

Understanding the Rise in Cannabis Treatment Demand

A „joint“ study in the Netherlands, Germany and the United Kingdom



European Monitoring Centre
for Drugs and Drug Addiction

TDI Expertmeeting 20-22 september 2012



IFT



Martin Steppan

IFT München

In cooperation with:

Andrew Jones (UK)

Jeroen Wisselink (NL)

Wil Kuijpers (NL)



Background

- For some years Treatment Systems have reported an increase in Cannabis Treatment Demand

(Wisselink & Kuipers, 2012; Steppan, Pfeiffer-Gerschel & Künzel, 2009-2011; Roxburgh, Donmall, Wright & Jones, 2011)

- EMCDDA, 2004 [selected issue])
- There is yet no evidence to understand this situation
- Research is needed that combines several scientific approaches (incidence, prevalence estimation, EMCDDA cross-country comparisons etc.) to give explanations for this situation



Formula for Treatment Demand

A change in treatment demand...

Hypothesis (A)

... is either due to changes in treatment probability...

$$TD_{year} = \sum_{n=0}^{\infty} n(\text{year} - n) \cdot p(n)$$

$n(2010)$... incidence in 2010
 $p(0)$: probability to have a delay between onset of disorder to treatment of 0 years.

... or due to changes in past incidence...

$$TD_{2012} = n(2012) \cdot p(0) + n(2011) \cdot p(1) + n(2010) \cdot p(2) + n(2009) \cdot p(3) + n(2008) \cdot p(4) \dots$$

Hypothesis (B)



Possible Explanations (hypotheses) for a Rise in Treatment Demand

- Changes in treatment probability (A)
 - Increased treatment probability
 - Higher societal awareness of cannabis as a serious problem
 - Higher treatment supply due to societal awareness
 - Better supply with focused cannabis treatment
 - Higher acceptance of therapy in general
 - Obligation for therapy due to legal authorities
 - Greater emphasis on young people services
 - Accelerated treatment probability
- Changes in incidence in the past (B)
 - Increased incidence of (pathological) cannabis consumption
 - Higher prevalence among general population
 - Equal prevalence, but higher rate of serious consumption (e.g. via higher doses of THC; higher popularity of serious application forms, e.g. „bong“)
 - Higher supply with cannabis products, e.g. „coffee shops“ in the Netherlands
- Explanations (A+B)
 - change in legal classification making use more ‘open’



Research Questions

- Is there really an increase in Cannabis treatment demand in NL, GER, UK?
- What is it like (linear, logistic, etc.)?
- Can it be traced back to an increased incidence in the last decade? (bad news [hypotheses A])
- Can it be traced back to an increased probability to seek treatment? (good news [hypotheses B])
- Can it be traced back to both causes? (good and bad news)
- Which hypotheses can be eliminated?



Method and Data

Method:

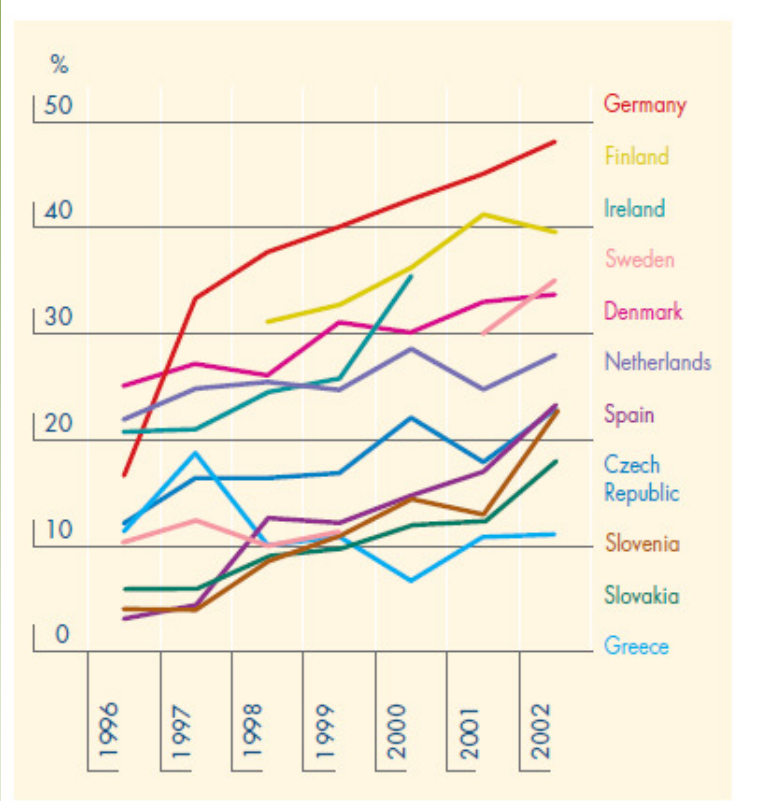
- Hypothesis elimination approach
 - ❖ (A) Cross-country comparisons (UK, GER, NL)
 - ❖ (B) Subregional comparisons (NL municipalities)
 - ❖ (C) Relative Incidence Estimation (GER, NL)

Data:

- National Treatment Documentation Systems
 - ❖ Ladis (NL), DSHS (Germany), NDTMS (UK)
 - ❖ Literature research (previous studies)



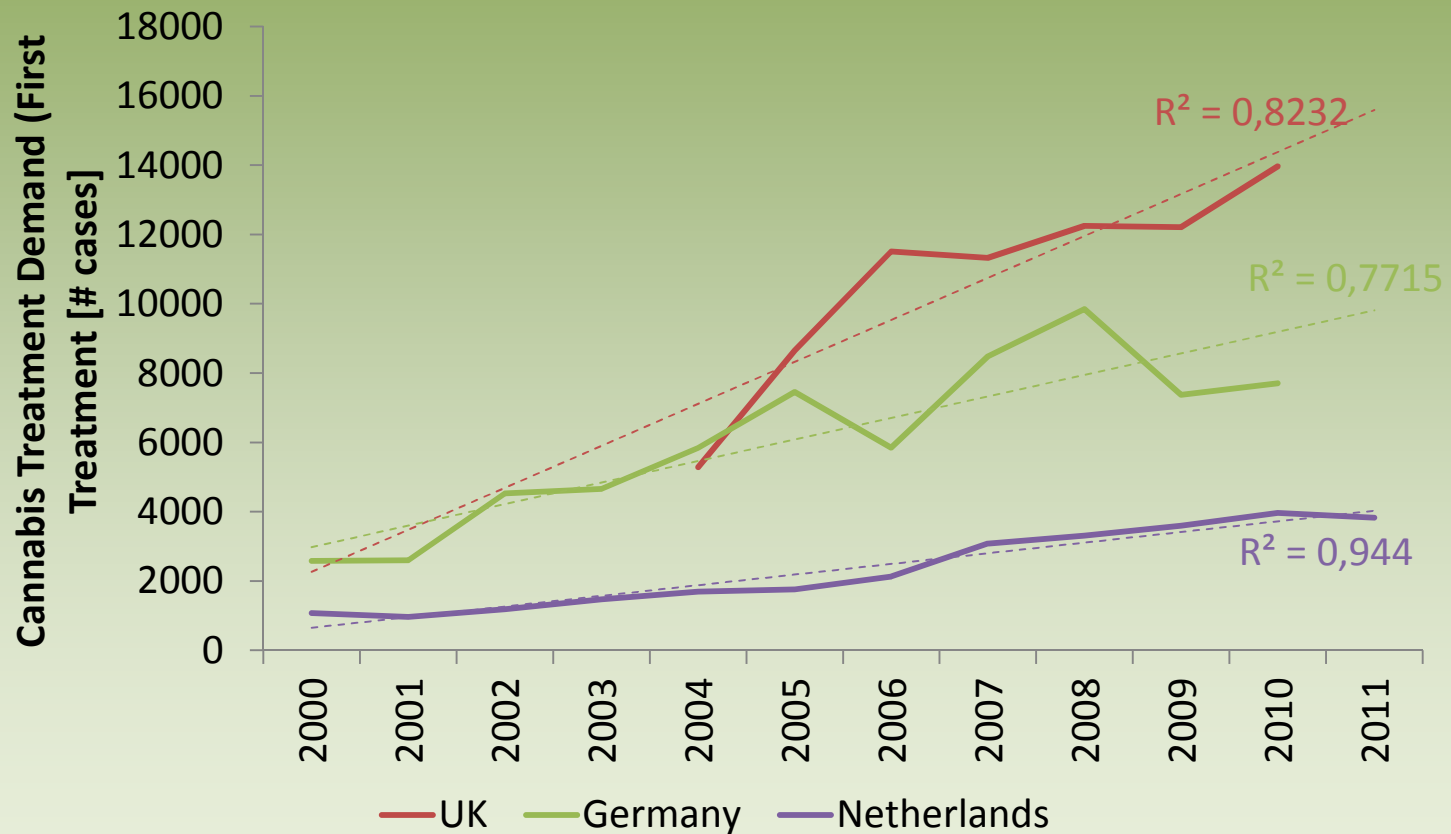
Results (A): EMCDDA-Reitox-Reports



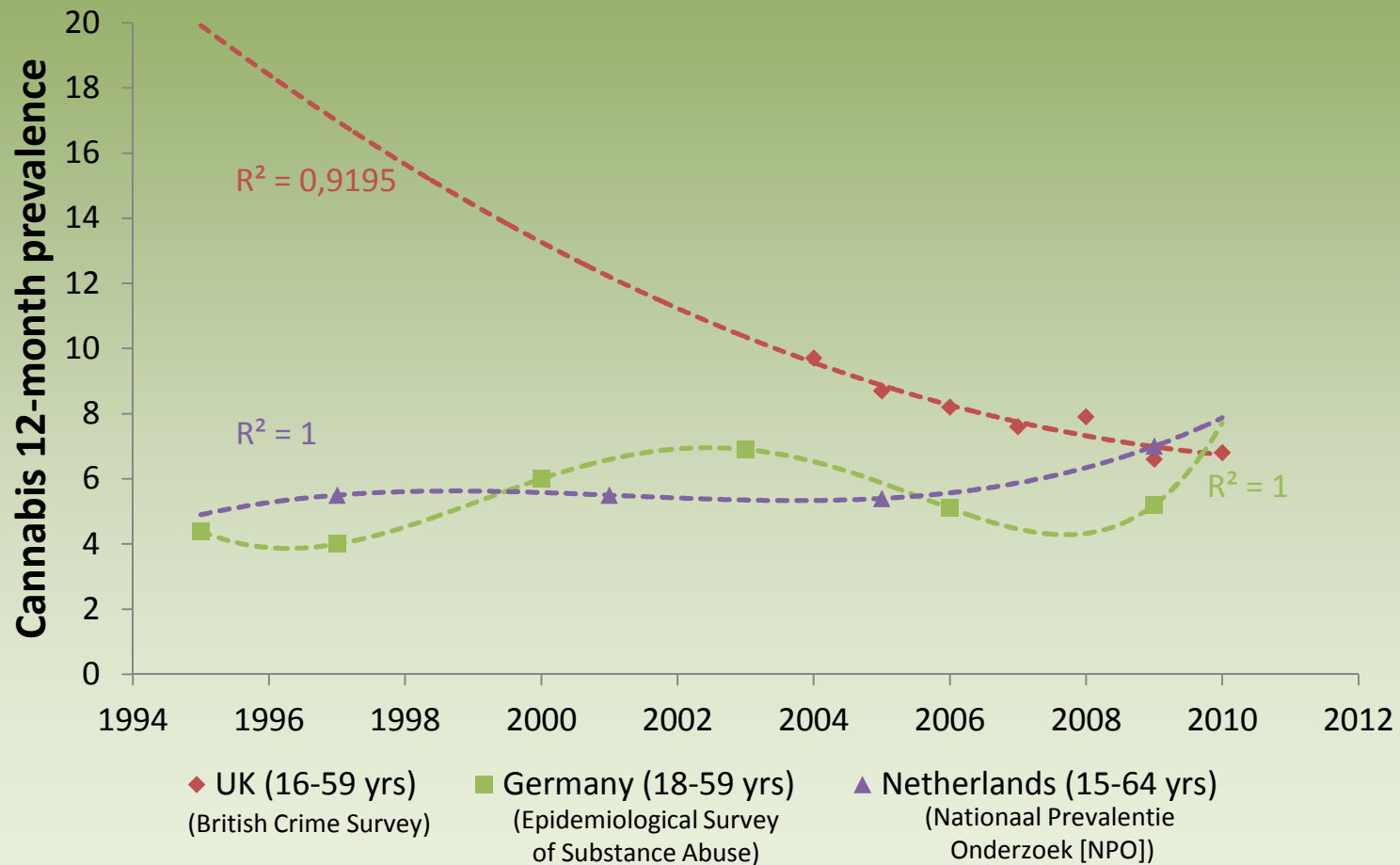
NB: Treatment in overall numbers (% of all clients).
 Average of trends (%) within countries.
 Countries providing data: CZ, DK, DE, EL, ES, NL, SL, SK, FI, SE.
 In Sweden, data for 1996-99 are from hospital treatment: the number of cannabis cases is thus relatively low compared with other years.
 Sources: Reitox national reports 2003.



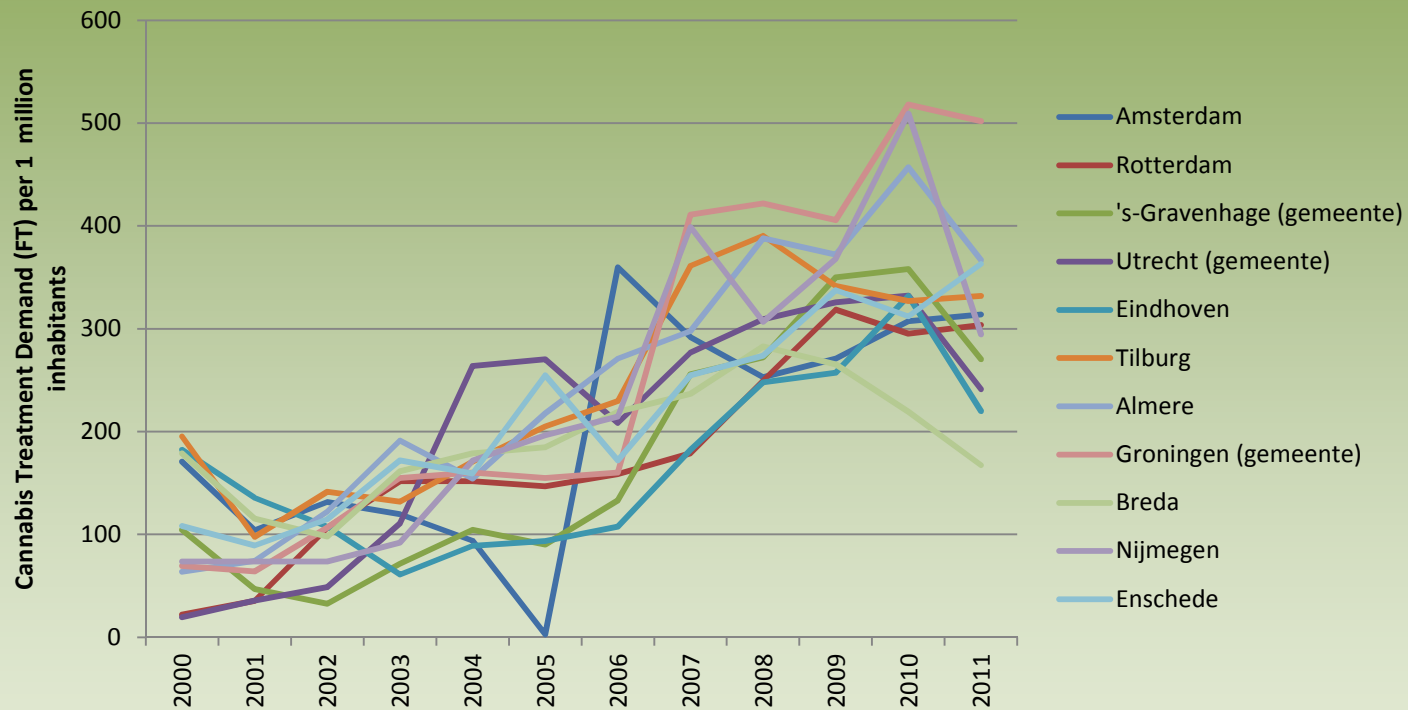
Results (A): Rise in Cannabis Treatment Demand



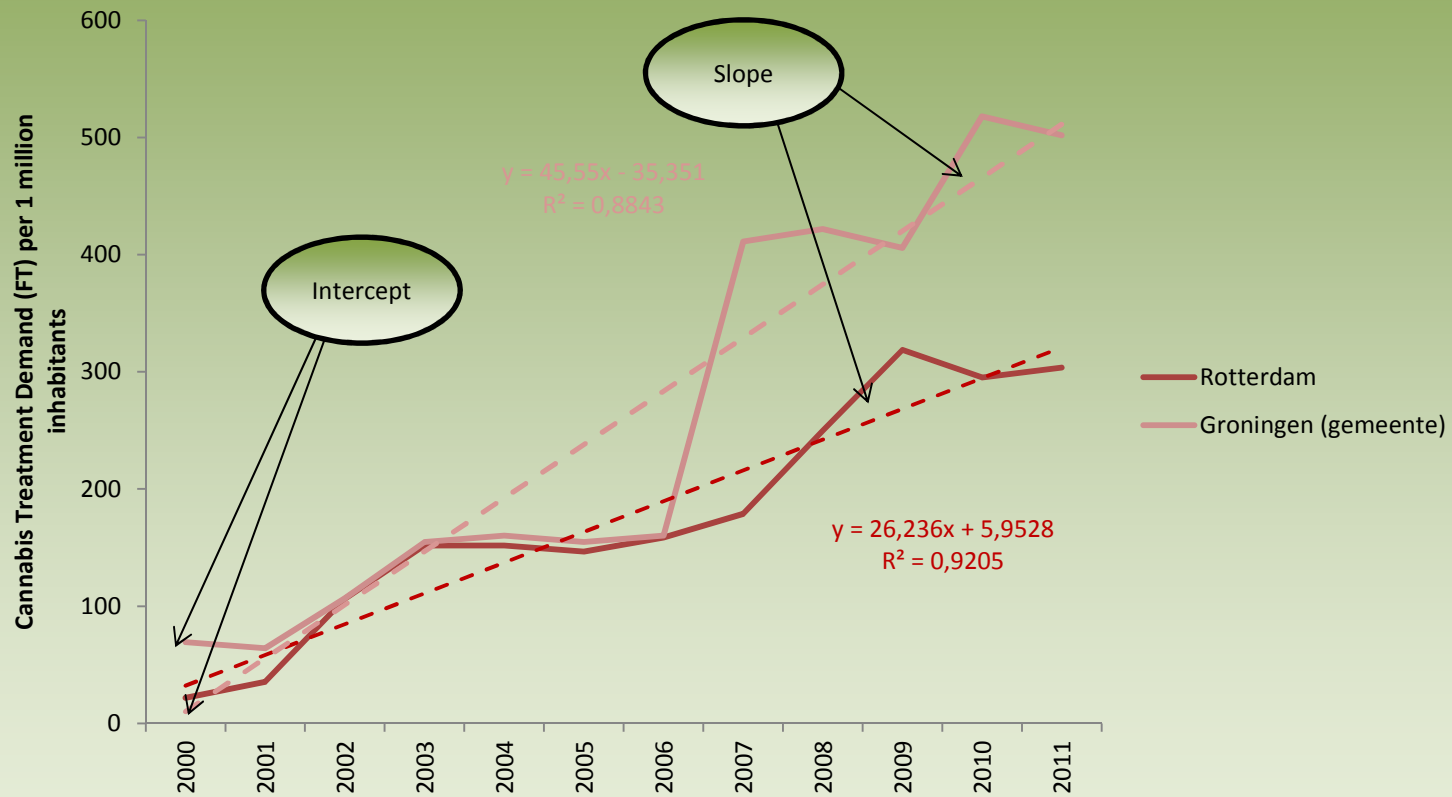
Results (A): Changes in Cannabis prevalence among general population



Results (B): Rise in Cannabis TD in the ten biggest cities in the Netherlands



Results (B): Linear Trend?

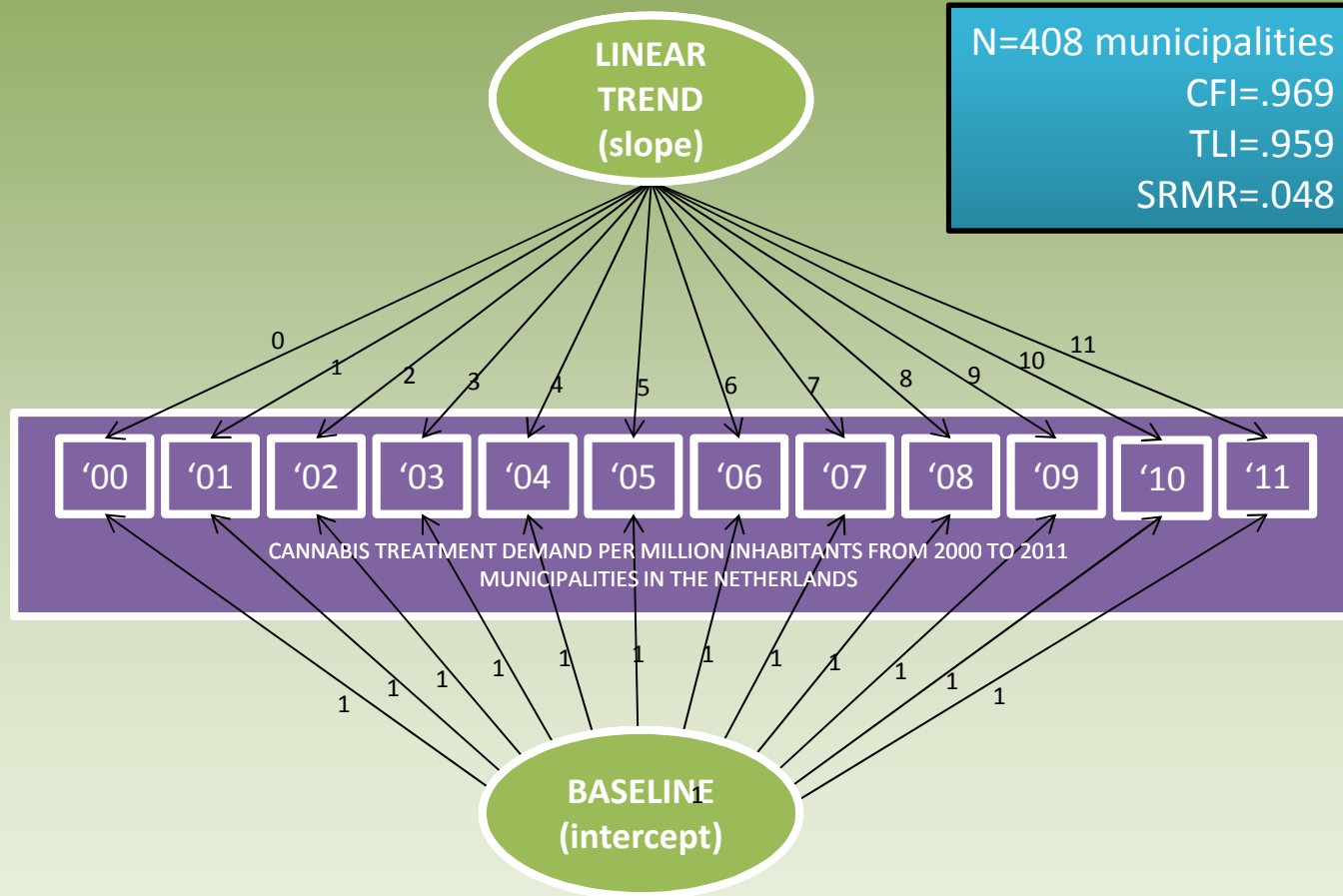


Summary (A): Cross-country comparisons

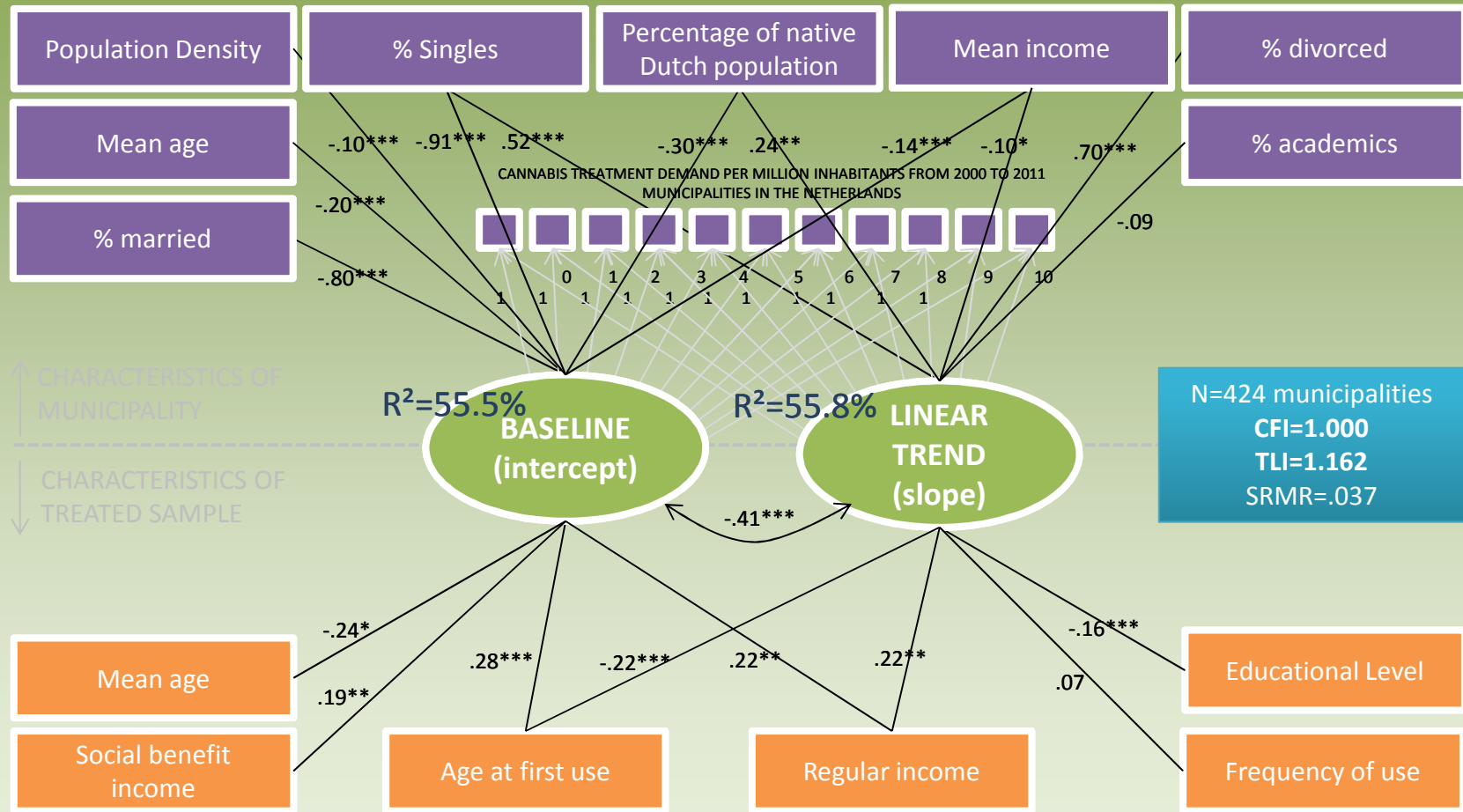
- Consistent increase in cannabis treatment demand in several countries since 1996 (EMCDDA, GER, UK, NL)
- No relationship with cannabis prevalence in the general population (GER, UK, NL)



Results (B): Latent Growth Curve Modelling



Results (B): Latent Growth Curve Modelling

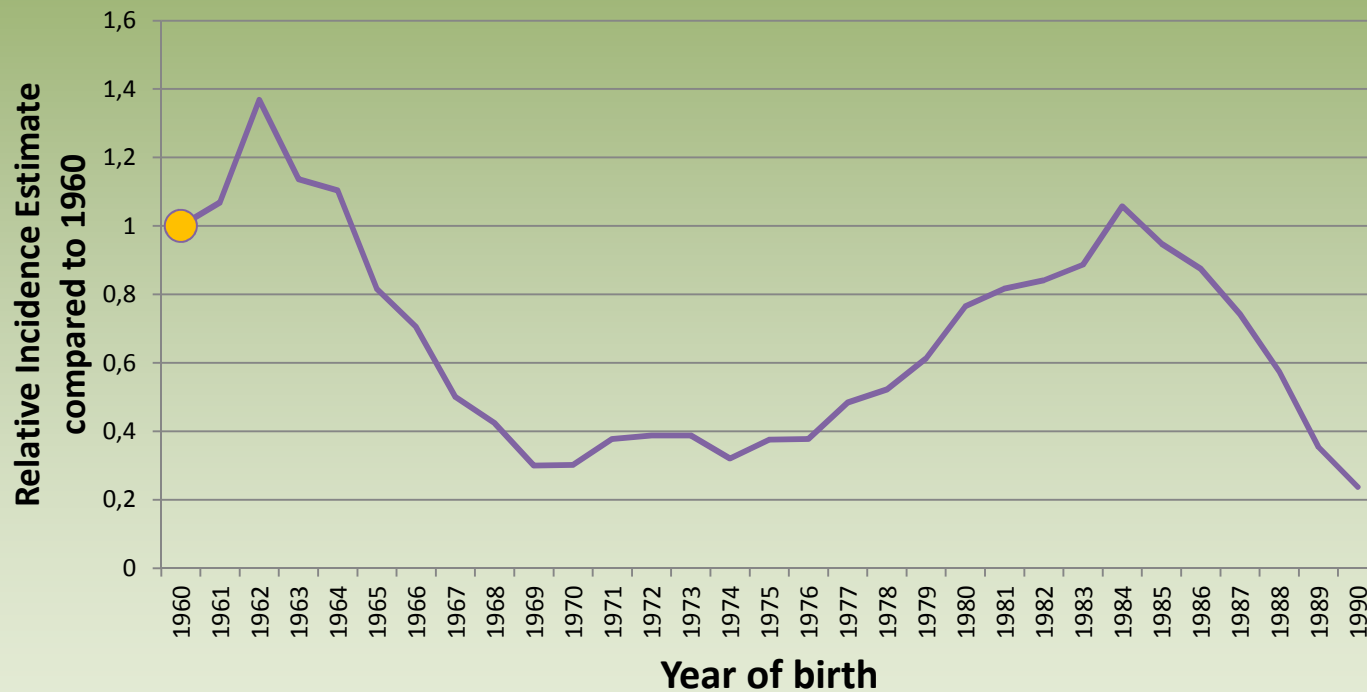


Summary (B): Subregional analysis (NL)

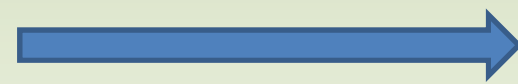
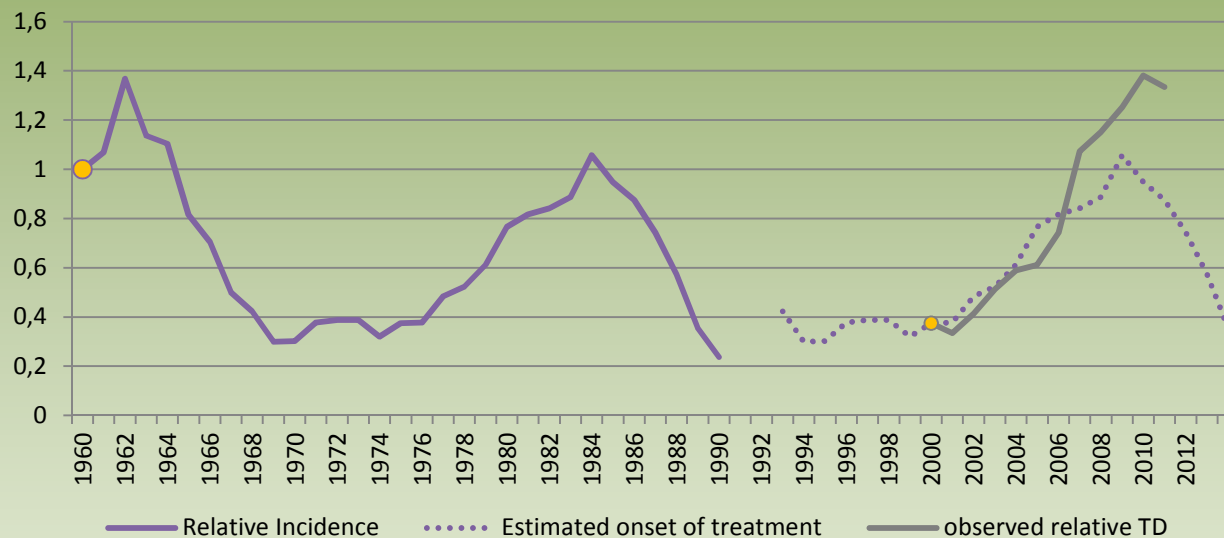
- Consistent linear increase in cannabis treatment demand across Dutch subregions
- Increase in cross-regional cannabis treatment demand in NL is mainly associated with
 - ‚destructurization‘ of traditional familial bonds (in municipalities with more singles and more divorces)
 - other demographic and behavioural predictors (lower educational level, lower percentage of migrants, lower but more often regular income, lower age at first use)



Results (3): Relative Birth Cohort Incidence Estimation (NL)



(3) Relative Birth Cohort Incidence and Treatment Demand Forecast



Average Age at onset of treatment (26 years)



Summary (C): Relative Incidence Estimation NL

- Birth cohort incidence peak in 1962 and 1984
- Combined with the typical age at onset of treatment the increase in cannabis treatment demand can be explained (nearly perfectly)



Summary

- (A): Cross-country comparisons (EMCDDA, UK, GER, NL):
 - Consistent increase in cannabis treatment demand not related to changes in prevalence among the general population
- (B): Subregional analysis (NL):
 - Consistent linear increase in cannabis treatment demand best explained by social structure determinants
- (C): Relative Incidence Estimation
 - High concordance of incidence estimates with lagged treatment demand figures
 - suggesting a decline within few years



Which hypotheses can be eliminated?

- Changes in treatment probability (A)
 - Increased treatment probability
 - Higher societal awareness of cannabis as a serious problem
 - Higher treatment supply due to societal awareness
 - Focused cannabis treatment due to societal awareness
 - Higher acceptance of therapy in general
 - Obligation for therapy due to legal authorities
 - Accelerated treatment probability
- Changes in incidence in the past (B)
 - Increased incidence of (pathological) cannabis consumption
 - Higher prevalence among general population
 - Equal prevalence, but higher rate of serious consumption (e.g. higher doses of THC; higher popularity of serious application forms, e.g. „bong“)
 - Higher supply with cannabis products, e.g. „coffee shops“ in the Netherlands



Answers to Research Question

RESEARCH QUESTION:

- Is there really an increase in Cannabis treatment demand in NL, GER, UK? **YES**
- What is it like (linear, logistic, etc.)? **QUITE LINEAR**
- Can it be traced back to an increased incidence in the past? (bad news) **PROBABLY YES**
- Can it be traced back to an increased probability to seek treatment? (good news) **NO EVIDENCE YET**
- Can it be traced back to both causes? (good and bad news) **NO EVIDENCE YET**
- Which hypotheses can be eliminated?



End of presentation

Thank you very much for your attention!

For more information:

steppan@ift.de

jeroen.wisselink@sivz.nl

andrew.jones@manchester.ac.uk

