A DATABASE ON WORLD INFRASTRUCTURE REGULATION

A research project by WCTRS SIG-4

Deliverable 2.2: HIGHWAYS Database explanation

Prepared by:

TRASPOL – Dipartimento di Architettura e Pianificazione
Politecnico di Milano
Milan (Italy)
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1. **INTRODUCTION AND GENERAL INFORMATION**

This brief note provides some guidelines for filling the forms of the survey and eliminating possible ambiguities.

The structure of the survey deals with four modes and the same structure is used in this explanatory note. For each mode there are three areas that we consider:

- General aspects;
- Regulatory aspects;
- Regulatory Institutions.

The survey, described in the aims in Deliverable 1, is conducted via electronic forms available at the website: [www.transregulation.org](http://www.transregulation.org).

The survey refers to the infrastructures only, except some context questions (specified) that refer also to the services and to the demand.

At the end of each form few indications about the sources used and quoted are requested. It is important to indicate:

- The release date of the quoted source;
- Year to which data refer;
- A comment on source reliability;

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<th>Source [release date]</th>
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The whole survey has been built, as far as possible, using closed questions. Nevertheless, in order to let collaborators express part of the complexity of the issue, some “open comments” fields have been introduced. Each author is welcomed to provide specific explanations concerning the data or to comment specific situations not classifiable in the closed questions.

It would be useful, at the moment of data collection, to send a copy (or the link) of the main quoted sources to the database managers in order to make them available to the users and to be shared in the SIG website. If the document is available via payment, the website will publish the link to the seller (the journal editor, for example), otherwise the file will be freely available.
2. HIGHWAYS

2.1 Highways General Aspects Database

1G. Network Management Model

☐ Direct state provision by national agency
☐ Provision by local or regional agency
☐ Public concession
☐ Private concession
☐ Mixed concession
☐ Private provision (no concession)

*Explanation:* This question considers both the type of concession and the nature of the subject that manages the infrastructure.

*Private concessions* and *public concession* (or *mixed*) refer to a private owned or state owned (or public-private owned) agency that manages the infrastructure for a defined period; this situation differs from the *direct* (or *local*) *state provision* when the State or a Local Authority directly build and operate infrastructures and there’s no limitation in time to the direct public involvement. The *private provision* considers an infrastructure built and managed by a private subject without any concession.

Please consider here PF, PFI and PPP as concession.

For example, EU rail networks are usually *public concessions*, i.e. concessions held by a public company. In the past EU states used to provide directly rail services and moreover the network (*direct state provision*).

2G. Describe the general concession framework

*Explanation:* For example specify the relationships between concessionaires and public bodies, also detail peculiarities in types of concessions.

3G. Is the tool of Project Financing used?

☐ Yes   ☐ No

*Explanation:* With Project Financing we mean a new concession for a brand new project, pick yes also if few PF applications exist in the country (i.e. if such tool is used). Otherwise pick no (also in the case of a new project or extension associated to an existing concession).

4G. Type of the concessions
Build Operate and Transfer (BOT)
Operate and Transfer (OT)
No concessions (Building only)
Other (specify in the comments)

5G. Who owns the infrastructure?
- State
- Private
- Temporary private (to be transferred to the State at the end of the concession period)
- Other (specify in the comments)

Comments

6G. Total main network length [route km, whole country] 

Explanation: Since there isn’t a shared definition for highway infrastructure, indicate here the total length of the main networks in the whole country, excluding regional, local and rural roads; include multiple lanes roads, toll roads, main national roads and in general all the roads potentially economically exploitable otherwise specify which categories are included.

You may also introduce here the total length of the network according to the definition of highway used in your country. This information has not a statistical importance but it is useful to understand the weight of the regulated network on the overall extension.

Optionally: specify in comments the extensions according to the previous classification.

7G. Number of concessionaires

Comments

8G. Duration of the concessions [years]

Explanation: Indicate how many years the concession can last, in particular specify if there are maximum durations foreseen by law.

If there are differences among the main network and the local ones, please provide here the info for the main network and specify the rest in the comments, if available.

If a network is formally a concession, but the concession lasts indefinitely, please write “9999”.
9G. **Transport demand [whole country]**

- Million veic-km/year
- Million commercial veic-km/year
- Million passengers /years

*Explanation:* provide up to date information, possibly using at least one of the indicator used above. If there are no information available for the whole country, please provide the data for the main network only. Then, specify the fact in comments.

10G. **The access to the infrastructure is**

- Free
- Toll system
- Shadow toll
- Vignette
- Other (specify in the comments)

*Explanation:* **Vignette model** (like in Switzerland) requires the payment of an annual flat toll for the use of the motorway; in the **Shadow toll system** the Administration pays the contractor on an annual basis depending upon the volume of traffic using the road and service levels.

**Comments**
2.2 Highways Regulatory Aspects

1R. How are the concessions (and their renewals) awarded?
   - Tendering mechanisms
   - Direct negotiation
   - Other (specify in the comments)
   - No concessions

**Explanation:** Pick negotiation if the concession is awarded after a negotiation between the concessionaire and the grantor of the concession.

2R. Describe the regulatory mechanism

**Explanation:** Provide a short description of the mechanism focusing possibly on the practical problems

Comments

3R. Is regulation designed to promote efficiency in investment and operating costs?
   - Yes
   - No
   - Not Available

**Explanation:** Provide in comments a short description of the mechanism underlining the incentive tools used, if any. Otherwise comment why regulation is not incentivating.

Comments

4R. Is the regulatory mechanism applied subjected to periodical review?
   - Yes
   - No
   - Not Available

**Explanation:** Are regulatory mechanisms used subjected to periodical updating? For example, the claw back for price cap regulation, or periodical renewals of concessions by tendering. Pick not available if this information is not known.

5R. Is the network division based on some economic evaluations?
   - Yes
   - No
   - Not Available
**Explanation:** Specify if the network is divided on the basis of any kind of economic consideration (for example, applying the concept of *minimal efficient dimension*). Otherwise pick “no”, for example if the division derives from geographical - historical evaluations or if there is no network division.

**6R. Size of the concessions**

- [ ] Single links
- [ ] Networks
- [ ] Area concessions

**Explanation:** In a complex network, concessions dimension can be of three types. If the concessionaire is in charge of one single segment of the network, possibly with minor secondary segments only, pick “single links”. If concessions include more than a single link/segment, we talk of a **network concession**. In the case of **area concession**, the operator manages and exploits not only the principal highway network, but also the non toll secondary roads that provide traffic to the main network.

![Networks Concessions: the concession is unrelated with geographical dimension](image)

![Area Concession: every road included in an area is managed by one single operator](image)

**7R. Is the Yardstick Competition / Benchmarking Regulation applied?**

- [ ] Yes
- [ ] no
- [ ] not available

**Explanation:** The YC/benchmarking could be applied not only if there are private concessionaires but also in presence of public operators asking for the subsidy.
8R.  Pricing method

☐ Construction and operating costs
☐ Construction and operating costs, with subsidies for the investments
☐ Operating costs only
☐ Other (specify in the comments)

Explanation: “construction and operating costs” refer to fares covering the full costs related to infrastructure provision. In case of public subsidies covering part of the investment costs, pick the second option. “Operating costs only” refers to the case of building costs paid by public and thus excluded by the fare.

In the answer please refer to the cost recovery rather than to principles, that might result unapplied. For example, if a principle of average cost pricing is stated, but actually the charges revenues are insufficient to repay construction, pick “Operating costs only”.

9R.  Are some external costs included in the tariffs?

☐ Yes
☐ No
☐ Other (specify in the comments)

Explanation: specify if tariffs consider congestion, air pollution, noise, land take and other externalities.

Comments

10R.  STRENGTH OF THE ACTUAL REGULATORY FRAMEWORK


11R.  PROBLEMS OF THE ACTUAL REGULATORY FRAMEWORK


Highways Regulatory Institutions

*This part wants to define some aspects related to the Regulatory Institutions, the structure is the same for all modes.*

**Name of the Regulatory Institution**

1. **Is the Regulatory Institution**
   - □ Independent
   - □ Governmental (part of a Ministry)
   - □ Part of the network operator
   - □ No Regulatory Institution
   - □ Other (specify in the comments)

   *Explanation: Pick part of the network operator if the Regulatory Institution also manages part of the network (e.g. ANAS for Italy, NHAI for India)*

2. **Is the Regulatory Institution**
   - □ Mode specific
   - □ All transport modes
   - □ Multi-sectoral
   - □ No Regulatory Institution

3. **Is the Regulatory Legislation**
   - □ Already established
   - □ In progress
   - □ Other (specify in the comments)

**Comments**

4. **Tasks of the Regulatory Institutions**
   - □ Set or approve the value of tolls
   - □ Collect tolls
   - □ Decide or approve the investments
   - □ Award the concessions
   - □ Is responsible for the safety aspects
   - □ Has a function of settle the conflicts
   - □ Examining efficiency e.g. by Benchmarking / Yardstick Competition
   - □ Other (specify in the comments)
Explanations: Under the name of “Regulatory Institution” single countries can include completely different tasks. Only some of them are directly related to economic regulation (set value of tolls, for example) while others are more general (safety, for example). Pick here all the functions in charge to the Regulatory Institution of the country.

5I. Staffing level of the Regulator

Explanations: Provide the number or an order of magnitude for the staffing of the Regulator.

Comments