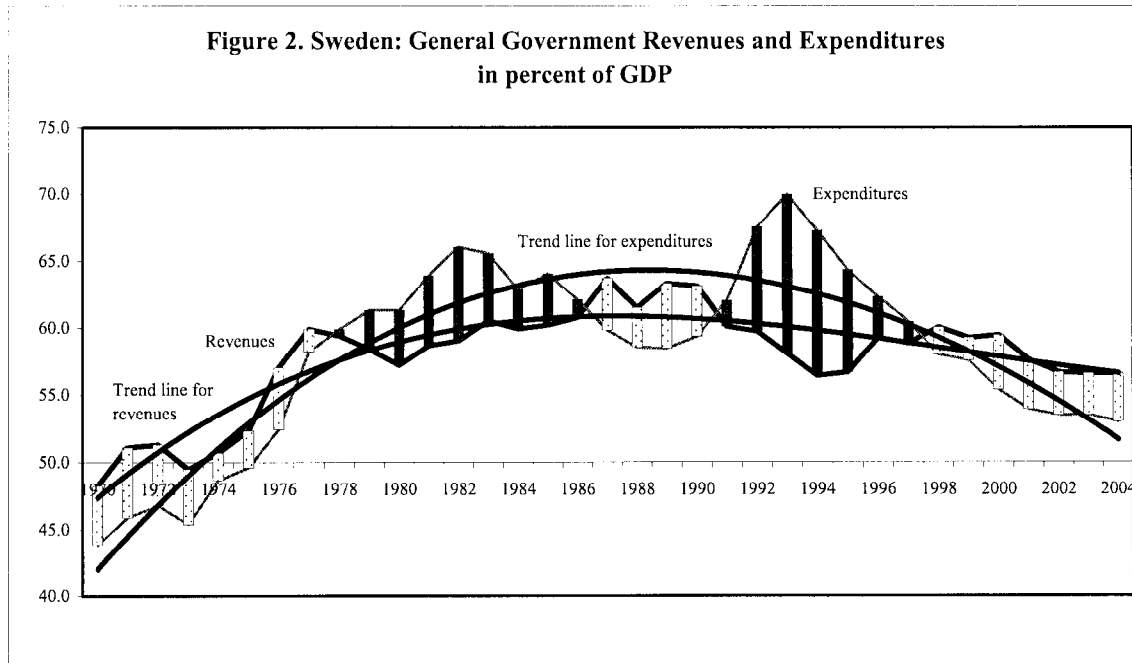
B.   Past Developments in Fiscal Aspects of the Swedish Model

13.   **The dramatic increase in the size of the Swedish government was halted following the crisis of the early 1990s, giving way to a steady retrenchment.**[4] Expenditures surged during 1970–1982, followed by an unsustainable squeeze giving rise to temporary budget surpluses (indicated by dotted vertical bars in Figure 2) and another, even larger run-up during 1989–1993. The expenditure ratio reached 70 percent of GDP in 1993 (26 percentage points higher than in 1970), but has been on a declining trend since then, projected to fall to 53 percent of GDP in 2004. Revenues peaked in 1989 at 63.7 percent of GDP, 15.4 percentage points higher than in 1970, and—with a variance just a third of that of expenditures—were much less volatile. The polynomial trends for expenditures and revenues suggest that a marked reversal in the size of government has begun and that a sustained surplus is emerging. Notably, the swing in expenditures was substantially more pronounced over the past decades than that in revenues. However, the projections through 2004 indicate

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[3] The essence of the compensation scheme is as follows. ~~With income Y and social security contribution (deductible against income tax) at rate e—this is the 7 percent charge to be compensated—liability to~~ Let Y denote income and e the 7 percent social security contribution rate. ~~income tax plus social security contributions, g~~ Given $T(.)$, the income tax schedule, and with no compensation, the income tax plus social security contribution liability is $L=T(Y-eY)+eY$. The compensation takes the form of an income tax credit for a proportion α of the social security payment, allowing only the uncredited portion $1-\alpha$ as a deduction. Thus, total liability is $L^*=T(Y-(1-\alpha)eY)+(1-\alpha)eY$ ~~is T = T(Y−eY)+eY. The nature of the compensation is to give credit for a proportion α of the social security payment but at the same time allow only the uncredited portion 1−α as a deduction. Thus total liability is T* = T(Y−(1−α)eY)+eY−αeY~~, with α to be increased in four steps from 0 to 1.

[4] Data underlying the 2001 Spring Budget ~~are,~~ are on the ESA-95 standard ~~from~~ from 1980. While data for the 1970s are on an earlier definition, they were appended without a visible break.

that the momentum for further reductions in the size of government from its current high level may be flagging.

Figure 2. Sweden: General Government Revenues and Expenditures in percent of GDP

14.   **Despite the turnaround and potential problems with international comparisons, government in Sweden remains large.** Average revenues during 2002–2004 are projected to be 6.4 percent of GDP higher than in 1970–72, while the corresponding difference for expenditures is 7.8 percent of GDP. Sweden also comes out at the top when compared with other OECD countries in 2000. However, there are caveats related to the international comparison of the size of the public sector, lending some credence to the claim of some observers that Sweden is not as much of an outlier in this respect as would appear from a comparison of raw data. First, there are data comparability problems. Swedish revenue data include the taxation of gross social transfers (untaxed in many other countries), raising measured revenue and expenditure levels by an estimated 3½ percent of GDP in 2000. Different levels of net tax expenditures—revenue shortfalls from an ideal norm of tax collection owing to tax exemptions, rebates, and preferential rates estimated in Sweden at 5.7 percent of GDP in 2000—also lower the international comparability of the government share figures, especially, since tax expenditure data are not available for most other countries. Second, as evident from the following decomposition from Atkinson (1995), welfare spending is driven not only by the generosity of transfer and social insurance payments (first component of the decomposition), but by the wage share (second component) and the dependency ratio (third component) as well:

$$\frac{WS}{Y} \equiv \frac{AB}{\overline{w}}\frac{\overline{w}}{Y/L}\frac{R}{L}, \text{ where } \frac{WS}{Y} \text{ is the share of welfare spending in GDP, AB the average}$$

benefits, $\overline{w}$ the average wage, L the number of workers, and R stands for the number of benefit recipients. Thus, the relatively early onset of aging of the Swedish population from the 1970s contributed to higher government spending compared to most OECD countries whose populations had a significantly lower average age during the past three decades.[5]

15.   **The run-up in spending and its partial reversal demonstrated that expenditure control was key to sound public finance in Sweden.** During the past three decades, large expenditure increases always preceded the emergence of sustained and substantial deficits. At the beginning of both deficit periods, revenues actually fell while expenditures raced ahead toward an unsustainable local peak. As a result, the average deficit, at 4.9 percent of GDP, was much larger than the average surplus (3.5 percent of GDP). Moreover, expenditure levels in excess of 60 percent of GDP were invariably associated with large deficits (concurrently or with a lag, following a short period of surpluses). Accounting for cyclical factors does not alter the conclusion that the fiscal balance deteriorated during the 1970s and 1980s. The key reason for this was a steady upward drift in expenditures stemming from a political consensus in favor of extending welfare arrangements, and strong demographic effects amplifying the boosting effect on the size of government—observed throughout the OECD—of rising per capita income.

16.   **General government expenditures have been effectively constrained by medium-term fiscal rules since 1997.** These rules utilize a combination of a 2 percent of GDP general government structural surplus target set three years ahead, central government expenditure ceilings, and a balanced budget requirement for local governments stipulating a reversal of any deficits on current spending within two years. The nominal ceilings are set three years ahead, and limit central government non-interest expenditure plus spending on old-age pensions outside the state budget. While their level was set to increase in krona terms in the 2001 Spring budget, their share in GDP is set to decline marginally (Figure 3). The emphasis on central government expenditure ceilings is appropriate: local governments have rarely incurred deficits since 1980 and not at all since 1997, while the pension system has

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[5] Adema (1997) derives internationally comparable figures on the share of public social expenditure in GDP for 1993. While not accounting for all factors mentioned above, the paper controls for differences in direct taxes and social contributions paid on transfers, indirect taxes on consumption purchased out of net cash transfers, and tax breaks for social purposes on public and private social expenditure. Sweden still comes out at the top of the list of the 8 covered OECD countries, but the difference relative to the U.S. shrinks from 26 percentage points of GDP in unadjusted data to 15 percentage points, and becomes insignificant relative to Denmark.

III. THEORY AND EVIDENCE ON FISCAL POLICY AND GROWTH[7]

A. Introduction

19.   **This section summarizes economic theory and cross-country empirical evidence on the impact of fiscal policy on growth and efficiency.** The main economic reasons for public expenditure are to compensate for externalities and market failures, to provide public goods, and to provide social insurance through redistribution. These public activities should be financed in a manner that minimizes distortions and growth losses. Fiscal policies can impact growth by changing: (i) the average skill of workers; (ii) the productivity of capital; and (iii) the supply of labor or capital inputs.

20.   **The theoretical mechanism for the effect of fiscal policy on growth broadly depends on whether growth is endogenous or exogenous.** In endogenous growth models, public policies that impact productivity or the incentives to invest in human and physical capital can permanently change the rate of growth. In the neoclassical growth model, output grows in the long run due to exogenous technological change or population growth. Fiscal policy can affect the level of output and welfare. Through a several-year transition period, it can also impact growth until a new steady state is reached.

B. Expenditure Policy and Growth

Public expenditure and labor productivity

21.   **Accumulation of human capital can increase labor productivity.** Human capital can be accumulated through schooling, which takes time away from production, or learning-by-doing, which occurs through repeated work. Human capital can also be accumulated through R&D efforts that increase the stock of knowledge. Health and nutrition can improve productivity by reducing absenteeism and illness and increasing work efficiency. Government financing of education and health care can ensure access to these services in the presence of imperfect credit markets that prevent individuals from borrowing against their future incomes. Public subsidization of education may also be needed to reach an optimal allocation of time to education when social returns are higher than private returns. Nonetheless, public subsidization should concentrate on those components of education and health care that generate the highest social returns.

22.   **A more educated work force is likely to boost growth.** A number of studies find a positive relationship between high levels of education achievements and growth

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[7] This section draws on a number of survey articles, such as Aghion et al. (1998), Gerson (1998), Masson (2000), and Tanzi and Zee (1997).

(Denison, 1967; Barro, 1989) or between public spending on education and growth (Diamond, 1989; Otani and Villanueva, 1990; Hansson and Henrekson, 1994; Barro and Sala-i-Martin, 1995; Tanzi, 1995). Using a Bayesian averaging technique, Doppelhofer, et al. (2000) find evidence that primary education and life expectancy are among the robust determinants of growth in a random sample of approximately 21 million of the possible regressions that include any combination of 32 conditioning variables. However, they did not test whether *spending* on schooling and health is robustly related to productivity enhancement, and other empirical studies provide mixed conclusions. The relationship may be hard to verify because the level of health and educational attainment may not be proxied well by expenditure on these items. In addition, it may take many years before spending can feed through to higher achievement levels and productivity growth.

Government capital expenditure and productivity

23.   **Government provision of infrastructure or R&D can enhance growth by increasing the supply of effective capital.** Through its ability to compel payment through the tax system, the government can provide public goods whose benefits cannot be restricted and would not, therefore, be generally profitable for a private firm to provide at socially optiaml optimal levels. However, the empirical evidence on the effects of government capital | expenditure on growth is mixed. The results depend on the sample and specification, and studies have often not distinguished between types of capital expenditure. Easterly and Rebelo (1993) differentiate between types of capital expenditure in a large sample covering 119 countries from the 1960s through the 1980s and find that public investment in transport and communications improve growth without crowding out private investment; investment in public enterprises has no effect; and public investment in agriculture has a negative effect. Estimated elasticities of growth with respect to public infrastructure investment have tended to be small. However, Berndt and Hansson (1992) find that infrastructure investment had a significant impact on Swedish productivity, allowing a lower labor requirement for firms. Martin (2000) cites evidence that regional infrastructure investment in telecommunications has a more favorable effect on growth in Europe than other types of infrastructure investment.

24.   **The evidence on R&D investment is also mixed.** It appears to be important for productivity growth at the firm level (Griliches, 1991), but the effect at the national level | depends on the level of development. Coe and Helpman (1993) find that domestic R&D investment contributes significantly to total factor productivity (TFP) growth in G7 countries, and imported R&D is also important for smaller industrial countries. R&D investment has generally not been significant for middle income and developing countries, which may benefit more from domestic competition and importation of new technologies. However, even among industrial countries, public R&D spending does not appear to significantly impact output growth.

25.   **Government spending on maintaining a stable political and legal framework and an efficient bureaucracy can facilitate growth.** The key channels through which it achieves

Korpi's presentation of 1973 and 1989 shows Sweden's position in a more favorable light because in 1973 Sweden suffered a relatively deep recession, while in 1989 it was in the midst of an unsustainable boom. ~~The choice of two periods of weak relative Swedish performance~~Thus, the choice of the sample's endpoints can change substantially the conclusion about Sweden's relative decline.
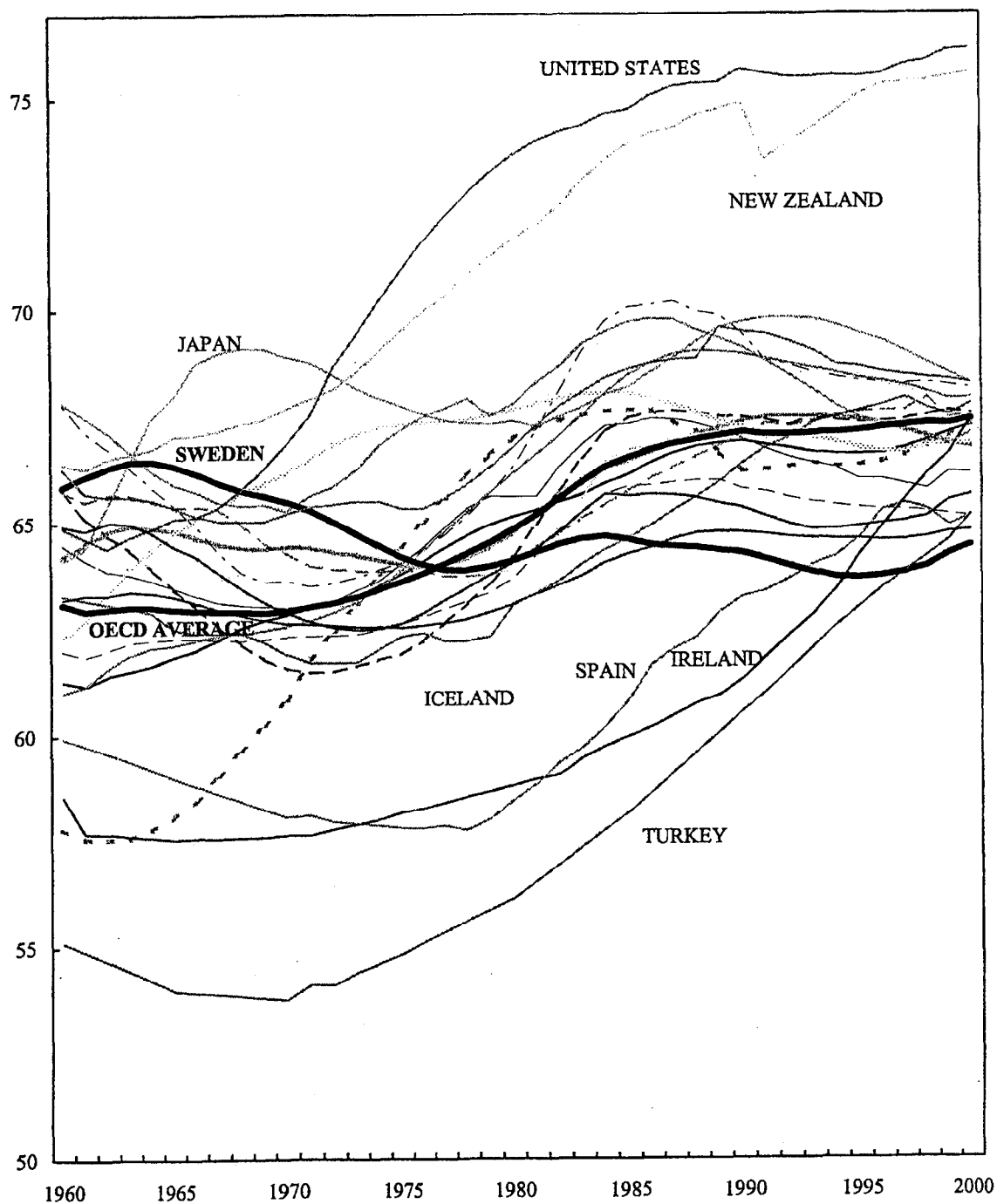
40.   **The timing of the demographic transition can be an important consideration.** Since a higher share of the elderly imply a lower saving rate and probably affects the stock of human capital negatively, demographic differences can affect differences in growth rates between countries. One of the reasons underlying Sweden's relative decline in the OECD's ranking by per capita GDP may be that the demographic shock of an aging population hit Sweden well before other countries. This was the consequence of the earlier rapid expansion, which was boosted by the relatively young population after World War II, which, unlike in other European countries, was not decimated by the war. Figure 7 shows that the ratio of working age persons to the total population declined slightly over the four decades, while the percentage rose in an average of 24 OECD countries.

C. Analysis Over a Longer Period

41.   **Over a long span of years, Sweden seems to have slipped in the table of rankings of living standards as measured by per capita income.** Figures 8 and 9 analyze the developments in Sweden's relative income position, taking into account several of these arguments. To avoid problems of sample period selection, the entire path of relative per-capita output is shown. The effects of convergence can be viewed by comparing the paths of other initially rich countries and of Sweden. Figure 8 shows the path of per capita GDP in Sweden and 23 other OECD countries over the period 1960-2000 based on 1995 prices and purchasing power parity (PPP) exchange rates. From the mid-1970s through around 1990, most countries experienced a slight slowdown in growth, but growth in several countries took off again in the 1990s. Between 1960 and the mid-1970s, Sweden was in the top half of the countries in the sample, but its per capita income was fairly close to levels of many countries. Sweden's per capita income appears to have grown broadly in line with the bulk of countries concentrated in the center of the sample until 1990. In the early 1990s, Sweden's banking crisis and recession appear to have led to a permanently lower level of output, allowing a number of the countries to overtake Sweden in the GDP per capita rankings.

42.   **The slippage in Sweden's relative ~~position~~income reflects the convergence phenomenon.** Figure 9 compares each country's GDP per capita to the average of the 24 countries, and shows that, with the exception of a few outliers, there has been a pattern of convergence in relative incomes. Sweden's relative income has trended down over the four decades, with most of the decline occurring in the mid-1970s and around 1990. The oil price shocks of the 1970s hit Sweden relatively hard given its energy-intensive production structure that included forestry and pulp, and automobile manufacture. Forestry, accounting for 40 percent of

Figure 7. Sweden and OECD: Working Age to Total Population, 1960-2000

A. Inequality and Poverty

105. **In terms of standard indicators, the outcomes for inequity and poverty in Sweden are as egalitarian as in virtually any other country.** The table below reports recent comparative statistics for other EU countries. As a simple summary indicator of inequality, the first column shows the share of disposable income[33]—income, that is, after all taxes and transfers—earned by the best-off 20 percent relative to that of the bottom 20 percent: the greater this ratio, the more unequal the distribution of disposable income. At 3.7, this ratio is far below the average of 5.7; only Denmark has a more egalitarian outcome in this sense. The poverty outcome is also impressive. The second column reports the headcount measure of poverty—the proportion of the population that is in relative poverty (after taxes and transfers)—when the poverty line level of income is taken to be 60 percent of the median. The outcome in Sweden is again far better than the average: 14 percent of the population remains in poverty, compared to an average of 17.2 percent elsewhere in the EU. While different choices for the poverty line are liable to give different impressions of cross-country performance, Jäntti and Danziger (2000) show that on a test of first-order poverty dominance—the requirement of a lower headcount measure of poverty for any choice of poverty line—only a few countries (notably Austria, Finland and Germany) fare better while many fare unambiguously worse.

After-Tax/Transfer Inequality and Poverty in the EU, 1996

	Inequality 1/	Poverty /2
Austria	4.0	13.0
Denmark	2.9	11.0
France	4.5	16.0
Germany	4.7	16.0
Greece	6.1	21.0
Ireland	5.6	18.0
Italy	6.0	19.0
Luxembourg	4.5	12.0
Netherlands	4.7	12.0
Portugal	6.6	20.0
Spain	5.9	18.0
Sweden	**3.7**	**14.0**
UK	5.6	19.0
EU15	5.2	17.2

Source: Eurostat

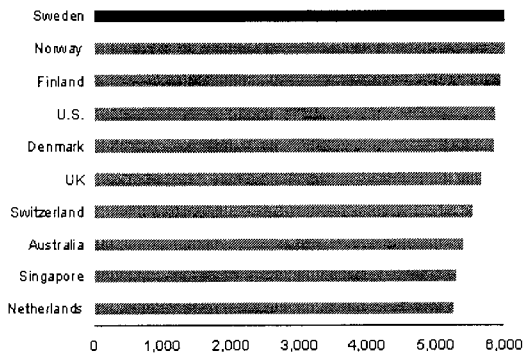1/ Ratio of total equivalized disposable income of top and bottom quintiles.

2/ Share of population with equivalized after-transfer income below 60 percent of median.

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[33] The figures are for 'equivalized' income; adjusted, that is, for family size and composition.

addition to its high position in development of information and communications technologies, Sweden also ranks high in the usage of these technologies.
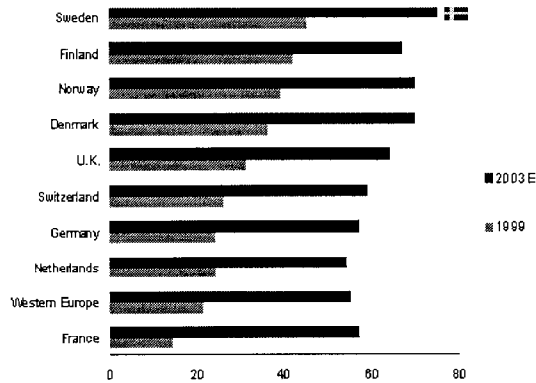
The top ten IT countries in the world
Scores

Country	
Sweden	
Norway	
Finland	
U.S.	
Denmark	
UK	
Switzerland	
Australia	
Singapore	
Netherlands	

0   1,000   2,000   3,000   4,000   5,000   6,000

Source: IDC/World Times Survey 2001

Internet penetration
users as a percentage of total population

Country	
Sweden	
Finland	
Norway	
Denmark	
U.K.	
Switzerland	
Germany	
Netherlands	
Western Europe	
France	

0   20   40   60   80

■ 2003E
▓ 1999

Source: IDC/Financial Times, Feb 10, 2000

49.   Several factors contributed to Sweden's high position in the ICT sector. Ericsson and the public telecommunications monopoly, Telia, invested early in establishing a mobile network. They designed the first generation of a mobile network in the 1970s, the Nordic Mobile Telephony, which was launched in 1981 as a Scandinavian-wide mobile system. Ericsson and Telia also introduced the digital Global System for Mobile Communications in 1992, which became the most widely-used mobile phone standard. High expenditure on R&D supported the development of the industry. Sweden was also one of the first countries in Europe to deregulate the telecommunications market, which spurred competition and helped establish mobile phones and GSM system throughout the country. In addition, there were a number of public incentives for adoption of ICT. For instance, the government subsidized schemes to allow employees to lease computers from their employers for home use. Special tax rules gave sellers and buyers of corporate automobiles incentives to adopt new technologies, including mobile phones, without affecting the taxed benefit of the car. Sweden's openness has also facilitated trade. High public investment in education contributed to a highly skilled labor force, which has helped support the ICT industries. Finally, labor relations in Sweden have generally been productive and free of strife.

V. THE LABOR MARKET

A. Background: Experience of the 1990s

53.   **A substantial build-up of tensions in the labor market up to 1990 was followed by significant policy adjustments.** Centralized bargaining, a pivotal component of the Swedish model, aimed for full employment at high participation rates to broaden the tax base and hence help finance high budgetary expenditures, and for job security with an equal distribution of labor income to preserve social peace. While these goals had largely been achieved through the mid-1980s, as welfare arrangements grew in size the long-term disincentive effects of the Swedish model became more apparent: with growing tax wedges, increasingly generous transfers, legislation raising the cost of firing and hiring, a high effective floor on the wage level, and growing uncertainty about the real value of future welfare entitlements as public debt grew, jumping in 1990–93 by 30 percentage points of GDP. The result was a period of latent increases in unemployment (with the consensus estimate of the equilibrium unemployment rate steadily rising throughout the 1980–1993 period) followed by a sudden quadrupling of the open unemployment rate during 1990–1993 to 8 percent. The macroeconomic crisis hit employment, and brought the public employment boom—which boosted public employment from 15 percent of the labor force in 1970 to a third in the early 1990s—to an end. Awareness of these structural weaknesses was a key factor in the consensus underlying the 1991 tax reform summarized in ~~Chapter II~~Box 2 above, which is estimated by Agell et al (1998) to have led to an increase in labor supply in the order of 2 percent. Following the deep recession, steady improvements were registered in employment, unemployment and participation rates. The levels of the late 1980s, however, have not been recovered: participation rates, for example, remained 7 percent lower in 2000 than a decade earlier, with a drop of over a fifth for workers under 25.

B. Assessing the Impact of Government

54.   **A wide range of policy measures impact a variety of labor market outcomes.** The state affects the labor market through the tax-transfer system, through its influence on wage bargaining institutions and outcomes, and through spending on labor market programs. These potentially bear on all key dimensions of labor market performance, including hours worked, participation decisions, the duration of unemployment spells and intensity of search effort, absenteeism and the acquisition of human capital. These are areas, moreover, in which there has been substantial policy change over the last decade or so. Not surprisingly, the labor market impact of intervention in Sweden have been widely discussed and studied over this period. This section offers an overview of some of the principal issues.

Incentives and the tax-transfer system

55.   **The most direct (and readily quantified) effects are those of the tax-transfer system on labor market incentives.** Assessing these incentives, which bear on labor market outcomes, requires taking account of a wide range of features of the tax-transfer system:

- Local income tax payable beyond a low basic allowance, at rates between 26 and 34 percent and averaging a little over 30 percent. Central income tax at 20 percent becomes payable at taxable income of SEK 252,000, and at 25 percent above SEK 390,400.[9] These latter thresholds are high, so that only about 9 percent of full-time employees pay central income tax.

- Social security contributions payable at 32.92 percent by employers, and at 7 percent (up to SEK 301,011) by employees themselves. To the extent that these are not perceived to carry actuarially fair benefits, the incentive effects of these will be akin to a tax.

- Indirect taxes—not least a standard VAT rate of 25 percent~~VAT at 25 percent~~ affecting individuals' budget constraints in much the same way as taxes on their labor income, and so should have similar incentive effects.

- The withdrawal of means-tested benefits as income rises reduce disposable income just as would an explicit tax. Sweden has no general in-work benefit explicitly structured as a supplement to low incomes as such, along the lines of the Earned Income Tax Credit in the US or Working Families Tax Credit in the UK. Social assistance payments are available, however, to guarantee a minimum level of income to all, with an implicit tax as income rises above that level. These are paid by local governments, which have some discretion over their level. Moreover, housing allowances and the subsidy to childcare payments are means-tested. So too is the repayment of student loans, again having an effect—since the benefits of the loan have already been enjoyed—similar to an explicit tax.

- Contingent benefit payments for unemployment, sickness and parental duties, which potentially affect labor market status. These are typically related to prior earnings, and so may also affect the work effort of those likely to fall into these contingencies.

56.   **These taxes and transfers potentially distort labor market decisions by driving a wedge between the cost to the employer of expanding employment and the real value of the resources that the associated net earnings will buy the worker.** When the former exceeds the latter, society loses from dissipation of the otherwise mutually beneficial expansion of employment that the tax-transfer system frustrates. Such distortions operate on a variety of margins.

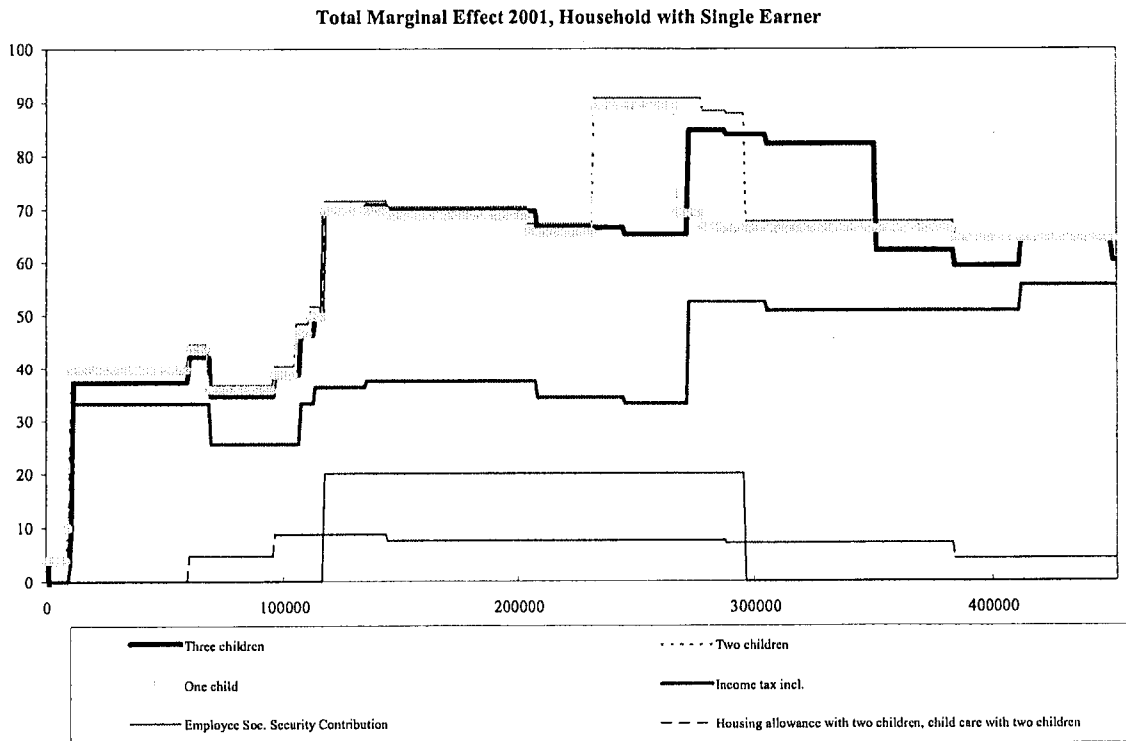[9] There is no deduction or credit of either tax against the other.

Hours worked

57.   **Much attention traditionally focuses on the decision as to the number of hours worked.** Many workers of course have relatively little control over the hours they work in the short-term, especially given the institutional restrictions on overtime in Sweden. Over the medium-term, however, there is scope for variation in the renegotiation of labor agreements.

58.   **The impact of the tax-transfer system on hours worked depends on both the average and the marginal rates of taxes and transfers combined, with the former critical for participation decisions and the latter for the distortions of those in work.** Conditional on having chosen to participate in the labor market, the average effective rate— likely to be negative at low incomes, with benefits received exceeding transfers paid— determines the income effect of the system: the higher the proportion of income taken in tax, the less the household can afford to take leisure and so the greater on this account will be its labor supply. The average rate will also affect the discrete choices as to whether to work at all, and of whether to migrate. The marginal tax rate, on the other hand, determines the substitution effect: the higher it is, the less is the return from additional earnings and so the lower will be labor supply. While the overall outcome depends on both marginal and average rates, the two differ crucially in their welfare significance. Since the income effect arises from the need to raise revenue, it is in a sense inescapable: even the least distorting tax system would generate an income effect. Thus, conditional on participation, it is only the marginal rate that generates efficiency losses; and that is the focus here.

59.   **The extent of the distortion to labor market incentives at the margin is conveniently described by the marginal effective tax rate on labor income (METR),** defined as the proportion of an additional SEK of earnings that is offset by increased tax payments and the withdrawal of benefit. Simple calculations show that this can be substantial in Sweden: for a worker paying at the top central marginal tax rate, the combined effect of income tax, VAT and employer's social security contributions is an METR in the order of 73 percent.[10] That is, SEK 100 additional expense by the employer buys the worker goods worth only SEK 27. For those lower down the income scale, the impact of the income tax will be less, but the withdrawal of means-tested benefits (particularly housing allowance and child care support) will tend to raise the METR.

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[10] Calculated as 1- (1-0.55)/((1+0.3292)(1+0.25)), this assumes local tax at 30 percent.

Total Marginal Effect 2001, Household with Single Earner

Line	Label
────	Three children
·····	Two children
	One child
────	Income tax incl.
────	Employee Soc. Security Contribution
─ ─ ─	Housing allowance with two children, child care with two children

60.   **METRs on labor income in Sweden are high over some income ranges and for some household types.** This is illustrated in the figure above, which shows the METR for single earner households differing in the number of children. The unbroken line shows the impact of the income tax and the employees' social security contributions, which is less straightforward than might have been supposed. In particular, the METR from these sources at some points actually falls with income, running counter to the usual notion that the marginal tax rate ought to increase with income.[11] The most striking downward dip reflects the unusual feature of the Swedish tax system—for which there appears to be no clear rationale—that, over a range of low incomes, the allowance (the amount that is, by which taxable income is reduced) actually increases with income.[12] However, income tax and social

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[11] There is in theory no reason to require the METR to everywhere fall with income: indeed optimal tax schedules in some key cases imply that it should fall over high income ranges (Seade, 1977). But there is no obvious rationale for a falling METR over a range of low incomes.

[12] More precisely, as income increases, the allowance increases and then declines back to its initial level, implying an METR initially below and then above the statutory tax rate.

security are not the only important determinants of the METR. The withdrawal of means-tested housing and child care benefits can give rise to very high METRs at lower levels of income: well over 60 percent over quite a wide range, and in some cases even over 90 percent.

61.   Averaged across all households—and ignoring both the employers' social security contributions and indirect taxes—the marginal effective tax rate is about 46 percent. The table below shows the average METR for a hypothetical increase of SEK 12,000 in the earnings of all households (and thus includes the effects of moving from unemployment back to work, an issue addressed below), together with a decomposition into its underlying components. Such an average clearly conceals important inter-household variation in the METR. For this reason it should be thought of as understating the effective distortion of the labor supply decisions: since the excess burden of a tax is a convex function of the tax rate, the associated inefficiency when METRs vary around an average will be greater than it would be if all households faced that average METR.

The Average METR Across Households on Labor Income, 2001

(In percent)

Total	46.0
Of which	
Income tax	34.5
Child-care	0.2
Housing allowance	1.5
Social assistance	1.6
Maintenance advance	0.2
Unemployment insurance	7.6

Source: Ministry of Finance, Sweden

62.   While the METR provides a conceptually sharp quantification of the strength of disincentives to marginal labor effort, the key policy question is the extent of the welfare losses from these disincentives. It is these efficiency costs that need to be weighed against any distributional gains. The extent of these losses depends on both the size of the METR and, for the reasons given above, the strength of substitution effects, as measured by the compensated wage elasticity of the supply of labor. By way of illustration, the table below reports figures for the marginal excess burden of labor income taxes at various levels of the METR and at various plausible levels of the compensated wage elasticity for primary earners in Sweden.

Marginal Excess Burden per Additional SEK of Revenue
(In percent)

METR	Compensated Elasticity (ε)		
	0.05	0.11	0.25
35	2.7	6.2	15.4
46	4.4	10.1	26.5
60	7.9	19.1	57.3
70	12.5	32.5	125.9
80	22.7	68.8	1250.0

Note Marginal excess burden is calculated as $(t/(1-t))\varepsilon/[1-(t/(1-t))(\varepsilon+\alpha\eta)]$, where m is the marginal effective tax rate, ε the compensated wage elasticity and η the income elasticity of labor supply (taken to be –0.05—in line with estimates for Sweden reported by Agell et al (1998)—and to be independent of the net wage) and α is the ratio of hours worked to the time endowment (assumed to be 0.4). Excess burden is defined as in Kay (1980). Non-labor income is assumed to be zero, and there are no taxes other than on earned income.

Source: Staff calculations.

63. **At high METRs, the inefficiency loss is considerable even when compensated labor supply is relatively unresponsive.** At a marginal effective rate of 80 percent, for example, even with a compensated elasticity as low as 0.05, the additional excess burden crated by raising an additional SEK 1 of revenue is over SEK 0.2. In this context it should be emphasized that the 1991 tax reforms, although to some degree undone since (by, for instance, the introduction of the 7 percent employee's social security contribution) have greatly reduced the distortionary cost. Agell et al (1998) report, for example, that the METR on the average blue collar worker was reduced from about 70 percent to about 60 percent by the reform, nearly halving marginal excess burden per SEK of revenue even at low levels of responsiveness. Nevertheless, the persistence of high METRs noted above means that there is still potentially worthwhile gain from further reducing METRs. Even at the average current METR of 46 percent, the marginal loss per SEK may be plausibly be as high as SEK 0.1–0.2.

64. **The question then is how can a significant reduction in METRs be achieved without unduly jeopardizing revenue or wider social objectives.** Distinct issues arise at the top and bottom of the income distribution, where METRs are the highest.

65. **Action at the top of the distribution is relatively easy.** Simply eliminating the top central marginal rate of tax—establishing a common rate of 20 percent—would cost only about SEK 3 bn, roughly 0.3 percent of general government revenues. Going further and

C. Collective Bargaining and the Effects of the Tax-Transfer System

75.   **The effective incidence of the tax-transfer system can be hard to gauge.** Much discussion of the labor market impact of the tax-transfer systems focuses, as above, on the effects on the incentives faced by individual workers, given the wider labor market setting they face—their wage rates, the level of unemployment benefit and so on. But that wider context is also liable to be affected by the tax-transfer system, making it important to consider issues concerning its effective incidence. Part of the benefit of housing allowances, for instance, may accrue to landlords in the form of increased price of housing services; and employment subsidies may in part go to the benefit of employers, able to pay reduced gross wages. Assessing effective incidence is difficult, and in many respects this remains an area of considerable ignorance.

76.   **What has become clear in recent years, however, is that the existence and nature of collective bargaining arrangements can significantly shape the effective incidence of the tax-transfer system.** Two effects merit emphasis.

*   Centralization of wage bargaining is likely to mean that negotiators recognize the cost of financing unemployment benefit, so internalizing more of the cost of high wage settlements. Unemployment becomes less acceptable as a price to be paid for higher wages of union members in work.

*   Progressivity of the tax-transfer system is itself conducive to wage settlements that imply relatively low unemployment. The reason for this—an effect shown by Koskela and Vilmunen (1996) to apply in a range of bargaining models—is that a high marginal tax rate raises the pre-tax cost to the employer of meeting any increase in after-tax wages; which means that it also raises the cost to the union, in terms of induced unemployment, of seeking such net wage increases. Empirical support for an effect of this kind has been found in a range of countries, including Sweden (Holmlund and Kolm (1995)).

As they note, this may be one reason why the positive correlation between labor taxes and unemployment that Daveri and Tabellini (2000) find elsewhere is not apparent in Sweden and the other Nordic countries.

77.   **Both of these effects—mitigating the adverse employment consequences of the tax-transfer system—have become less marked in recent years.** The bargaining system has become significantly less centralized since the 1970s. Friberg and E. Uddén-Sonnegård (2001) distinguish three periods since 1970: the traditional centralized wage formation model during 1969–1982, decentralized wage formation during 1983–1990, and wage formation under stabilization policies during 1991–2000. This last commenced with a recession and soaring unemployment rates, convincing social partners of the need for restrained wage increases as part of a policy package to stabilize the economy. And the tax-transfer system has become less progressive since the 1991 reform: The table below shows a significant increase in the average

direct taxes paid by the least well-off between 1989 and 1998, and a reduction in the average tax rate on the best-off. Although it is hard to quantify the significance of these developments, their direction is fairly clear: the employment effects of the tax-transfer system have become, though these routes, more adverse.

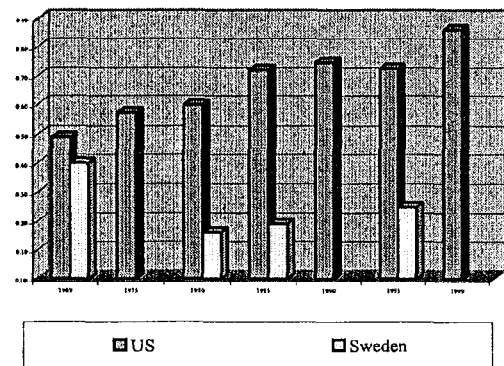**Average Direct Tax Rates by Income Group, 1989 and 1998**

(In percent)

	1989	1998
0-50,000	14	23
100,000-150,000	33	31
200,000-250,000	36	35
500,000 -	58	43

Source: ~~Riksskatteverket~~ National Tax Board (2000).

D. Wage Compression

78.   **Centralized bargaining in Sweden gave rise to a growing compression of the wage scale with complex consequences.** Starting from levels comparable to that in the U.S. in 1969, wage compression as measured by the university wage premium reached extreme levels by the ~~1986~~ 1980s, severely diminishing the private financial pay-off to education, followed by a marginal decompression by 1993 (Figure 7). Lindquist (2000) estimates that the potential welfare gain from removing wage compression would be around 4 percent of GDP, mainly due to higher employment of low-skill workers, and the resulting broader tax base and reduced need for transfers. Hibbs and Locking (2000) on the other hand argue that wage compression between plants and industries can induce the movement of labor to more efficient uses. The mechanism is that compression helps destroy inefficient jobs (which cannot cover wages for the relatively overpaid low-skilled workers), while the most productive units pay less in wages than they would be ready to, resulting in an incentive to create highly efficient ones. However, this

Sweden: University Wage Premium: Percentage difference in Average Wage between Workers with 16 and 12 Years of Education

VI. INVESTMENT AND SAVINGS

A. Introduction

83.   **The potential effects on investment and savings are amongst the key routes through which government may affect long-run growth and the efficiency of the intertemporal allocation of resources.** By altering the user cost of capital, taxes directly impact the incentive to invest, with empirical evidence increasingly confirming the potential importance of this affect: one recent survey of US evidence concludes that the elasticity of the capital stock with respect to the user cost is about –0.25 (Chirinko et al (1999)). Studies of aggregate saving behavior, on the other hand, generally find relatively low responsiveness. This does not mean, however, that tax effects are unimportant. As with labor supply, so in relation to savings it is the substitution effect—in this case between present and future consumption—that determines the excess burden of the tax, which can be substantial even if the uncompensated elasticity is low. Moreover, taxation may distort the composition of both investment and saving across different types of asset.

84.   **Sweden has traditionally set low average effective tax rates at corporate level but high rates on personal savings.** In a closed economy, savings and investment are identical, so that policy measures which affect one will affect the other equally: the distinction between taxes at corporate level and on personal savings is of no economic significance. In an open economy, in contrast, savings and investment are not identical, and the tax system may affect them differently.[21] This distinction is especially important in Sweden, over 40 percent of the equity market being held by non-residents. Indeed, the importance of the distinction has been appreciated in Sweden longer than in most other countries, with a traditional pattern—dating back to the days of 'capitalism without capitalists'—of relatively low tax rates on corporate income and relatively high rates on saving. Even with a corporate rate of 57 percent at the start of the 1980s, for instance, the real impact of the tax on businesses was moderated by the Investment Funds system[22] and other provisions: the proportion of corporate profits taken in tax

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[21] Empirically, savings and investment have been somewhat more_closely correlated than might |
have been expected, a puzzle first noted by Feldstein and Horioka (1980).

[22] Under which firms could allocate up to half of their pre-tax profits to an investment fund (escaping corporation tax on this amount), at the price of making a non-interest bearing deposit at the Riksbank of some fraction of the amount reserved (the deposit then being repaid when the fund is used, in time of recession, for investment). The funds could then be used to finance investment in times of recession: in effect, such investment received immediate expensing. The scheme was abolished as part of the 1991 reform. See Södersten (1993) for an analysis of the impact of the effect of the system on incentives to invest. |

has for long often been less than half the statutory rate.[23] This same pattern of low rates on companies and relatively high rates on savers continues to prevail.

B. Investment

85. **The central ingredient in assessing incentives to invest is the treatment of business income under the corporate tax.** For foreign investors, the impact of this will then be modified by double tax arrangements and the treatment of final investors in their residence countries; for Swedish investors, it will be mitigated by the Swedish personal tax system, discussed below. In either case, however, the corporate tax system is clearly critical.

86. **Sweden has a relatively simple corporation tax system, with the 1991 reform establishing a rate of 28 percent and essentially standard depreciation allowances.** The sole significant non-standard feature is a provision enabling firms to deduct up to 25 percent of their profits for allocation to a 'periodization reserve', these funds to be recovered (and taxed) within no more than five years. This enables firms to defer part of their corporation tax liability: at an interest rate of 10 percent, it is equivalent to a reduction in the statutory rate from 28 to about 25 percent.

87. **The net impact of the corporate tax system—both the statutory rate and the various allowances—is conveniently summarized by the marginal effective corporate tax rate (MECTR),** defined as the difference between the pre-tax return on a hypothetical marginal investment—one, that is, which just meets its costs—and the rate of return net of corporation tax. The important benchmark here is an MECTR of zero, meaning that the corporate tax system leaves marginal investment decisions entirely unaffected. This will be that case if the tax system enables all true costs associated with an investment, both financial and the acquisition cost of the asset, to be fully deducted over the life of the project: one way to achieve this being, for example, to allow interest costs to be fully deductible against tax (as they are in Sweden) and grant depreciation allowances on physical assets that match the true reduction in their value from economic depreciation.

88. **On average, the corporate tax somewhat discourages investment, but with debt finance significantly favored over equity.** Table below reports current MECTRs for various kinds of investment in Sweden, under varying assumptions on the inflation rate (which affects the real value of nominal interest deductions and depreciation reductions based on historic cost). At the target inflation rate of 2 percent, the MECTR is a little over 5 percent, so that the corporate tax system, considered in isolation, provides a modest discouragement to investment: as has been traditional in Sweden, the corporate tax bears relatively lightly on marginal investments. Within this, however, there is significant variation across types of investment. In particular, the low average reflects the balance between a significant subsidy to debt-financed

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[23] See Figure 4.1 of Agell et al (1998).

investments, and an even larger charge on equity-financed investments: this is because the interest costs of debt finance are deductible against corporate tax whilst the cost of servicing equity investments is not. There is also some distortion across forms of investment, with machinery subsidized while buildings and, especially, inventories carry a significant burden.

Effective Marginal Corporate Tax Rates, Sweden 2001

| | Inflation Rate (In percent) | | |
	Zero	Two	Five
Asset			
Machinery	-4.8	-6.3	-8.6
Buildings	7.8	5.9	2.4
Inventories	10.7	12.6	15.5
Source of Finance			
Debt	-7.9	-10.7	-15.1
Equity	18.2	20.4	23.2
Overall	4.7	4.2	3.2

Source: Provided by Professor Jan Södersten (University of Uppsala).

89.   **These figures may overstate the distortion, however, to the extent that legal constraints on dividend distributions bite.** It is assumed in the calculations of the table above that the firm makes full use of all allowances available to it. In practice, however, it has long been a puzzle in Sweden that tax allowances are not fully utilized: Södersten (1993) cites evidence that in 1979–85 about two-thirds of tax allowances remained unused. One explanation for this is that companies are constrained to pay out in dividends no more than their after-tax profits, so that the use of allowances may imply an unwanted reduction in dividend payments.; But if this constraint bites, then it can be shown that the corporate tax is effectively neutral, implying an MECTR of zero (Kannainen and Södersten (1994)).[24]

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[24] Intuitively, if all post-tax profits are distributed then, from the identity between the firm's sources and uses of funds, investment must be financed from debt issues and the tax value of depreciation allowances. This in turn implies that the equity part of the investment is identical

(continued...)

90.   **By international standards, Swedish MECTRs are low**. For comparison, the table
below reports MECTRs (for investments in different assets) for a range of countries., While the
two sets of figures are calculated under different assumptions, and so not entirely comparable, it
is clear that the corporate-level incentives to invest in Sweden are relatively strong.

Swedish MECTRs in an International Perspective

	Sweden	U.S.	Japan	Germany 1/	U.K.	Denmark	Netherlands
Plant and machinery	-4.8	4.0	18.0	6.0	6.0	3.0	7.0
Buildings	7.8	39.0	34.0	50.0	20.0	18.0	21.0

Sources: from Prof. J. Södernsten, Tables 3 and 4 of Bond and Chennells (2000).
1/ After completion of phased 2000 reform.

91.   **For internationally mobile investments, however, the average effective corporate
tax rate—and the statutory rate of tax—are also important.** In choosing where to locate a
discrete project, it is not simply the tax treatment of the marginal investment that matters but
also that of the intra-marginal investments: those that yield more than the required after-tax
return.[25] Thus the marginal effective *average* rate of corporate tax also matters in choosing
where to locate an investment. No estimates of this appear to be available for Sweden. A key
determinant, however, is the simple statutory corporate tax rate.[26] This also has a key role to
play in relation to transfer pricing decisions and in multinationals' choice of financing methods:
the attractions of moving paper profits into Sweden either by manipulating the prices of intra-
group transactions or by inter-group financial transactions will depend on the differences
between the statutory tax rate in Sweden and those faced elsewhere in the group.

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to tax depreciation, so that the cost of equity finance is effectively deductible against tax,
implying neutrality.

[25] For example, if all countries had a corporate tax with interest deductibility and true economic
depreciation then the MECTR would be zero in all of them, even if they set different statutory
rates. But firms will clearly wish, all else equal, to locate investments in the country with the
lowest statutory tax rate.

[26] For instance, in the circumstances of the previous footnote the tax bears only on rents, so that
the average effective tax rate coincides with the statutory rate.

92.   **Sweden has been successful in attracting foreign investment.** In 1999, it was the third largest recipient of investment capital; relative to GDP, it was the largest. While this mainly reflected ~~one~~ two unusually large transactions, it seems plausible to suppose that the tax regime has been a broadly helpful factor. At the time of its introduction in 1991, the 28 percent rate was very low by international standards. But corporate tax rates have since fallen substantially in other countries, and (as discussed in Chapter VII) further downward pressures may emerge.

C. Savings

93.   **The final after-tax return to Swedish investors also depends, of course, on the personal tax treatment of capital income.** Under the dual form of income tax adopted in 1991, essentially all forms of such income—including dividend, interest and capital gains— are taxed at a flat rate of 30 percent. Net returns are further reduced by the wealth tax, levied at 1.5 percent on annual wealth in excess of SEK 1 million. This translates into a significantly higher tax rate on the associated capital: at an interest rate of 10 percent, for instance, it is equivalent to a tax of 15 percent on the equivalent annualized income.

94.   **Marginal effective tax rates on personal savings—showing the combined effect of business and ownership-level taxes—are high.** Such METRs—reflecting the effect of investor-level taxes combined with the MECTR discussed above—are reported in the table below. The METR varies across ownership class, being lower for tax-exempt institutional shareholders and insurance companies than for persons. For the latter, the METR is about 45 percent, far higher than the corporate level tax of 4 percent.[27] This reflects the impacts of both the flat personal tax on capital incomes and the wealth tax, with the latter appearing to exert a significant disincentive effect.

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[27] The relationship between the MECTR, METR and personal tax rates is complex: it is not in general the case that 1-METR = (1-MECTR)(1-MEPTR), where MEPTR depends only on personal tax rates. See King and Robson (1993).

METRs on Saving in Sweden, 2001

	Inflation Rate		
	Zero	Two	Five
Asset			
Machinery	17.3	19.0	21.5
Buildings	28.1	29.4	31.0
Inventories	30.3	35.1	42.2
Source of Finance			
Debt	13.6	15.1	17.0
New share issues	46.6	52.5	61.2
Retained earnings	37.3	41.2	46.8
Owner			
Households	40.7	45.3	51.9
Tax-exempt	8.1	8.4	8.6
Insurance company	23.5	27.0	32.0
Overall	25.4	28.0	31.7

Source: Provided by Professor Jan Södersten
(University of Uppsala).

95.   **Around this high average level of the METR on savings, there is considerable variation between different sources of finance, with new equity finance relatively disfavored.** Debt is by far the cheapest source of finance, followed by retentions: a ranking that reflects the deductibility of interest payments but not of financing equity returns. Most heavily taxed is new equity finance. This reflects the 'classical' form of corporation tax in place in Sweden, with dividends being taxed at personal level without any credit or deduction being given against corporate tax. Funds injected into companies in the form of new equity

are thus subject to double taxation, tax being payable both at corporate level from the income generated and at personal level on the payment of these proceeds as dividends.[28]

96.   **The double taxation of dividends discourages the use of new equity finance, which may cause particular difficulties for new firms traditionally reliant on this as a major source of finance.** It may also give rise to significant international tax planning opportunities. For example, it has been said that in a merger of Swedish and Norwegian banks it became tax advantageous to locate the headquarters of the new enterprise in Norway rather than Sweden: since Norway operates a partial imputation system, under which Norwegian shareholders can use part of the corporate tax paid to offset their personal tax liability, they prefer, all else equal, to receive dividends from a company resident in Norway.

97.   **While these difficulties are clear—and have been worsened by developments over the over the 1990s**[29]**—there is little evidence as to how costly they are.** There are few estimates for Sweden, or other countries, of the welfare cost of the distortion in financing methods it implies, and in particular for new enterprises. Moreover, it can be argued that in an economy as open as Sweden the effect will be largely mitigated. For if the marginal purchaser of new shares is a foreigner (a plausible supposition for large Swedish companies) then the domestic tax on dividends should have no effect on incentives to invest, or even on share prices. The effect may be more marked for smaller companies unlikely to be purchased directly by foreign investors (who are unlikely to be well-informed as to their prospects). As Apel and Södersten (1999) point out, however, to the extent that some domestic shareholders hold both traded and non-traded shares, the impact of the dividend tax on the latter may be muted: since foreign investors do not pay the dividend tax, they will have a comparative advantage in holding the traded shares, inducing domestic shareholders to substitute towards the non-traded and thereby lower their cost of funds. In any event, measures have been taken to mitigate double taxation in respect of unlisted companies.[30]

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[28] For equity finance in the form of retained profits, in contrast, the personal tax treatment of dividends is irrelevant. The choice is then between distributing profits today or instead reinvesting them and paying dividend taxes in the future; so long as its rate does not change over time, the dividend tax cancels out of the calculation.

[29] While the 1991 reform had dividends fully taxed, the impact of this on the cost of new equity finance was mitigated by the 'Annell deduction,' allowing firms to claim a partial deduction in respect of new equity issues. In January 1994 both the tax on dividends and the Annell deduction were removed; but when the dividend tax was reintroduced by a new government in 1995, the Annell deduction was not.

[30] Distributions to individual shareholders by unlisted or non-resident companies (not having or having had substantial ownership of listed companies) are exempt to the extent of an imputed return on invested equity.

98. **Further measures to mitigate the double taxation of dividends would appear worthwhile, though not urgent.** There has been continuing controversy as to whether Sweden would benefit by moving to some alternative structure that mitigates the double taxation of dividends. There are a number of ways in which this might be done. Sweden might for instance, adopt some form of imputation system, of the kind currently in place in France, Norway, Australia and elsewhere. This, however, would run counter to a recent trend away from imputation within the EU. Complications, and potential legal difficulties, arise in connection with international aspects of imputation.[31] These have been a key reason for recent movements away from imputation and towards classical taxation in Germany, Ireland and the UK. There are alternatives: a credit in relation to dividends might be given at corporate level rather than personal; or, simpler still, dividends might simply be exempted from personal tax. Such measures are unlikely to be especially costly in revenue terms. While there is no strong evidence that the double taxation of dividends currently causes significant welfare losses, there is also no reason to suppose that it conveys great benefit. A case can thus be made for further reform in this area, though it cannot be seen as a priority.

99. **Tax advantages to investment in owner-occupation further distort the allocation of capital.** The calculations reported above concern investment in real business assets. Traditionally, the Swedish tax system has treated relatively more favorably investment in owner-occupied housing: as in many other countries, this benefits from the combination of interest deductibility and exemption of the effective return. While the 1991 reform and others in the late 1980s substantially reduced the tax favoring of owner-occupation[32]—by limiting interest deductibility, replacing a tax on imputed income with a more burdensome real estate tax, and extending VAT to housing construction costs—some preference seems likely to remain. A particular concern with this is that the tax-favoring of owner-occupation, not least through the exemption of the implicit value of occupation, may worsen the bias against the provision of rental properties that is implied by continuing de facto rent control.

100. **Political pressures to cut the real estate tax have proved irresistible, but the tax continues to have a potentially useful role.** The recent increase in valuations for the property tax—having been frozen for several years—led to substantial pressure to lighten the burden of the tax. This was in part on distributional grounds, with less well-off residents of sought-after holiday home areas facing awkward bills. In the event, the government announced in August 2001 its intention to cut the rate of real estate tax from 1.2 to 1 percent. Property tax rates have indeed been rather high by EU standards. Nevertheless, the real estate

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[31] They arise, for example, from the natural inclination to deny imputation credit on dividends paid from foreign-source income that has not borne tax in the home country; and legal requirements in the EU may require that the credit be extended to residents of all member states, potentially eroding the revenue collected at corporate level.

[32] See Chapter 3 of Agell et al (1998).

106.   **While there are many difficulties with summary outcome indicators of this kind, other measures tell broadly the same story.** There are many other and perhaps better ways of measuring inequality and poverty: the headcount measure takes no account, for instance, of the depth of the poverty of those below the cut-off poverty line. Yet most summary measures convey much the same impression. For instance, Gottschalk and Smeeding (2000) report Sweden as having the second lowest after-tax and transfer Gini coefficient amongst 21 developed countries (only Finland having a lower one), while Jäntti and Danziger (2000) find that in terms of second-order poverty dominance—looking not at the numbers in poverty for any given poverty line but the extent to which their incomes fall short of that line—Sweden's performances is also relatively good.

107.   **More fundamentally, in focusing on the pattern of annual incomes, these summary measures make no distinction between transitory and permanent differences in economic position.** A more complete treatment would focus on differences in lifetime economic status: it may be, for instance, that greater inequality of annual income in one society relative to another simply reflects a greater variance (around the same mean) of incomes over the lifetime; a difference which, if capital markets enable individuals to borrow freely against future income, is of little significance to economic well-being. In similar spirit, a given incidence of poverty may be viewed as less damaging if those in poverty in different years tend to be different people. While data problems pose difficulty for lifetime assessments of inequality and poverty,[34] such evidence as there is suggests that in this dimension Sweden also performs well. Jäntti and Danziger (2000) report exit rates from poverty as being relatively high in Sweden (bettered, within a set of ten industrialized countries, only by Finland and the Netherlands). Inter-generational mobility in Sweden also appears relatively high: Björkund and Jäntti (1993) find the correlation between earnings of fathers and sons to be far lower in Sweden than in the United States.

B.   The Impact of Policy on Inequality and Poverty

108.   **While the outcomes for inequality and poverty are thus strong, the key question is how much of this is attributable to the interventions of the welfare state.** Determining this requires, in principle, constructing the counter-factual of how real income would be distributed in its absence. While it is natural to take as a starting point the actual distribution of income before taxes and transfers, that will itself reflect the incentive effects created by the tax and transfer system: the assurance of a pension, for instance, may reduce the earnings of

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[34] To the extent that individuals' consumption decisions reflect their own assessment of their lifetime income prospects, the distribution of consumption would provide a better indicator of lifetime inequality that that of relatively short-term income measures. But no comparative data of this sort appear to be available.

those approaching retirement. These responses are likely to mean, for example, that poverty in the absence of policy would be less than poverty measured simply in terms of the pre-tax and transfer incomes that are actually received in the presence of the tax-transfer system.[35]

109.   **Considerable effort has traditionally been made in Sweden to equalize the distribution of gross earnings by wage compression and promoting employment of the low skilled, so that a simple comparison of incomes before and after the effects of the tax-transfer system may understate the extent of redistribution achieved by policy.** Wage dispersion has been relatively low in Sweden: in 1993, the wage rate of the highest paid decile was about 59 percent above the median, about the same as in Germany, but much lower than in the United Kingdom (86 percent) and in France (99 percent). The impact of this on the distribution of earnings has been amplified by traditionally high levels of employment. Moreover, it seems that this relatively egalitarian distribution of earnings cannot easily be explained in terms of an underlying heterogeneity of abilities: Bjorklund and Freeman (1997), for instance, find that the earnings distribution of Swedes in the US is essentially the same as the overall U.S. distribution. Thus the relative equality of earnings in Sweden appears to be largely attributable to policy, so that much redistribution has already been done before the tax-transfer system comes into play.

110.   **The redistributional effect of the tax-transfer system—easier to assess, in the mechanical sense of accounting for the difference between the inequality of market incomes and that of disposable incomes—has been considerable.** The table below shows, the tax-transfer system has for many years reduced the extent of inequality in annual income by 50 to 55 percent. This is a very considerable amount: the comparable figure in Germany has been around 35 percent, for instance, and in the US 25 percent.[36] In terms of poverty reduction, Jäntti and Danziger (2000) find that around the start of the 1990s, Sweden was one of only three (among fifteen) industrialized countries in which the tax transfer system reduced the headcount measure of poverty (relative to a poverty line of 50 percent of median income) by over 75 percent.

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[35] The impact of the tax-transfer system on pre-tax inequality is less clear cut. If the main impact of progressivity is to induce the higher paid to earn less, pre-tax inequality will increase; on the other hand, the inducement to risk-taking implied by social insurance (discussed in Section D below) may generate increased pre-tax inequality.

[36] See Table 13 of OECD (2000).

Capital

121.   **Sweden has long (and successfully) sought to maintain an attractive tax environment for inward investment,** as was discussed in Chapter V. Mobility of real investment is nothing new for Sweden, which has for many years essentially viewed itself as an archetypal small open economy, open to capital movements and with little ability to influence the return that potential investors can earn in the world capital market.

122.   **It is quite a robust theoretical prescription that such an economy should not levy any source-based tax on the marginal return to investment.**[40] The effective incidence of any such tax cannot be on the owners of capital, since they will ensure that they receive in Sweden the same after-tax return that they can earn elsewhere. The effective incidence can only be on domestic immobile factors, but with the unwanted side effect of raising the gross return to capital and so inducing excessive labor-intensity of production. Put differently, increased capital mobility increases the marginal excess burden associated with a source-based capital tax, an effect which Hansson (1987) shows to be potentially significant. This distortion can be avoided by simply taxing the immobile factors directly. Since the key source-based tax is the corporate tax, this prescription translates into that of a marginal effective corporate tax rate of zero. Though that is not achieved in Sweden uniformly for all conceivable investments, it was seen in Chapter V that it has been achieved in a broader sense for many years. While there is scope for achieving this effect by simpler means—establishing more uniform treatment of different kinds of investment—there is thus little reason to suppose or recommend that this aspect of tax policy will or should change as internationalization intensifies.

123.   **The prescription of no source-based tax on marginal investments does not imply, however, that there should be no corporate tax, though there are strong reasons for setting it at an internationally competitive level.** Without a business-level tax, tax could be avoided by incorporating, retaining earnings and deferring the realization of capital gains. Moreover, a well-designed corporation tax can raise revenue by taxing the rents earned on intra-marginal investments without distorting investment incentives at the margin. For investments from countries that give a credit for taxes paid in the source country—such as the US, the main single proximate source of direct investment in Sweden—taxes can be levied up to the level of the residence country tax without imposing any additional burden on the investor, the effect of the credit being that residence country taxes are reduced one-for-one by source country payments. The rate of corporation tax cannot be raised too far, however. Doing so will increase the average effective rate of corporation tax—even for investments from jurisdictions offering foreign tax credits, since no additional credit will be available

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[40] The result is an application of the Diamond-Mirrlees (1971) theorem on the desirability of production efficiency; an explicit statement is in Frenkel et al (1996).

once the rate in Sweden exceeds the residence country rate—and so make Sweden less attractive for companies choosing where to locate investments. Only rents specific to Sweden can be taxed at high rates without risk of driving investment away; and these are likely to become increasingly limited as the Swedish economy becomes more integrated with the rest of the EU and other countries. Not least, high statutory rates of corporation tax make a country vulnerable to transfer pricing and financial operations, which transfer paper profits to lower tax jurisdictions.

124. **Current arrangements in Sweden appear well adapted to these considerations.** The rate of corporation tax remains relatively low by the standards of the major developed economies. Revenue from the corporation tax is somewhat below OECD and EU averages, but nevertheless remains quite substantial: around 5.7 percent of total tax revenue in 1998, or 2.9 percent of GDP. Nor has there been any clear tendency for receipts to fall: in the latter 1980s they were around 2 percent of GDP. This apparent resilience of corporate tax revenues has been observed in many other countries, and is something of a puzzle (Chennells and Griffith (1997)). It appears to reflect the consequences of reforms that, like the 1991 reform in Sweden, have lowered statutory rates of corporation tax (so preserving the base from transfer pricing devices) whilst broadening the base (so bolstering revenue at least from relatively immobile domestic investments). Nevertheless, continued downward pressure on the rate of corporation tax in Sweden can be expected. While the 28 percent rate established in 1991 was then amongst the very lowest of developed economies, this is no longer the case: the U.K. rate, for instance, is now 30 percent, that in Germany was reduced dramatically by the 2000 reform from 40 percent (on undistributed profits) to 25 percent, and the Irish rate is to be reduced to 12.5 percent by 2005.

125. **The likely extent of these pressures on corporate tax revenues is hard to gauge, but, in the absence of effective international coordination, the direction is clear.** With the MECTR averaging close to zero, it is unlikely that the effective incidence of the corporate tax is substantially passed on to labor, suggesting little prospect of painlessly replacing it by an explicit increase in the tax on employment income. In this sense the whole of the corporate tax revenue is at stake. The pressures on these revenues would be mitigated to some degree if the EU were to adopt, as has sometimes been proposed (notably by the Ruding Committee (1992)) a minimum rate of corporation tax. That remains a remote prospect, however, and in any event pressures from low tax rates outside the EU would remain. Recent experience, and Sweden's long-established expertise in preserving an attractive tax environment whilst sustaining revenues, both imply a limited risk of a dramatic erosion of corporate tax revenues in the near future. But it would be prudent to factor in a modest reduction into medium-term fiscal planning.

126. **A quite different set of considerations arise in relation to personal savings: openness per se does not imply that taxes on these are optimally zero.** In Sweden, as is the norm, capital income accruing to individuals is taxed on a residence basis: that is, Swedish residents are liable to Swedish tax on their capital income (and, under the wealth tax, on their assets) wherever in the world it arises (generally with a credit for foreign taxes paid on that income).

enabling them to bring under taxation their residents' savings located elsewhere in the EU. Much important detail remains to be resolved, however—not least in terms of negotiations with key non-members. At a technical level, the proposal to exchange information routinely is innovative, and its effectiveness remains to be tested. Doubtless though, the mere knowledge that information is being exchanged will have a salutary effect on taxpayers, at least in the early years of the scheme. The more fundamental difficulty remains, however, that the agreement will leave open opportunities for tax evasion through non-participant countries.

132.   **While there remain many imponderables in assessing the outlook for revenues from the taxation of savings, there is a clear downside risk.** This risk is perhaps even higher than with the corporation tax, and may be of the order of a few percentage points of current tax revenues.

Commodities

133.   **The increased ease of moving commodities across borders, both legally and illegally, makes high indirect taxes harder to sustain.** Cross-border movement of commodities into and out of Sweden has become easier in recent years, particularly with the easing of fiscal controls at frontiers in the context of the EU's single market program and the expansion of links with the countries of the former Soviet Union. This facilitates the arbitraging of indirect tax differentials across countries—both through relatively small scale, legal, own-use purchases by individuals, and through organized smuggling—and so potentially exerts downward pressure on both tax rates and revenue.

134.   **High excises on drink and tobacco are likely to come under particular pressure.** The incentive for 'cross-border shopping'—using this term to refer to the full range of transactions, legal and illegal—depends on the extent of tax differentials between countries. As can be seen from the comparative indirect tax rates for the EU countries shown in the next table, Sweden has the highest excises of any EU country on wine and spirits: far higher, in particular, than Denmark or Germany, both easily reached from Sweden. The tax differentials this implies are amplified, moreover, by the high rate of VAT in Sweden—equaled only by that in Denmark—which is applied to the excise-inclusive price. Cigarette taxes are not out of line with those in neighboring EU countries, though the prospect of more open borders with nearby EU accession countries does pose a risk. While the incentive for cross-border shopping out of Sweden on these items is clear enough, the VAT rate itself is also sufficiently in excess of that charged elsewhere, notably in Germany, to risk generating tax-induced shopping on a broad range of items.

Indirect Tax Rates in the EU, July 2001

	VAT 1/	Excises				
		Cigarettes 2/	Unleaded Petrol 3/	Still wine 4/	Beer /5	Spirits (ethyl alcohol) 4/7/
Austria	20	73.07	408	0	2.1	10.02
Belgium	21	74.36	494	0.47	1.71	16.61
Denmark	25	81.67	524	0.95-1.42	3.62-36.02	36.89
Finland	22	76.03	552-561	2.35	28.58 6/	50.46
France	19.6	74.80	571-621	0.03	2.59 6/	14.50
Germany	16	68.86	593	0	0.79	13.04
Greece	18	72.75	298-372	0	1.13	9.08
Ireland	21	79.01	348-454	2.73	19.9	27.62
Italy	20	74.67	520	0	1.4	6.45
Luxembourg	15	67.72	372	0	0.8	10.41
Netherlands	17.5	72.97	590	0.49	9.1-26.6	15.04
Portugal	17	80.73	289	0	7.22-20.2	8.36
Spain	16	71.18	372-403	0	0.77	6.85
Sweden	**25**	**70.47**	**528-531**	**3.19 /5**	**17.2 6/**	**58.80**
United Kingdom	17.5	79.50	765-815	2.58	29.5	32.65

Source: EU Excise Duty Tables (July 2001).
1/ Standard rate.
2/ ~~Euros per 1000 liters.~~As percentage of price of most popular category.
3/ ~~As percentage of price of most popular category.~~Euros per 1000 liters.
4/Per ~~hectoliter per~~ degree Plato of finished product.
4/ ~~Euros per liter of product.~~
5/ ~~Currently proposed to be reduced by nearly 20 percent.~~
5/ Currently proposed to be reduced by nearly 20 percent.
6/ Euros per hectolitere per degree of alcohol of finished product.
7/ Euros per liter of product.

135. **Cross-border shopping does indeed appear to be sizable in Sweden.** It is estimated that about one-third of the spirits consumed in 1996/7 were either smuggled or illegally distilled.[44] The table below reports estimates of the excise revenue lost from cross-

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[44]~~Riksskatteverket~~ National Tax Board (2000).

border shopping. For cigarettes, it is estimated that about 159 mn sticks were smuggled, for a revenue loss of SEK 0.25 bn; the SEK 0.9 bn in the table comes from applying the same loss per stick to an estimate[45] of 540 mn sticks—a considerable increase—smuggled more recently. For alcoholic drinks, the foregone excise revenue is SEK 2.2 bn, with the associated VAT loss estimated by the Ministry of Finance to be SEK 0.94 bn. The implied total loss on excisable commodities is a little over SEK 4 bn, around 0.34 percent of general government revenue. To this may be added a loss of around SEK 0.75 bn in relation to new cars.

Estimated Excise Revenue Losses From Cross-Border Shopping (SEK bn)

Cigarettes 1/	Petrols 2/	Wine 3/	Beer 3/	Spirits 3/
0.9	0.2	1.3	0.5	0.4

1/ See text for derivation.
2/ Riksskatteverket (2000).
3/ Excises only. Provided by Ministry of Finance
Source: Ministry of Finance and National Tax Board.

136.   **The downward pressures on excise tax rates implied by cross-border shopping are already being felt, and acted upon, by Swedish policy-makers**. In June 2001, the government announced a modest reduction in the excise on wine, by nearly 20 percent. There is little doubt that these pressures will increase. The derogation under which Sweden is allowed to limit the quantities of tax-paid goods that travelers may import expires in January 2003. It may also be that the internet will further facilitate cross-border movements, although business-to-consumer transactions (the only ones that properly give rise to a consumption tax liability) remain relatively limited. Some protection against erosion is provided by the minimum indirect tax rates set by the EU, which in due course may also come to apply to other of Sweden's Baltic neighbors. Nevertheless, the revenue at risk is significant. The yield from the excises in 1999 was about SEK 82 bn. Even ignoring the associated reduction in VAT payments, a loss of one-quarter of this would reduce general government revenues by about 1.7 percent. Still larger sums would be at stake if the high standard rate of the VAT itself were to come under strain.

Labor

137.   **Labor mobility is potentially a concern—in terms of both its potential distortion by, and effect on, the welfare state—mainly at the two ends of the income distribution.** The risk is that measures of redistribution may give rise to emigration by the better off (with

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[45] Riksskatterverket National Tax Board(2000).

consequent loss of tax revenues and skills) and immigration at the bottom end (with consequent pressures on the welfare state in so far as migrants are net fiscal beneficiaries).

138.   **The prospect of outward movement of labor in response to the tax-transfer system has been a concern for some years.** Indeed Bhagwati and Wilson (1989) argue that "The departure of Ingmar Bergman, Björn Borg and Ingemar Stenmark...has done more to focus Swedish attention on the enormous erosion of incentives than the writings of all the economists between Stockholm and Stanford." How significant a threat this is to the current welfare state, however, is far from clear.

139.   **High average effective tax rates on labor income will in themselves tend to foster net emigration.** The next table shows the average effective tax rates that a worker receiving the average production wage (second column) or 167 percent of that wage (third column) would face in the countries of the EU. The first figure in each cell shows the rate taking account of income tax, employee's social security contributions and transfers. To take account of the reduction in real incomes brought about by indirect taxation, the figure in parentheses adjusts also for the standard rate of VAT. Though clearly high relative to a number of member states, those in Sweden are not out of line with those in the other countries of continental northern Europe.

Average Effective Tax rates for a Single Earner, 1998

	Average Production Wage	167 Percent of Average Production Wage
Austria	28.6 (40.5)	35.0 (45.8)
Belgium	41.8 (51.9)	48.7 (57.6)
Denmark	43.4 (54.7)	50.4 (60.3)
Finland	35.4 (47.0)	42.6 (53.0)
France	27.3 (39.2)	30.7 (42.1)
Germany	42.1 (50.1)	47.5 (54.7)
Greece	18.3 (30.8)	23.3 (35.0)
Ireland	24.9 (37.9)	35.9 (47.0)
Italy	29.1 (40.9)	33.8 (44.8)
Luxembourg	24.6 (34.4)	33.9 (42.5)
Netherlands	34.4 (44.2)	38.9 (48.0)
Portugal	18.1 (30.0)	24.5 (35.5)
Spain	20.2 (31.2)	12.8 (24.8)
Sweden	**34.4 (47.5)**	**42.0 (53.6)**
United Kingdom	25.2 (36.3)	27.0 (37.9)

Source: OECD (2000) and staff calculations.
Note: Figure in parentheses is (v+t)/(1+v), where v is the standard rate of VAT and t the effective rate _preceding the parentheses.

140.   **The migration decision is affected, however, by a range of measures not included in these calculations.** The average pay on which these calculations are based is likely to be affected, for instance, by the relatively high level of social security contributions in Sweden and by the extensive wage compression. Comparing net pay across countries within occupational groups, Andersson (1995) reports substantially lower net wages in Sweden. He also emphasizes, however, that account needs to be taken of the consumption benefits from public expenditure enjoyed in the various countries, on which score Sweden looks attractive. Moreover, the migration decision is more complex than such comparisons allow. Individuals may exploit tax differentials of different kinds at different times in their life, earning and saving in low income tax countries—perhaps repatriating earnings to their families in the home country—and then retiring to countries with low consumption and wealth taxes. Although there are significant avoidance opportunities under the wealth tax, as noted earlier, Sweden would seem in a fiscal sense relatively unattractive to the wealthy.

141.   **Outward migration of Swedes does not appear to have been high enough to become a serious concern.** Emigration does not currently appear high or increasing, even within the common Nordic labor market. In the 1980s, for example, an average of only 0.1 percent of Swedes emigrated, far below corresponding figures for Germany and Norway. While it appears relatively commonplace for highly skilled workers in Swedish multinationals to spend time working abroad, return migration historically seems to be high.

142.   **Sweden has been quite open to inward migration, notably of asylum seekers and refugees.** In 1998, about 5.6 percent of the population was foreign born, a higher proportion than in any other Northern EU country. In recent years a high proportion of these—around 70 percent—have been asylum seekers, a group with a high welfare dependency. There appears to be no assessment of the net fiscal cost from this, although survey evidence continues to show a relative lack of political concern amongst Swedes (Brücker et al (2000)).

143.   **Looking forward, the key issue is the likely extent and impact of inward migration associated with EU enlargement.** Current estimates are that ultimately 2–4 percent of the population of the potential accession countries may wish to migrate to the current members (Brücker et al (2000)). Since persons from these countries account for a higher proportion of the population in Sweden (3 percent) than in any other EU member except Germany, Sweden may be a target destination for a significant number of these migrants. Moreover, during its presidency of the EU in the first half of 2001, Sweden committed itself to a liberal immigration policy towards these countries. Assessing the extent of the likely inflow with any precision is extremely difficult. The relative generosity of the tax-transfer system may increase the attractiveness of Sweden as a destination, but the state of the labor market is likely to be also important. Continued rigidities may make it hard to absorb inflows, which in turn will have feedback effects on migrants' decisions that tend to reduce the inflows. The impact on the public finances depends on the nature of the immigrants, and is not necessarily adverse. If, as seems likely, they are largely relatively young and relatively highly skilled, perhaps with a high propensity to return home after a period of good earnings, the impact may be to strengthen the finances.

B. Spending Pressures

Demography

144.   **The aging of the population set in earlier in Sweden than elsewhere, and firm action has been taken to deal with the pension implications.** By the early 1990s, the old age dependency ratio in Sweden was already at levels that other industrialized countries are projected to reach only in the coming years (Hagemann (1995)). This prompted a major reform of the pension system in 2001. The new system—which applies in full to those born after 1954—comprises two tiers. Of the 18.5 percent contribution on earnings, 2.5 percent is allocated to funded schemes. The remainder finances pensions on a pay-as-you-go basis, but with pension entitlements tightly linked to past contributions and an automatic balance mechanism in place to cut the real value of pensions if notional liabilities of the system exceed its notional assets.[46] Under current projections, this mechanism is unlikely to be brought into play.

145.   **After 2010, however, significant pressures can be expected, largely from non-pension age-related spending.** Projections in the 2001 Spring Budget show a sharp increase in general government expenditure from 2010. Excluding interest payments, this is projected to be around 55 percent of GDP compared to the current 51 percent. This reflects the retirement of the baby-boomers of the 1940s, the increased pension payments that will be increasingly accommodated within the new pension arrangements and an increase in other age-related expenditures on health and social services.

Local government spending and the equalization system

146.   **Control of local government spending is key to controlling the overall level of public expenditure.** Local government spending, on health, education, social services and other items mentioned in Chapter II, accounts for over 40 percent of general government expenditure. Although subject to a balanced budget rule, with expenditure ceilings applying only to central government, there is some risk that pressures on the level of spending at central level may be deflected into an increase in local spending.

147.   **Current equalization arrangements limit the incentives that local authorities face to improve the quality of the services they provide or limit the tax rates they set.** In an attempt to redistribute resources towards poorer localities, funds are reallocated horizontally between them, with each ultimately receiving an amount equal to:

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[46] For an account of the system by one of its architects, see Settergren (2001).

Box 3: Trading Off Efficiency and Equity

Suppose that policy is evaluated by an objective function of the form $Y(T).(1-G(T))^\alpha$, where Y denotes average real income, G the Gini coefficient measure of after tax-transfer inequality, and T the total level of taxes and transfers, while α parameterizes the relative weight attached to average incomes and equality: a 1 percent increase in after-tax inequality is valued the same as an α percent increase in average real incomes. The dependence of Y on T reflects the inefficiency cost of redistribution: normalizing Y to unity in the initial position, the derivative Y′ is the negative of the additional excess burden of the system per dollar raised at the margin, MEB. Similarly the dependence of G on T reflects the impact of the system, on both the tax and transfer side, on after tax inequality.

Differentiating the objective function, a small increase in T—the extent of government intervention—is desirable if and only if

$$\alpha > -(1-G)\frac{MEB}{G'} \qquad (1)$$

As one would expect, an increase in T is more likely to be desirable, for any given value judgment, the lower is the marginal excess burden it creates and the greater is the reduction G′ in inequality it allows. More to the point, by specifying values for the MEB and G′ one can infer from (1) the critical level of α—the weight one attaches to inequality—such that all those who care more or equally about inequality would welcome a further increase in the scale of intervention. Illustrative calculations are presented in the below:

Critical values of the equality preference parameter α

-G'	MEB			
	0.1	0.5	0.75	1
0.5	0.14	0.71	1.06	1.40
1.0	0.07	0.35	0.53	+0.71
1.5	0.05	0.24	0.35	0.47
2.0	0.04	0.18	0.26	0.35

Note: Initial inequality is assumed throughout to be 0.294 (the 1999 estimated value.

157.   **While the impact of extensive government intervention on the rate and quality of economic growth is hard to assess, there is a presumption that in this respect too an easing of distortions to work, investment and savings decisions would generate sizeable cumulative efficiency gains.** The illustrative figures for the marginal excess burden of taxation in Box 3 derive from a static framework. Though less extensively studied and understood, the cost of distortions that affect the long-term growth rate—part of which will be borne by generations yet unborn, and so unable to directly represent their interest in current politics—could be even greater, so reinforcing the case for tilting the balance to efficiency considerations.

158.   **The next decade and beyond is likely to see both an increase in inefficiency costs of current tax arrangements and increased pressure for high priority expenditures.** Though the extent of the effect is still to some degree imponderable, continued and deepening internationalization will put continued pressure on the level and nature of government intervention. So too may changes in the pattern of collective bargaining. At the same time, the aging of the baby boomers will add to pressures from spending not only on pensions— this can be broadly accommodated within the reformed pension system—but also on other age-related items.

159.   **Both for their own merits, and to prepare for what may lie ahead, measures to streamline the role of government and focus on essentials should be continued and reinvigorated.** Assessments of the 1991 tax reform and other policy initiatives of the 1990s have been very positive. More can be done to better position Sweden to preserve its considerable achievements. While a full strategy requires addressing more questions of detail, and undertaking deeper analysis, than this paper has done, some areas of possible attention emerge clearly:

- The risk of high marginal effective tax rates on the better-off—by definition a particularly productive group—could be lowered by cutting the top rate of central income tax, and perhaps unifying the central rate somewhat below the current standard rate, all at relatively little revenue cost. By mitigating the problems that arise from the current disparity between the top rate of tax on labor income and that on capital income, this might also pave the way for an eventual cut in capital income taxation, should that prove necessary.

- The more difficult problem of high marginal effective tax rates on the less well-off could be ameliorated by, for example:

    ➢ reducing the starting rate of the local income tax;

    ➢ increasing the level of the child benefit, and taxing it.