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ITPF/AEI Conference on the Economic Effects of Territorial Taxation

# Home Country Tax Effects on Mergers, Inversions, and Headquarters Location

*Empirical Evidence*

# Outline

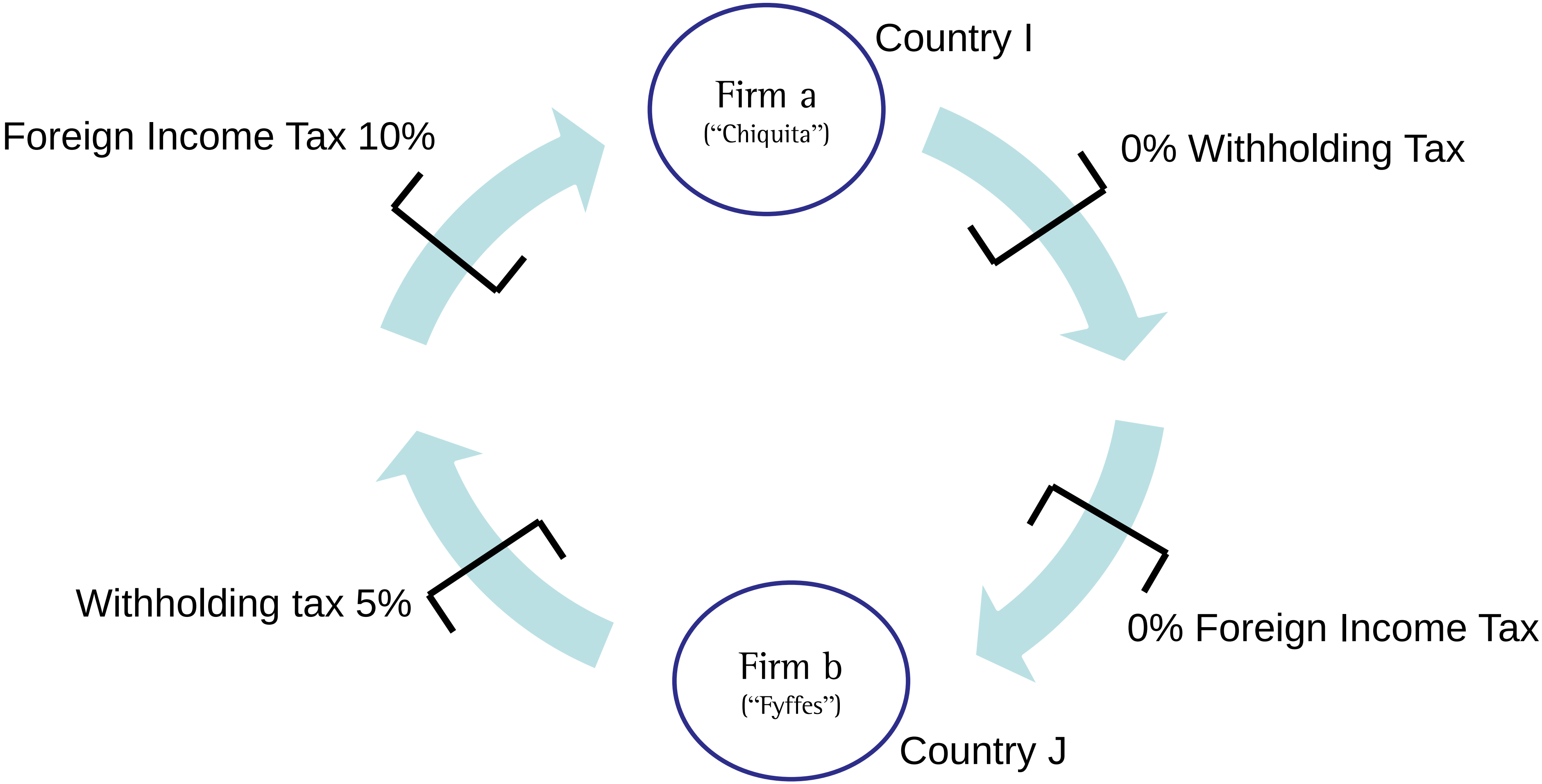
- 3 Papers

- Slides 3+4: Direction of M&As
  - Huizinga, H.P. and J. Voget (2009), International taxation and the direction and volume of cross-border M&As, Journal of Finance 64, p. 1217 - 1249.

- Slides 5+6: Relocation of Headquarters
  - Voget, J. (2011), Relocation of headquarters and international taxation, Journal of Public Economics 95, p. 1067 – 11081

- Remainder: Effects of Territorial and Worldwide Corporation Tax Systems on Outbound M&As
  - Feld, L.P., M. Ruf, U. Scheuering, U. Schreiber, and J. Voget (2013), Effects of Territorial and Worldwide Corporation Tax Systems on Outbound M&As, Centre for European Economic Research Discussion Paper No. 13-088

# 1st Paper: Direction of M&As



# Direction of M&As: Findings

- Relative size is important
  - Example: Volkwagen acquires Porsche, not the other way around

- Increasing repatriation tax by 1 percentage point decreases the chance of being the acquirer from 50% to 41%
  - (for merger of equals with a 50/50 chance in absence of taxes)
  - Example: Chiquita / Fyffes
  - Older example: Daimler / Chrysler (Remark: Fiat / Chrysler has HQs in the Netherlands now)

- Suppose U.S. from now on exempts foreign-source dividends. What is the effect on all U.S. related M&As?
  - U.S. party acquires in 57.6% of cases (instead of 53.1% as before)
  - Irish party acquires in 3.6% of cases (instead of 38.2% as before)

- Hence: By means of cross-border M&As, multinational HQs are attracted to locations without repatriation taxes
- (Skipped: Volume of M&As: acquisitions decrease by 1.7% per repatriation tax percentage point.)

# $2^{nd}$ paper: Relocating Headquarters

- Criticism of the previous paper:
  - Geographical spread/ subsidiaries of firms are not observed
  - Only looks at merging firms

- Representative sample of multinationals from several countries
- Over a 10 year period, 6.4% relocate their HQs as they are acquired by a foreign firm
  - Inversions are just a special case of a general phenomenon: HQs relocate with every cross-border acquisition

- Effect of taxes is found by comparing four groups of multinationals:
  - Multis from foreign tax credit countries:
    - Foreign subsidiaries subject to low taxes → tend to relocate HQs
    - Foreign subsidiaries subject to high taxes → tend not to relocate HQs
  - Multis from exemption countries:
    - Foreign subsidiaries subject to low taxes → no difference in behavior
    - Foreign subsidiaries subject to high taxes → no difference in behavior

# Relocating Headquarters: Findings

- Increasing the repatriation tax of a multinational by 10 percentage points raises the probability of HQ relocation by 1/3.
  - More than 8% chance of HQ relocation instead of 6.4%.

- Controlled foreign corporation rules also appear to increase the rate of relocation
  - Especially if they are tough/ not easy to game
  - For example, blacklists do not appear to constitute effective CFC rules

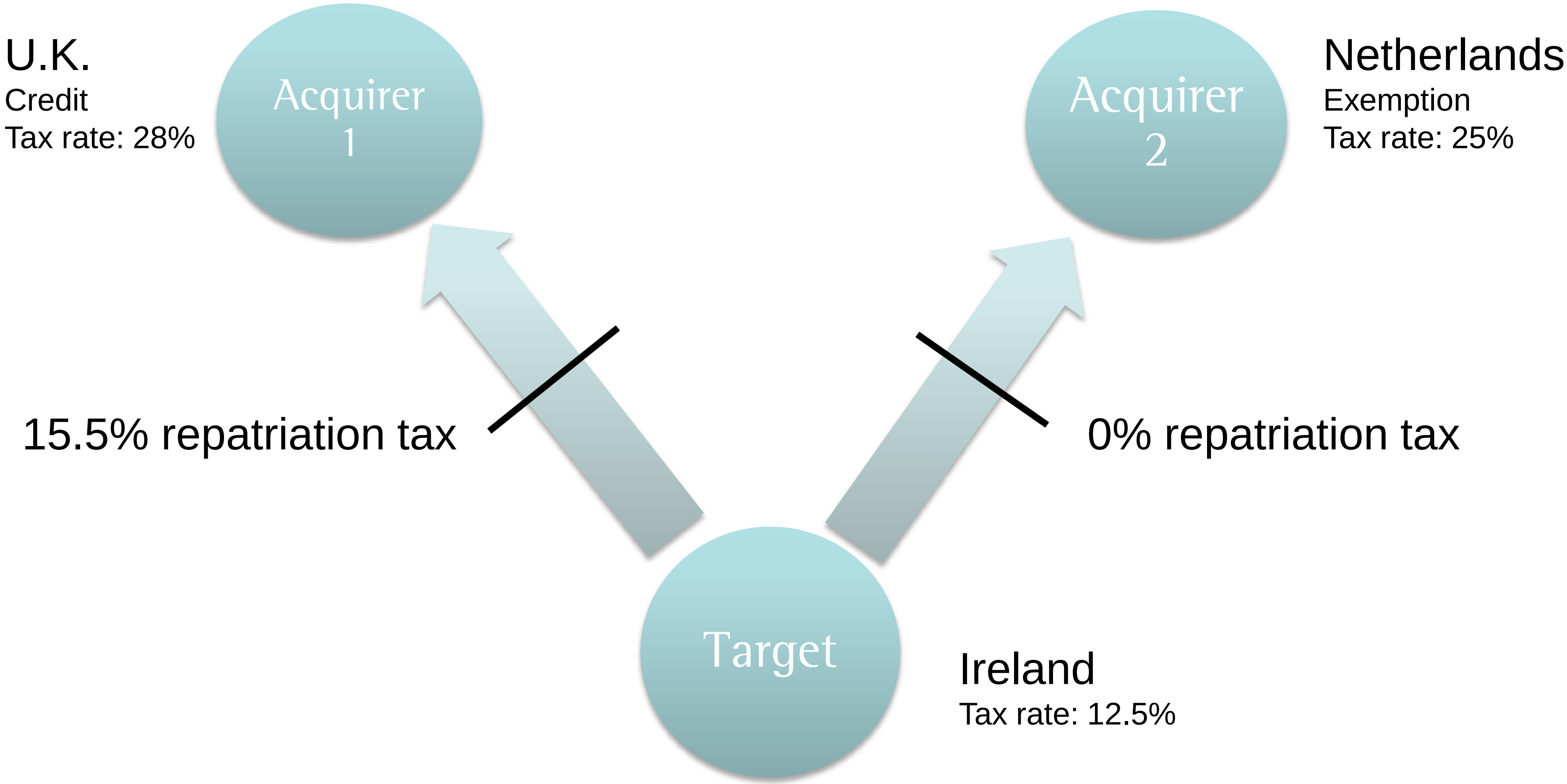
- Some musings: What is lost when HQs relocate abroad?

1. HQs spill-overs: Collocation of R&D functions? Executive pay?
2. Loss of agglomeration effects? (Silicon Valley…)
3. Tax authority related:
   a) Erosion of tax base in worldwide tax systems
   b) Tax enforcement by means of CFC rules becomes ineffective
   c) Loss of easy access to information relevant to transfer pricing / interest stripping issues

# 3rd paper: Credit vs Exemption and Outbound M&As

- Recent opportunity for research:
  - Japan and the U.K. both switched from a foreign tax credit system to exempting foreign source dividends in 2009
  - First time that we observe an actual switch in international taxation regimes in major capital exporting countries.
  - So, is there an effect of repatriation taxes on M&As? Direct identification!
- In particular: Is there a competitive disadvantage in the market for corporate control due to repatriation taxes?

# Competitive Disadvantage in M&As due to International Taxation?

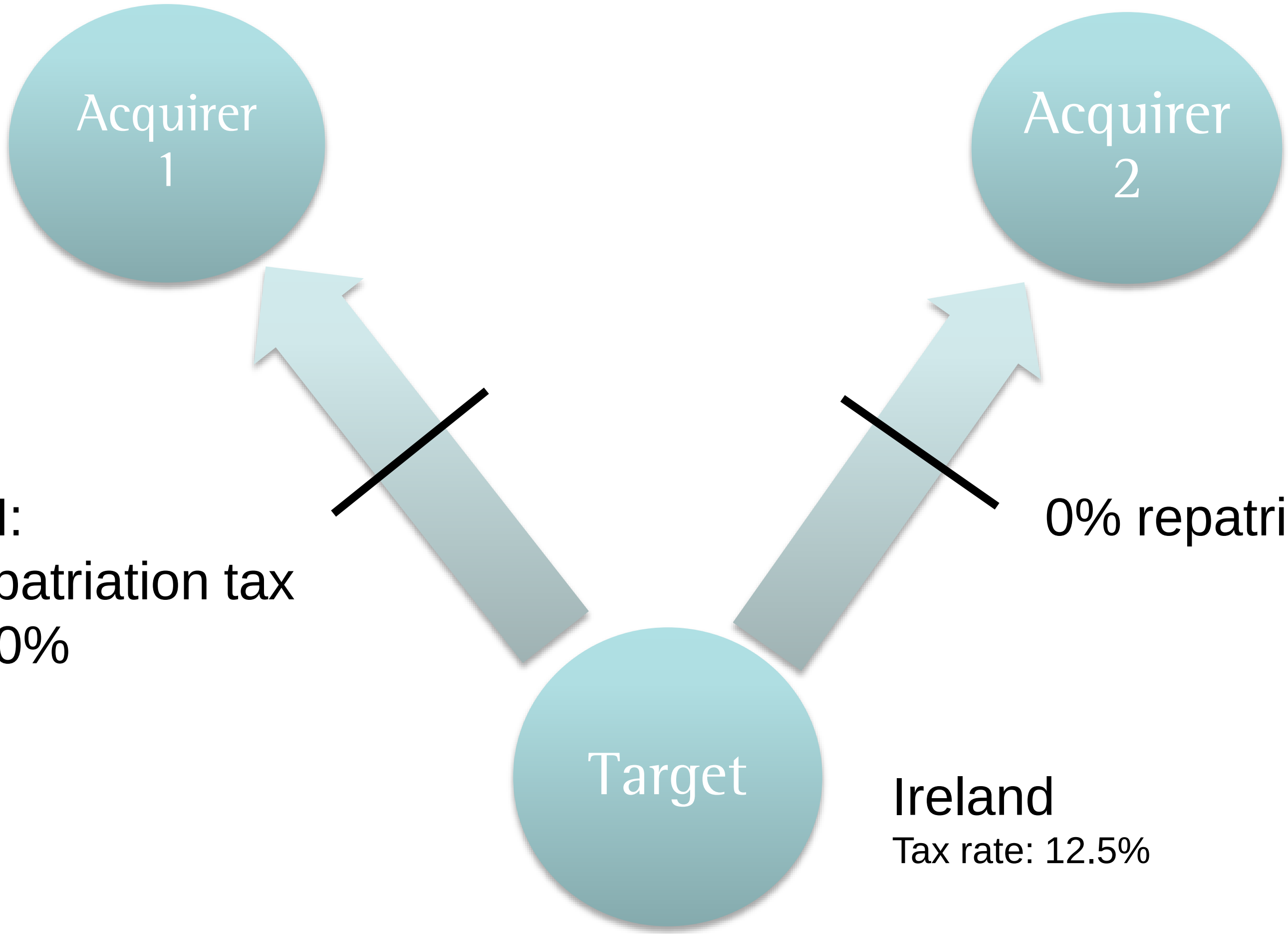



- Acquirer 2 is willing to pay more for the same target firm.
- Acquirer 1 is at a disadvantage in the international market for corporate control

# Empirical Approach: Exploit Reform in the U.K. and Japan

U.K.
Credit to Exemption
Tax rate: 28%

Netherlands
Exemption
Tax rate: 25%




REFORM:
15.5% repatriation tax
Drops to 0%

0% repatriation tax

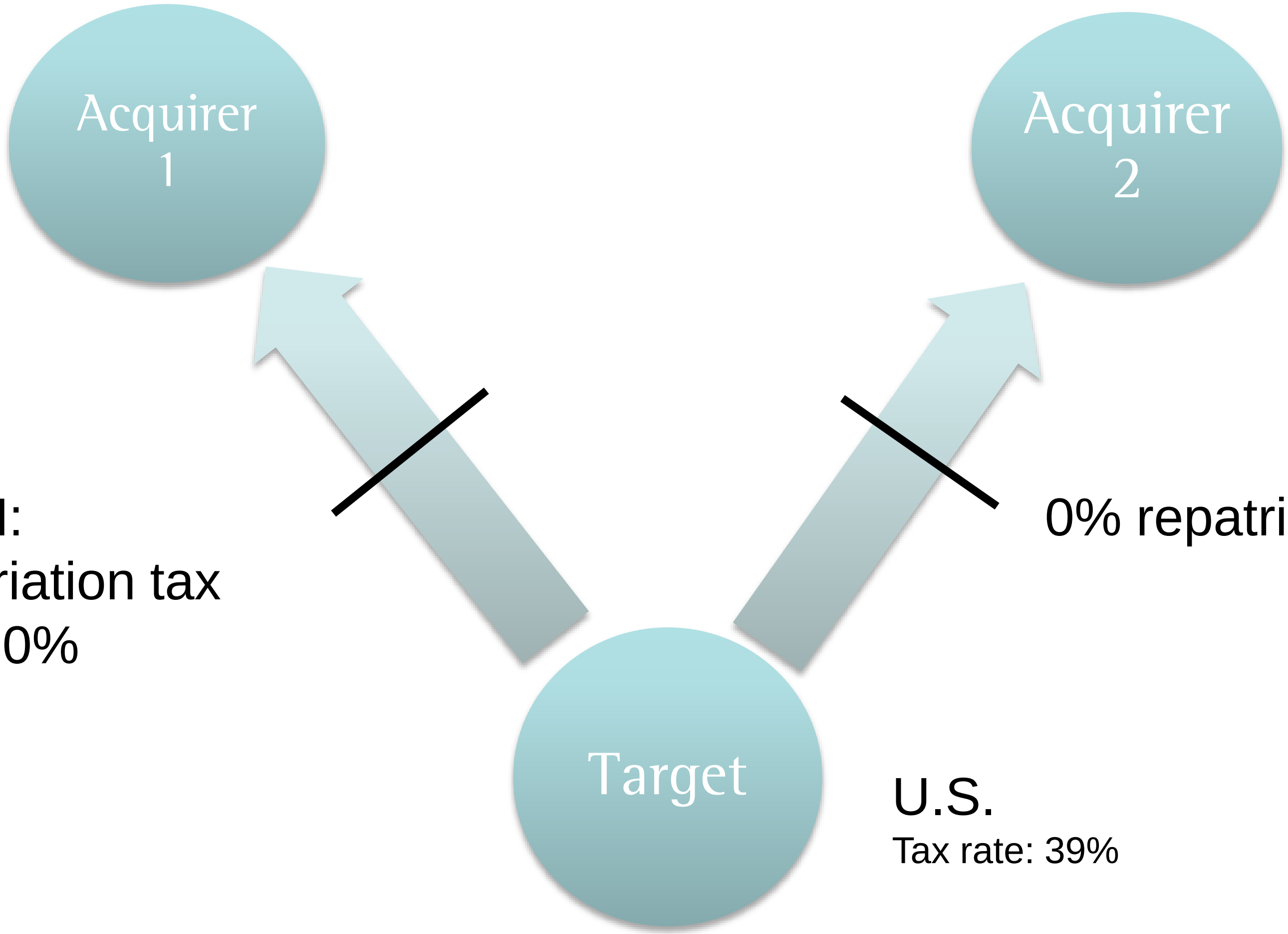
Ireland
Tax rate: 12.5%

- Does the likelihood of a U.K. acquirer increase after the reform?
- (while controlling for other effects in a regression)

# Empirical Approach: Control Group

U.K.
Credit
Tax rate: 28%

Netherlands
Exemption
Tax rate: 25%




REFORM:
0% repatriation tax
Remains 0%

0% repatriation tax

U.S.
Tax rate: 39%

- Control group should not be affected by the reform

# Regressions Control For Other Effects

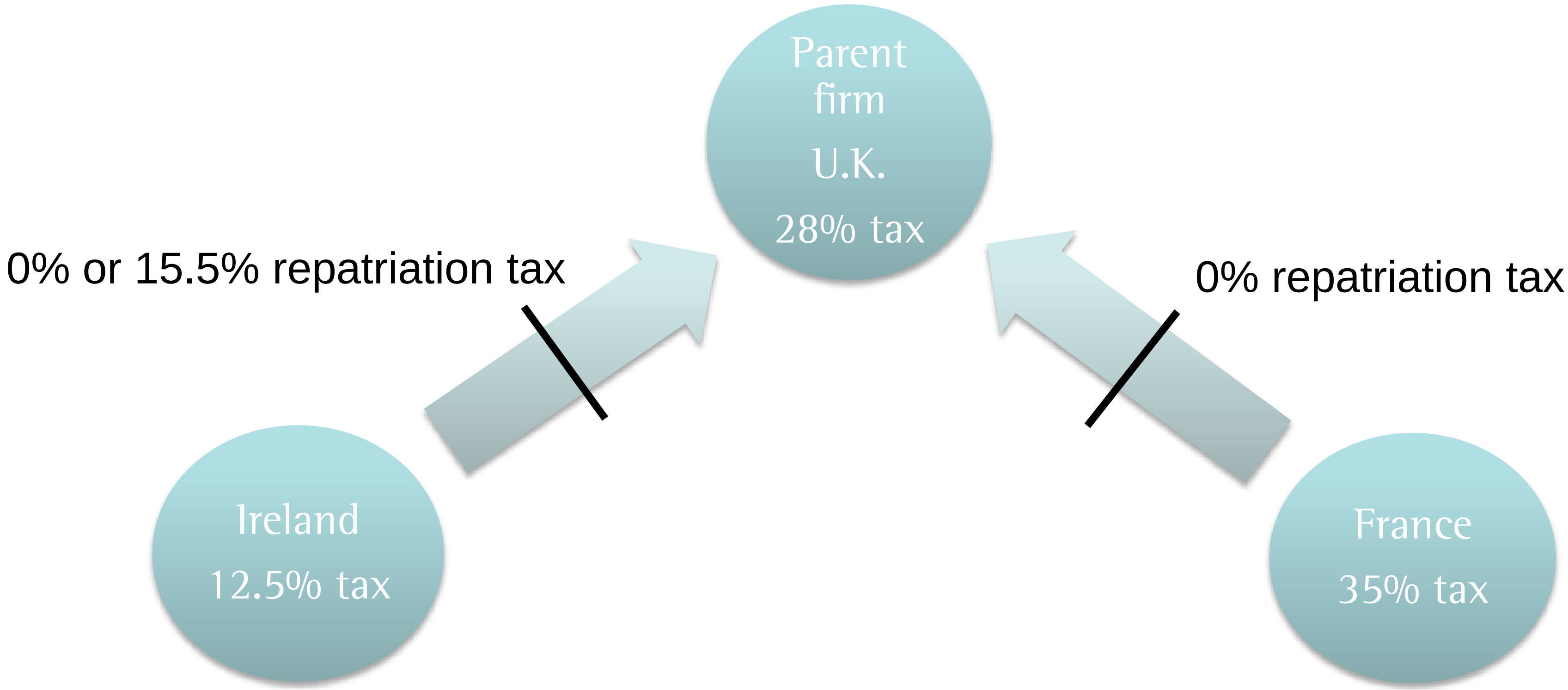
- Trends in productivity
  - GDP/capita
  - GDP growth rate (+)
- Trends in financing conditions
  - Financial depth: Stock market capitalization/ GDP
- Different industry specializations
  - Number of past M&As in the relevant industry (+)
  - Share of the relevant industry sector in the acquirers GDP
- General differences between acquirer countries (fixed / random)
- Special bilateral ties capturing low transaction costs
  - Common language (+)
  - Colonial ties etc. (+)
  - Distance (-)
- Target firm characteristics
  - Total assets
  - Profits

# First Research Question and Findings

- Is there a competitive disadvantage in M&As when dividend repatriations are taxed? Yes.
  - U.K. exemption: 3.9% increase in acquisitions
  - Japan exemption: 31.9% increase in acquisitions
  - Simulation of U.S. exemption: 17.1% increase in acquisitions
- (Interesting side result: More profitable target firms are less likely to be taken over by a U.S. acquirer)

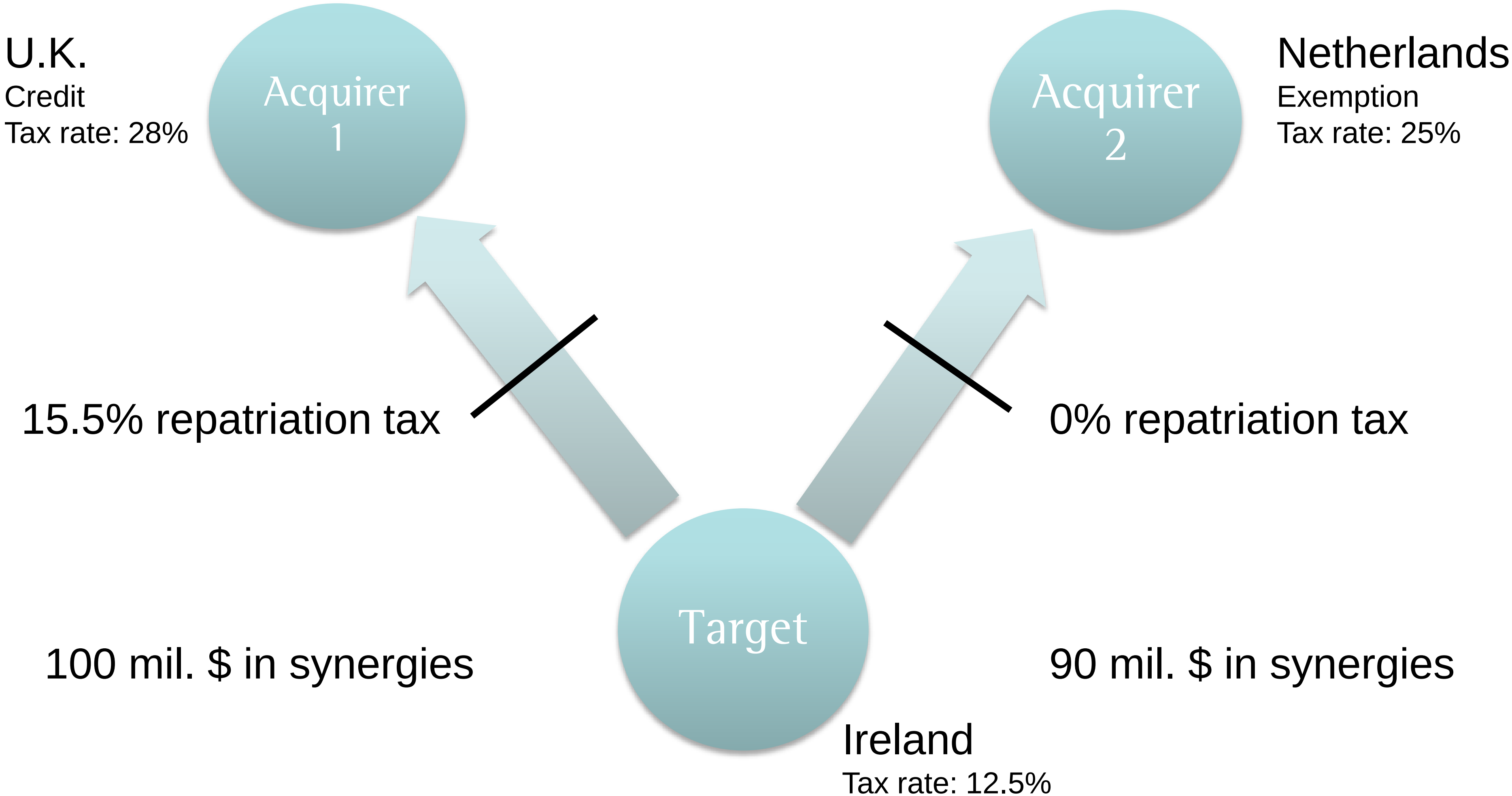
- Should we care? → Second research question:
- How large are the inefficiencies due to suboptimal ownership structures?

# Traditional Concern in FDI: Inefficient Distribution of Capital?




- Too much capital in Ireland just because of taxes?
- One could produce more by relocating some capital from Ireland to the U.K.
- Capital export neutrality by repatriation tax

# Concern with M&As: Inefficient Ownership Structures




- Relevant concern as M&As are the main form of FDI between developed countries

# First and Second Research Questions + Findings

- Is there a competitive disadvantage in M&As when dividend repatriations are taxed? Yes.
  - U.K. exemption: 3.9% increase in acquisitions
  - Japan exemption: 31.9% increase in acquisitions
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- How large are the inefficiencies due to suboptimal ownership structures? (unrealized synergies per year)
  - U.K.: 14 million $
  - Japan: 525 million $
  - U.S.: 1,134 million $

- See the following slides for the calculations

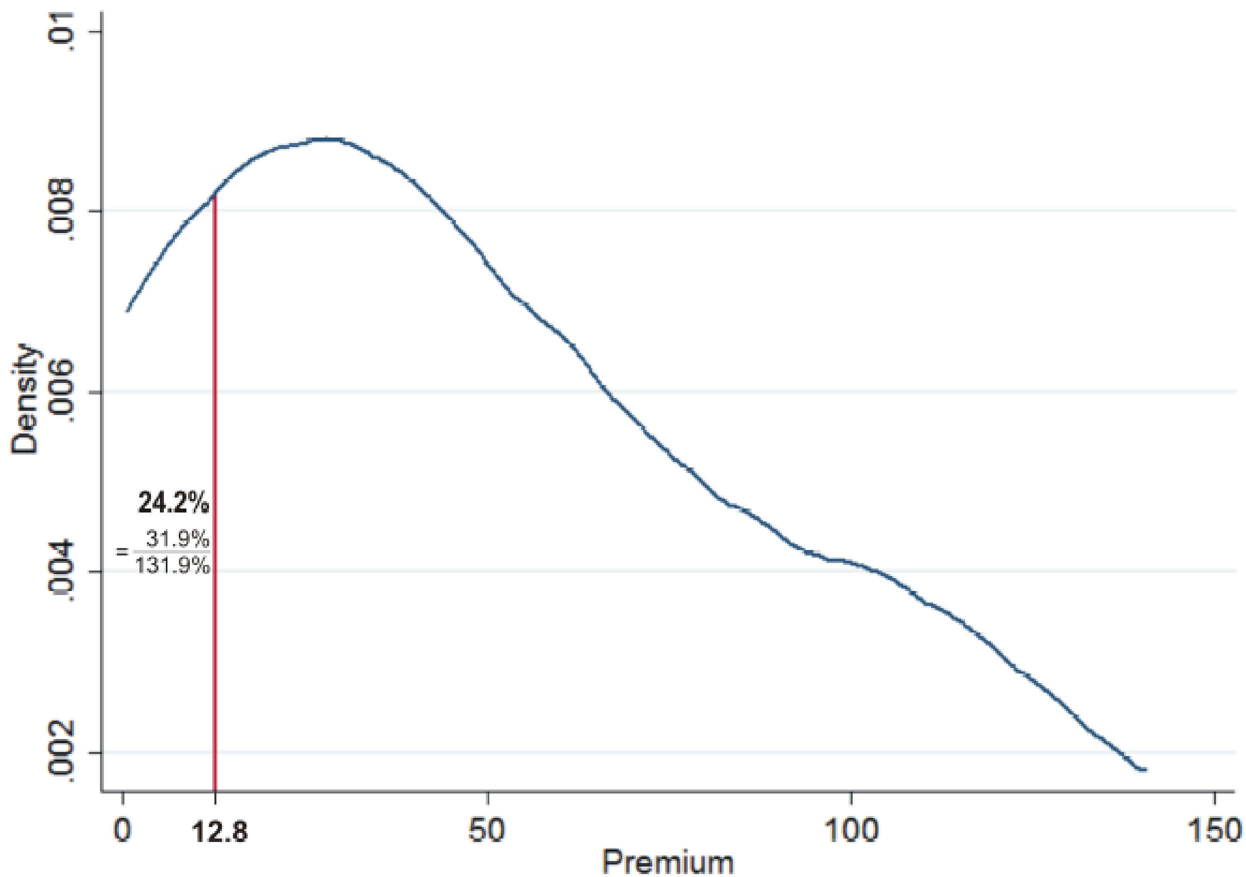
# Loss in Efficiency: Calculation

- If Japan went back from exemption to a foreign tax credit system
  - In 24% of cases, the acquirer would no longer be a Japanese firm (based on the previous estimates)
  - Second-best owner prevails over first-best owner → Loss in efficiency due to inefficient ownership structure

- How much would prices decrease because Japanese acquirers can no longer afford to offer the winning bid?
  - The price decreases for the cases where the second-best owner prevails over the first-best owner capture the loss in efficiency / synergies which are not realized
  - Second-best bids are generally not observable, so auxiliary assumptions are required to arrive at an answer
  - Polar assumption: Second-best bidders are not willing to pay any premium on the target firm's market price
  - Prices would have to decrease by 12.8% to eradicate the premium for 24% of acquisitions by Japanese firms (see graph on next slide)

# Decrease in Premium to lose 24% of M&As

Figure 3: Distribution of premiums paid by Japanese acquirers



# Loss in Efficiency: Calculation

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- Total value of targets with inefficient ownership: 24%* 17 billion US $

- Hence, efficiency loss is: 12.8%* 24%* 17 billion US $ = 0.5 billion US $ (per year)

- This is an upper bound to the extent that second-best bidders may be willing to pay a premium as well.

# Conclusion / Further Questions

- HQs gravitate to tax-favorable locations as industries are reorganized by means of cross-border M&As
  - Increasing repatriation tax by 1 percentage point decreases the chance of being the acquirer (in a merger of equals) from 50% to 41%
  - Increasing the repatriation tax of a multinational by 10 percentage points raises the probability of HQs relocation by 1/3

- What is actually lost? (Especially in countries which are very good at fostering new multinationals organically – agglomeration effects etc.)

# Conclusion / Further Questions

- Repatriation taxes are a disadvantage when bidding for target firms
  - Switch to exemption in the U.S. may increase acquisitions by 17%

- Repatriation taxes cause inefficient ownership
  - U.S. repatriation taxes may result in unrealized synergies of 0.5 billion US $ per year
  - (Note: losses are born by foreign target firm shareholders)

- Trade-off between ownership neutrality and capital export neutrality?
  - Optimal policy may depend on the composition of a country's FDI:
    M&As versus Greenfield investment (change in capital stock)
  - Also depends on externalities of international acquisitions:
    - Substitute to domestic activity due to crowding out of scarce input factors: management capacity, for example?
    - Complement to domestic activity?

**THANK YOU FOR YOUR ATTENTION AND COMMENTS!**