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Thesis title: Navigating Change: The Role of Institutions in Sustainable Mobility Transitions in Prishtina and Ljubljana

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Summary

Through the analytical lens of the Multi-Level Perspective (MLP) complemented by Institutional Theory, this thesis explores the divergent paths of sustainable urban mobility transitions in Prishtina, Kosovo and Ljubljana, Slovenia. By exploring the interactions of the MLP's three analytical levels with institutions, this study underlines the role of institutions in shaping the urban mobility of a city.

Following the 1990s, the cities of Ljubljana and Prishtina, which were formerly a part of the Socialist Federal Republic of Yugoslavia, have had completely different outcomes in achieving sustainable urban mobility. Ljubljana, the capital of Slovenia, has become a leader in sustainable urban mobility, recognized widely by its award as the European Green Capital in 2016. In 2012, Ljubljana introduced its carefully planned Sustainable Urban Mobility Plan (SUMP), which greatly decreased motorised traffic while improving other sustainable methods of travel. On the other hand, Prishtina continues to face challenges as significant air pollution and a poorly designed public transit system, even after the city established its SUMP in 2019.

Utilising a Comparative Process Tracing methodology, the study analyses the ways in which institutions have impacted these changes. This method shows that adaptive legislation, cohesive governance and stable funding play a crucial role in Ljubljana's success. On the other hand, Prishtina's efforts have been hindered by reliance on international aid and inconsistent policy implementation which have impeded its progress towards sustainable urban mobility.

Central to this analysis is the concept of institutional change within the MLP framework, categorized into five mechanisms by Streeck and Thelen: displacement, layering, drift, conversion, and exhaustion. Each city's developments are analysed to understand how these changes have facilitated or hindered sustainable mobility transitions.

By carefully analysing the interactions between institutional dynamic and urban mobility systems, this study contributes to the academic discourse on the challenges of implementing these sustainable transitions. For policymakers and urban planners working to enable more successful transitions, this research provides valuable findings that highlight how institutions can support more effective urban mobility transitions.

Keywords

Sustainable Urban Mobility, Regulative Institutions, Institutional Change, Multi-Level Perspective, Transition Pathway, Sustainable Urban Mobility Plan (SUMP)

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Table of contents

| | |
|---|------------|
| Summary | i |
| Keywords | i |
| Acknowledgements | ii |
| Table of contents | iii |
| List of Figures | v |
| List of Tables | v |
| Abbreviations | vi |
| 1. Introduction | 7 |
| 1.1 Background | 7 |
| 1.2 Problem statement | 8 |
| 1.2 Relevance of the research topic..... | 9 |
| 1.3 Research questions and objective..... | 9 |
| 2. Literature review and hypotheses | 10 |
| 2.1 Sustainable Urban Mobility | 10 |
| 2.2 Transitions | 11 |
| 2.2.1 Multi-Level Perspective | 12 |
| 2.2.2 Dynamics of transitions in the MLP..... | 15 |
| 2.3 Linking the MLP with Institutional Theory | 18 |
| 2.3.1 Institutional Theory | 18 |
| 2.3.2 Institutional Change within the MLP | 19 |
| 2.4 Conceptual framework | 21 |
| 3. Research design, methodology | 22 |
| 3.1 Research design..... | 22 |
| 3.2 Data collection methods | 22 |
| 3.3 Data analysis | 23 |
| 3.4 Operationalization | 24 |
| 3.5 Expected challenges and limitations | 27 |
| 4. Results, analysis and discussion | 28 |
| 4.1 Overview of Case Studies | 28 |
| 4.2 Multi-Level Analysis..... | 29 |
| 4.2 Period I: Institutional Building..... | 30 |
| 4.2.1 Prishtina: 2000-2010..... | 31 |
| 4.2.2 Ljubljana: 1990 - 2000 | 31 |

| | |
|--|-----------|
| 4.3 Period II: EU Alignment | 33 |
| 4.3.1 Prishtina: 2010 - 2020 | 33 |
| 4.3.2 Ljubljana: 2000-2010 | 35 |
| 4.3 Period III: Sustainability Initiatives | 36 |
| 4.3.1 Prishtina 2020-Present..... | 36 |
| 4.3.2 Ljubljana: 2010-2020 | 37 |
| 4.4 The Influence of Institutional Changes on Transition Pathways..... | 38 |
| 4.4.1 Type of Institutional Change | 38 |
| 4.4.2 Transition Pathway | 39 |
| 4.4.3 Synthesis..... | 40 |
| 5. Conclusions..... | 41 |
| 5.1 Answering the main research question..... | 41 |
| 5.2 Research Validity, Importance, and Relevance | 42 |
| 5.3 Recommendations for Further Research | 42 |
| Bibliography | 43 |
| Appendix 1: List of documents for analysis | 52 |
| Appendix 2: IHS copyright form..... | 53 |

List of Figures

| | |
|---|----|
| Figure 1 Prishtina’s traffic & Figure 2 Ljubljana’s City Centre..... | 8 |
| Figure 3 Multiple levels as nested hierarchy | 12 |
| Figure 4 The multi-actor network involved in sociotechnical regimes | 13 |
| Figure 5 Three interrelated analytic dimensions..... | 14 |
| Figure 6. Multi-level perspective on transitions | 16 |
| Figure 7 Conceptual Framework..... | 21 |

List of Tables

| | |
|---|----|
| Table 1. Comparison of traditional transport planning and sustainable urban mobility plans..... | 11 |
| Table 2 Transition pathways..... | 17 |
| Table 3 The Three Institutional Pillars..... | 18 |
| Table 4 Framework for Assessing Institutional Change..... | 20 |
| Table 5 Operationalization table | 26 |
| Table 6 Characteristics of Prishtina and Ljubljana..... | 28 |
| Table 7 Landscape Developments after 1990 | 29 |
| Table 8 Comparative Time Frames for Analysis | 29 |
| Table 9 Overview of Institutional Change | 39 |
| Table 10 Overview of Transition Pathway | 39 |

Abbreviations

| Abbreviation | Full form |
|---------------------|---|
| IHS | Institute for Housing and Urban Development Studies |
| EU | European Union |
| EIB | European Investment Bank |
| UNDP | United Nations Development Programme |
| GIZ | German Agency for International Cooperation |
| KEPA | Kosovo Environmental Protection Agency |
| ARSO | Environmental Protection Agency |
| SUMP | Sustainable Urban Mobility Plan |
| GCAP | Green City Action Plan |
| UNMIK | United Nations Interim Administration Mission in Kosovo |
| IPA | Instrument for Pre-Accession Assistance |
| MESP | Ministry of Environment Spatial Planning and Infrastructure |
| MDP | Municipal Development Plan |
| UDP | Urban Development Plan |
| MLP | Multi-Level Perspective |
| EULEX | European Union Rule of Law Mission |
| SFRY | Socialist Federal Republic of Yugoslavia |

1. Introduction

1.1 Background

In recent years, urban areas have become crucial in the global shift toward sustainability, largely due to their high levels of energy consumption and carbon emissions (*World Cities Report, 2020*). Cities are responsible for up to 70% of global carbon emissions, with transportation accounting for 30% of global energy use (*Key World Energy Statistics, 2020*). One of the hardest obstacles to accomplishing net-zero energy transitions is the dependence on fossil fuel-powered transportation infrastructure, aggravated by issues such as traffic congestion, local air pollution, depletion of fossil fuels, and rising CO₂ emissions (Markard et al., 2012). This emphasises the urgency of developing alternative mobility solutions that put sustainability first and solve the problems with current urban transport models on the social, economic, and environmental front.

Transportation systems, particularly the concept of automobility, are deeply ingrained in modern urban landscapes. As theorized by Urry (2004), automobility is “a self-organizing autopoietic, non-linear system that spreads world-wide, and includes cars, car-drivers, roads petroleum supplies and many novel objects, technologies and signs.” The benefits to vehicle manufacturers, oil companies, and road infrastructure firms fuelled this lock-in, generating significant economic returns but entrenching unsustainable patterns of urban mobility.

In terms of societal impacts, automobility has been maintained by a range of factors, from everyday politics of urban transport planning to cultural association linking cars with modernity, freedom and individual identity (Geels, 2012). The resulting regimes of automobility are thus difficult to shift since they are supported by professional practices and institutional structures that reinforce the status quo. Thus, in addition to technological advancements, changes in societal norms, laws, and governance structure are also necessary for the transition to sustainable urban mobility. This has led scholars to examine how institutions and regulatory frameworks influence transitions to sustainable transport, with particular attention to socio-technical regimes that resist change (Geels & Schot, 2007).

The European Union has taken a lead in promoting sustainable urban mobility, introducing various directives and policies aimed at transitioning to more sustainable transportation methods. The EU’s Sustainable Urban Mobility Plans (SUMPs), developed since 2005, provide a framework for cities to integrate sustainability into their transport strategies. However, transitioning to sustainable mobility has proven to be rather a complex issue, particularly in highly institutionalized urban contexts where regulatory, cultural and technological factors are tightly interconnected (Hoffmann et al., 2017).

To better understand these dynamics, this research draws on the Multi-Level Perspective (MLP) framework, a key analytical tool used to study socio-technical transitions. MLP explains transitions as the result of interaction between three levels: landscape (broader trends), regime (dominant systems), and niches (spaces for innovation) (Geels, 2002). However, recent studies have expanded the MLP framework to highlight the critical role of institutions in shaping transition pathways (Bedtke & Gawel, 2018; Fuenfschilling, 2019; Geels, 2004; Geels et al., 2016; Roberts & Geels, 2019; Schippl et al., 2022). Geels et al. (2016) underline that institutional configuration - such as governance structures and regulatory frameworks – are central to either supporting or hindering transitions. By integrating insights from institutional theory, this research aims to examine how institutional dynamics influence urban mobility transitions.

1.2 Problem statement

The complexity of achieving sustainable urban mobility is illustrated by the contrasting cases of cities like Prishtina and Ljubljana, two cities with shared Yugoslav legacies but diverging developmental paths. Prishtina continues to struggle with severe issues such as high levels of air pollution, traffic congestion, and an underdeveloped public transportation system. In 2019, Prishtina ranked as the 30th most polluted city globally, largely due to fossil fuel reliance in transportation, residential heating, and the nearby coal power plants (*IQAir*, 2024). The city is characterized by significant car dependency, with 50.9% of vehicles being private cars or motorcycles, and only 20% of residents using public transport, further exacerbating pollution and congestion (Green City Action Plan, 2021).

On the other hand, Ljubljana, the capital city of Slovenia, has emerged as a European leader in sustainable urban mobility, receiving the prestigious European Green Capital Award in 2016. Ljubljana's urban mobility success stems from its comprehensive Sustainable Urban Mobility Plan (SUMP), first adopted in 2012, which led to a 60% reduction in motorized traffic within its city centre (*European Commission*, n.d.). Pedestrian zones expanded by 620% between 2007 and 2017, accompanied by significant investment in cycling infrastructure and public transportation (*City of Ljubljana*, n.d.). As a result, 80% of trips within the city are now made using sustainable modes of transport, such as walking, cycling, and public transit.



Figure 1 Prishtina's traffic (Source: Prishtina Insight)



Figure 2 Ljubljana's City Centre (Source: City of Ljublj.)

Although Prishtina and Ljubljana share a common Yugoslav heritage (they were both part of the former Socialist Federal Republic of Yugoslavia from 1945-1990s), their post-1990s development paths have diverged significantly. The conflict in Kosovo during the late 1990s and its unresolved political status¹ have posed significant challenges for Prishtina, affecting its capacity to develop and implement sustainable urban mobility solutions. In contrast, Ljubljana's smoother transition—marked by its early independence from Yugoslavia in 1991 and subsequent integration into the European Union—has provided the city with resources and frameworks that have supported its mobility transformation.

The central question that emerges from these contrasting cases is why such stark differences in urban mobility transitions have arisen, despite the cities' shared historical roots. While acknowledging the distinct historical and political contexts—especially Kosovo's experience of conflict and delayed development—this thesis aims to investigate the institutional dynamics that have shaped these divergent mobility pathways. The focus will be on how regulative institutions have either facilitated or hindered progress in each city

¹ Kosovo unilaterally declared its independence from Serbia on 17 February 2008 and has since gained diplomatic recognition as a sovereign state by 104 member states of the United Nations

1.2 Relevance of the research topic

The relevance of this research lies on its contribution to both academic and practical understandings of sustainable urban mobility transitions. Given the transportation sector's substantial contribution to energy consumption and carbon emissions, addressing issues connected to urban mobility is crucial as cities now are at the forefront of sustainability initiatives. Furthermore, the Multi-Level Perspective (MLP) and institutional theory are integrated in this study to enhance the conceptual framework in either promoting or hindering sustainable transitions.

Although the MLP has historically emphasised niche innovations as the drivers of change, recent research highlights the significance of institutional structures at the regime and landscape levels, which can either facilitate or hinder progress (Bedtke & Gawel, 2018; Fuenfschilling, 2019; Geels, 2004; Geels et al., 2016; Roberts & Geels, 2019; Schippl et al., 2022). By examining how different institutional dynamics have influenced urban mobility in Prishtina and Ljubljana, this study offers insights into the complexities of socio-technical transitions. Moreover, it aims to address existing gaps in transition theory by exploring the interaction between institutions and socio-technical systems.

In addition to enriching academic discussions, this research offers practical implications for policymakers and urban planners in cities facing similar challenges, offering potential pathways for facilitating more effective transitions to sustainable mobility systems.

1.3 Research questions and objective

The objective of this research to explore the role of institutions in shaping the transition towards sustainable urban mobility in Prishtina and Ljubljana. By using the Multiple-Level Perspective (MLP) and integrating insight from institutional theory, the study will analyse how institutions at the regime, niche, and landscape levels interact to influence urban mobility outcomes in these two cities. Specifically, the research will look for institutional changes that have either facilitated or hindered each city's progress toward sustainable mobility and will attempt to understand the factors that have led to different transition pathways.

Therefore, this research aims to answer the main research question:

“What institutional factors have caused the transition pathways of Prishtina and Ljubljana to diverge?”

To unpack the main research question, the following sub-questions are required:

- How are the type of transitions described in this thesis best understood theoretically?
- Which types of institutional change have affected urban mobility transitions in Prishtina and Ljubljana?
- Which transition pathway have Prishtina and Ljubljana taken?
- What are the differences in the transition pathways taken by Prishtina and Ljubljana, and how are these differences shaped by their respective institutional changes?

2. Literature review and hypotheses

This chapter provides the theoretical foundation for understanding the key concepts that inform this research. It addresses the first sub-question: *How are the types of transitions described in this thesis best understood theoretically?* It begins with a review of transitions, specifically the Multi-Level Perspective (MLP), and then delving into institutional theory which is essential for understanding the different pathways cities take in transitioning to sustainable urban mobility.

At the end of this chapter, a conceptual framework will be introduced to synthesize these theories and provide a structured approach to analyzing the multi-level dynamics and institutional changes that shape urban mobility transitions. This framework will guide the empirical analysis in the following chapters.

2.1 Sustainable Urban Mobility

Sustainable Urban Mobility is an evolving concept that encompasses using transport methods that have minimal environmental impact and involves planning urban growth with sustainability goals in mind (Gielen et al., 2019; Kovačić et al., 2022; Mora et al., 2019). Since urban areas in the past were designed around the needs of traditional transportation models reliant on fossil fuels, today's approach to urban planning has evolved significantly (Tuominen et al., 2022). The shift from traditional transportation planning, which focused primarily on traffic flow capacity and speed, has moved towards sustainable urban mobility planning that prioritizes people over vehicles (see Table 1) (Matusiewicz, 2019).

The main idea of sustainable mobility is to design transport networks that satisfy the needs of all citizens without compromising future generations' ability to meet theirs (Berger et al., 2014). This entails aligning mobility with broader sustainability goals, such as reducing greenhouse gas emissions, improving accessibility for marginalized communities and public health. Sustainable mobility also promotes compact, mixed-use areas where individuals can walk or bike to daily services while reducing the need for long-distance commutes (Kiba-Janiak & Witkowski, 2019).

In recent years, the European Union has placed growing emphasis on advancing sustainable urban mobility, leading to the introduction of new laws and formal directives (Kiba-Janiak & Witkowski, 2019). One of these leading documents is the promotion of the concept of Sustainable Urban Mobility Plans (SUMP). Thus, SUMP have emerged as Europe's primary urban transport planning framework since their systematic development began in 2005 (Rupprecht Consult, 2019). They are being increasingly adopted in European cities as they support in achieving European climate and energy targets (*European Commission*, n.d.). Both Prishtina and Ljubljana have drafted such plans, yet despite their shared ambitions, the results appear to diverge significantly.

| Traditional Transport Planning | Sustainable Urban Mobility Planning |
|---|--|
| Focus on traffic | Focus on people |
| Primary objectives: Traffic flow capacity and speed | Primary objectives: Accessibility and quality of life, including social equity, health and environmental quality, and economic viability |
| Mode-focused | Integrated development of all transport modes and shift towards sustainable mobility |
| Infrastructure as the main topic | Combination of infrastructure, market, regulation, information and promotion |
| Sectoral planning document | Planning document consistent with related policy areas |
| Short and medium-term delivery plan | Short and medium-term delivery plan embedded in a long-term vision and strategy |
| Covering an administrative area | Covering a functional urban area based on travel-to-work flows |
| Domain of traffic engineers | Interdisciplinary planning teams |
| Planning by experts | Planning with the involvement of stakeholders and citizens using a transparent and participatory approach |
| Limited impact assessment | Systematic evaluation of impacts to facilitate learning and improvement |

Table 1. Comparison of traditional transport planning and sustainable urban mobility plans (Adopted from Matusiewicz, 2019)

This disparity naturally leads us to look at transition theory for answers. Transition theory, particularly the Multi-Level Perspective (MLP), offers a framework to understand how socio-technical systems evolve over time and how various layers—landscapes, regimes, and niches—interact to drive or hinder transitions toward sustainability. By applying this lens, we can better understand why Ljubljana has successfully embedded sustainable mobility practices within its regime, while Prishtina’s efforts face greater barriers.

2.2 Transitions

Transition theory has been widely used in disciplines like demography, ecology, psychology, physics, etc. and it refers to a nonlinear change from one dynamic equilibrium to another (Loorbach et al., 2017). The aim of transition theory is to understand how innovation processes evolve in socio-technical systems (Schippel et al., 2022). The main challenges to a transition are believed to be constructing new, more sustainable structures while overcoming the rigidities and path-dependence of the highly institutionalised, preexisting ones (Fuenfschilling & Truffer, 2014).

Researchers in this area have studied transitions from diverse systems perspectives, such as sociotechnical systems (STS), innovation systems, and complex adaptive systems. According to Grin et al. (2010), transitions have the following qualities:

- They are co-evolutionary processes requiring multiple changes in STS configurations;
- Transitions involve many actors, including a wide range of social groups;
- They entail radical shift from one configuration to another;
- They are long-term processes occurring at a macro level.

Since transitions are shaped by the interactions of a variety of social groups, they have unpredictable and non-linear dynamics often spanning in decades and requiring coordination between these social groups (Geels, 2002). Therefore, from the start transition research has actively engaged with policy and society, contributing to the development and enhancement of governance concepts and strategies aimed at facilitating transitions. There are four framework which have received prominence in transition studies (Loorbach et al., 2017; Markard et al., 2012):

- Transition management (TM)
- Strategic niche management (SNM)
- Multi-level perspectives (MLP)
- Technological innovation systems (TISs)

The MLP is one of the most widely used frameworks to explain transition and is an example of an epistemological style that is ideal for examining unpredictable phenomena like transitions (Geels, 2012). Given the complexity and co-evolutionary nature of transitions, understanding these dynamics requires a detailed framework that can capture the interactions across different levels of a socio-technical system.

2.2.1 Multi-Level Perspective

The multi-level perspective emerged from the field of innovation studies, incorporating ideas from sociology of technology, evolutionary economics and neo-institutional theory (Geels, 2012). It is a model with three levels that helps understand how dynamics operate within a sociotechnical system. Initially created as a heuristic framework, it aims to broadly explain the interactions that facilitate technological change (Rip and Kemp, 1998).

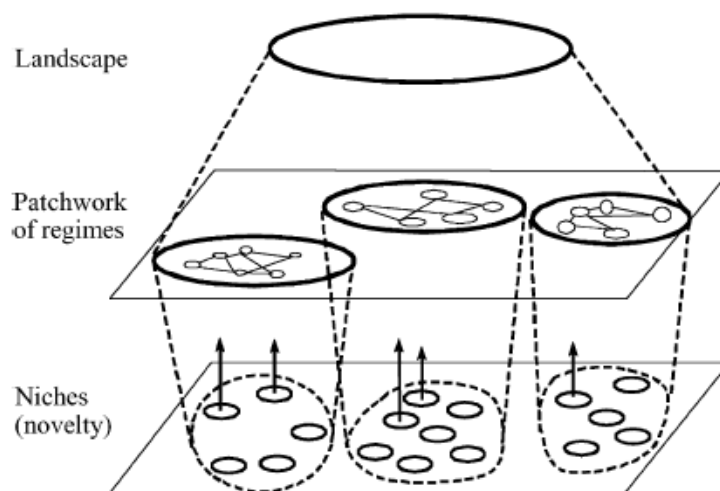


Figure 3 Multiple levels as nested hierarchy
(Source: Geels 2002, p. 1261)

The MLP framework operates on three levels: a) technological niches; b) socio-technical regimes; and c) socio-technical landscapes. These concepts are interrelated in a nested hierarchy, where regimes are situated within landscapes and niches are situated within regimes, as illustrated in Figure 3 (Geels & Schot, 2010)

The meso-level of socio-technical regimes explains the stability of technological advancements and the formation of developmental paths. The macro-level of the socio-technical landscape encompasses slow-changing external factors, which influence the direction of these paths. Meanwhile, the micro-level of niches focuses on the creation and evolution of radical innovations (Geels, 2002).

Socio-technical regime

The concept of technological regime was introduced by Nelson and Winter in 1977 in their article, *In Search of Useful Theory of Innovation* (Hoogma et al., 2002). According to them, a technological regime refers to a stable system characterized by common cognitive routines among the engineering community. This regime guides engineers' and innovators' attempts to solve problems along a particular technological path, and are shaped by shared understandings rather than short-term economic changes (Nelson & Winter, 1977).

By describing the technological regime in terms of the sociological category of "rules," Rip and Kemp (1998) have expanded the concept of the regime. They defined a technological regime as a “rule-set or grammar embedded in a complex of engineering practices, production process technologies, product characteristics, skills and procedures, ways of handling relevant artifacts and persons, ways of defining problems – all of them embedded in institutions and infrastructures” (Rip & Kemp, 1998, p. 338).

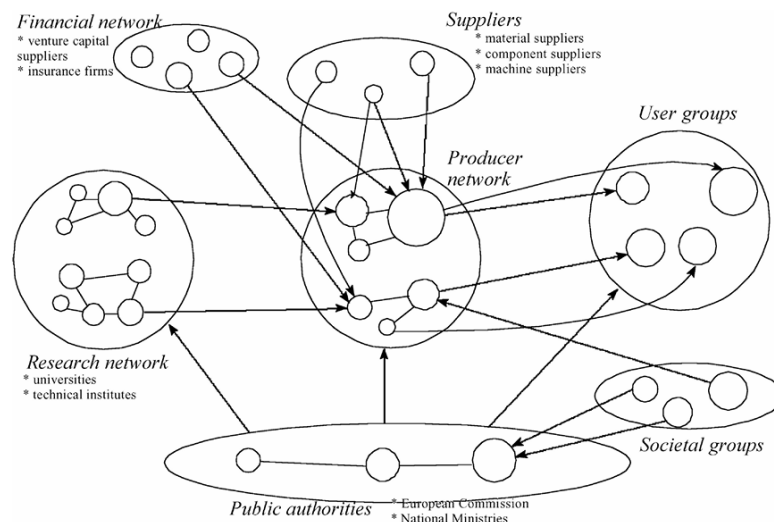


Figure 4: The multi-actor network involved in sociotechnical regimes
(Source: Geels 2002, p. 1260)

Geels (2002) stated that technical trajectories are shaped not only by engineers but also by multiple kinds of actors including users, policymakers, societal groups, supplier scientists and

capital banks (see Fig. 4). Since the actions of these groups are also governed by rules, he introduced the term ‘socio-technical regimes’ to describe the semi-coherent set of rules maintained by these various social groups. He explains: “*I understand regimes as semi-coherent sets of rules, which are linked together. It is difficult to change one rule, without altering others. The alignment between rules gives a regime stability, and ‘strength’ to coordinate activities*” (Geels, 2004, p. 904).

Rules and regimes create a game where diverse actors, including firms, authorities, users, scientists, and suppliers, each with unique perceptions, goals, and resources, strive to achieve their aims and enhance their positions. In this setting, human actors are not entirely free to act as they want, since their perceptions and activities are coordinated by institutions and rules (see Fig. 5) (Geels, 2004). Several rules – cognitive, regulative, and normative rules – are used to control the regime, which reinforce the lock-ins and hinder the niche’s ability to stabilize the regime configuration (Audet et al., 2017; Bedtke & Gawel, 2018; Fuenfschilling, 2019).

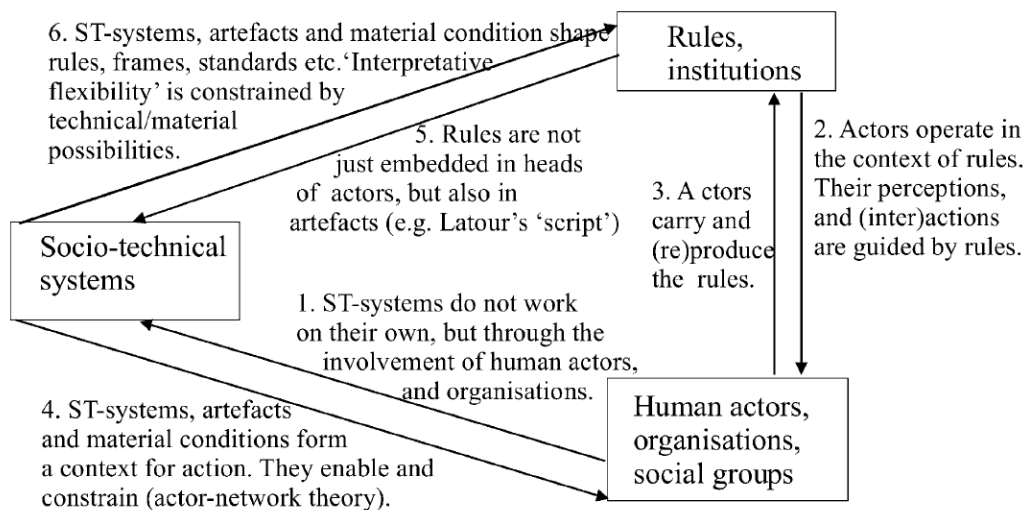


Figure 5 Three interrelated analytic dimensions
(Source: Geels 2004, p. 902)

Niches

Technological niches are another key concept in transition studies which create the micro-level where radical innovations are created (Geels & Schot, 2007). These are ‘protected spaces’ such as R&D laboratories, subsidized demonstration projects, or small market niches where users have specific needs and are prepared to fund new inventions (Geels, 2012).

Niches have less well-defined and explicit regulations which make them spaces where it’s acceptable to break the rules of the current system and explore new ideas. Thus, niches offer spaces for learning about things that may be unclear, like public policy, user preferences, technological requirements, and symbolic meaning (Geels, 2004). They come out of a process of interaction shaped by many actors and are not under control. As such, the novelties are low performing, initially unstable sociotechnical setups that serve as “incubation rooms” for innovations, shielding them from the mainstream market. The ultimate outcome of the niche formation process is determined by both changes occurring outside the niche and effective

processes occurring within it, as such it is the coincidence of these developments that results in the patterns of niche development (Kemp et al., 1998). This indicates that the niche's growth is dependent upon the interactions with the other system levels, particularly the regime. Although the macro-level serves as the selection environment, the regime will in time select innovations that are compatible with its trajectory or select them to prevent its own failure (Smith, 2003).

Socio-technical landscape

Apart from the direct effects of the regime and niche actors, the socio-technical landscape – comprising macro-economics, deep cultural patterns and macro-political trends - creates an external environment, changes in which usually happen gradually over decades (Geels, 2002; Geels & Schot, 2007). The sociotechnical landscape is described as beyond the control of individual actors e.g. material environments, symbol and values, shared cultural beliefs are hard to stray from. These factors generally evolve slowly over time, over exerting pressures on regimes that are beyond the direct control of individual actors or organization (Geels, 2002). Thus, because landscapes have a stronger effect on action, they structure activities more than regimes do (Geels, 2004).

Geels (2011) addressed criticisms of the landscape level being treated as a “residual category” by proposing two key refinements:

1. Refinement of Landscape Dynamics: Rather than viewing the landscape as static or slow-moving, Van Driel and Schot (2005) offered a more nuanced perspective, identifying three types of landscape dynamics:
 - Slowly changing factors (e.g., cultural values or environmental awareness).
 - Long-term directional changes (e.g., increasing focus on sustainability).
 - Rapid external shocks (e.g., financial crises or technological disruptions).
2. Balanced Assessment of Trends: While sustainability transition studies often focus on destabilizing landscape trends (e.g., climate change, peak oil), Geels (2011) argues that balanced assessment should also consider stabilizing trends.

While the landscape sets the broader context through its slow-moving and sometimes sudden changes, the interaction between niche innovations, regime pressures, and landscape dynamics drive the processes of transition which will be further elaborated below.

2.2.2 Dynamics of transitions in the MLP

The central concept of the MLP is that transitions emerge from the interactions between three levels (Geels & Schot, 2010; Geels, 2002, 2011; Rip & Kemp, 1998; Schot & Geels, 2008; Smith et al., 2005)

- (a) Niche Innovations: These innovations gain internal momentum through learning processes, improvements in price, and support from influential groups.
- (b) Landscape Changes: These shifts exert pressure on existing regimes.
- (c) Regime Destabilization: The destabilization of the regime creates windows of opportunity for niche-innovations to emerge.

This process is illustrated in Figure 6.

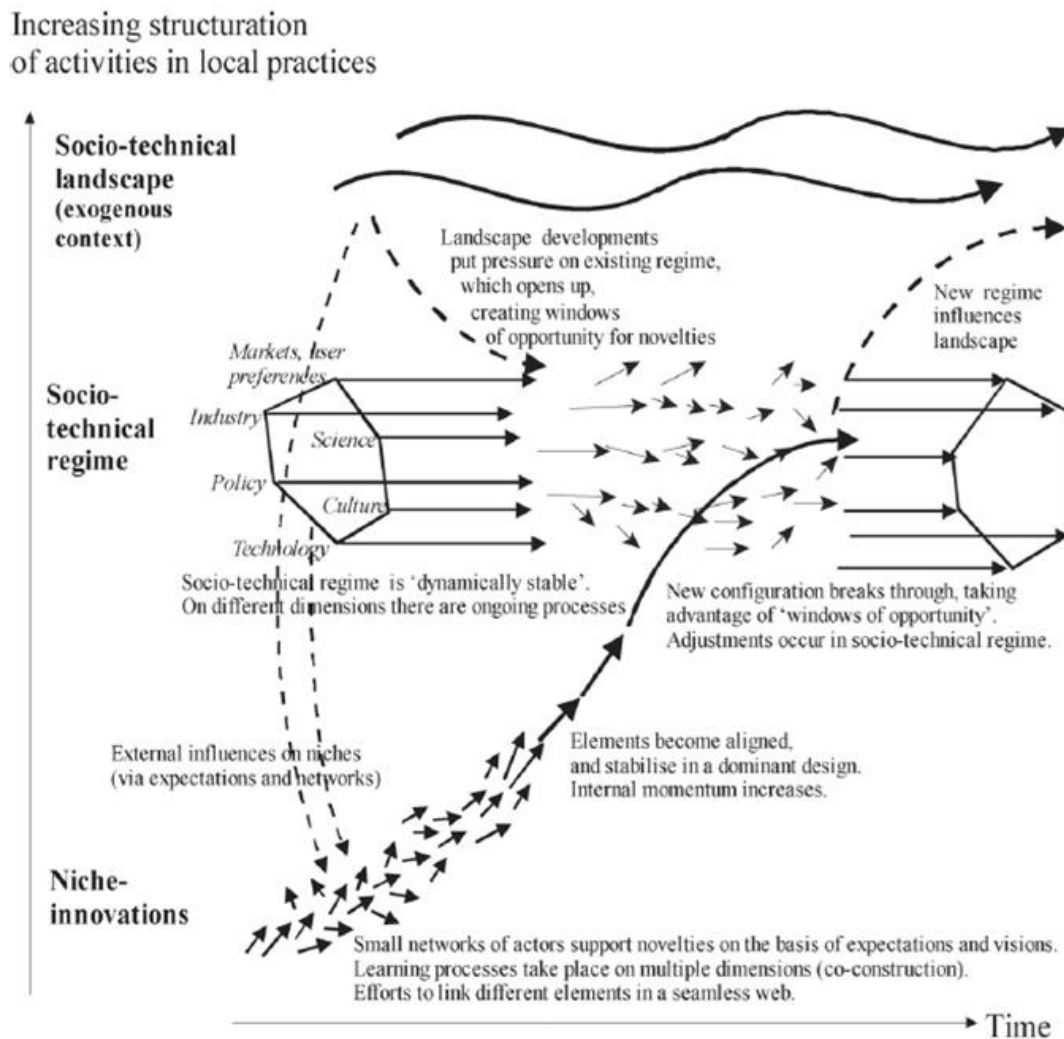


Figure 6. Multi-level perspective on transitions
(Source: Geels 2002, p. 1263)

However, most recently scholars have addressed that there's a bias within the MLP towards the novelty, thus putting too much emphasis on the niche as the primary drivers of regime change. To address this bias, scholars believe there should be a greater focus on the ongoing processes at both the regime and landscape levels (Berkhout et al., 2004; Geels, 2002; Geels & Schot, 2007).

Thus, Geels and Schot (2007) to address this criticism by further developing the MLP into four transition pathways, based on differences in timing and nature of multi-level interactions which are presented in Table 2.

| Transition Pathway | Description |
|---|---|
| P0. Reproduction process | In the absence of external pressures from the surrounding environment, the system remains stable and continues to replicate itself. |
| P1. Transformation path | When there is moderate disruption from the landscape and niche innovations are not yet mature, actors within the system will adjust their development and innovation strategies to respond. |
| P2. De-alignment and re-alignment path | If a significant and sudden shift occurs in the environment, the existing system may face challenges and actors could lose confidence in it. This leads to a breakdown and in the absence of fully formed niche innovations, there is room for various new innovations to emerge. |
| P3. Technological substitution | When strong pressure from the environment coincides with well-developed niche innovations, these innovations will replace the current system. |
| P4. Reconfiguration pathway | Innovations from niche areas that complement the existing system are initially developed to solve localized issues, eventually leading to broader changes in the system's core structure. |
| P5. Mixed pathway | If landscape pressure comes in the form of disruptive changes, the transition process may follow several steps: starting with transformation, then reconfiguration, and potentially moving toward substitution or de-alignment and re-alignment. |

Table 2 Transition pathways. (Adopted from: Geels & Schot, 2007)

But, while this pathways typology has been helpful, it has been critiqued for downplaying the role of institution in influencing transitions (Geels et al., 2016). As Geels et al. (2016) observe, institutional dynamics are crucial for understanding mechanisms through which transitions are initiated. Furthermore, Fuenfschilling (2019) points out that institutional theory is suited to refine the conceptualization of socio-technical regimes, through understanding the rules of the game in regimes that contribute to path dependency and inertia of socio-technical systems.

Thus, by integrating institutional theory into the MLP framework, we can strengthen our analysis. This approach offers a clearer view of how socio-technical transitions are influenced not just by technological advancements and external pressures, but also by the institutional environments they occur within. This perspective is important for understanding the transitions happening in the cities we're studying, where institutional constraints and opportunities have shaped their development.

2.3 Linking the MLP with Institutional Theory

2.3.1 Institutional Theory

Since the middle of the 19th century, institutional theory has been used as a conceptual framework within various research traditions. It is a broad research field with numerous strands, which of most prominent are historical, sociological, and organizational institutionalism, each offering different insights into how institutions shape social behavior and structures (Scott, 2014).

Institutions are often described as "the formal rules or guidelines of the game" (North, 1990), encompassing both informal aspects like customs, culture, and habits, as well as formal components such as laws, regulations, and policies." These informal and formal components of institutions pressure dominant actors, routines, values, regulations, norms, cultural expectations, and technologies in socio-technical systems to become widely accepted and entrenched (Fuenfschilling & Binz, 2018; Geels, 2004; Scott, 2005). Consequently, the process leads to a stable socio-technical configuration where routines, technologies, and beliefs reinforce each other, making systemic change difficult (Fuenfschilling & Truffer, 2014).

In recent years, researchers have increasingly applied concepts from institutional theory to describe the norms and rules that maintain stability in a socio-technical system (Bedtke & Gawel, 2018; Fuenfschilling, 2019; Fuenfschilling & Truffer, 2016; Geels, 2004; Roberts & Geels, 2019; Schippl et al., 2022). Scott (1995) identified three institutional pillars that provide stability and meaning to social life: regulative (formal rules and laws), normative (values and norms), and cognitive (beliefs and knowledge frameworks), which have been presented in Table 3.

| Regulative | Normative | Cognitive |
|---|---|--|
| Formal rules, laws, sanctions, incentive structures, reward and cost structures, governance systems, power systems, protocols, standards, procedures. | Values, norms, role expectation, authority systems, duty, codes of conduct. | Priorities, problem agendas, beliefs, bodies of knowledge (paradigms), modes of reality, categories, classifications, jargon/language, search heuristic. |

Table 3 *The Three Institutional Pillars. (Adopted from: Scott, 1993)*

While the three pillars have been identified of being important in creating a self-reinforcing system that resists change (Bedtke & Gawel, 2018; Geels, 2004), this research will only examine the regulative pillar for a few key reasons. First, they directly influence sustainable urban mobility through formal policies and governance structures hence making them easier to evaluate. Second, changes in regulation, like new laws or policies, are more straightforward to track with clear timelines, unlike the slower and more diffuse shifts in normative or cognitive institutions. Lastly, the political and institutional landscapes in Prishtina and Ljubljana emphasize the role of governance and regulation in shaping their mobility transitions, which makes focusing on regulative institutions relevant for this research.

2.3.2 Institutional Change within the MLP

Transitions can be viewed as processes where existing institutions are gradually deinstitutionalized, and new, initially less institutionalized socio-technical configurations (niches) emerge to replace them (Fuenfschilling, 2019). Given that transitions fundamentally involve changes in socio-technical regimes, and these regimes as explained earlier are understood as the “rules of the game”, which is essentially an institutional construct, it becomes crucial to explore how institutional change occurs. Many interdisciplinary studies on socio-technical transformations highlight the importance of institutions, but they often overlook the specific mechanisms driving institutional change (Brown et al., 2006; Farrelly & Brown, 2011; Fuenfschilling & Truffer, 2016; Kiparsky et al., 2013).

Streeck and Thelen (2005) have categorized institutional change into five mechanisms:

1. Displacement: New elements gradually replace existing institutions as practices or norms shift focus.
2. Layering: New elements are added to institutions without replacing them, altering the old rules or practices.
3. Drift: Institutions deteriorate due to neglect, failing to adapt to external changes and losing effectiveness.
4. Conversion: Existing institutions are repurposed to serve new functions in response to changing conditions.
5. Exhaustion: Institutions break down over time from neglect or resource depletion, leading to decline or transformation.

Each mechanism offers insights into how institutions evolve or break down, whether through the gradual introduction of new rules, the repurposing of old institutions for new functions, or through the erosion of existing structures due to neglect (Mahoney & Thelen, 2010).

Institutional change is a critical aspect of socio-technical transitions, as regimes are deeply embedded within institutional frameworks. The transition process can be seen as a struggle between emerging niche innovations and established regimes. Actors within these regimes often resist change due to institutional inertia, where entrenched rules and practices make it difficult for new configurations to take hold. However, gradual institutional changes, such as layering or conversion, can open windows of opportunity for niche innovations to integrate into the regime, leading to system-wide transformations (Geels & Schot, 2010). In this sense, institutions play a dual role by both constraining behaviour and enabling change (Fuenfschilling & Truffer, 2014; Scott, 2014)

Assessing Institutional Change

As mentioned under Chapter 2.3.1, for this research institutional change is assessed through the lens of regulative institutions, which include formal rules, policies, and governance structures. The following framework identifies three key variables from regulative institutions:

1. Legislation: Formal laws that regulate urban/spatial planning systems, such as national and local laws related to urban planning, land use and transport. Legislation determines what is legally allowed and incentivizing or discouraging certain niches.
2. Urban Mobility Policies: These encompass long-term strategies and plans that guide urban mobility and sustainability efforts. Policies like the Sustainable Urban Mobility

Plans (SUMP) or climate action strategies set the direction for cities to shift towards more sustainable transport policies and enable the entry of niches.

3. Governance Coordination: Refers to the way different government bodies and stakeholders coordinate and collaborate in implementing mobility policies. Strong governance and clear institutional roles are vital for the successful execution of policy and legislative initiatives, while fragmentation can hinder progress.

The analysis of institutional change will draw on Streeck and Thelen (2005)'s typology, which identifies five types of institutional change: displacement, layering, drift, conversion, and exhaustion. Each type of change manifests differently in policy frameworks, legislation, and governance structures, providing a comprehensive picture of how institutions influence transition pathways. Table 4 outlines how these types of institutional change will be assessed for each variable.

| Type of Institutional Change | Legislation | Urban Mobility Policies | Governance Coordination |
|------------------------------|---|---|--|
| Displacement | New laws replace outdated or ineffective legislation. | New policies replace existing frameworks. | Replacement of old governance structures with new ones. |
| Layering | New legal amendments or clauses added to existing laws. | New sustainability objectives added to existing frameworks without fully replacing them. | New levels of coordination introduced on top of existing structures. |
| Conversion | Laws originally designed for different purposes are reinterpreted to fit new goals. | Existing policies are repurposed to serve new goals. | Existing governance structures are adapted to new purposes. |
| Drift | Laws become obsolete or are not updated in response to changing circumstances. | Existing policies become ineffective due to lack of updates or adaptation to new mobility challenges. | Governance structures become less effective as they fail to adapt to new challenges. |
| Exhaustion | Legal frameworks break down due to lack of enforcement or diminishing relevance. | Policies fail over time due to lack of resources or effectiveness. | Governance structures weaken due to inefficiency leading to fragmentation or institutional collapse. |

Table 4 Framework for Assessing Institutional Change

The table will be further operationalized in Chapter 3.

2.4 Conceptual framework

The conceptual framework for this research integrates the Multi-Level Perspective (MLP) with institutional theory to explore how changes in regulative institutions influence the transition to sustainable urban mobility. The MLP framework explains transitions across three levels: landscape (broader societal trends), regime (dominant systems), and niches (spaces for innovation). By focusing on regulative institutions, which include legislation, urban mobility policies and governance structures, the framework assesses how institutional changes either facilitate or hinder sustainable urban mobility transitions.

In this model, institutional change (the independent variable) influences the transition pathways (the dependent variable) by altering the governance, rules, and policies that guide urban mobility systems. These transitions may follow different trajectories based on Geels and Schot's (2007) typology, ranging from transformation to reconfiguration. The framework aims to uncover how institutional dynamics affect urban mobility, with case studies of Prishtina and Ljubljana highlighting the divergent outcomes of institutional shifts.

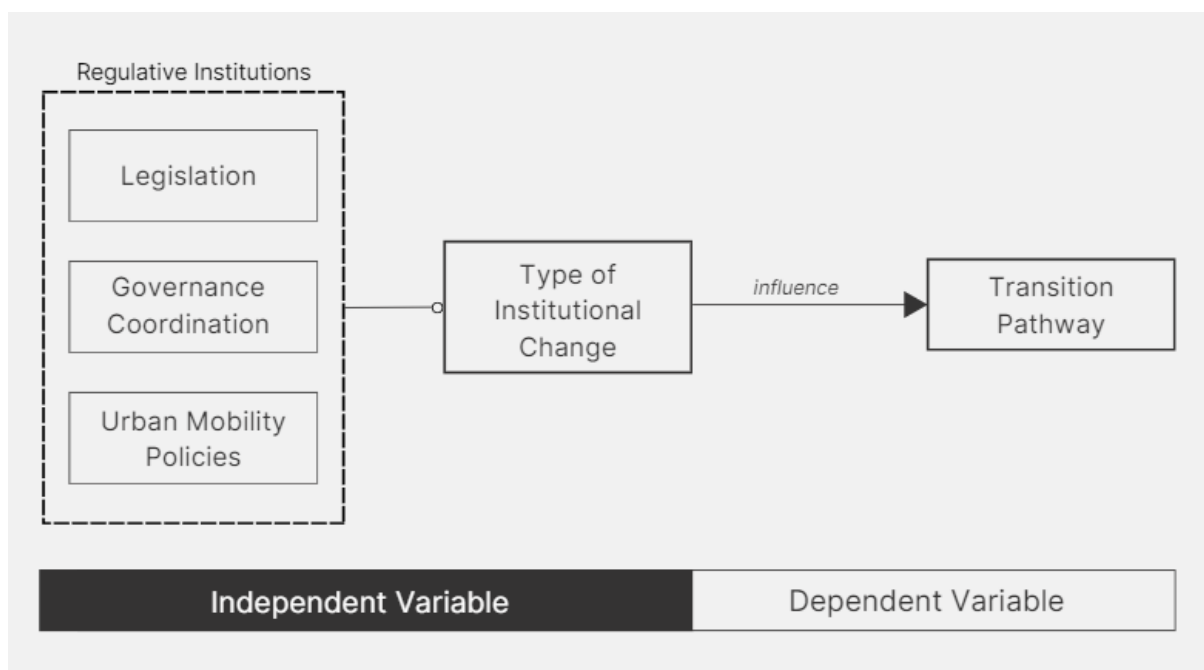


Figure 7 *Conceptual Framework*

3. Research design, methodology

3.1 Research design

This research uses a Comparative Process Tracing (CPT) design to examine how institutions have shaped the transition pathways in Prishtina and Ljubljana. CPT is a theoretically informed comparative approach that takes social and political processes seriously (Bengtsson & Ruonavaara, 2017). It does this by combining components of theory, chronology, and comparison which are particularly suited for answering our research questions.

Both cities, though sharing a common Yugoslav legacy, present urban mobility transitions. In this study, process tracing allows us to focus on how specific institutional reforms unfolded over time in both Prishtina and Ljubljana. As highlighted by Bennett and Checkel, (2014), process tracing is closely related to historical explanation, whereby the goal is not just to describe events, but to draw on theories to explain significant steps that lead to specific outcomes. This method will reveal the causal chains and mechanisms that link institutional changes to outcomes in sustainable urban mobility.

The theoretical foundation of this study is the Multi-Level Perspective (MLP), which guides the analysis of the interaction between niches, regimes, and landscapes (as explained in Chapter 2). This framework allows research to examine how changes in the landscape (international pressures, such as EU directives) level or at the niche (local, innovative projects) impact the regime (dominant transportation systems) in each city.

By applying Comparative Process Tracing (CPT), we track institutional changes across multiple levels of the Multi-Level Perspective (MLP). This integration allows for a thorough analysis of how local institutions in Prishtina and Ljubljana respond to external pressures (landscape), adjust their existing systems (regime), and either support or hinder niche innovations. Process tracing was chosen for this framework because as Collier (2011) puts it, it entails “systematic examination of diagnostic evidence selected and analysed in light of research questions and hypothesis.” This method allows for the temporal sequencing of key events and decisions, which is crucial for understanding how multi-level governance dynamics unfold over time. In this context, process tracing will reveal how institutional reforms—for example as the introduction of Sustainable Urban Mobility Plans (SUMPs) in both cities—have played a role in shaping the respective mobility regimes.

Therefore, the Comparative Process Tracing approach, grounded in the MLP framework, is most suitable for this research since it allows the identification of causal mechanisms that explain how institutional changes have influences urban mobility transitions in the three levels in Prishtina and Ljubljana.

3.2 Data collection methods

For this paper’s research questions, primary and secondary are essential to fulfilling a process tracing analysis with an elevated level of detail. As George and Bennett (2005) note, process tracing entails the tracing of history through specific events or policies through documents, interviews, and historical in order to establish a relationship between the independent variable (such as policy reforms) and dependent variables (such as the urban mobility outcomes). The research employs a combination of qualitative data collection methods ensuring that a variety

of data sources are used to triangulate findings and strengthen the reliability of the analysis. The methods include document analysis, archival research and desk research.

The primary method of data collection is document analysis which involved a detailed review of policies, legal frameworks, and other official documents. This was done to understand the institutional practices, decisions, and historical developments over time. These documents were sourced from a range of governmental agencies, local authorities, and public institutions involved in the development and regulation of sustainable urban mobility in both Prishtina and Ljubljana. Key documents that were analyzed are presented in Appendix 1.

In addition, archival research played a crucial role in providing historical context to the policy evolution in both cities. The historical documents sourced not only from national and local archives but also from academic journal articles. This method offered a longitudinal view of how institutions have evolved particularly in response to external influences. To complement the primary data collection, desk research on media reports and international assessments was conducted. These sources offered a deeper understanding of how institutional changes were received and their effects on urban mobility initiatives.

In conclusion, the combination of document analysis, archival research and desk research, provided a multi-faceted approach to understanding how institutional changes shaped sustainable mobility transitions in Prishtina and Ljubljana.

3.3 Data analysis

The data analysis follows a structured approach, starting with the selection of a time frame for each city. This periodization was chosen to capture key phases in the development of sustainable urban mobility in Prishtina and Ljubljana. For Prishtina, the analysis begins in 2000, marking the period of institutional rebuilding under international oversight. For Ljubljana, the focus starts in the early 1990s, coinciding with Slovenia's transition to independence and its subsequent integration into the European Union.

Within these time frames, the analysis will focus on key events related to legislative changes, policy developments, and governance structures. The primary method of analysis will be thematic document analysis, where key legislative frameworks, policy documents, and governance reports will be reviewed to identify patterns of institutional change. This review will be guided by a focus on three institutional variables: legislation, urban mobility policies, and governance coordination. Each of these areas will be examined for types of institutional change, including displacement, layering, drift, and conversion, as outlined by Streeck and Thelen (2005).

Using this framework, the analysis will trace how institutional changes in each city influenced their respective urban mobility transitions. In particular, it will examine how these changes responded to external pressures, such as EU directives, and how they shaped the urban transport systems at the regime level, while also assessing the emergence of niche innovations that aimed to challenge or complement the existing systems.

3.4 Operationalization

| Concept | Variable | Definition | Indicators | Method |
|-----------------------------|--|---|---|--|
| Institutional Change | Displacement | The replacement of old institutional practices with new ones (Streeck & Thelen, 2005). | - New laws replace outdated or ineffective legislation | Document Analysis Archival Research |
| | | | - Replacement of old governance structures with new ones. | |
| | | | - New policies replace existing frameworks. | |
| | Layering | The addition of new rules or policies on top of existing ones, without fully replacing them (Streeck & Thelen, 2005). | - New legal amendments or clauses added to existing laws. | |
| | | | - New levels of coordination introduced on top of existing structures | |
| | | | - New sustainability objectives added to existing frameworks without fully replacing them. | |
| | Drift | The gradual erosion of ineffectiveness of institutions due to neglect or failure to adapt to new conditions (Streeck & Thelen, 2005). | - Laws become obsolete or are not updated in response to changing circumstances. | |
| | | | - Governance structures become less effective as they fail to adapt to new challenges. | |
| | | | - Existing policies become ineffective due to lack of updates or adaptation to new mobility challenges. | |
| | Conversion | The reinterpretation or repurposing of existing institutions to serve new objectives (Streeck & Thelen, 2005). | - Laws originally designed for different purposes are reinterpreted to fit new goals. | |
| | | | - Existing governance structures are adapted to new purposes. | |
| | | | - Existing policies are repurposed to serve new goals. | |
| Exhaustion | The breakdown or collapse of institutions due to loss of | - Legal frameworks break down due to lack of enforcement or diminishing relevance | | |

| | | | | |
|---------------------------|------------------------------------|--|---|--|
| | | effectiveness or relevance (Streeck & Thelen, 2005). | <p>- Governance structures weaken due to inefficiency leading to fragmentation or institutional collapse.</p> <p>- Policies fail over time due to lack of resources or effectiveness.</p> | |
| Transition Pathway | Reproduction | The system remains stable, reproducing the same regime without major changes due to a lack of external pressure or niche innovation (Geels & Schot, 2007). | Landscape: Limited or no pressure from external factors to shift away from existing mobility structures. | |
| | | | Regime: Lack of substantial changes to public transport or mobility systems. | |
| | | | Niche: Minimal support for innovative solutions. | |
| | Transformation Pathway | Gradual adjustment of existing regimes in response to moderate landscape pressures, without radical innovation (Geels & Schot, 2007). | Landscape: Moderate pressures from external factors leading to small adjustments in policies and practices. | |
| | | | Regime: Incremental policy changes without a radical shift in dominant systems. | |
| | | | Niche: Limited development of new mobility options. | |
| | Reconfiguration Pathway | The integration of niche innovations into the existing regime, leading to changes without total system replacement (Geels & Schot, 2007). | Landscape: External pressures drive the incorporation of niche innovations without triggering regime replacement. | |
| | | | Regime: Integration of sustainable mobility into existing systems. Continued co-existence of old and new transport modes. | |
| | | | Niche: Successful growth and mainstreaming of niche innovations. | |
| | Technological Substitution Pathway | A new technology replaces the existing socio-technical regime due to high landscape pressure and well-developed niches (Geels & Schot, 2007). | Landscape: Strong external pressures to shift away from existing mobility structures. | |
| | | | Regime: Complete replacement of old technologies. | |
| | | | Niche: Rapid development of niche innovations and scaling them into dominant positions. | |

| | | | | |
|--|---------------------------------------|---|---|--|
| | De-alignment and Re-alignment Pathway | Regime collapse due to landscape pressures, leading to a period of uncertainty until a new dominant system emerges (Geels & Schot, 2007) | Landscape: High pressure from external crises disrupts existing mobility structures, creating a window for experimentation. | |
| | | | Regime: Breakdown or collapse of the existing mobility system. | |
| | | | Niche: Multiple competing innovations emerge but lack coordination or dominance. | |
| | Mixed Pathway | The transition follows multiple stages, often beginning with a transformation or reconfiguration and later moving toward substitution or de-alignment and re-alignment (Geels & Schot, 2007). | Landscape: A combination of moderate pressures early on with increasing global pressures driving deeper changes. | |
| | | | Regime: A combination of incremental adjustments and eventual adjustment changes. | |
| | | | Niche: Initial support for niche innovations followed by full integration or domination. | |

Table 5 Operationalization table

3.5 Expected challenges and limitations

One key challenge in the comparative process tracing approach is the availability of data. While Ljubljana's policies are well-documented due to its integration into the EU, Prishtina's data is more fragmented, often reliant on international reports rather than internally driven. However, this will be balanced as the researcher already is familiar with the context of Prishtina and can access data in the local language to triangulate these reports.

Another challenge is the contextual differences between cities. While they shared the same socialist background, the broader political and economic environments in which they operate are significantly different, which may complicate the comparability of certain institutional processes. This will be mitigated through careful contextualization of findings within each city's institutional trajectory.

The reliance on secondary data sources, such as media articles and reports, presents another challenge, as it may introduce biases or inaccuracies that could affect the validity of the findings. Although cross-referencing and triangulating data from multiple sources will be employed to mitigate these biases, the availability of diverse sources may still be limited, which could impact the strength of the conclusions.

Additionally, time constraints pose a significant limitation. With a limited period for data collection and analysis the depth of the research may be restricted, potentially resulting in a less comprehensive understanding of the complexities involved in sustainable urban mobility transitions.

4. Results, analysis and discussion

4.1 Overview of Case Studies

Prishtina, the capital of Kosovo, has been facing with numerous urban transport challenges such as increasing motorization, chronic traffic congestion, air and noise pollution, and low service quality in public transport as also presented in Chapter 1. Despite introducing its first Sustainable Urban Mobility Plan (SUMP) in 2019, Prishtina continues to struggle with reducing automobile dependency and enhancing public transport services.

Ljubljana, the capital of Slovenia, on the other hand, has been a frontrunner in sustainable urban mobility, having adopted its first SUMP in 2012. However, the city's journey toward sustainable mobility began much earlier, with initiatives from previous decades paving the way for today's modern transport. This city nowadays is seen as a model city for its transition to sustainable urban mobility while Prishtina represents a city with many challenges ahead. A list of characteristics of the city's is presented in Table 6.

| Characteristic | Prishtina | Ljubljana |
|-----------------------------------|--|---|
| Population (Urban) | ~ 230,000 (2024) | ~ 280,000 (2022) |
| Capital City | Yes | Yes |
| Economic Hub | Main economic centre of Kosovo | Main economic centre of Slovenia |
| Historical Context | Former part of Yugoslavia | Former part of Yugoslavia |
| EU Integration | Potential candidate for EU membership | EU member since 2004 |
| Urban Mobility Plan (SUMP) | First SUMP adopted in 2019 | First SUMP adopted in 2012 |
| Urban Mobility Challenges | Traffic congestion, air pollution, underdeveloped public transport | Historically faced traffic congestion, now focused on reducing car use and promoting sustainable transport. |

Table 6 Characteristics of Prishtina and Ljubljana

Prishtina and Ljubljana were both integral cities within the Socialist Federal Republic of Yugoslavia (SFRY) until its dissolution in the early 1990s. During the Yugoslav era, the country was characterized by socialist governance and a planned economy that was more open compared to other Eastern Bloc countries. This period was marked by specific urban development and mobility strategies that impacted both cities in terms of centralized planning, mobility and infrastructure, urban expansion and design, cultural and political unity (Mrak et al., 2004). After the breakup of Yugoslavia in the 1990s, Prishtina and Ljubljana have followed different paths due to diverging exogenous factors. A comparative table of these developments after their break-up from Yugoslavia has been presented in Table 7.

| | 1990 | 2000 | 2010 | 2020 |
|------------------|---|---|---|---|
| Prishtina | Collapse of former Yugoslavia and Conflict | Influence of International Aid and Organization (UNMIK/EULEX), Independence in 2008 | Attempts to EU Integration and Policy Alignment | Global Technological Trends in Urban Mobility |
| Ljubljana | Transition from former Yugoslavia to Independence | EU Accession and Economic Growth | Participation in EU-Wide Mobility Programs | Global Climate Change Policies and Technological Advancements |

Table 7 Landscape Developments after 1990

To build a comprehensive understanding of how Prishtina and Ljubljana have navigated their urban mobility transitions, we will explore these dynamics at multiple levels in the following sections.

4.2 Multi-Level Analysis

By conducting analysis, we will be able to answer the second and third sub-question, which explores the types of institutional changes that have unfolded and the transition pathways each city has taken. This analysis will pave the way to answering the main research question in Chapter 5.

At the landscape level according to the MLP, exogenous factors pressure the regime while simultaneously creating windows of opportunity for niche innovations to emerge (Geels, 2012). These landscape factors, often beyond the immediate control of urban planners and policymakers, play a crucial role in either stabilizing or destabilizing urban mobility systems. Key historical and external influences for each city are outlined in Table 7, which maps significant landscape developments.

| | Period I | Period II | Period III |
|------------------|---|---|---|
| Prishtina | 2000-2010 Institutional Building and Independence | 2010-2020 Alignment with EU directives | 2020-2024 Sustainability Initiatives |
| Ljubljana | 1990-2000 Post-independence Institutional Building | 2000-2010 EU Alignment and Accession | 2010-2020 Sustainability Initiatives |

Table 8 Comparative Time Frames for Analysis

This brings us to the selection of distinct times for the comparative analysis of Prishtina Ljubljana which is supported by the need to contextualize their institutional building phases accurately. Given their differing historical contexts and the timings of significant political and

social pressures after 1990 (there was stagnation of development in Kosovo during from 1990-1999 after it's difficult departure from SFRY in comparison to Slovenia's smoother break-up, thus Slovenia's institutional building started earlier), it is essential to tailor the analysis to periods that reflect each city's critical stages in urban mobility transition. The time frames which the comparison will be made are presented in Table 8.

By selecting these specific periods, the analysis aims to provide a nuanced understanding of how each city's historical and institutional conditions have shaped their approaches to sustainable urban mobility. The next sections will provide a multi-level analysis of each Time Period.

4.2 Period I: Institutional Building

4.2.1 Prishtina: 2000 – 2010

4.2.1.1 Landscape

Kosovo, the newest country in Europe, after its breaking down from SFRY experienced war in its territory from 1998 to 1999. Following NATO's military intervention, it ultimately led to Kosovo's liberation from Serbia in 1999 (Yannis, 2004). This international intervention set the stage for Kosovo's institutional rebuilding under the United Nations Mission in Kosovo (UNMIK)². This period was marked by strong international influence in governance and infrastructure development, which laid the groundwork for the future mobility and urban planning efforts (Joireman, 2016). Externally driven projects aimed to create governance system aligned with Western standards, some of which came from UNMIK, UN-Habitat and the European Union, which would ultimately influence the planning system (Greïçevci, 2011). After Kosovo declared independence in 2008, the European Union Rule of Law Mission (EULEX)³ was launched, which took many of UNMIK's previous responsibilities in areas such as policing, judiciary, and customs. The objectives of EULEX go beyond common peacekeeping and directly engage in institution and state building (*EULEX - European Union Rule of Law Mission in Kosovo*, n.d.). They have also been established with the long-term goal of preparing Kosovo for potential EU accession (Keukeleire & Thiers, 2010; Papadimitriou & Petrov, 2012).

4.2.1.2 Regime Dynamics

In the 2000s, under the administration of UNMIK, Kosovo began establishing its foundational institutions for spatial planning. The Ministry of Environment and Spatial Planning (MESP) was created at the start of 2002 and shortly after the Law on Spatial Planning (Law No 2003/14) was approved in 2003 (Gollopeni & Kurtishaj, 2014). This law, as analyzed, was established to develop the legislative framework for urban and spatial planning and laid the foundation for Kosovo's urban planning system. It introduced two levels of planning:

² UNMIK (United Nations Interim Administration Mission in Kosovo) is a United Nations peacekeeping mission established to help maintain peace and facilitate the transition of Kosovo to self-government. UNMIK focused on 4 areas: interim administration, humanitarian affairs, reconstruction and the development of the government apparatus.

³ EULEX (European Union Rule of Law Mission in Kosovo) is a mission launched by the European Union in 2008 to support the rule of law in Kosovo. It is the largest civilian mission ever launched under the Common Security and Defense Policy of the European Union.

- The central level, responsible for the Spatial Plan of Kosovo (SPK).
- The local level, covering Municipal Development Plans (MDP), Urban Development Plans (UDP), and Urban Regulatory Plans (URP).

The law also introduced other key bodies to guide the spatial planning process: Committee of Planning Experts (for the local level) and the Spatial Planning Council (for the national level). While the law provided a formal structure, it was heavily influenced by international bodies such as UN-Habitat, which assisted in developing the legislative framework (Gjinolli, 2019). The reliance on external actors meant that the legislative process was not fully adapted to local needs, reflecting a top-down approach with little local ownership.

Governance during this period was characterized by centralization under international administration. UNMIK and international agencies played a dominant role in decision-making, sidelining local governance bodies. Other key international development players include the EU Office, UNDP, USAID, GIZ, SIDA, the World Bank, and the EBRD (Greiçevci, 2011). The MESP lacked the autonomy to enforce urban mobility initiatives effectively, leading to a fragmented governance system (Joireman, 2016). Local authorities had limited involvement in planning and implementation, with most urban mobility decisions driven by international organizations. There were efforts by UN-Habitat of capacity building led by UN-Habitat programs, focusing on various aspects such as plan development, public participation, policy formulation, and decision-making, all of which were supported by on-the-job training for planning officers (Gjinolli, 2019).

When looking for Prishtina's urban mobility policy frameworks in the early 2000s, it is evident that reconstruction was prioritised over the creation of long-term sustainable mobility solutions. There was little involvement in urban mobility planning during this time, as evidenced by the lack of focus on improving public transport and lowering reliance on personal vehicles. Throughout this decade, foreign aid had a major impact on developing the field of urban planning. However, even with this foreign aid and multiple organizations involved, Prishtina's approach to urban planning during this period lacked a forward-looking mobility strategy, or even a sustainable urban planning approach that would lay the groundwork for future sustainable transportation systems.

4.2.1.3 Niches

During the period of UNMIK's involvement, international efforts focused on restoring Kosovo's government and infrastructure. Niche innovations in urban transportation were largely absent during this time. The primary objective remained the establishment of institutional stability and fundamental reconstruction.

4.2.2 Ljubljana: 1990 – 2000

4.2.2.1 Landscape

Unlike Kosovo, Slovenia's transition following the dissolution of former Yugoslavia was relatively peaceful. After Slovenia declared independence in 1991, the city began transitioning from a socialist centrally planned economy to a market-based system (Ramet, 2010). The early years of Slovenia's independence were characterized by a careful and deliberate approach to building its national institutions. This initial phase focused on creating a new sociopolitical system suited to its independent status. However, as Slovenia advanced towards EU

membership, the pace of institutional reform started to move faster. This shift was driven by the need to align with EU regulations, which required a more proactive and comprehensive agenda (Mrak et al., 2004; Ramet, 2010). During this time the World Bank Group supported this process with analytical and advisory activities. These activities included policy advice, critical transfer or technical knowledge, economic and sector reports, seminars, training of government officials, and making the experience of international experts available to policymakers (Mrak et al., 2004).

4.2.2.3 Regime Dynamics

After Slovenia's independence in 1991, legislative reforms became a central aspect of its transition toward a market-based economy and European Integration. In 1991, Slovenia updated its spatial planning laws to better align with the changing political and market conditions of the time. These changes led to the adoption of the new Spatial Planning Act (ZUreP-1) later in 2003, which set a modern framework for urban and regional planning. The main strategic decisions that set Slovenia on the road toward membership, as Moore and Zajc (2000) in the European Union were first outlined in 1994-95 in the Strategy for Economic Development of Slovenia. The crucial goals of this strategy were to speed Slovenia's economic growth and allow Slovenia to catch up with the more developed European countries; to improve the competitiveness of the Slovenian economy; to allow Slovenia to take part in Europe's integration; and to achieve sustainable economic growth while taking into account environmental, social, and ethical concerns (Moore & Zajc, 2000). Several amendments were added to the existing articles of spatial planning legislation, including the Spatial Planning Act in Transition (1993, 2000), the Settlement Planning Act (1993, 1997), the Building Land Act (1997), and the Construction Act (1999, 2000). These incremental updates reflected the evolving needs of Slovenia's post-socialist economy while aligning with international standards in preparation for EU accession.

The administrative reform of 1994 had a crucial role in shrinking the official territory of Ljubljana and unifying its administration framework. The Urban Municipality of Ljubljana was created through the merger of five communes, which facilitated more efficient coordination and centralized decision-making between the city and the neighboring municipalities. Coherent development policies and the coordination of urban planning initiatives throughout the recently established municipality depended on this reorganization (Milanović, 2001). Moreover, the coordination between local authorities and national institutions became crucial as Slovenia accessed EU pre-structural instruments such as PHARE, ISPA, and SAPARD during the pre-accession period (1995–2000).

In the 1990s, Ljubljana did not have a comprehensive urban mobility policy or strategy targeted for sustainable transport. However, the basis for Ljubljana's future urban mobility planning was established throughout this decade by the comprehensive legislative and administrative reforms created the groundwork for future urban mobility planning. The Strategy for the Economic Development of Slovenia (1995), set forth the nation's long-term economic objectives, including regional development and EU integration (Milanović, 2001). This approach placed a strong emphasis on spatial planning, sustainable growth, and incorporating social and environmental issues into the nation's development plans. Even while these changes were mostly strategic, they prepared the way for more focused urban and spatial planning laws to be introduced in Slovenia in the early 2000s as the country worked to bring its legal system into compliance with EU standards.

4.2.2.3 Niches

The researcher did not identify niche innovation emerging at this time. This may be due to lack of documentation of such initiatives, or the priorities that the city had at the time navigates its shift to a market economy and was preparing for European Union integration. The focus at the time was on establishing basic governance and institutional structures, which potentially left little room for innovation to emerge in urban mobility.

4.3 Period II: EU Alignment

4.3.1 Prishtina: 2010 - 2020

4.3.1.1 Landscape

During this period, Prishtina was transitioning from international oversight to local governance, with a growing emphasis on aligning with European Union standards. The signing of the Stabilization and Association Agreement (SAA)⁴ between Kosovo and the EU in 2016 was a key exogenous factor that drove the alignment of Kosovo's policies, including urban mobility, with EU standards. The SAA required Kosovo to adopt EU directives, focusing on sustainable development, environmental protection, and modern mobility solutions (*European Integration*, n.d.). There was also external push from international organizations and global policy trends toward green mobility which began impacting how Prishtina approached its urban transport challenges (*Prishtina Online*, n.d.). During this time, Kosovo was getting financial assistance from the EU through the Instrument for Pre-Accession Assistance (IPA) from 2007-2020 (through IPA I and IPA II)⁵ (*European Commission*, 2021)

4.3.1.2 Regime Dynamics

Prishtina's legislative framework saw a significant shift in 2013 with the introduction of Law No. 04/L-174 on Spatial Planning, which replaced the earlier 2003 law. This came after, the World Bank published the 'Doing Business'⁶ report which ranked Kosovo 86th out of a list of 189 countries. That is when the U.S. Agency for International Development (USAID) initiated the "Partnerships for Development" project which "supported Kosovo government institutions at the central and local level to create a business-friendly and competitive environment that will attract foreign investments, while maintaining macroeconomic stability" (*USAID Partners*, 2024). One of the project's ambitions was to improve implementation of construction reforms as the procedure for getting a permit was 'highly bureaucratic'. This new law aimed to simplify and modernize Kosovo's planning processes by introducing zoning practices, which

⁴ The Stabilization and Association Agreement (SAA) is a framework for EU integration that governs the relationship between the European Union and a non-EU country. It sets out the reforms and obligations that a country must fulfill to align itself with EU standards and is often seen as the first formal step towards eventual EU membership.

⁵ Since January 2007, the Instrument for Pre-Accession Assistance (IPA) has been set up to function as a financial instrument for candidate countries or potential candidates of the European Union.

⁶ The World Bank's "Doing Business" report was an annual publication (2003-2020) that assessed the regulatory environment for businesses in various countries. It evaluated factors like ease of starting a business, obtaining permits, getting electricity, registering property, and enforcing contracts. The report aimed to provide insights into how regulations and business environments could impact economic activity and investment.

were not a practice applied before in Kosovo, and improving the efficiency of construction permitting. However, the law was met with resistance from local officials, who were unfamiliar with the new zoning regulations (Gjinolli, 2019). This resistance hindered the development process of a more adaptive legislative framework for urban mobility.

This new law abolished organizations such as the Spatial Planning Council and the Committee of Spatial Planning that Law 2003/30 previously introduced. The MESP integrated Planning, Housing and Construction into a single department covering three sectors. As described by (Gjinolli, 2019), former director of the Institute of Spatial Planning within the MESP, the new zoning practice is more comprehensive and takes longer to draft, which the municipalities were having a hard time to adjust. Additionally, a certain amount of centralization was added by this new law, which is against European planning standards. The main difference in governance identified through document analysis of these laws are:

- To guarantee compliance with national standards, the 2013 law mandates that municipal zoning maps and other local spatial plans be examined and approved by the Ministry. This is a change from the 2003 law, which gave local governments greater flexibility to develop plans.
- The introduction of zoning maps as a central planning document that is legally binding throughout the entire region represents a shift towards more top-down control compared to the 2003.

A review of the municipal website reveals that the Zoning Map of Prishtina has not yet been published, despite it being enforced by law since 2013. In 2018, the municipality announced that the drafting process had begun, but as of now, the map remains unavailable online, unlike other urban plans that are publicly accessible. This delay suggests that governance frictions and administrative challenges may have hindered local authorities from finalizing and releasing the document.

In 2019, Prishtina made its first significant step toward sustainable urban mobility with the adoption of its Sustainable Urban Mobility Plan (SUMP). This plan was initiated under the MobiliseYourCity Partnership, which aims to support cities in their efforts toward sustainable urban mobility (MobiliseYourCity, n.d.). The plan is ambitious, aiming to reduce car dependency, improve public transport, and promote cycling infrastructure. However, as will be discussed this plan faced several challenges. The absence of local laws to support the development of cycling lanes and emission-reduction policies created obstacles in implementing the SUMP's objectives. Additionally, the policy remained heavily dependent on external funding from international organizations like the European Bank for Reconstruction and Development (Municipality of Prishtina, 2019).

4.3.1.3 Niches

During this period of 2010-2020, Prishtina saw the emergence of several niches aimed at replacing existing transportation models. In 2016, 51 new buses were introduced to reduce car dependency and enhance public transit efficiency (MobiliseYourCity, 2019). Cycling infrastructure, which was introduced in the SUMP, set goals for increasing non-motorized transport options and developing cycling lanes (EBRD Green Cities, 2021). These initiatives were supported by global alliances like the City Climate Finance Gap Fund and the European Bank for Reconstruction and Development (EBRD), which offered financial and technical assistance for investments in green infrastructure and sustainable transport (World Bank, 2020).

4.3.2 Ljubljana: 2000-2010

4.3.2.1 Landscape

During the 2000-2010 period, Ljubljana saw a significant transformation as the city shifted towards sustainable urban development. This was prompted by Slovenia's accession to the European Union in 2004 which brought substantial EU funding to Ljubljana, particularly for infrastructure and sustainable development projects. The EU's Cohesion and Regional Development Funds became instrumental in shaping the city's urban mobility framework (Mrak et al., 2004; Ramet, 2010). The requirement to comply with EU environmental and sustainability standards, such as reducing greenhouse gas emissions and promoting public transport, was a major landscape pressure that influenced institutional development of Ljubljana's mobility systems. This period also saw a growing international emphasis on reducing urban pollution and promoting green spaces, aligning with broader global trends toward sustainable cities.

4.3.2.3 Regime

Ljubljana's legislative environment in the 2000s was driven by Slovenia's EU accession process, which finalized in 2004. Slovenia's Spatial Planning Act (ZUreP), introduced in 2003, began aligning the country's urban planning systems with EU directives. The Act emphasized decentralized planning, granting greater autonomy to municipal governments like Ljubljana's (Niksic, 2017). The legislative environment became increasingly shaped by EU norms, particularly in the areas of environmental protection and urban sustainability. Thus, building on the Spatial Planning Act of 2003, the Spatial Planning Act of 2007 was introduced. This act mandated that local governments create spatial plans that integrate transport, infrastructure, environment concerns, and economic development, in accordance with EU sustainability goals. Additionally, this plan enforced stricter regulations on building permits and land use to ensure that urban growth followed sustainable guidelines.

The introduction of the 2003 and 2007 Spatial Planning Acts brought need for stronger collaboration between the national government and local municipalities. Local authorities were responsible for ensuring their spatial plans were in line with both national strategies and EU directives. Meanwhile, the Ministry of Environment and Spatial Planning took on an oversight role, offering guidance to make sure that urban development adhered to principles of sustainability, environmental protection, and efficient land use. The recognition of Ljubljana as the European Green Capital in 2016 is an external validation of these good coordination between different levels, which was noted for being crucial for winning this award (*European Environment Agency*, n.d.)

In 2007, the Municipality of Ljubljana introduced the Ljubljana 2025 Vision, which aimed to make Ljubljana a more livable, sustainable, and ecologically friendly city by the year 2025. Its main objectives were to lessen dependency on private vehicles, support bike infrastructure and enhance the public transport. In 2008, the Ljubljana Urban Master Plan was updated in order to realize this ambition. This plan, put Ljubljana 2025 Vision plans into concrete strategies for implementation (*City of Ljubljana*, n.d.)

4.3.2.3 Niches

This period saw a rise in niche innovations in the infrastructure of Ljubljana. In 2007, with the new-urban vision "Ljubljana 2025," the city began transforming its center by restricting car traffic and enhancing pedestrian access, particularly around central areas like the Triple Bridge and Wolfowa Streets. This initiative was aimed to prioritize pedestrian and cyclist access and

lessen vehicle congestion. The city also invested in improving its public transport infrastructure by providing the URBANA card system, which simplified payment for multiple types of public transport (*EU Urban Mobility Observatory*, n.d.).

4.3 Period III: Sustainability Initiatives

4.3.1 Prishtina 2020-Present

4.3.1.1 Landscape

Major landscape pressures which impacted Prishtina before having started to neutralize during this period. Starting in 2020, Prishtina has been navigating the challenges of aligning more comprehensively with European Union standards, particularly in sustainable urban development. There is also external push from international organizations and global policy trends toward green mobility in Prishtina to approach its persistent urban transport challenges which are impacting negatively residents' lives.

4.3.1.2 Regime Dynamics

A major obstacle in this time is the incompatibility of new urban plans and existing legal frameworks. In 2021 the Green City Action Plan (GCAP) was introduced to address the current urban mobility and environmental issues in the city. However, delays in the Municipal Development Plan (2023-2031) have left a legislative gap, where these strategies cannot be materialized in concrete actions. Moreover, the persistent absence of a zoning map further hinders Prishtina's ability to enforce its spatial planning regulations, leaving gaps in the city's legal structure.

The coordination of the different levels of planning is facing problems, particularly in the coordination and approval of significant urban development plans. This is evident in the expiration of the previous Municipal Development Plan (MDP) 2012-2022. The city has operated without an official MDP since 2022 since the new development plan for 2023-2031 has encountered multiple delays due to governance and procedural issues, including political opposition, regulatory comments from the MESP, and challenges in facilitating effective public discussions (Zeqiri, 2024).

Prishtina's urban mobility policies are primarily guided by the Sustainable Urban Mobility Plan (SUMP) (2019) and the Green City Action Plan (GCAP) (2021). The SUMP aims to reduce car dependency and promote sustainable alternatives such as public transport and cycling, aligning with EU directives on reducing carbon emissions. The GCAP complements this by focusing on broader environmental goals, including green mobility and infrastructure improvements. But as mentioned before, legislative currently hindering its implementation.

4.3.1.3 Niches

Several niche innovations aimed at promoting sustainable mobility have emerged in Prishtina. These include the expansion of public transport, initiatives to improve cycling infrastructure, and explorations into electric vehicle infrastructure, all of which align with the broader goals set out in the SUMP and GCAP. However, due to legislative delays that were mentioned earlier they still struggle to scale effectively. These barriers have prevented Prishtina from fully capitalizing on the momentum of these niches, which, despite external support from bodies like the European Bank for Reconstruction and Development (EBRD) and the City Climate Finance Gap Fund, remain underdeveloped.

4.3.2 Ljubljana: 2010-2020

4.3.2.1 Landscape

Between 2010 and 2020, the accession of Slovenia in 2004 brought substantial funding from the European Cohesion and Regional Development Funds (*Cohesion Fund*, n.d.). were instrumental in shaping Ljubljana's Sustainable Urban Mobility framework. EU mandates, such as the requirement to reduce greenhouse gas emissions, prompted the city to focus heavily on sustainable public transport systems and non-motorized mobility. Global trends, particularly the growing emphasis on reducing urban pollution and enhancing green spaces, also influenced the direction of Ljubljana's policies during this decade.

4.3.2.3 Regime

Legislative developments during this period were driven by Slovenia's need to align with EU directives on sustainability and urban mobility. Building on the 2007 Spatial Planning Act, the Spatial Planning Act of 2013 (ZUreP-2) was introduced to enhance the efficiency of the planning process. This was done by streamlining administrative burdens and improving coordination between national and municipal authorities. The new legislation placed an increased emphasis on environmental protection, ensuring that spatial plans integrated sustainability goals such as natural resource conservation and the promotion of sustainable transport. The legal framework empowered municipalities like Ljubljana to adapt their urban planning strategies in accordance with the EU's long-term sustainability objectives.

Ljubljana's governance structures were strengthened through collaboration between national and local authorities, particularly in implementing EU-led initiatives. The streamlined procedures under the 2013 Spatial Planning Act clarified municipal responsibilities, allowing for better coordination with national policies and EU environmental directives. Local authorities worked closely with EU-funded projects, including the INTERREG and CIVITAS programs, enabling the city to scale sustainable mobility innovations effectively (Peterlin & McKenzie, 2007). This multi-level governance structure was essential in ensuring that Ljubljana could integrate sustainable urban mobility policies that aligned with EU standards while maintaining efficient decision-making processes at the local level.

The Ljubljana 2025 Vision, adopted in 2007, continued to guide urban mobility policies throughout the 2010s. The municipality updated its urban master plan to further reduce dependency on private vehicles and encourage sustainable alternatives such as cycling, walking, and public transit. In 2012, Ljubljana introduced its Sustainable Urban Mobility Plan (SUMP), which set ambitious targets, including a 50% increase in public transport use and a 40% rise in cycling, while aiming to reduce car journeys by 20%. This period saw the implementation of major infrastructure projects, such as the expansion of pedestrian zones, promotion of multimodal transport systems, and investments in public transport.

4.3.2.3 Niches

Several niche innovations emerged and were successfully implemented during this period, contributing to the city's broader sustainable mobility goals. The expansion of pedestrian-only zones in the city center, notably around the Triple Bridge and Wolfova Street, was a significant development which reduced motor vehicle congestion while enhancing pedestrian and cyclist

accessibility. By 2020, car-free zones covered more than twelve hectares of the city center (*European Commission, n.d.*). The city center's pedestrian zone has expanded by 620% since 2007, now covering about 10 hectares, with an additional 3 hectares accessible to local traffic. This shift has had a noticeable effect on how people get around: the percentage of trips made by car dropped from nearly 60% in 2003 to 42% in 2013, while walking trips increased from 19% to almost 35%.

Cycling infrastructure also advanced during this decade. Ljubljana developed over 220 km of dedicated cycle lanes and introduced the Bicike(LJ) bike-sharing system, which saw widespread public adoption with over 900,000 trips recorded annually. Additionally, the city upgraded its public transport system with new CNG-powered buses and introduced five Park and Ride (P+R) facilities to reduce traffic congestion while promoting the use of public transport (*City of Ljubljana, n.d.*).

4.4 The Influence of Institutional Changes on Transition Pathways

4.4.1 Type of Institutional Change

The institutional changes in Prishtina and Ljubljana are analyzed using the typologies introduced by Streeck and Thelen (2005), which were operationalized in Chapter 3. Through the Multi-Level Perspective (MLP) analysis, the evolution of legislation, urban mobility policies, and governance coordination in both cities over time was assessed. Table 9 provides an overview of the types of institutional changes identified in each city, categorized across three distinct time periods.

| Period | Prishtina | Ljubljana | Type of Institutional Change |
|---|--|---|---|
| Period I: Institutional Building | <ul style="list-style-type: none"> - Institutional rebuilding under UNMIK - Creation of Ministry of Environment and Spatial Planning (2002) - Law on Spatial Planning (2003/14) | <ul style="list-style-type: none"> - Transition from socialist to market economy - Preparation for EU accession - Adoption of Spatial Planning Act (ZUreP-1) in 2003 | <p>Prishtina: Displacement</p> <p>Ljubljana: Conversion</p> |
| Period II: EU Alignment | <ul style="list-style-type: none"> - Introduction of new zoning practices in the 2013 Law on Spatial Planning - Adoption of Sustainable Urban Mobility Plan (2019) | <ul style="list-style-type: none"> - Strong focus on EU directives - Adoption of Ljubljana 2025 Vision - Expansion of public transport and cycling policies | <p>Prishtina: Displacement</p> <p>Ljubljana: Layering</p> |
| Period III: Sustainability Initiatives | <ul style="list-style-type: none"> - Struggles with institutional inertia and governance issues - Green City Action Plan | <ul style="list-style-type: none"> - Continued expansion of sustainable urban mobility | <p>Prishtina:</p> |

| | | | |
|--|--|--|--|
| | (2021) adopted but slow implementation | - Implementation of new urban policies | Drift Ljubljana: Layering |
|--|--|--|--|

Table 9 Overview of Institutional Change

4.4.2 Transition Pathway

The transition pathways of Prishtina and Ljubljana are analyzed through the framework introduced by Geels and Schot (2007), which was operationalized in Chapter 3. Utilizing the Multi-Level Perspective (MLP), the analysis examines how landscape pressures, regime dynamics, and niche innovations have influenced the direction and pace of sustainable urban mobility transitions in each city. The assessment focuses on how institutional changes in legislation, urban mobility policies, and governance coordination have either supported or hindered these pathways. Table 10 summarizes the transition pathways identified in both cities.

| MLP Level | Prishtina | Ljubljana | Transition Pathway |
|------------------|--|--|--|
| Landscape | <ul style="list-style-type: none"> - International oversight (UNMIK, EULEX) - EU integration pressures - Global trends towards sustainable mobility (SUMP) | <ul style="list-style-type: none"> - EU integration in 2004 - EU sustainability directives - Access to EU funding for green projects | <p>Transformation (Prishtina): Gradual adaptation to external pressures with incremental changes.</p> <p>Reconfiguration (Ljubljana): Integration of new mobility solutions influenced by EU policies.</p> |
| Regime | <ul style="list-style-type: none"> - Creation of Ministry of Environment and Spatial Planning - Introduction of zoning practices - High car dependency, underdeveloped public transport | <ul style="list-style-type: none"> - Strong local governance - Adoption of Ljubljana 2025 Vision - Expansion of pedestrian and cycling infrastructure | <p>Transformation (Prishtina): Limited regime change with adjustments to zoning and public transport.</p> <p>Reconfiguration (Ljubljana): Niche innovations incorporated into the existing regime.</p> |
| Niches | <ul style="list-style-type: none"> - Efforts in public transport (new buses, 2016) - Cycling infrastructure, but limited implementation | <ul style="list-style-type: none"> - Successful introduction of bike-sharing and pedestrian zones - Major investments in sustainable transport modes | <p>Transformation (Prishtina): Niche innovations struggle to take hold due to governance challenges.</p> <p>Reconfiguration (Ljubljana): Niche innovations successfully mainstreamed into the system.</p> |

Table 10 Overview of Transition Pathway

4.4.3 Synthesis

This section answers to the following sub-question: What are the differences in the transition pathways taken by Prishtina and Ljubljana, and how are these differences shaped by their respective institutional changes?

This synthesis provides a comprehensive view connecting the theoretical framework in Chapter 2 with the empirical case study findings.

Prishtina: Transformation Pathway/Institutional Drift and Displacement

Prishtina's transition toward sustainable urban mobility follows a transformation pathway, characterized by institutional drift and occasional displacement. The city faced substantial landscape pressures, especially from international actors like the United Nations Interim Administration Mission in Kosovo (UNMIK) and later the European Union. The adoption of new legislative frameworks, including the Sustainable Urban Mobility Plan (SUMP) and the Law on Spatial Planning (2003), were pushed upon Prishtina by these external influences.

Over time, these institutional changes led to drift in governance and policy implementation. Although new laws and frameworks were introduced, their application and enforcement were weak as is shown from the delayed implementation of crucial tools like the Zoning Map. This failure to adapt to changing external conditions (including EU sustainability directives) has caused the regime's response to be fragmented. Prishtina's regime dynamics reflect this lack of institutional cohesion, as local resistance and governance fragmentation have slowed down its ability to incorporate sustainable urban mobility practices.

Ljubljana: Reconfiguration Pathway/Institutional Layering and Conversion

Ljubljana's pathway follows a reconfiguration pathway which is driven by institutional layering and conversion. Differently from Prishtina, Ljubljana managed to adapt its institutions by adding new sustainability-focused policies to existing frameworks without completely changing them. This process of layering is evident in the introduction of the 2003 Spatial Planning Act and subsequent reforms, which integrated sustainability goals aligned with EU directives. Ljubljana's ability to continuously build upon its existing planning systems reflects strong regime dynamics. This is also shown from the governance structures at both the local and national levels which are well-coordinated to implement sustainability reforms.

The city also experienced institutional conversion, where older governance structures were repurposed to meet new environmental goals. The transition to sustainable urban mobility was supported by converting pre-existing planning frameworks to accommodate the goals of the Sustainable Urban Mobility Plan (2012) and the broader Ljubljana 2025 Vision. Although, these reforms enabled the city to embrace niche innovations effectively, such as the pedestrian zones, expanded cycling infrastructure, and improvements in public transportation systems, all of which were successfully scaled into mainstream urban mobility practices.

Ultimately, the differing experiences of Prishtina and Ljubljana reinforce the central role of institutions in shaping sustainable urban mobility transitions. The conceptual framework (p. 22), which integrates the Multi-Level Perspective (MLP) and institutional theory, plays a vital role in understanding these outcomes. From that we can understand, that while Prishtina has struggled in transitioning to sustainable methods due to fragmented governance and external dependency, Ljubljana's strong institutional framework and alignment with EU standards have enabled it to integrate sustainable practices.

5. Conclusions

5.1 Answering the main research question

Main Research Question: "What institutional factors have caused the transition pathways of Prishtina and Ljubljana to diverge?"

A number of institutional factors account for the divergent routes in urban mobility transitions between Prishtina and Ljubljana, as broadly explained in Chapter 4. While former Yugoslavia remains a part of both cities' histories, their approaches to sustainable urban mobility were influenced by the institutional frameworks that developed after the 1990s.

In Prishtina, institutional challenges are tied to its post-conflict recovery, where there is a heavy dependence on international bodies like UNMIK and EULEX. This international influence created a situation where local governance found it hard to take control over urban planning and development. A major reason behind this institutional struggle is the slow pace of regulatory reforms, especially when it comes to spatial planning. Even though the Law on Spatial Planning was brought in 2013 to modernize urban development, its impact was weak due to political resistance and the lack of the legally required Zoning Map. The slow legislative progress has delayed many key urban mobility policies, like the Sustainable Urban Mobility Plan (SUMP) which make it difficult for the city to develop a clear strategy for reducing car use and improving public transportation.

Furthermore, Prishtina's promising urban mobility have been shaped by external funding and support. The implementation of these plans is reliant on funding organizations like the European Bank for Reconstruction and Development (EBRD) and the MobiliseYourCity Partnership shows a trend of external reliance. This shows that local institutions haven't been able to fully take charge of sustainable mobility efforts. This has further led to policies that are not grounded enough in local needs, creating a fragmented approach to urban mobility. The ongoing absence of the Zoning Map only makes this clearer, as local governance has struggled to collaborate effectively with national authorities, resulting in delays and policy stagnation.

In contrast, Ljubljana's move toward sustainable urban mobility has been helped by a much more stable and forward-looking institutional environment. Slovenia's earlier membership in the European Union gave the city access to important funds and technical help, which were crucial in shaping its urban mobility policies. The city's legal framework, especially the Spatial Planning Acts of 2003 and 2007, provided a strong base for sustainable development by bringing EU environmental goals into local planning processes. Unlike Prishtina, Ljubljana's institutional reforms showed a high level of cooperation between national and local authorities, making it easier to roll out sustainable mobility initiatives.

Ljubljana's success in transforming its urban mobility landscape is also thanks to strong governance coordination. The city's ability to closely work with national bodies and EU-funded programs, like INTERREG and CIVITAS, made sure that urban mobility policies were not only well-designed but also well-executed. This coordination allowed Ljubljana to implement major projects like expanding pedestrian zones and launching bike-sharing systems, which have helped to cut down car use and promote sustainable transport options. The city's proactive approach to policy implementation demonstrates an adaptable and responsive institutional coordination that can address sustainability difficulties without the governance issues observed in Prishtina.

Ultimately, the different transition pathways between Prishtina and Ljubljana underline that institutional factors for a sustainable urban mobility transition are adaptive legislation, cohesive

governance, and stable funding. In Prishtina, a mix of fragmented governance, legislative delays, and external dependency has made it difficult to move toward sustainable mobility. On the other hand, Ljubljana's well-coordinated governance, strong legislative system, and alignment with EU standards have allowed it to follow a reconfiguration pathway, integrating sustainable practices into its existing urban framework.

5.2 Research Validity, Importance and Relevance

The strength of this research comes from the careful way process tracing was approached, focusing on the most important institutional factors while recognizing that not everything can be included. Especially when looking at something as complex as urban mobility transitions, researchers have to make choices about what to highlight. In this case, the spotlight was on institutional dynamics, governance, and legislative changes, while other factors (e.g. informal institutions) were left out. This doesn't mean they are irrelevant, but they were not central to the specific transitions being examined here. The process tracing method lets researchers dig deep into how things unfold over time, but it's also about knowing when to leave certain things aside so that the analysis doesn't get lost in too many details (Bennett & Checkel, 2014). This way, the study stays clear and focused, while still giving a solid, reliable picture of what's really influencing these transitions.

This brings us to the importance of this research. The findings highlight the critical role that stable, coherent, and integrative institutional frameworks play in facilitating successful urban mobility transitions. By examining these two cities the study has highlighted the institutional challenges and opportunities that arise towards the aim of sustainable urban mobility.

The findings offer real-world insights for policymakers, showing that strong governance and local control over policies are crucial for making sustainable urban mobility a reality. This doesn't just apply to Prishtina and Ljubljana, but to other cities facing similar challenges. With the global push for greener transport solutions becoming more urgent, this research is particularly timely, demonstrating how institutions can play a key role in tackling both environmental and social issues in urban settings.

5.3 Recommendations for Further Research

The findings from this thesis open several avenues for further research, which could help deepen the understanding of institutional influences on urban mobility transitions and enhance the generalizability of the results:

- One key area for further study could be longitudinal research that tracks institutional changes and mobility outcomes over a longer period. This would offer a clearer picture of how transitions play out over time and how different political, social, and economic factors come into play.
- Expanding the geographical scope would also be valuable. Including more cities from different regions and with diverse political, cultural, and economic backgrounds could reveal more about how institutions impact mobility transitions
- While this thesis focuses on formal regulatory frameworks, further research could explore the impact of informal institutions (cultural norms and social practices) on urban mobility transitions. Understanding these informal elements could provide a more holistic view of the barriers and enablers of sustainable urban mobility that this research has not taken into account.

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Appendix 1: List of documents for analysis

| | Name | Type | Retrieved from | Level |
|----|--|--------------------|---|----------|
| 1 | Law no. 04/L-174 on Spatial Planning | Law | Official Gazette of the Republic of Kosovo | National |
| 2 | Law no. 2003/14 on Spatial Planning | Law | Official Gazette of the Republic of Kosovo | National |
| 3 | Law no. 03/L-120 on Roads | Law | Official Gazette of the Republic of Kosovo | National |
| 4 | Multimodal Transport Strategy 2023-2030 | Strategic document | Official Gazette of the Republic of Kosovo | National |
| 5 | Plan of Measures for Improvement of Air Quality and the Environment Condition in Kosovo (2016) | Strategic document | Official Gazette of the Republic of Kosovo | National |
| 6 | City of Prishtina. Green City Action Plan (2021) | Strategic Document | Official website of Municipality of Prishtina | Local |
| 7 | Municipal Development Plan of Prishtina | Planning document | Official website of Municipality of Prishtina | Local |
| 8 | Sustainable Urban Mobility Plan of Prishtina (2019) | Report | Official website of Municipality of Prishtina | Local |
| 9 | Act 2003 ZUreP on Spatial Planning | Law | Official Gazette of Slovenia | National |
| 10 | Act 2007 ZPNacrt on Spatial Planning | Law | Official Gazette of Slovenia | National |
| 11 | Act 2017 ZUreP-2 on Spatial Planning | Law | Official Gazette of Slovenia | National |
| 12 | Act 2021 ZUreP-3 on Spatial Planning | Law | Official Gazette of Slovenia | National |
| 13 | “Ljubljana 2025” Vision | Strategic document | Official website of City of Ljubljana | Local |
| 14 | Environmental Protection Program (2007 to 2013) | Strategic document | Official website of City of Ljubljana | Local |
| 15 | Sustainable Urban Mobility plan of Ljubljana 2012 | Strategic document | Official Gazette of Slovenia | Local |

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