The Identification Problem

In the context of cohort analysis in social research, the identification problem arises when trying to disentangle the effects of age, period, and cohort. The identification problem is particularly acute when using age-period-cohort (APC) analysis, where the model assumes a one-to-one correspondence between age groups and cohort categories over time. When these categories do not align perfectly, the model may fail to recover accurate estimates of age, period, and cohort effects.

This issue is not limited to social research but also affects demographic studies, where age and cohort categories can change over time due to factors such as changes in birth rates or immigration patterns.

To address the identification problem, researchers often employ techniques such as age-period segregation, which helps to separate the effects of age and period, and the use of non-parametric methods, which can be more robust to the misalignment of age and cohort categories.

In conclusion, the identification problem is a significant challenge in cohort analysis, necessitating careful consideration of data collection methods and the use of appropriate statistical techniques to ensure valid and interpretable results.