Master project

Title: Analysis of the socio-economic and demographic factors potentially influencing the sustainability activity level and the use of sustainability indicators in Swiss cities

Description of research: Many scholars underline the leading role of cities regarding sustainability governance and an acceleration of this leadership has been observed since the early 2000s. However, empirical insights show that cities are active at various degrees in designing strategies and using instruments – including monitoring by means of sustainability indicators – to operationalise sustainability. In order to shed light on this variety of sustainability activity levels and gather insights on the practical governance arrangements at work, an online survey was administered to representatives of the public administration of Swiss cities. The survey collected information from 99 cities (see Figure 1) on strategic and organizational aspects of local public administrations regarding sustainability as well as about the instruments used to implement policies, with a specific part about sustainability indicators.

Figure 1: The 176 cities contacted and the 99 that participated to the online survey
The literature suggests that socio-economic and demographic factors may influence the sustainability activity level of cities and their use of indicators, which is the focus of the online survey described above. In order to better understand the diversity of sustainability activity levels in Swiss cities, the student will address the following research question during this master thesis:

| What socio-economic and demographic factors affect the sustainability activity level and the use of sustainability indicators of Swiss cities? |

The student will first update an existing literature review based on a search in the Scopus database and analyse the results to extract the factors already identified in the literature. A discussion about the relevance of the identified factors in the context of Swiss cities as well as suggestions of alternative factors potentially better suited to the Swiss local context is expected.

In a second step, s/he will assess the availability of data to measure the selected factors for Swiss cities, using the website of the Swiss federal statistical office as data source.

Finally, the student will gather the available data and perform statistical analyses to assess the potential role of the selected factors on the sustainability activity level of Swiss cities.

**Methods:** Literature review, statistical analyses (small samples)

**Requirements:** The candidate should ideally speak and read French or German (at least B2) and be proficient in English (writing, reading). S/he should also be familiar with statistical analyses, ideally with R (tidyverse).

**Starting date:** Fall 2022

**Duration:** 18 weeks

**Supervisor(s):** Anne Boesch, Claudia R. Binder

**Contact details:** Anne Boesch, anne.boesch@epfl.ch