ECON3620/4620 Spring 2026 – Second exam

1 True/False Questions (20%)

You need to explain your answer, just a true false or "it depends" statement without any arguments is not rewarded.

(a) The conventional corporate tax is a distortionary tax.

Yes, this is correct. Under the conventional corporate tax system, the costs of equity-financed investment are not deductible from the tax base. As a result, debt financing and equity financing are treated unequally.

(b) The Atkinson measure of income inequality is based on the Lorenz-curve.

No, that is not correct. The Gini coefficient is derived from the Lorenz curve, whereas the Atkinson index explicitly incorporates society's aversion to inequality. It measures how much total income society would be willing to forgo in order to achieve an equal income distribution.

(c) A tax on annual wealth and a tax on capital income have essentially the same economic effects.

False. A capital income tax taxes the return on wealth (interest, dividends, gains), while a wealth tax taxes the wealth itself regardless of the return earned. Therefore, the two taxes affect incentives and taxpayers differently.

(d) The Laffer curve suggests that increasing the tax rate will always increase government tax revenue.

False. The Laffer curve suggests that after a certain point, higher tax rates may reduce incentives to work or report income, causing tax revenue to fall.

2 Dual Income Tax (40%)

(a) Explain what characterizes a dual income tax (DIT) schedule and how its design answers to some of the key results of optimal taxation.

- A dual income tax (DIT) taxes labor income progressively and capital income at a lower flat rate aligned with the corporate tax rate. It is designed to reduce distortions to saving and investment, limit capital flight in small open economies. At the same time, it maintains redistribution through progressive labor taxation.

(b) Judd (1985) and Chamley (1986) both came to the same conclusion with respect to the optimal taxation of capital. What is the famous "Chamley-Judd result"? How do Chamley and Judd reach their conclusion?

- The Chamley–Judd result states that the optimal long-run tax rate on capital income should be zero. The argument is that capital taxation distorts saving and investment decisions over time. Even a small tax on capital income creates increasingly large efficiency losses in the long run. Therefore, the optimal policy is to eliminate capital income taxation.

(c) Explain the challenge when taxing small businesses under DIT, referred to as the "Achilles heel" of the dual income tax.

- The "Achilles heel" of the dual income tax (DIT) is the taxation of small businesses where the owner both works in and invests capital in the firm. It becomes difficult to determine which part of business income is a return to labor and which part is a return to capital. As labor income is taxed progressively and capital income is taxed at a lower flat rate, it creates incentives for income

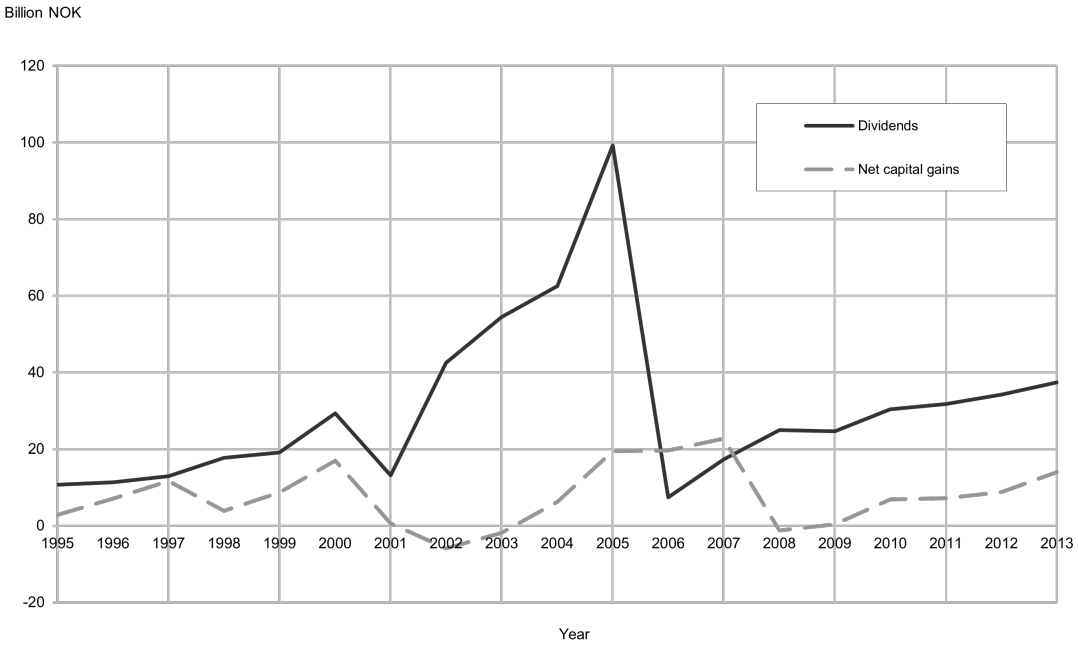


Figure 1: Dividends and net capital gains in Norway over time

shifting, where business owners classify labor income as capital income to reduce taxes. In Norway, the split model attempted to solve this problem by calculating an imputed return on capital and treating the remaining income as labor income.

(d) How did the Norwegian tax reform of 2006 respond to the challenges of the DIT?

- The Norwegian tax reform of 2006 addressed the main challenges of the DIT by reducing incentives for income shifting between labor and capital income. The reform abolished the old split model and introduced the shareholder model, where dividends and capital gains above a normal risk-free return became taxed at the personal level. In the new scheme the top marginal rates are very close to each other.

(e) Explain the pattern seen for dividends in Figure 1 in relation to the reform of 2006.

- Before the 2006 reform, dividends were lightly taxed, which encouraged business owners to take compensation as dividends rather than wages in order to benefit from the lower tax rate. This led to an increase in dividend payouts. As the pre-announced 2006 reform introduced higher taxation of dividends above a normal return, dividend payments increased considerable in the years prior to the reform and decreased in the years after. One may also mention that there was a temporary tax on dividends in 2001.

3 Wealth Transfer Taxation (40%)

a) Wealth transfer taxes are much more common than net wealth taxes. Provide two reasons for why governments may choose to have a wealth transfer tax, and not a net wealth tax.

- Administration and valuation: a wealth transfer is a discrete, observable event (death, gift) tied to a legal transfer, so the tax base only has to be valued once. A net wealth tax requires annual valuation of all assets, which is costly and especially difficult for illiquid or hard-to-value assets such as private businesses and real estate.
- Equity / equality of opportunity: a wealth transfer tax targets unearned advantages received by heirs and addresses inequality of opportunity, without penalizing wealth built up from one's own lifetime saving. It therefore distorts lifetime saving less than a recurrent tax on the stock of wealth, while still reducing the intergenerational persistence of wealth.
- Other plausible reasons are counted as well.

b) For each of these bequest motives, briefly explain what they mean:

(i) Warm glow of giving

(ii) Altruism

(iii) Strategic giving

- Warm glow: the parent derives utility from the act of giving itself, independently of how the bequest affects the child's utility.
- Altruism: the parent cares directly about the child's utility and values the bequest because it raises the child's consumption and thus its utility.
- Strategic giving: the parent uses the prospect of a bequest as an implicit price to induce desired behavior from the child (visits, care, attention).

c) Assume a retired parent P has available wealth w_P that they can spend on their own consumption with utility $u_P(c_P)$. They bequeath everything they do not consume to their child C, with bequest $b = w_P - c_P$. The child has utility $u_C(c_C)$. For each of these bequest motives, show how they enter the utility function of the parent:

(i) Warm glow of giving

(ii) Altruism

(iii) Strategic giving

- Warm glow: $U_P = u_P(c_P) + v(b)$ with $v' > 0$. The bequest enters directly as a "gift" argument; the child's utility does not appear.
- Altruism: $U_P = u_P(c_P) + \alpha\, u_C(c_C)$ with $\alpha > 0$ and $c_C = b$. The parent values the child's utility.
- Strategic: $U_P = u_P(c_P) + \phi\big(a(b)\big)$, where $a(b)$ is the child's action/attention, increasing in the (net) bequest. The bequest is the implicit price paid for the child's service a.

d) Assume bequests are taxed at a flat tax rate $\tau > 0$. For each of these bequest motives, state whether the tax has an excess burden and why (not):

(i) Warm glow of giving

(ii) Altruism

(iii) Strategic giving

- Warm glow: no excess burden, the relative price of the bequest in terms of own consumption is unchanged (as long as i only cares about the gross amount they give)
  Full points also for answering "excess burden" if student explicitly states that the parent values the *net* bequest.
- Altruism: excess burden (tax raises the price for the child's consumption)
- Strategic: excess burden (tax raises the price for the service provided by the child)

e) Explain the Carnegie effect.

- "Carnegie effect": Recipients of inheritances/gifts reduce their labor supply.

f) Describe Figure 2 and relate it to the Carnegie effect.

- Figure 2 is an event study that shows how (residualized log) labor earnings change over time when receiving a wealth transfer. It shows that recipients of wealth transfers reduce their labor income. The average earnings response takes two years to materialize and remains permanent thereafter at around -4%. This negative pattern is exactly what the Carnegie effect predicts: positive wealth shocks reduce heirs' labor supply.

g) Describe the findings from Brülhart, Eyquem, Martinez, and Rubolino (2025) in Table 1 and explain what these findings imply for the Carnegie effect.

- The pooled earnings elasticity with respect to wealth shocks is -0.047 (column 1) and highly significant. For inheritances alone it is -0.046 (column 2) and for lottery wins -0.082 (column 3). All three elasticities are negative and significant, so heirs/winners reduce labor earnings after a wealth shock (in line with what is observed in Figure 2), which is empirical evidence for the Carnegie effect.
- The larger lottery estimate is consistent with inheritances being partly anticipated, so part of the labor-supply response materi-

alizes before the actual transfer. This means that the Carnegie effect is larger than what is observed after receiving an inheritance, because heirs already reduce their income in expectation of the wealth transfer.

h) Assume there is a Carnegie effect: how does that impact the optimal tax rate for wealth transfers, and why?

- A Carnegie effect pushes the optimal bequest tax rate upward. Untaxed inheritances reduce heirs' labor supply, which shrinks the labor-income tax base and so generates a negative fiscal externality on the government. Taxing the transfer reduces the size of the net bequest, dampens the labor-supply response of the heir, and partly recovers the lost labor-income tax revenue. Beyond the standard redistributive motive, the Carnegie effect therefore provides an efficiency rationale for a positive (and higher) tax rate on wealth transfers.

	All (1)	Inheritances (2)	Lottery (3)
Earnings elasticity	-0.047^{***}	-0.046^{***}	-0.082^{***}
	(0.005)	(0.005)	(0.031)
Obs.	1,266,430	1,219,122	47,308
Individuals	140,490	135,150	5,340
Average earnings (CHF)	43,517	43,500	44,029
Avg. wealth shock (CHF, p.v. adjusted)	349,798	349,703	352,662
Avg. wealth shock (CHF, nominal)	128,854	129,038	123,261

Notes: This table reports the earnings elasticity to wealth shocks, pooled across age groups. Column (1) considers wealth shocks from inheritance and lottery wins; column (2) focuses only on inheritances; column (3) only on lottery wins. The table also reports information on recipients' average earnings, the average nominal wealth shock, and the average present-value-adjusted wealth shock (computed by multiplying the nominal wealth shock by (1+0.03) raised to the power of the number of years from when the wealth is received until age 90: $W_i^{pv} = W_i(1+0.03)^{[90-a_i]}$).
***Significant at the 1 percent level
**Significant at the 5 percent level
*Significant at the 10 percent level.
(This is an extract from Table 1 in Brülhart, Eyquem, Martinez, and Rubolino (2025).)

Table 1: Earnings responses to wealth shocks

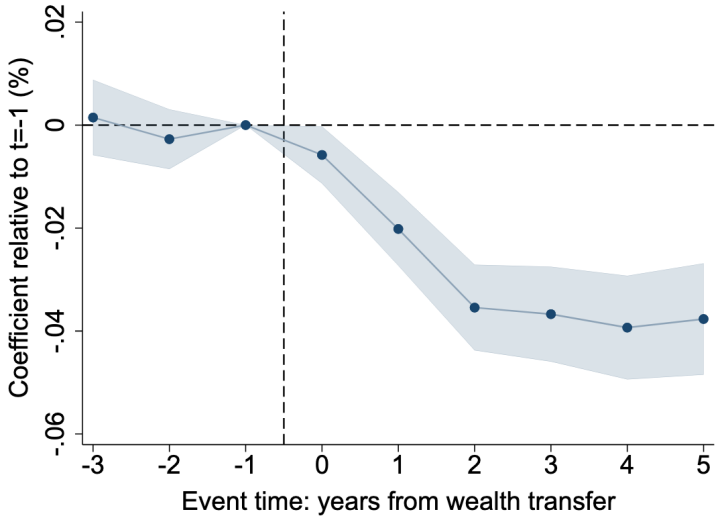


Figure 2: Event-study estimate of the pooled earnings response

Notes: This figure shows the event-study coefficient estimates of the impact of receiving a wealth shock on the log of labor earnings. It plots coefficient estimates and the 95 percent confidence intervals: each point shows the effect of the wealth shock $k \in [-3, 5]$ years from the realization of the shock relative to $k = -1$. Wealth shocks include both inheritances and lottery wins. Standard errors are clustered by individuals. The sample contains 1,266,430 person-year observations.
(This is Figure 2 from Brülhart, Eyquem, Martinez, and Rubolino (2025).)

References

Brülhart, Marius, Aurélien Eyquem, Isabel Martinez, and Enrico Rubolino (2025). *The Output Cost of Inheritance*. SSRN Scholarly Paper. Rochester, NY. DOI: 10.2139/ssrn.5741803. URL: https://papers.ssrn.com/abstract=5741803.