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Executive Summary

**Collaborative Commuting Solutions to
Address Road Congestion in Israel**

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About the Milken Innovation Center Fellows Program

The Milken Innovation Center Fellows Program accelerates Israel's economic growth through innovative, market-based solutions for long-term economic, social, and environmental challenges. Our goal is to accelerate Israel's transition from a Start-up Nation to a Global Nation with solutions that others can replicate.

The Program awards annual fellowships to outstanding Israeli graduate students. We train and deploy some of Israel's best and brightest young professionals to create pragmatic financing and economic policy solutions. Our applied research and Financial Innovations Labs® are a launching pad for transformative change, using innovative financing mechanisms, programs and policies to bridge social, regional, economic and productivity gaps within Israel and between Israel and the world.

In addition, Fellows craft their own projects during their internship aimed at barriers to job creation and capital formation in Israel. The Fellows' research, carried out under the guidance of an experienced academic and professional staff, support business and policy makers to shape economic reality in Israel. The program offers the ultimate training opportunity, combining real-life work experience with applied research.

Throughout the year, Fellows receive intensive training in economic and financial analysis, public policy and research methods. They acquire tools for communication and presentation, policy analysis, leadership and project management. The fellows participate in a weekly research training workshop where they work with senior economic and government professionals, business leaders, and top academic and financial practitioners from Israel and abroad. They also participate in an accredited MBA course, taught at the Hebrew University School of Business Administration by Prof. Glenn Yago.

Fellows Program alumni can be found in senior positions in the public and private sectors. Some serve in key positions in government ministries while others work at private-sector companies or go on to advanced graduates studies at leading universities in Israel, the United States and Great Britain.

The Fellows Program is a non-partisan. It is funded, in part, by the Milken Institute and other leading philanthropic organizations and individuals in the United States and Israel.

For many years, meeting the challenges posed by population growth has been high on the priority list of both researchers and policymakers, who seek to address housing shortages, possible future food distress, and the transportation distress manifested in an increase in demand for transportation services. Every country which aims to develop urban centers is contending with traffic congestion, and Israel is no exception. In 2006, the total externality costs arising from traffic congestion in Israel stood at approximately NIS 41 billion (Moav and Shreiber 2017), while today these amount to approximately NIS 76 billion, with the loss of time alone estimated by the Bank of Israel at approximately NIS 35 billion, in 2018 (Bank of Israel 2018). The costs to the entire economy are increasing all the time.

Across the world, proposed solutions to these challenges include aggressive legislation such as prohibiting private vehicles in city centers and incentives such as a progressive taxation system to encourage utilization of alternative services. Different solutions are adapted by different countries, and sometimes by different cities within the same country. While some of the challenges which face Israel are unknown in other places – such as public transport services being shut down for about 15% of the year – there are solutions that may be appropriate and that can be implemented quickly and at low cost. This study presents one such alternative and recommends its implementation.

Research Structure

The first chapter reviews the congestion problem on Israeli roads and maps its most prominent characteristics, which are an increase in the rate of private vehicles on the road, relative to other vehicles, and a potential increase in the rate of vehicles per capita compared to other developed countries. Furthermore, the study demonstrates that the number of passengers in private vehicles in Israel is among the lowest in the world. These and other factors reveal that the problem of congestion on Israeli roads is mainly due to the number of private vehicles on the road, which suggests that the solution lies in the application of business and technological innovations.

The second chapter describes how innovations may lead to disruption in existing markets. Disruptive innovations, exemplified by case studies such as Airbnb, Netflix and others, demonstrate how profit is generated by market disruptions and also results from a reduction in transaction costs. This is followed by an analysis of the obstacles which may bar the way to such disruptions, such as market failures and cultural or regulatory barriers.

The third chapter discusses various ways and means to deal with road congestion in Israel. Many of the existing solutions involve a model in which consumption of private car transport services is

reduced in favor of high-quality public transport. However, for reasons outlined in the description of the low quality of public transport in Israel, it cannot be a suitable replacement for the use of a private vehicle. Therefore, the proposed solution is to better utilize existing private vehicle resources by encouraging ridesharing transportation services.

Chapter four explores the barriers to the use of ridesharing transportation, which already operates in Israel, contrasting the immediate availability of this potential solution with intensive investment in public transport. These barriers are mainly regulatory, and comprise concerns about consumer security and safety, taxation policies and more, and are described along with the solutions currently available to the regulator.

Although congestion fees are levied in many parts of the world, this solution is a complementary step to be instituted alongside another transportation alternative. The innovative aspect of this study is its identification of an existing infrastructure in Israel which can be easily replaced with an existing but under-utilized alternative – a high-quality, thriving ridesharing commuter service.


The transportation market in Israel is mainly characterized by private car travel, and the distance traveled by private vehicles as compared to all vehicles providing transportation services in 2017, was 94% (CBS 2018). This means that private vehicle travel constitutes the bulk of the traffic on the roads so that any reduction would have far-reaching consequences.

The focus is on a solution which targets commuters, because according to the data, more than 60% of residents travel to work in private vehicles, with the rest, about a quarter of the population, travelling on multi-passenger transportation, such as buses and trains. These numbers demonstrate why the solution targets the use of private vehicles, and trips to and from work.

Public transport is characterized by a "high filling factor" (an index expressing the average number of people in a vehicle), and the proposal to solve road congestion problems by utilizing the resource of private vehicles is based on the fact that the filling factor in private vehicles in Israel is currently 1.1 (Task 2015). This highlights the fact that in Israel many passengers travel alone in their private vehicles. However, economic incentive may encourage them to drive with additional passengers in their vehicles or to ride in another person's vehicle. If this filling factor increases to 1.375, that would mean a reduction of more than 25% in the number of vehicles on the road per hour. As demonstrated by the data provided below, this reduction in the number of vehicles travelling on the road every hour would facilitate an increase in the average speed from 55 km/h to 100 km/h,

which would do much to alleviate traffic congestion (Trachtenberg 2018), and furthermore, the data supports the claim that private car rides are safer.

In conclusion, this research reveals that it would be relatively simple for the bodies which regulate transportation and taxation to encourage the low-cost, real-feasible alternative of ridesharing for commuters as a solution for traffic congestion on Israel's roads, and also suggests a way to resolve the current regulatory challenges that may stand in its way.



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