

# Where do we draw the line?

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Choosing the optimum gestational age  
cut-off for reporting stillbirths

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# International comparisons of stillbirth rates

- Aim to understand what the stillbirth rate is across Europe
- Explore how and why it differs between countries
- Identify ways of improving care and reduce mortality

# Standardised criteria

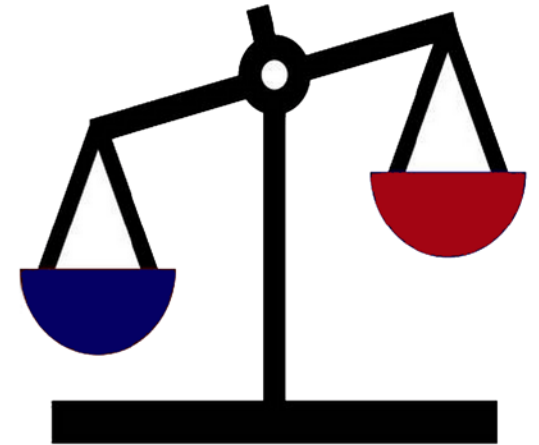
- Vital to compare “like with like”
- Need to remove variation due to differences in:
  - Ascertainment/registration of births and deaths
  - Reporting of deaths at the limits of viability
- Driving motivation for EURO-PERISTAT

# Current cut-off criteria

- EURO-PERISTAT
  - Stillbirths reported from 28 weeks
  - Neonatal death rates from 24 weeks
- WHO
  - Stillbirths 1000 g or more with an assumed equivalent of 28 weeks gestation

# Key issues

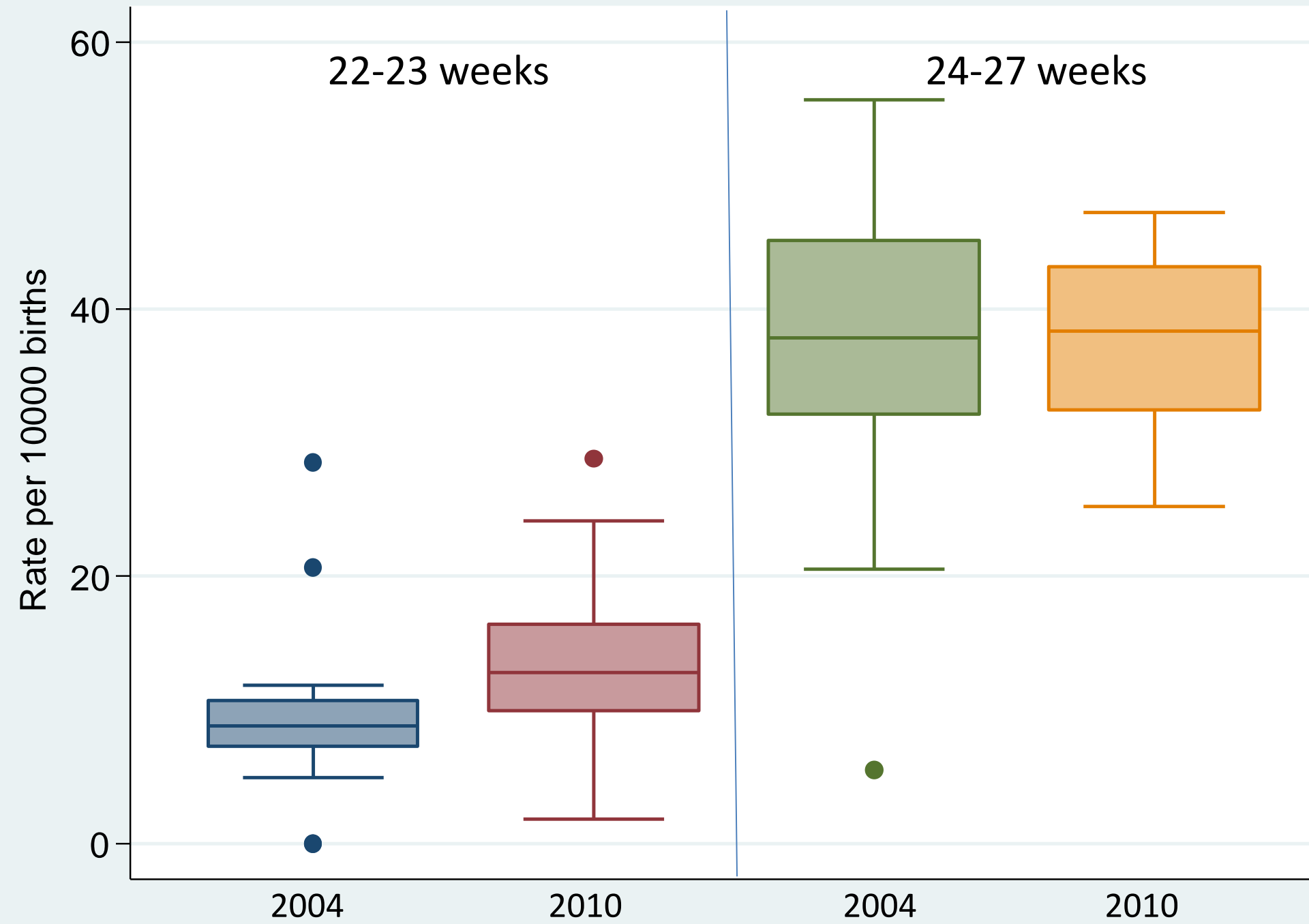
- However excluding <28 week stillbirths is ignoring a large burden of poor outcomes for families
- Need to balance variation in registration and reporting with importance of measuring deaths at early gestations
- There is little evidence as to which gestational age cut-off should be used



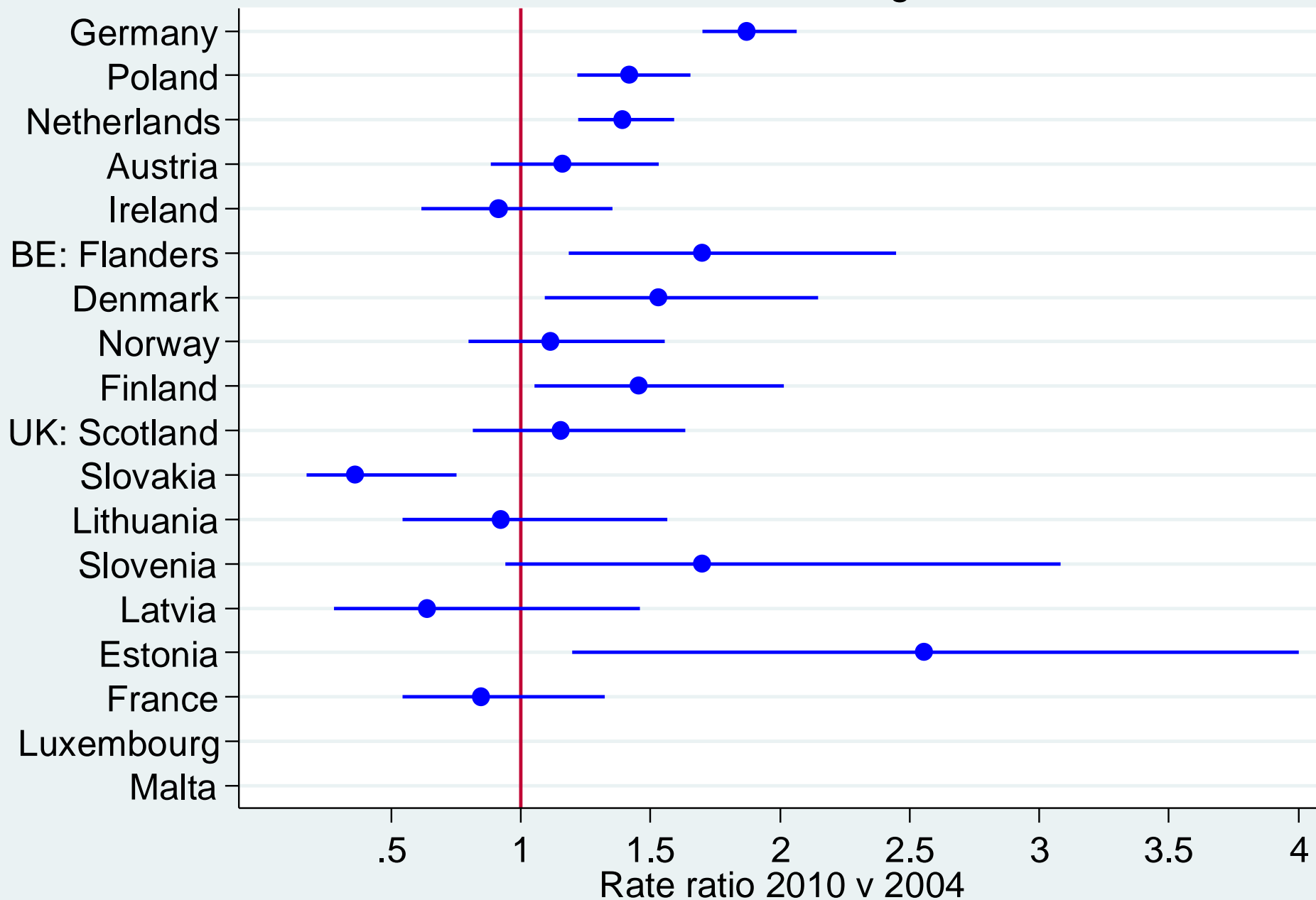
# Using the Euro-PERISTAT data...

- Explore international variation for stillbirths
  - 22-23 weeks & 24-27 weeks
- Assess the stability of rates over time
- Identify the optimum viability cut-off
- Understand stillbirth <28 weeks
  - Lancet series suggest not reducing
- Utilise data on 18 countries with information for 2004 and 2010

# Rate of births by gestational age

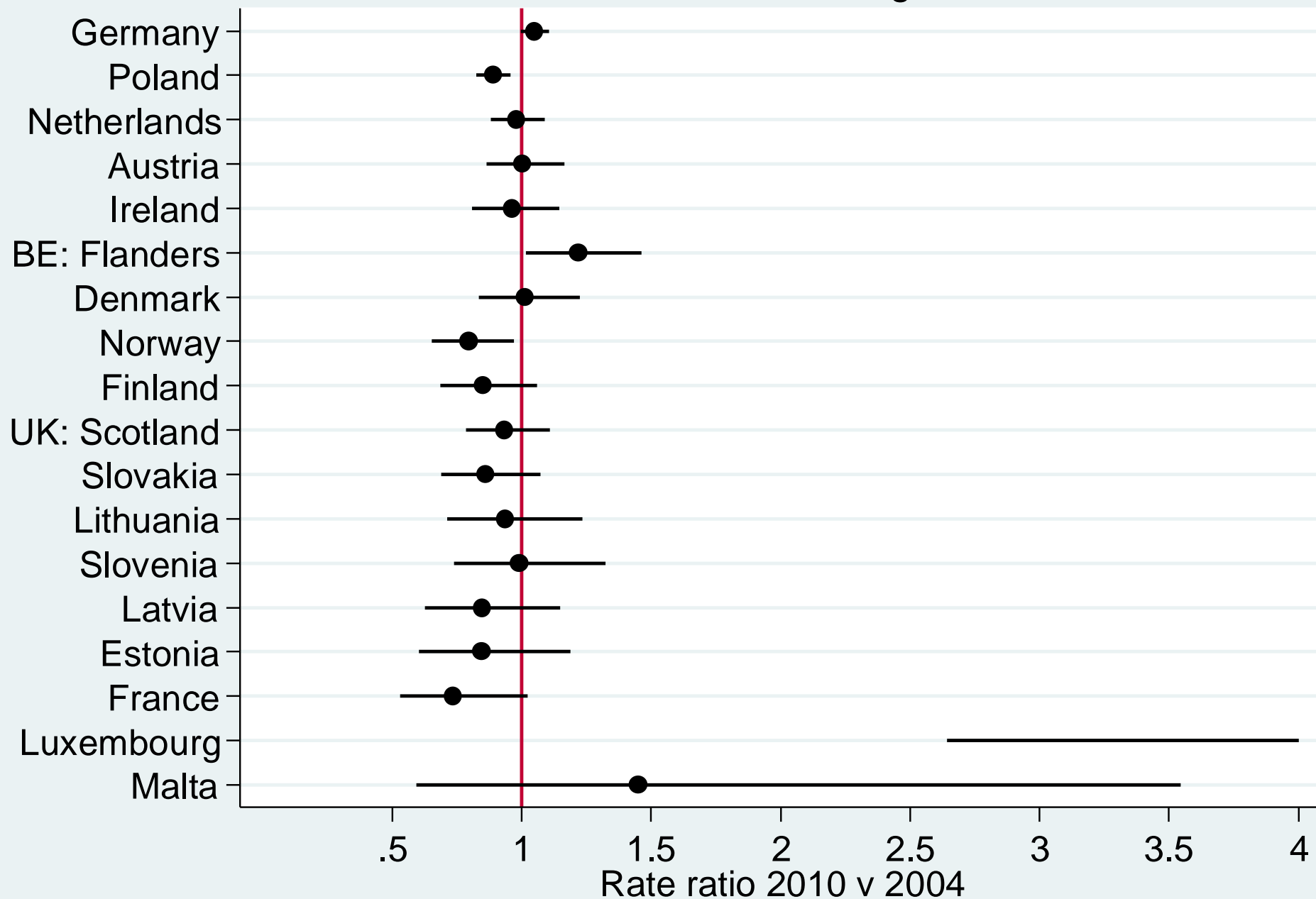


# Rate ratio of births at 22-23 weeks gestation 2010 v 2004

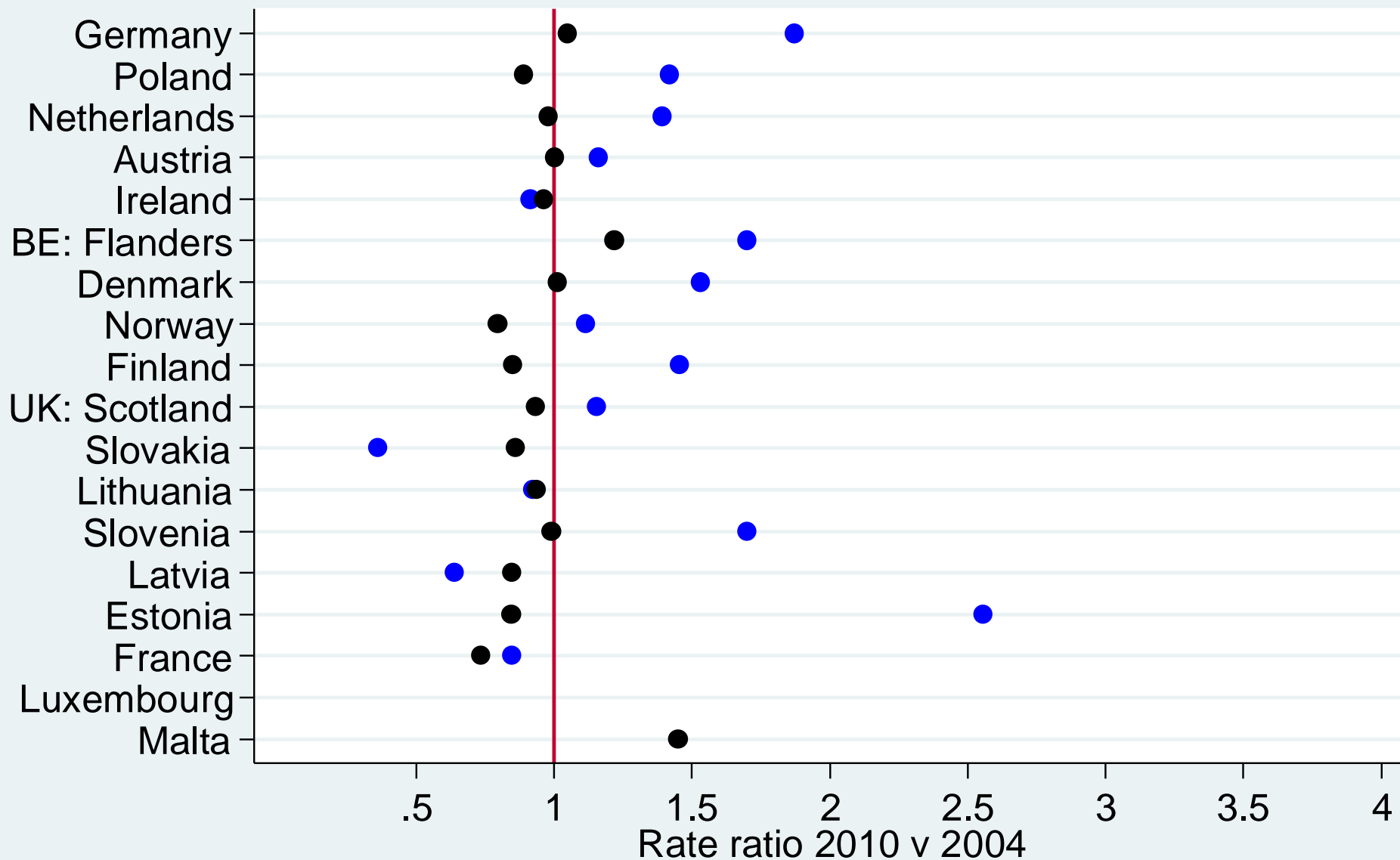




# Rate ratio of births at 24-27 weeks gestation 2010 v 2004

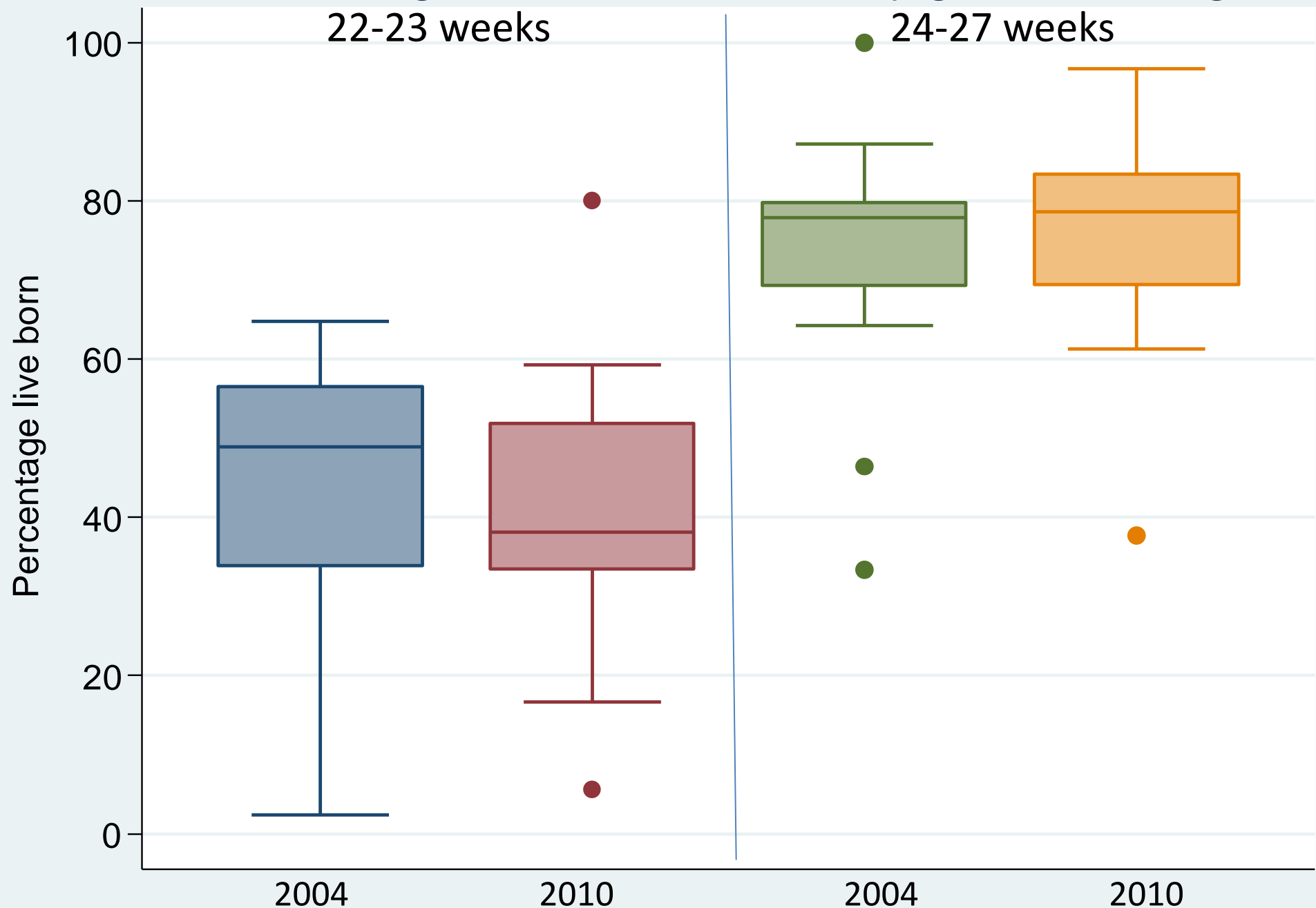


# Rate ratio of births 2010 v 2004

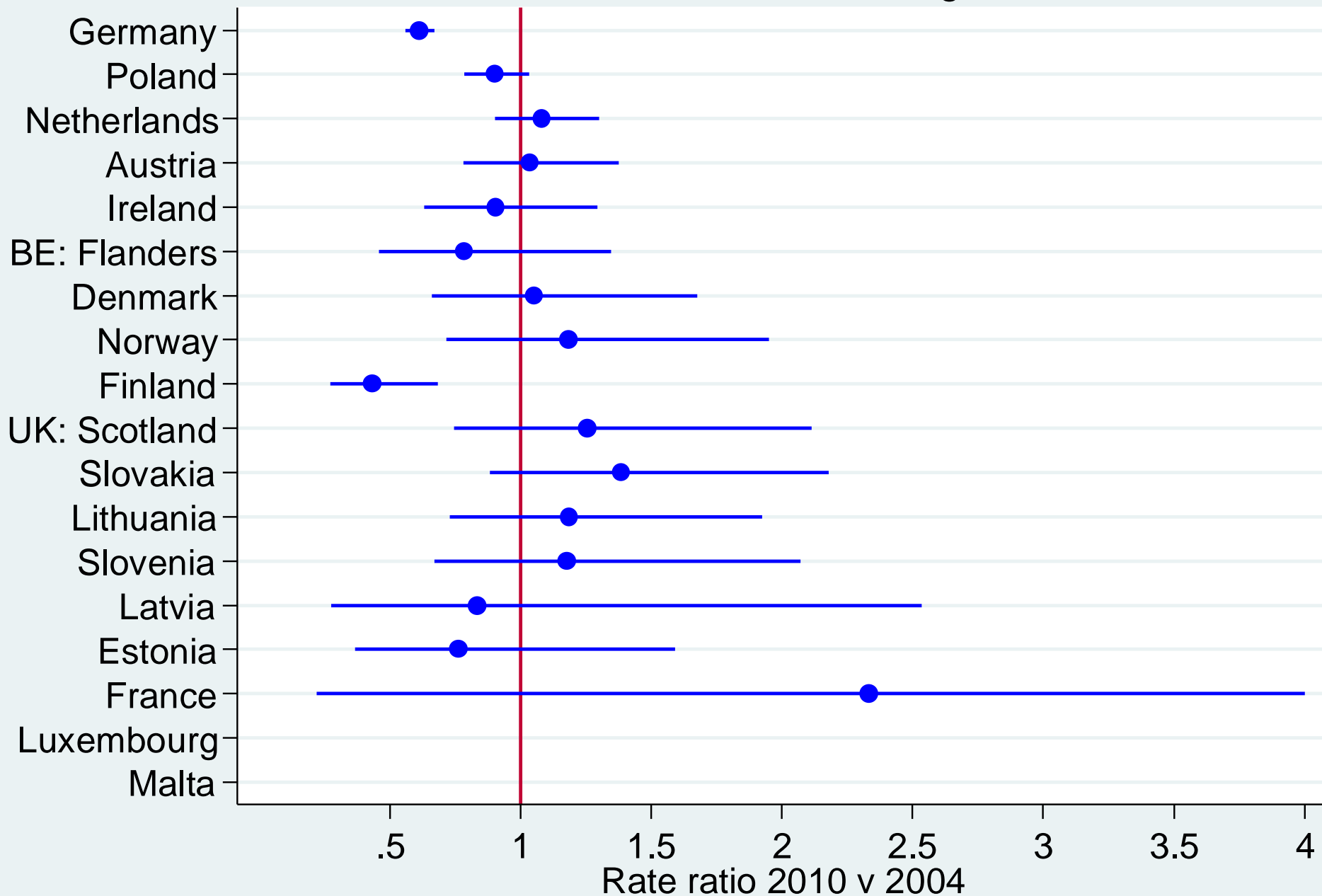


● 22-23 weeks    ● 24-27 weeks

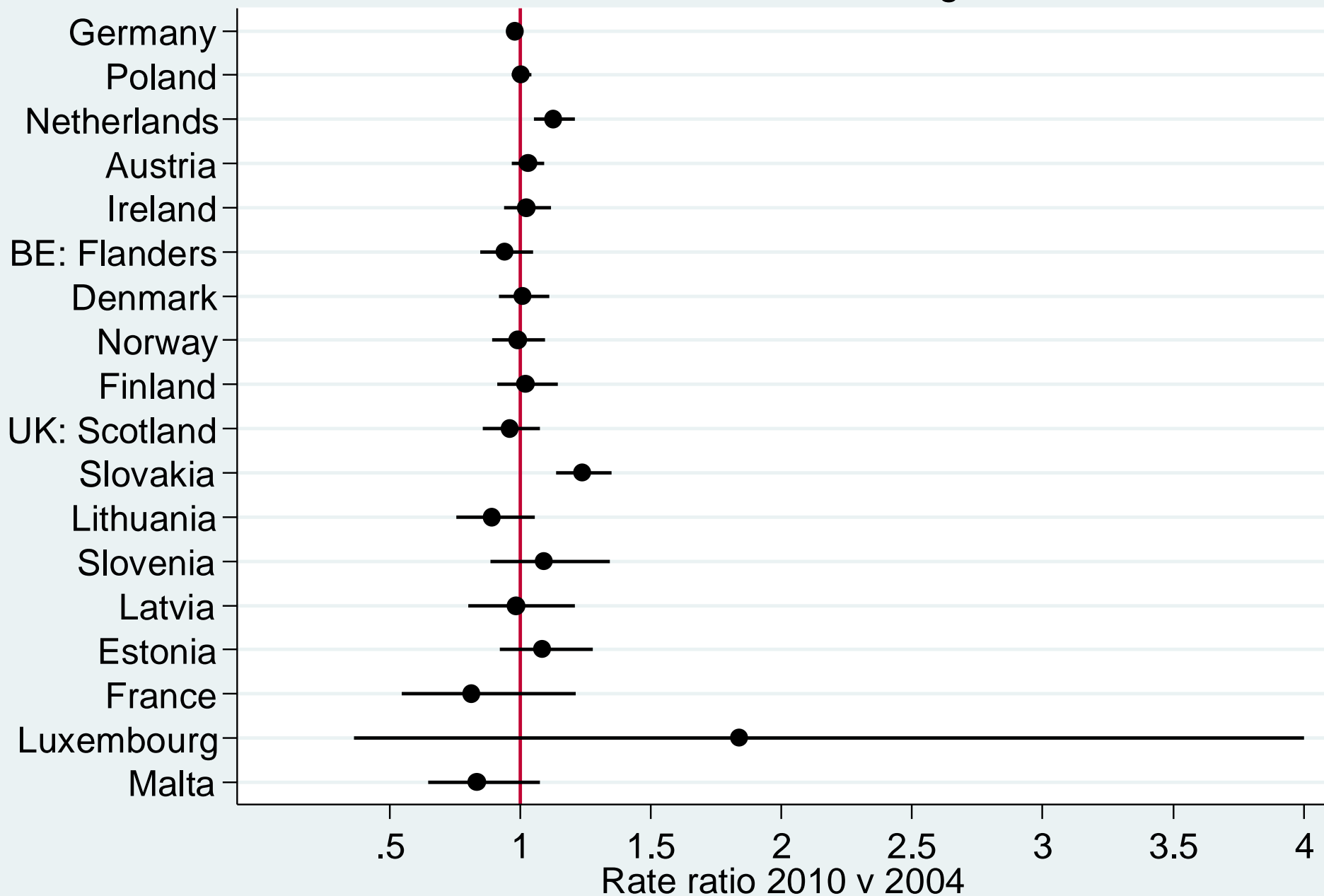
# Percentage of births live born by gestational age



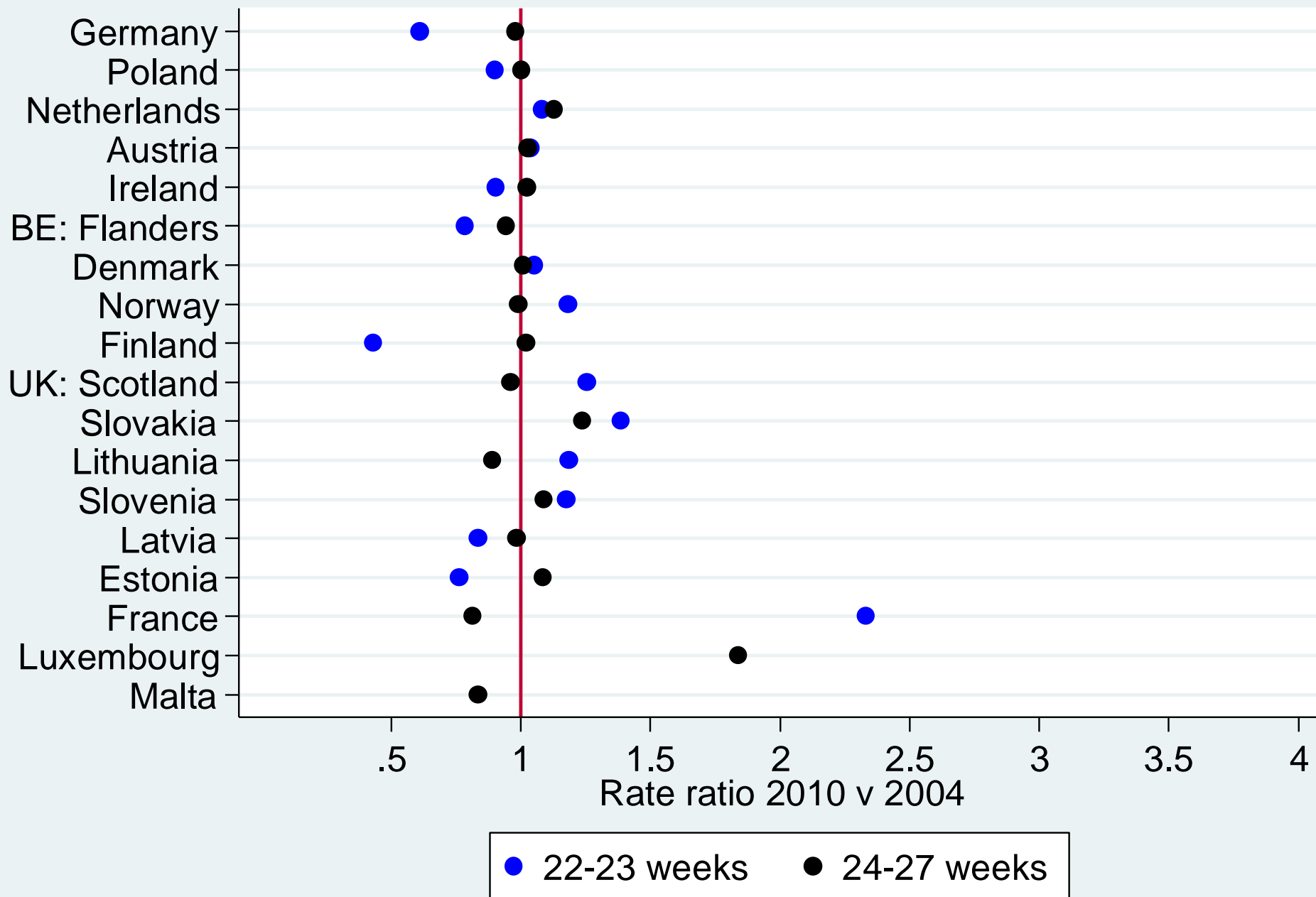
# Rate ratio of % live born at 22-23 weeks gestation 2010 v 2004



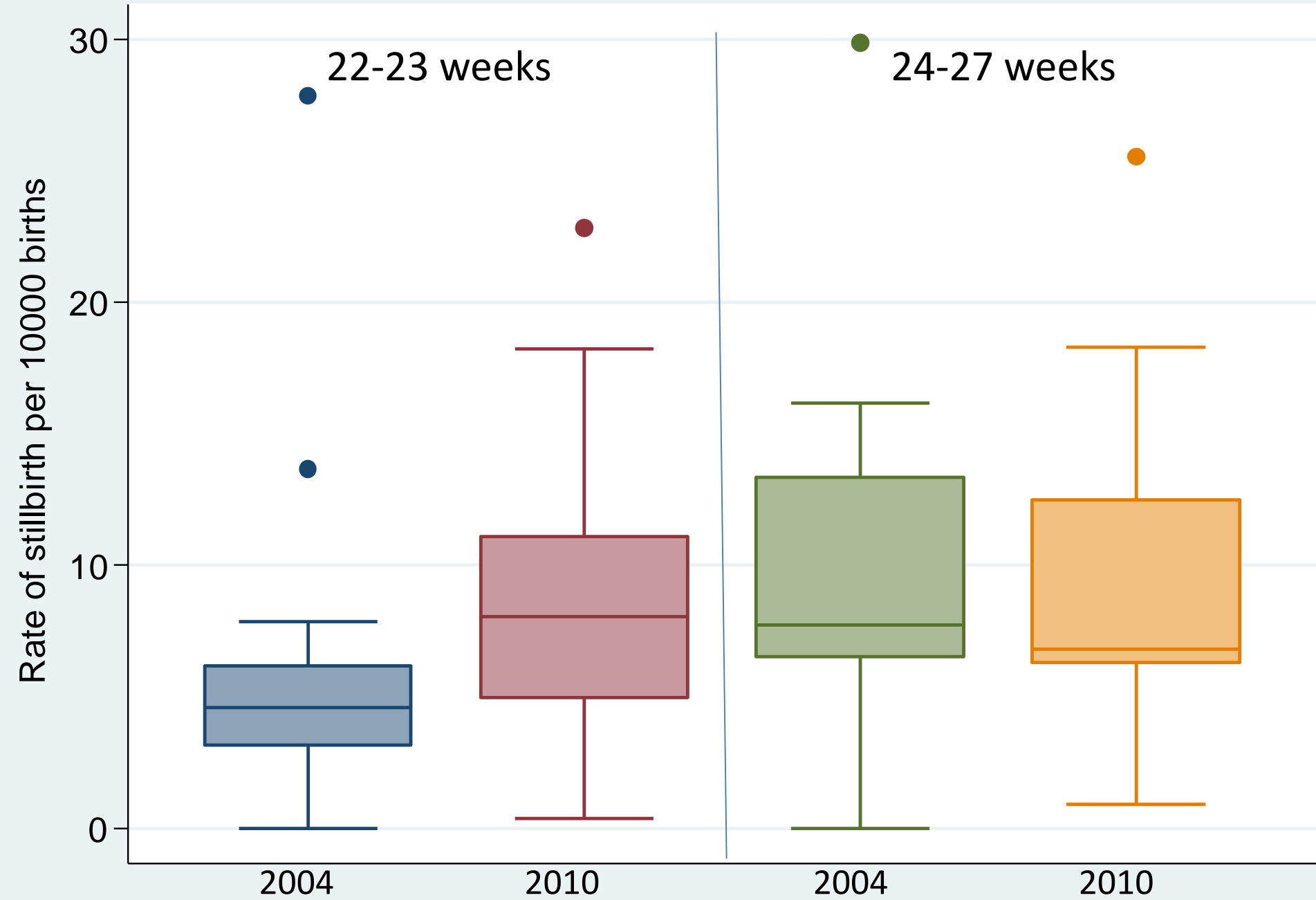
# Rate ratio of % live born at 24-27 weeks gestation 2010 v 2004



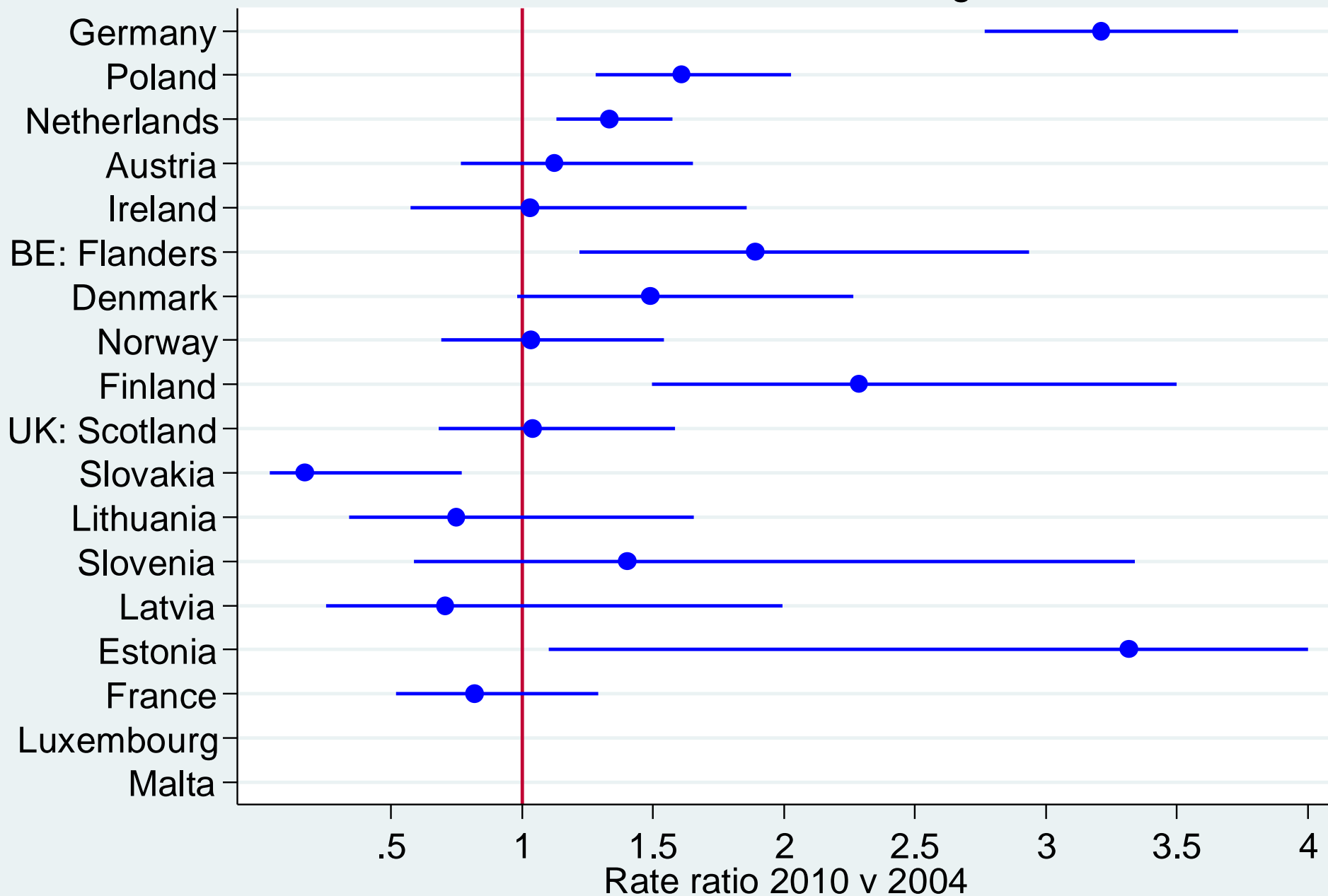
# Rate ratio of % live born 2010 v 2004



# Rate of stillbirth by gestational age

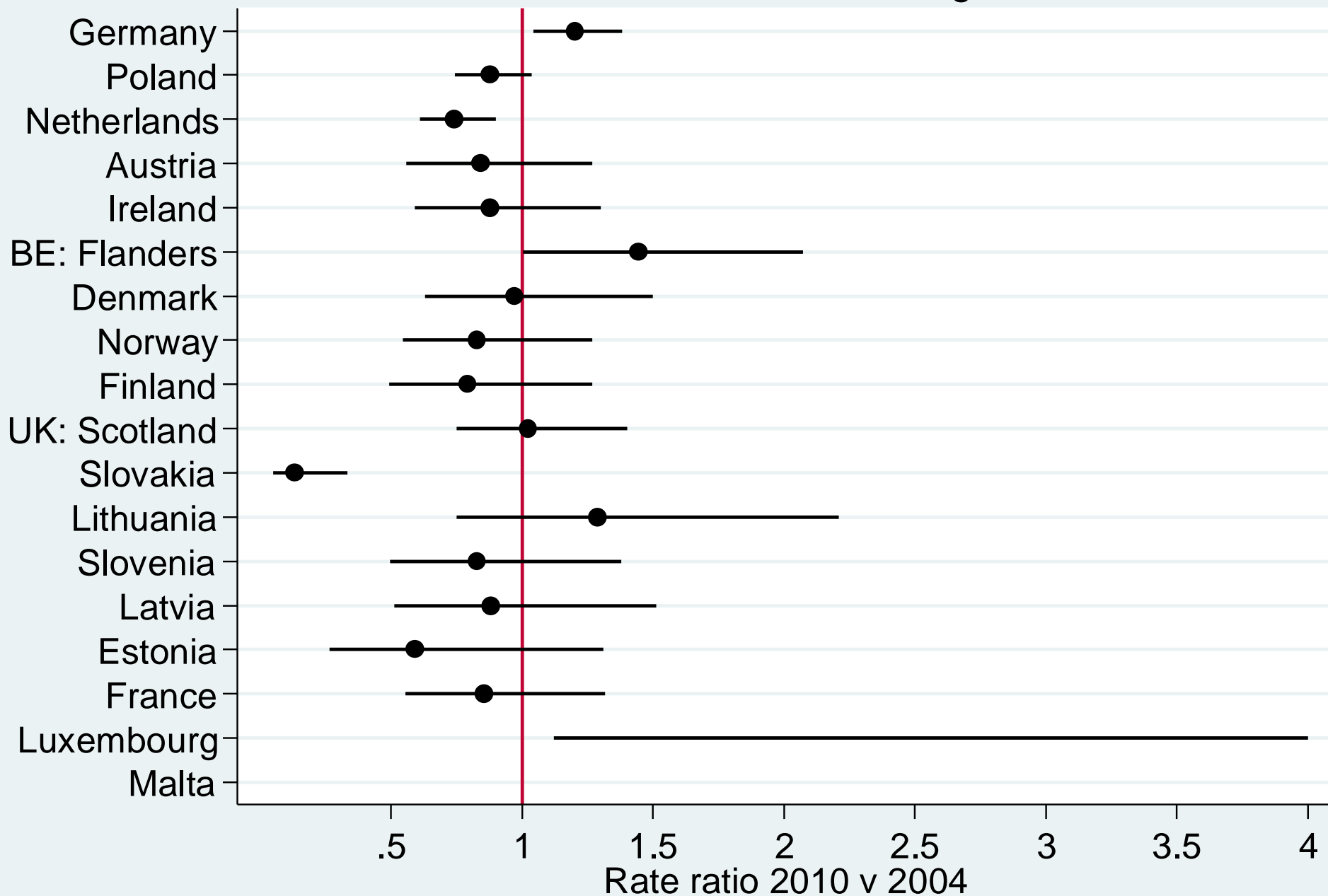


# Rate ratio of stillbirth rate at 22-23 weeks gestation 2010 v 2004

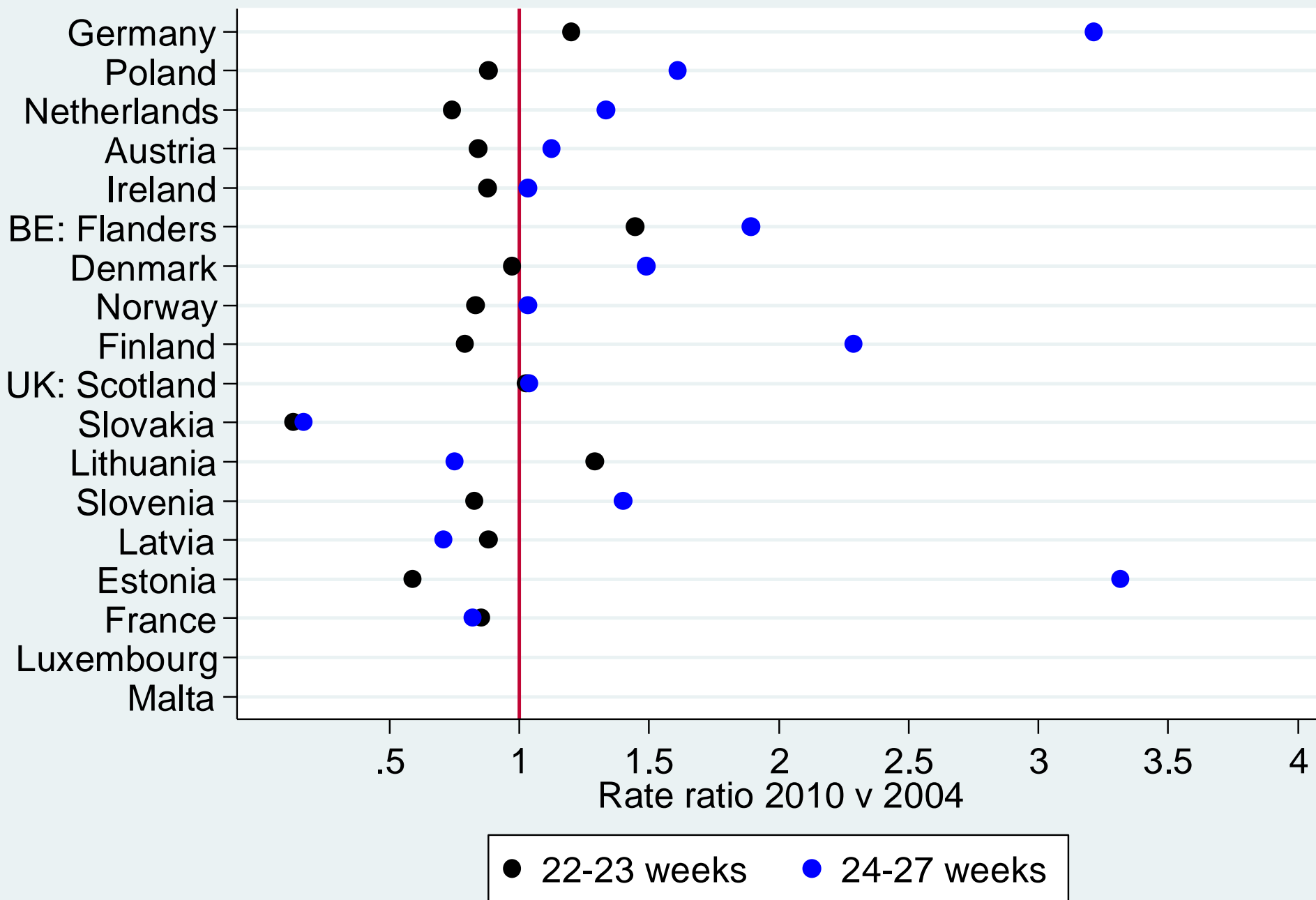




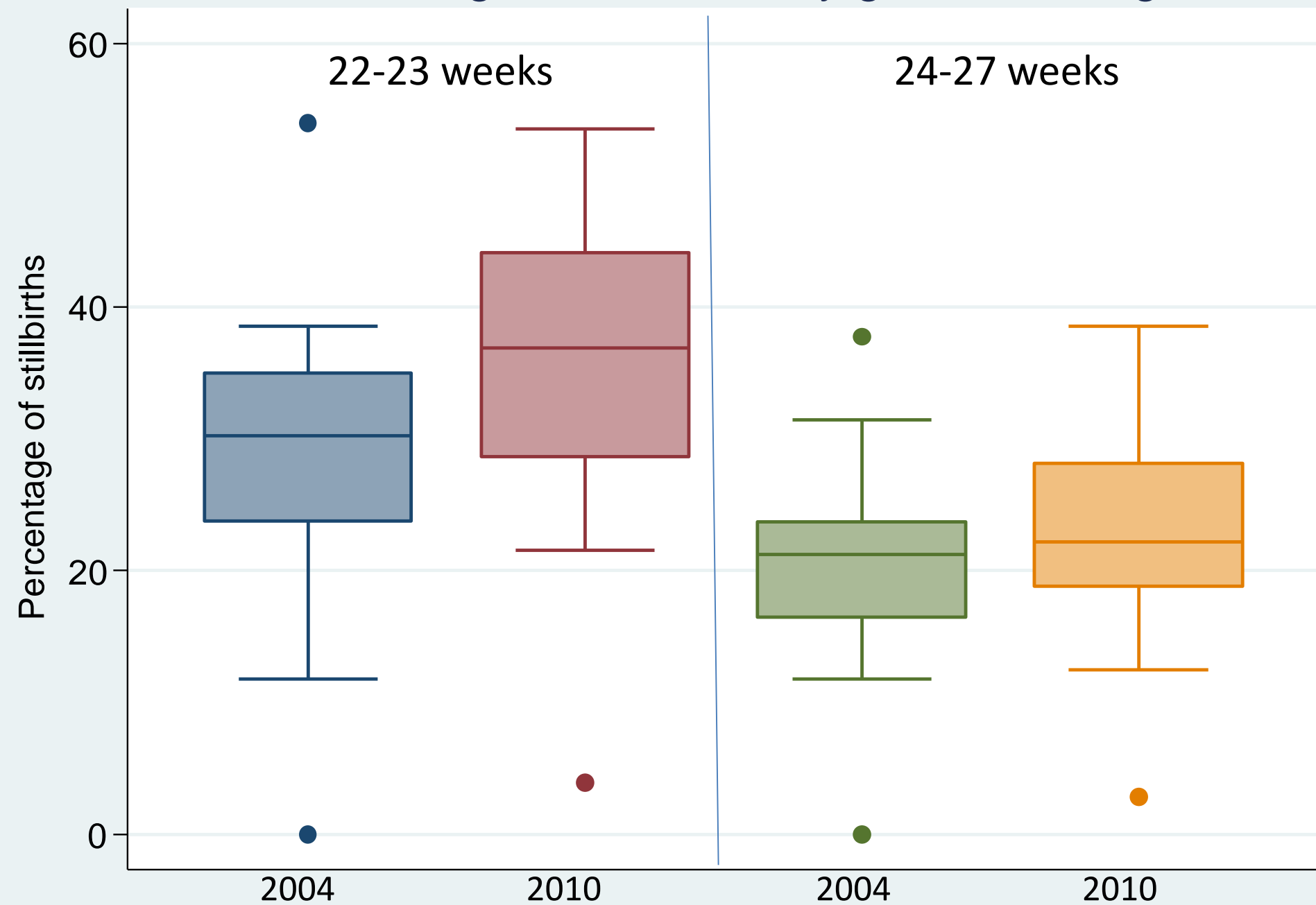
# Rate ratio of stillbirth rate at 24-27 weeks gestation 2010 v 2004



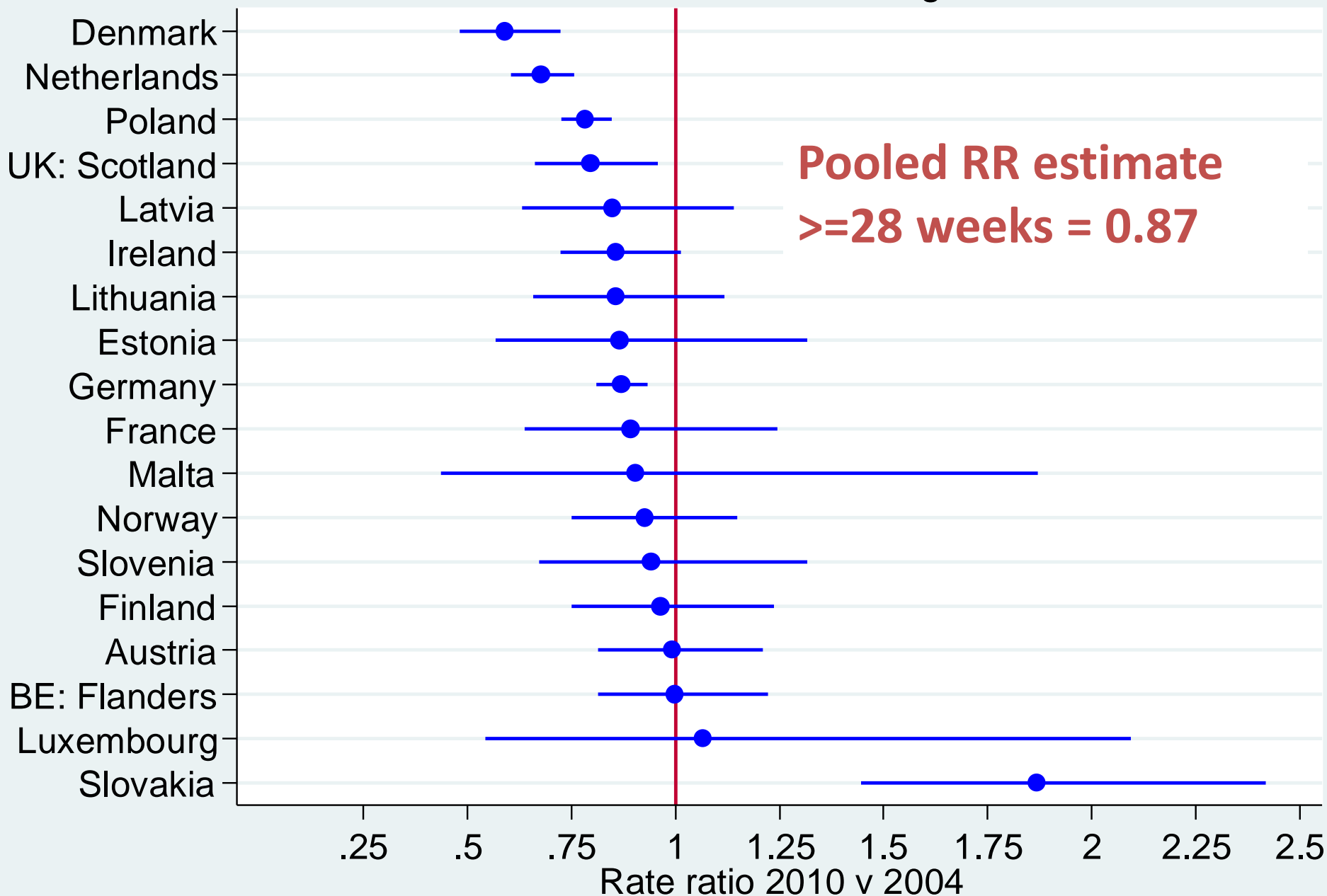
# Rate ratio of stillbirth rate 2010 v 2004



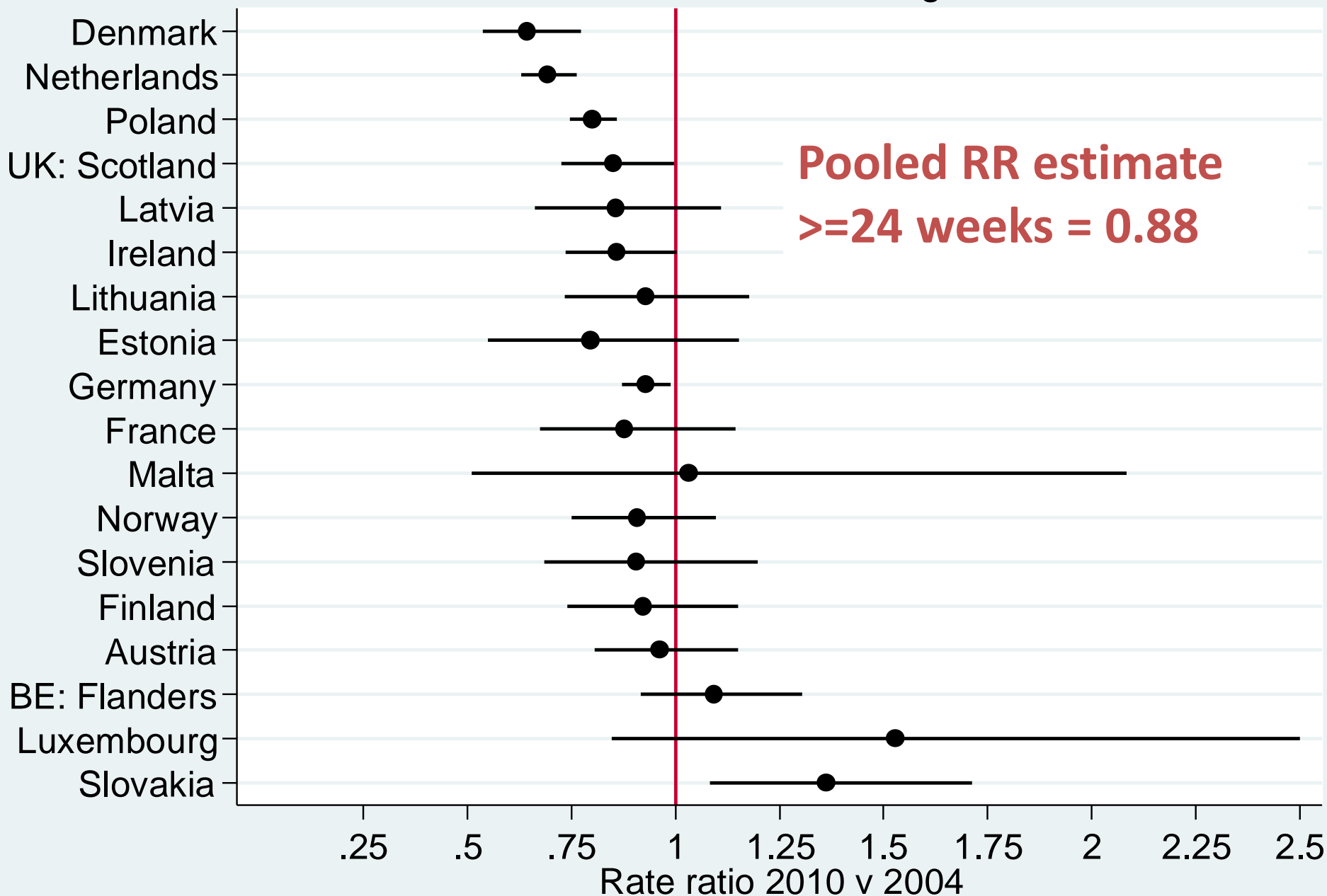
# Percentage of stillbirths by gestational age



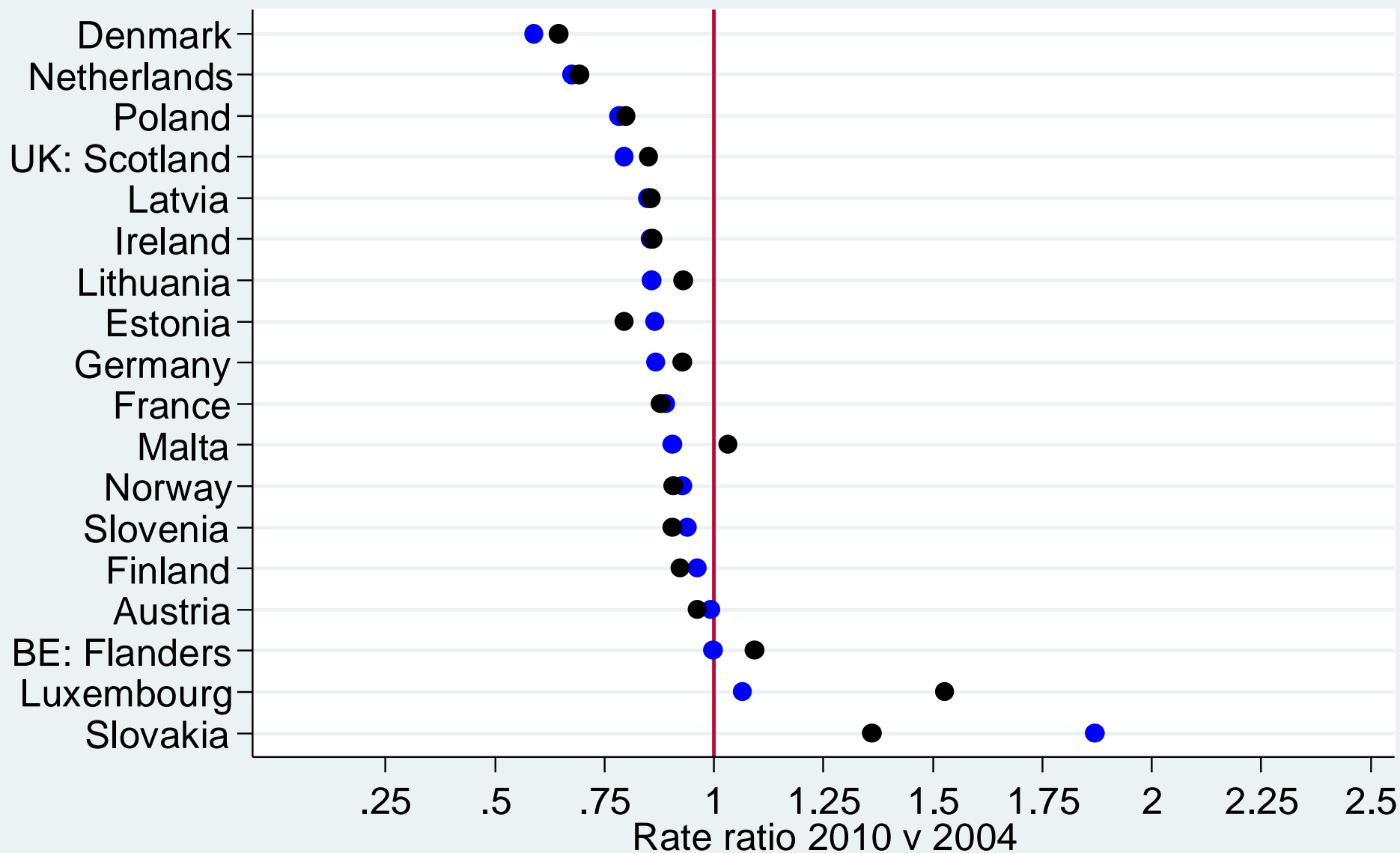
# Rate ratio of stillbirth rate $\geq 28$ weeks gestation 2010 v 2004



# Rate ratio of stillbirth rate $\geq 24$ weeks gestation 2010 v 2004



# Rate ratio of stillbirth rate 2010 v 2004



>=28 weeks



>=24 weeks

# Conclusions

- Reporting of births and stillbirths at:
  - 22-23 weeks
    - Wide international variation
    - Large changes over time
  - 24-27 weeks
    - Less international variation
    - Stable patterns over time

# Impact on mortality rates

- Measuring stillbirth from 24 weeks stillbirths to the standard stillbirth definition showed similar patterns
- Similar reduction in stillbirths seen at:
  - 24-27 weeks
  - $\geq 28$  weeks



# For discussion

- If we only include 28 weeks onwards we are not accounting for a large number of deaths
- These data suggest including births from 24 weeks gestation onwards is reliable
- This would also help account for an additional 20%-40% of deaths experienced by families

# Further work

- Extend to look at variation with birth weight
  - In terms of viability, birth weight is very important and gestational age is not as simple as suggested
- Incorporate information on terminations of pregnancies.
  - Varies widely between countries
  - Also important to acknowledge these deaths
  - But variation in when they take place so again not comparing “like with like”

Thank you