OPTIC

Optimal Policies for Transport in Combination

Un-intended effects of transport policies

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Introduction

- Transport systems are complex and outcome depends on multiple factors

- It is a challenge to avoid un-intended, negative side-effects in transport policy

- The paper aims to increase abilities to account in practice un-intended effects by building a typology

Focus and definition

Focus:

Significant non-intentional effects which may or do arise through policy interventions in the transport sector.

Definition:

Non-intentional effects are effects not reflecting the political decision makers' explicit intentions with respect to the policies they design and adopt

Outline

- Examples of un-intended effects
- Primary and secondary effects
- Intentions and knowledge
- Key types of effects
- Use of the typology

Examples - I

- Of 79 examples of adopted measures from Europe, un-intended effects were reported for the majority

- Un-intended effects can be negative as well as positive

Examples - II

Negative effects:

- CO_2-differentiation of vehicle tax in Norway => increase in diesel cars => increase in particulate emissions

- Motorway toll system for lorries in Czech Republic => lorries use low class roads => negative environmental and safety effects

Examples - III

Positive effects:

- Digital tachographs in Germany => helped trucking companies improve fleet management abilities

In several cases unclear if possible unintended effects have occurred or not

Primary and secondary effects

- Primary effects are related to specific, explicit objectives (= intentions)
- Secondary effects relate to other objectives
- Primary as well as secondary effects can be positive and negative

Primary and secondary - example

Enforcement of speed limit measures near schools to protect children from accidents

- Primary effect: Childrens' traffic safety in those areas

- Secondary effects: Traffic safety effects for others groups; objectives to keep expenses low; objectives to save energy in traffic

Intentions and knowledge- I

Two dimensions of effects:

- Whether intended or not

- Whether perceived or not

…in a given situation

Intentions and knowledge- II

Knowledge dimension	Consequence dimension		
	Intentional	Non intentional	
		Counter intentional effects	Secondary effects
Known	The consequences that decision makers intended with the intervention	Counter-intentional effects that were anticipated at the time of decision	Secondary effects that were anticipated at the time of decision
Unknown	Advantageous effects that are not known; expedient	Counter-intentional effects not known at the time of decision	Secondary effects not known at the time of the decision

Intentions and knowledge- III

- Knowledge of policy effects is not an 'either-or' situation.

- Rather a continuum between conceptually accurate and exhaustive models and complete ignorance

Intentions and knowledge - IV

- Situations where causal models linking intervention to effects exist and is specified correctly

- Situations where causal models are applied, but the application of them fail to consider full effects

- Situations where causal assumptions are made, which however fail to take into account significant recognised causal models, or evidence

- Situations where no models to predict cause and effect are feasible

Intentions and knowledge - V

Knowledge dimension	Consequence dimension		
	Intentional	Non intentional	
		Counter intentional effects	Secondary effects
Causal models – correctly specified			
Conceptual models – not full effects			
Causal assumptions – not including significant evidence			
No models are feasible			

Key types of effects

Knowledge dimension	Consequence dimension		
	Intentional	Non intentional	
		Counter intentional effects	Secondary effects
Causal models – correctly specified			
Conceptual models – not full effects	**Overdone** **Spill over**	**Off the mark** **Not-In-My-System**	
Causal assumptions – not including significant evidence		**Blind spot**	**Secondary blind spot**
No models are feasible		**Black Swans**	

Key types of effects

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Overdone

Policy-makers have a correct causal model of the situation, but their 'weighting' of the various elements is inaccurate.

$\Rightarrow$ The outcome *inflates* notably from the predicted Outcome.

Key types of effects

Knowledge dimension	Consequence dimension		
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Spill over

Policy-makers have a correct causal model of the situation, but they omit a part of the whole system from their considerations.

$\Rightarrow$ Effects are underestimated.

Key types of effects

Knowledge dimension	Consequence dimension		
	Intentional	Non intentional	
		Counter intentional effects	Secondary effects
Causal models – correctly specified			
Conceptual models – not full effects	Overdone Spill over	Off the mark Not-In-My-System	
Causal assumptions – not including significant evidence		Blind spot	Secondary blind spot
No models are feasible		Black Swans	

Off the mark

Policy-makers have a correct causal model of the policy situation, but their weighting of the various elements is partially inaccurate.

$\Rightarrow$ The measure fails to produce the expected results in terms of magnitude or when it occurs.

Key types of effects

Knowledge dimension	Consequence dimension		
	Intentional	Non intentional	
		Counter intentional effects	Secondary effects
Causal models – correctly specified			
Conceptual models – not full effects	Overdone Spill over	Off the mark Not-In-My-System	
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Not-In-My-System

Policy-makers have a correct causal model of the situation, but they omit a part of the whole causal system from their considerations.

$\Rightarrow$ It creates problems elsewhere

Key types of effects

Knowledge dimension	Consequence dimension		
	Intentional	Non intentional	
		Counter intentional effects	Secondary effects
Causal models – correctly specified			
Conceptual models – not full effects	**Overdone** **Spill over**	**Off the mark** **Not In My System**	
Causal assumptions – not including significant evidence		**Blind spot**	**Secondary blind spot**
No models are feasible		**Black Swans**	

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Blind spot

Policy-makers assume an inaccurate causal model of the policy situation.

$\Rightarrow$ The predicted outcome of the intended effect differ significantly from the actual outcome leading to counter-intentional effects.

Key types of effects

Knowledge dimension	Consequence dimension		
	Intentional	Non intentional	
		Counter intentional effects	Secondary effects
Causal models – correctly specified			
Conceptual models – not full effects	Overdone Spill over	Off the mark Not-In-My-System	
Causal assumptions – not including significant evidence		Blind spot	Secondary blind spot
No models are feasible		Black Swans	

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Secondary blind spot

The inadequate causal assumptions extend into secondary effects.

=> The elements ignored can potentially encompass a very wide spectrum of secondary effects, and can be challenging to address.

Key types of effects

Knowledge dimension	Consequence dimension		
	Intentional	Non intentional	
		Counter intentional effects	Secondary effects
Causal models – correctly specified			
Conceptual models – not full effects	**Overdone** **Spill over**	**Off the mark** **Not-In-My-System**	
Causal assumptions – not including significant evidence		**Blind spot**	**Secondary blind spot**
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Black Swans
An effect can occur that was not known before, never occurred in that policy context or have only existed as speculation.

=> Sometimes such events have effects that far outweigh normal occurrences.

Use of the typology - I

- The ambition has been to build a systematic and logical typology of unintended effects

- The typology does *not*

  - describe actual policy making

  - provide explanations

  - provide prescriptions

Use of the typology - II

- The typology demonstrates the importance of policy-makers situational knowledge, causal assumptions and jurisdictional influence

- It is intended for use in 'enlightened' policy assessment and a framework of policy packaging in OPTIC

- By acknowledging and defining non-intentional effects they can be accounted for in policy design