Entrepreneurial failure in the transition to electric vehicles: a case study of support for sustainability policy in Israel

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Abstract

Why do entrepreneurs who gained initial remarkable government support for sustainability policy lose it rapidly and what may be learned from such failure? In May 2013, a national attempt for transition of transportation industry from internal combustion engine to electric vehicle by building country-wide infrastructure in Israel went bankrupt. Only short period before, the company, Better Place, seemed to be successful both in recruiting $850 million from investors and gaining institutional and political support via successful policy entrepreneurship from top governmental echelons to cut dependence on oil. The case study investigates what caused policy entrepreneur to lose political support and why the government did not provide a bailout plan for the company. Based on in-depth interviews over a period of several years with company employees and government officials in Israel and use of secondary data sources, the study concludes that, in the wake of national demonstrations for social justice in 2011, politicians shifted their agenda from national security concerns to welfare issues. This case fills a gap in the literature which tends to focus on successful ventures, by deriving insights from a case of entrepreneurial failure, as much can be learned from failure too. The practical lesson learned as the global movement for social justice spread is that initial success of policy entrepreneurship, which exploits a political window of opportunity, does not guarantee long-term governmental support for sustainability policy.

Failure is, in a sense, the highway to success, in as much as every discovery of what is false leads us to seek earnestly after what is true. And every fresh experience points out some form of error which we shall afterwards carefully avoid. – John Keats

Introduction

In May 2013, Better Place, an established Israeli company with strong political and government backing for building an infrastructure for the alternative fuel transportation industry...
based on electric vehicle (EV) technology, applied to the court requesting the appointment of a liquidator. A few years earlier, it would have been very difficult to predict this development since Deutsche Bank analysts composed promising reports about the company’s ability to electrify transportation in Israel (Deutsche Bank, 2009). Its battery swapping technology that extended the range of EVs was associated with Israel’s innovation capability tradition and became a symbol of the country’s recognition as a start-up nation (Senor & Singer, 2009, pp. 2–10). The company’s unique business model based on a pay-per-mile approach seemed to be on the right track for starting a paradigm shift in the transportation industry worldwide (Bohnsack, Pinkse, & Kolk, 2014).

The company succeeded in gaining institutional and political support from the highest governmental echelons that advocated a new energy policy. Indeed, Shai Agassi, the founder of Better Place and a successful policy entrepreneur (Cohen & Naor, 2013), focused on the national security agenda in order to encourage political support for his company. Better Place used Israel’s acute national security priority of reducing its dependence on oil to promote the cause of electric cars.

The goal of this study is to unveil the risk undertaken by policy entrepreneurs counting on fragile political support in order to draw practical lessons for future national projects attempting to create a paradigm shift in traditional industries such as transportation. It is going to investigate the complex relationship between democracy’s ballot, political will, public policy and long-term design for sustainable transition. Specifically, why do entrepreneurs who gained initial remarkable government support for sustainability policy lose it after a short time period and what may be learned from such failure?

The article is organized in following manner: it starts by providing background about Better Place entrepreneurial policy. Kingdon’s (1984/1995) theoretical framework serves as lens to comprehend the rational of politicians to support policy entrepreneurs and their willingness to provide bailout for bankruptcy projects. Next, the case study method is elaborated. Findings are described based on interviews and secondary data sources. The study concludes with insightful lessons for policy entrepreneurs before embarking on future large-scale national projects based on fragile political support (Table 1).

**Background**

Policy entrepreneurs are individuals – in or out of formal government – who exploit opportunities to influence policy outcomes to increase their self-interests – without having the necessary resources required for achieving this goal alone (Cohen, 2012, 2016). While policy entrepreneurs are not always involved in policy changes that occur worldwide, in many cases, one cannot fully understand or explain policy outcomes without considering the role of policy entrepreneurs in setting agendas that result in new policy outcomes (Kingdon, 1984/1995; Mintrom, 2013; Mintrom & Norman, 2009). For example, Mintrom (2000) demonstrated how the prominence of school choice in contemporary education policy discourse in the United State was not a result of some inexorable process; rather, it is the product of policy entrepreneurs. To date, much of the research in this subject has been conceptual and empirically tested on post-ante case analyses of successful policy entrepreneurs (Zahariadis, 2007). However, do all policy entrepreneurship endeavors finish with success? Aren’t we missing many lessons from ignoring policy entrepreneurship failures?
The bankruptcy of the Israeli company Better Place in May 2013 provides an opportunity to investigate a failed transition of transportation industry from internal combustion engine to electric vehicle based on fragile government support for sustainability policy in Israel. Better Place, a company that designed and developed infrastructure for electric vehicles (EVs), was founded by policy entrepreneur, Shai Agassi, a member of the Forum of Young Global Leaders (Wolfson, Tavor, Schermann, & Krcmar, 2011). Joshi and Yermish (2000) argue that entrepreneurial behavior challenges the status quo of an industry setting and creates a disruptive change. Their study articulates 10 key characteristics of an entrepreneur. Better Place entrepreneur, Shai Agassi, manifests these attributes in order to gain political support: (1) passion to the idea of protecting the environment, and in the process saving life of people who could die because of the harmful health effects of air pollution; (2) persistence in overcoming significant bureaucratic obstacles; (3) confidence that building a transportation network based on EVs is technology feasible and economically profitable; (4) self-determination in order to obtain permission for deploying the charging infrastructure countrywide; (5) personal risk by making a career change from expertise in software to starting a new career in the automobile industry in which Agassi lacks any prior experience or knowledge; (6) positive perspective about the ability to change consumer’s behavior about transportation that is ingrained in people’s social norms for over a century; (7) pursuing a high-profile role that attracts a lot of media attention and involves convincing world leaders to embark on a transportation revolution; (8) generating creative solutions both to extend car range (battery swapping) and to bill customers (pay for distance instead of energy consumed); (9) comprehending the global arena in terms of all the parties involved such as supplier of batteries, car manufacturers, electric utility companies and governments; and (10) exploiting a unique political window of opportunity in which there is instability at the Middle East in rich oil countries which makes Better Place project not only a national security priority for Israel but also an international agenda.

### Table 1. List of interviews.

| Date       | Interviewee position | Duration | Location                  |
|------------|----------------------|----------|---------------------------|
| Dec 2009   | Leading system designer 1 | 50 min   | Rehovot                   |
| Jan 2010   | Leading system designer 1 | 70 min   | Headquarters              |
| Jul 2010   | Leading system designer 1 | 70 min   | Headquarters              |
| Jun 2011   | Associate engineer 1    | 90 min   | Visitor Center            |
| Jul 2011   | Marketing/Sales manager | 100 min  | Visitor Center            |
| Jul 2011   | Global environmental manager | 80 min | Headquarters         |
| Dec 2011   | Associate engineer 2    | 90 min   | Visitor Center            |
| Jan 2012   | Marketing/Sales manager | 90 min   | Visitor Center            |
| Dec 2012   | Global environmental manager | 90 min | Headquarters         |
| Jan 2013   | Electricity commissioner  | 30 min   | Phone                     |
| Jan 2013   | Director department of air pollution | 45 min | Phone               |
| Jan 2013   | Advisor Israel’s ministry for international energy security policies | 45 min | Phone               |
| Oct 2013   | Post-bankruptcy interview | 90 min  | Technion University campus|
| Aug 2014   | Post-bankruptcy interview | 45 min  | Phone                     |

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1. All the informants were directly involved in the project early on and occupied senior positions on key areas with systemic managerial and technical responsibilities, which allowed them to be very knowledgeable about major design decisions and strategies. The information collected from each interviewee was triangulated during interviews with different respondents and with secondary data.

2. All the names and some specific information on some of the interviewees that could reveal their identification were preserved or disguised at their request as a condition to participate in the study.

3. The formal in-person interviews were typically followed up through email communications.

4. Interviews with Electricity Commissioner, director department of air pollution and advisor to Israel’s ministry of international energy security policies were carried out over the phone.
Agassi, a successful entrepreneur (Perkmann, 2007), focused on the national security agenda in order to encourage political support for his company. Better Place capitalized on Israel’s acute national security priority of reducing its dependence on oil in order to promote the cause of electric cars.

Yet, while after this successful policy entrepreneurship in which the company succeeded to promote a national attempt for transition of transportation industry from internal combustion engine to electric vehicle, it went bankrupt. A very short time after that, the company did not receive the same political support.

As will be demonstrated in this study, following strong demands from the public, Israeli politicians shifted their agenda from national security concerns to welfare issues. Thus, although the policy entrepreneurs who act to promote the company’s interest did identify the shift in the politicians’ agenda, it was impossible to preserve political will toward bailout for the company. In the summer of 2011, hundreds of thousands of Israeli citizens went out into the streets, demanding changes in Israeli social policy and the rebuilding of the welfare state. The target of most protesters were Israeli politicians, whom they argued have neglected the middle class and made it impossible for the average family to live in dignity.

Theoretical framework

Policy entrepreneurship and policy change

As decades of research worldwide have established, policy entrepreneurship matters. Policy entrepreneurs prove to be involved in various institutional change and policy domains, including electrify transportation. Scholars studying policy or institutional change as a product of policy entrepreneurship underscore the importance of individual agency as a promoter of outcomes. Policy entrepreneurs are introduced as individuals who are not satisfied with merely promoting their goals within institutions that others have established. Rather, they try to influence a given reality to create new horizons of opportunity using innovative ideas and strategies. These persistent individuals use innovative ideas and non-traditional strategies to promote desired policy outcomes. Whether they come from the private, public or third sector, one of their defining characteristics is their willingness to invest their resources – time, energy, reputations and sometimes money – in the hopes of a future return (Arieli & Cohen, 2013).

Policy entrepreneurship prompts us to move beyond mainstream notions of institutions in equilibrium. The new institutionalism approach is based on the assumption that human behavior is shaped by institution and thus institutions establish social order. Yet, within the new institutionalism, some pointed at a tension between historical institutionalism and rational choice institutionalism. While the later focuses on national institutions and the activity of various actors in explaining micro-level processes and specific events of change (Katzenelson & Weingast, 2005), historical institutionalism emphasizes structural and ideological factors in explaining macro-level processes. Yet, as Weingast (2005) argue, historical institutionalism and rational choice institutionalism approaches are complementary rather than competitive. Hence, analyzing institutional change should combine these two approaches and incorporate additional variables such as agent of change and entrepreneurs into analysis. Agents are commonly regarded to be strategically thinking rational actors, propelled to advance their self-interests. As the literature suggests, the presence
of problems often leads to the rise of entrepreneurs who advance changes in policy as a problem-solving mechanism (Dull, 2006). Weingast (2005) characterizes entrepreneurs as pivot players. Indeed, understanding and explaining the role of individuals within broader socioeconomic structures is becoming an increasingly common focus in political science and public policy literature (Cohen, 2016).

Policy entrepreneurship was established as a theoretical concept mainly in Kingdon’s (1984/1995) influential policy streams model, which is based on the ‘garbage can’ model of organizational decision-making developed by Cohen, March and Olsen. His work considers the role of the individual within the policy process as an explanation of why and when change occurs. In this sense, Kingdon introduced a rather new point of view on the role of individuals in shaping the policy process. According to Kingdon, policy outcomes can best be understood as the joining of some core elements of the policy process aligned in particular ways in time and space. The model is based on three distinct but complementary streams (processes) in policy-making: the stream of problems, the stream of policies and the stream of politics. It is the uniting of these streams at a given time and in a given context that allows a particular issue to be turned into a policy. The success of a new policy thus depends on individuals and collective actors resolving coupling problems and presenting solutions that work in a particular situational context (Satren, 2009). Given a window of opportunity, policy entrepreneurs play a key role in connecting the streams by linking the problem with the solution. They are skilled and resourceful actors who unite the three streams together – problems, policies and politics – during open windows of opportunity (Ackrill, Kay, & Zahariadis, 2013). Thus, they are willing to invest their resources in return for the implementation of future policies they favor (Kingdon, 1984/1995). Since Kingdon’s initial work, the notion of policy entrepreneurship has become increasingly common in the literature on public policy and administration, offering a new perspective on various phenomena related to these areas (Mintrom, 2000; Roberts & King, 1996; Schneider & Teske, 1992).

While many policy scholars view entrepreneurs as central figures in this area, others in the disciplines of political science and public policy have been somewhat reluctant to acknowledge their role. Cohen (2016, p. 181) argue that only by providing sufficient examples of their importance, it will be possible to support the argument about the pivotal role that policy entrepreneurs play in political life. Yet, given the fact that not all policy entrepreneurship endeavors finished with success and given that much of the research in policy entrepreneurship has been focused on post-ante case analyses of successful policy entrepreneurs (Zahariadis, 2007), the literature misses many lessons from ignoring policy entrepreneurship failures. While failure is a painful experience for entrepreneurs, substantial knowledge can be gained from it (Shepherd & Kuratko, 2009).

**Bailouts and the pursuing of political will: an elusive window of opportunity**

Political will is an elusive achievement that is difficult to sustain over time. Given that according to this broad definition, a policy entrepreneur does not have all the resources needed to realize the goals of the entrepreneurial activity, it is clear that successful entrepreneurial activity must be based on gaining political will. In order to do so, the policy entrepreneur must base his/her strategies on persuasion, pragmatism and willingness to compromise. As Kingdon (1995) already demonstrated, by linking the problem with the solution, successful
policy entrepreneurs may recruit political will. As the entrepreneurs are well-versed in the social-political context in which they are interacting and demonstrate high levels of social acuity in understanding others and engaging in policy conversations, they identify ‘windows of opportunity’ for introducing innovative policy within the existing social order (Mintrom & Norman, 2009). Yet, by definition, window of opportunity is limited in time and when it comes to political will, in many cases, it will be short due to the temporary nature of political will to support allocations and transitions that have social economic implications.

While experienced policy entrepreneurs understand the importance of coalition buildings with powerful bureaucrats (Navot & Cohen, 2015), politicians are, in the bottom line, the actors who have the mandate on allocating public resources in democratic regimes. As Jones and Baumgartner (2005) demonstrated, every day, policy-makers face a variety of issues and required to address a multitude of problems. Politics is about securing, using and maintaining power. As elected officials, politicians are key players in the policy arena because they are ultimately responsible for adopting government policy design. Therefore, when it comes to gaining political will, policy entrepreneurs must work hard on gaining support for desirable policy from politicians. Traditionally, most have maintained that there was, or at least should be, a clear dichotomy between politics and the administration. According to this dichotomy, the politician, as the sovereign representative of the public’s values and interests, was in charge of shaping policy (May, 2003), while the bureaucrat was a subordinate executor of policy, whose major concern was implementing that policy efficiently (Wilson, 1887, p. 210). However, this classical dichotomy has long been challenged. Bureaucrats still tend to dominate policy and implementation, whereas politicians still tend to be the articulators of ideals (Aberbach, Putnam, & Rockman, 1981, p. 239). Indeed, bureaucracy is very much a part of the political process (Dunlevy, 1992), including agenda setting (Howlett & Shivakoti, 2014) and policy design (Howlett, 2011). Nevertheless, while bureaucrats have influence on public policy processes (Peters & Pierre, 2004), and various other administrators participate in the decision-making about policy, politicians, who are elected officials, ultimately play a much more significant role in this area (Aberbach et al., 1981). They use the tools of policy formulation to institutionalize collective action to address public problems (Salamon, 2002; Van der Doelen, 1998). Political will is the commitment expressed through the policy process to undertake actions to achieve a set of objectives and to be willing to bear the costs of those actions over time. Defining politics as the question of who gets what, when and how (Lasswell, 1936), politicians are, in the bottom line, the actors who have the mandate on allocating public resources in democratic regimes. Hence, their will to undertake actions in the arena is usually one of the most important targets in policy entrepreneurship (Cohen, 2016).

Although aspects of social contract are involved in their decision-making process (Rawls, 1971), as rational players, politicians usually seek to maximize their political self-interests (Downs, 1957; Post, Raile, & Raile, 2010). Although politicians may consider ideology and social welfare in making their decisions, they will choose their strategies according to political cost–benefit calculations (Lohmann, 2013), it is in their interest to secure their political survival (Downs, 1957). Therefore, identifying the ways that politicians’ preferences and calculations contribute to policy formulation is essential to an understanding of public policy processes (Zalmanovitch & Cohen, 2014) – this is true in all policy arenas.

Accordingly, behind every policy decision made by elected officials is their interaction or give-and-take with the electorate (Sabatier, 1991). This relationship is predicated on supply
and demand – the public’s demand for a policy and the politician’s supply of policy to meet this demand (Linder & Peters, 1991). While arguably in varying degrees, a factor underlying most elected officials’ decision-making is their vested interest in maximizing their electoral chances (Weimer & Vining, 2005, p. 164). So, they pay close attention to the issues which are central in public debate. If an issue is not identified, recognized, prioritized by vocal interest groups as a public policy problem, elected officials may not regard it as a problem that should be addressed in public policy (Sabatier & Mazmanian, 1980). They will try to invest their limited resources in actions that they believe will increase their chances of being re-elected. Government bailouts of unsuccessful entrepreneurial ventures, as a policy tool, are no exception (Stanford, 2010). Hence, when politicians must decide whether to bailout a failing or bankrupt business, they will ask themselves, ‘Politically, is it worth it?’ The fact that an issue has gained a place on the national agenda merely tells us that a ‘policy window’, ‘an opportunity for action’ may exist, given the public’s current opinion on the subject; it does not dictate that action must be taken.

An additional element in the decisions of elected officials to support industries is the actions of policy entrepreneurs. They help elected officials recognize the opportunity to exploit public opinion in formulating industrial policy. Policy entrepreneurs exploit windows of opportunity within the existing social order to promote innovative political agendas beneficial to business (Navot & Cohen, 2015). When the political winds shift, new administrations can set different national priorities that favor agendas other than those of the policy entrepreneur.

In the alternative fuel transportation industry (Campbell, Ryley, & Thring, 2012), bailouts of EV companies, as well as other companies, require an investment of public resources. A policy proposal for a bailout may engender a political struggle over the use of resources for different priorities and unless elected officials can determine that it is worth the cost, they may be hesitant to advance it. Bailouts raise the question of whether if the taxpayers should pay for failing companies. Elected officials represent the various segments of society and their changing needs and priorities. Although they recognize that government policy needs to support new industrial niches, such as alternative fuels until they reach sufficient market scale (Smith & Raven, 2012), rational elected officials will attempt to balance economic efficiency and public welfare to maximize their electoral chances. Furthermore, elected officials will prefer the status quo unless public opinion demands a change. For example, usually a congressman will not promote a new legislation which requires public budget without that indeed there is a demand among his voters for such allocation. Accordingly, elected officials will not support electric vehicle use as part of cutting dependence on oil and transition to energy sustainability unless they perceive that there is sufficient demand for such policy among the public to sustain or increase their popularity.

**Methods**

The methodology used in this study is case study design. The main rationale for using this design is that it represents a rare scenario to test a technology in a very large scale, and it has potential to start global sustainability policy to cut dependency on oil. The design is used to observe a situation in a uniquely politically conducive environment (Israel’s security situation and geographic size). The subject of this case study, Better Place, specialized in building infrastructure for EVs. This case provides an ideal setting due to the combinations
of several factors, such as Israel’s political system and lack of natural resources such as oil, and the fact that Israel’s Ministry of Environmental Protection has classified automotive pollution as a severe problem. This problem has intensified due to the continuous increase (10%) in the number of new vehicles each year on Israeli roads. Furthermore, Israel has strategic and political reasons to cut its dependency on oil, making this case a national priority.

This multi-year research project, conducted between 2009 and 2014, investigated various aspects of Better Place activities pertaining to entrepreneurial policy, diffusion of new technology, politics and sustainability policy. Interviews were conducted with lead engineers and the marketing and sales managers in Better Place at the company’s headquarters in Rosh Ha’ayin, covering the period from the company’s establishment until its bankruptcy, with additional post-bankruptcy interviews. To complement the interviews and field observations, the study also examined external secondary data sources for cross-validation.

In addition, to deepen understanding of the company’s link with political administrators and its role in shaping Israel’s economy, a series of interviews were conducted during January 2013 with Israeli Government officials and advisors in the relevant offices of Environmental Protection and Energy. More specifically, the decision-makers interviewed for this article were the Commissioner of Electricity Administration in the Ministry of Energy and Water, the Director of the Department of Air Pollution from Vehicles in the Ministry of Environmental Protection and the Advisor to Israel’s Ministry of Energy and Water for International Energy Security Policies.

The interviewer described the study to the interviewees and supplied them with background about it. Given the political sensitivity of the subject, the interviewees were selected based on their willingness to participate in the research (convenience sampling) and mostly through snowball sampling. This method has proven effective in reaching and involving respondents in discussions about conflicting environments (Cohen & Arieli, 2011). The interviewees were told at the beginning of each interview that their words would be quoted, and had the option to keep parts of the interview anonymous or unrecorded. Most of them agreed to have the interviews recorded and transcribed. In order to reduce potential bias, transcriptions of the interviews and the main findings from each interview were sent to at least one additional researcher to ensure inter-referee reliability.

All interviewees have been asked a basic set of questions in order to allow later comparison of the answers. After several questions about the company characteristics of the respondents, interviewees have been asked, among others, what was unique about the company’s entrepreneurial policy that allowed to gain political support, and why, in their opinion, did government not bail out the company from bankruptcy? Was bailout a feasible option, given the condition of the economy and the government’s annual budget in Israel? Did other companies in the past in Israel receive a bailout deal? Why did politicians who were initially committed to the mission of company to cut Israel dependency on oil become reluctant to support company after it went bankrupt? What was the impact of the social justice movement on political will to support Israel’s sustainability transition to electric transportation after elections? And what practical lessons can transport policy entrepreneurs and high echelon government officials learn from the Better Place failure?
Findings

Institutionalism support for sustainability policy

The Israeli Government made several strategic decisions involving various government agencies to push forward a reform in the transportation sector that will be based on extensive use of electric vehicles. For example, on October 2007, based on a proposal made by the Minister of National Infrastructures and the Minister of Environmental Protection to reduce air pollution from transportation, government resolution No. 2452 was issued. In section 12(a), it is stated:

To examine within a year the pros and cons of vehicles recharged with electricity from the national electricity grid and to recommend policies on this issue, including the generation and transmission of electricity for charging the vehicles, creating a solution for used batteries and formulation of a long-term tax policy for this new technology.

And in section 14 it is stated that the Ministry of National Infrastructure will support:

Ventures that develop alternative means of propulsion characterized by high energy efficiency, which contribute to significant reduction in air pollution and greenhouse gas emissions relative to existing technologies, granting preference to technologies according to their potential for improvement.

Subsequently, on November 2007, government resolution No. 2580 was issued:

The government also resolved to review favorably the integration of non-polluting technology alternatives to transportation fuels, in order to reduce the dependency of the State of Israel on fuel and to join the global trend seeking to reduce environmental harm in general and harm resulting from the use of fuel in private vehicles in particular; to examine, within a short time-frame, the possibility of preliminary implementation of these technologies in Israel, and for this purpose, to appoint an inter-ministerial steering committee, headed by budget director of Ministry of Finance, with the participation of representatives from the Prime Minister’s office, the Ministry of Transportation and Road Safety, The Ministry of National Infrastructures, the Ministry of Industry, Trade and Labor, The Ministry of National Infrastructures, the Ministry of Environmental Protection, The Ministry of Justice, the Tax Authority, the Israel Antitrust Authority and the Planning Administration in the Ministry of Interior, to examine proposals to encourage the use of clean and non-fuel transportation. (hereafter – the steering committee)

It was also decided in resolution No. 2580 that:

Panel headed by the Director General of the Ministry, with the participation of the Budget Director of the Ministry of Finance and the CEO of Israel Electric Corporation, will examine the implications of establishing the nationwide network and running it in the electricity sector.

Another important milestone, on July 2010, government decision number 1354 was issued:

The government sees research, development and implementation of technologies that reduce global oil use in transport (hereinafter in this resolution: ‘Oil Substitutes’) as a national mission that requires harnessing national resources and given top priority, in light of the strategic national interest, the environmental interest and the economic potential inherent in the issue.

The issue of security plays a pivotal role in Israeli society (Bar-Tal, 1998), and security concerns in general tend to influence public’s traveling behavior in Israel (Elias, Albert, & Shiftan, 2013; Hakim, Albert, & Shiftan, 2015). This fact was one of the reasons why Better Place succeeded in gaining political support through policy entrepreneurship. Given the lack of natural oil reserves in Israel, the notion of cutting dependence on oil was given a high priority. Politicians were particularly sensitive to this argument because, in case of
war, Iran could block the Strait of Hormuz, preventing passage to oil tankers that supply 25% of the world's oil supply.

As a result, during 2008–2012, Better Place received strong and broad-based support from the President of Israel and senior politicians heading the Ministries of Energy, Infrastructure, and Transportation, with the goal of cutting Israel's dependence on oil (Senor & Singer, 2009). Senior government ministers who had part in shaping the new Israeli Green Tax Reform (see: https://ozar.mof.gov.il/) were invited to the company visitor's center to learn about new EV battery technology, watch a demonstration of the infrastructure charging spots and switching stations and test drive a prototype of the EV. For example, the environmental protection minister came to the visitor center in 2009. Afterwards, he requested the minister of Finance to exempt EVs for the monthly use value tax, a substantial tax that employees who receive a car from their employer for personal usage have to pay. (Use of a company car for personal driving is a common employment contract benefit for employees in Israel, and most companies have a leased car fleet for this purpose.) Similarly, the environmental protection minister requested an extension of the sales tax exemption for EVs until 2014. Sales tax is the most substantial tax on a car purchase in Israel and can reach to 90%. The Finance Minister attended the visitor center in 2010 and discussed the collaboration opportunities emerging after the Chinese Government decided to adopt the Better Place model of battery switching to extend EV range.

Other officials also indicated their support. The Energy and Water Minister stated on 2011,

We want to see the diminution of our dependence on other countries. An inseparable part of our resilience is the energetic security with which we deal here today. We want to strengthen Israel by seeing it filled with electric vehicles of every type from every company.

In an interview we conducted on January 2013, the Commissioner of Electricity Administration in the Ministry of Energy and Water said,

The Israeli government is searching ways to decrease both Israel and the world dependency on oil. Towards achieving this purpose, it established an Inter-Ministerial Administration for Oil Substitutes which has representatives from the relevant government ministries of transportation, energy, science and technology, infrastructure, and environmental protection. Since transportation is heavily based on oil distillates, EV is considered a solution and the government encourages its usage.

In yet another interview in January 2013, the Director of the department of air pollution from vehicles in the Ministry of Environmental Protection explained that

the Ministry of Environmental Protection regards EV as an excellent way to improve the quality of air in central cities. Our office also supports the usage of EV because it reduces noise inside urban areas. In the long range, EVs will decrease greenhouse gas emissions levels in cities because the fuel basket mix used to generate electricity in Israel will be mainly based on natural gas.

Better Place identified Israel's acute national challenge of dependency on oil and used it to suggest a shift to electric transportation. More specifically, the strategic use of national security and environmental reasoning, along with increasing oil prices, led policy entrepreneurs to collaborate with Israeli bureaucrats and senior politicians in order to promote a new economic agenda. Although successful policy entrepreneurship may be key for understanding policy design, changes in the structural conditions (i.e. when the window of opportunity
is closed) and lack of maintenance of the policy change may lead to a situation in which political support disappears.

Initially, Better Place seemed to lay a strong groundwork. They ran a 90-day taxi project in Tokyo, Japan, illustrating the stages involved in mobilizing and executing the electrification of transportation. Better Place chose Japan because of its population’s inclination to be on the technology frontier and their fondness for high-tech gadgets. To publicly demonstrate the technological feasibility, the company built similar pilot projects in the Netherlands, at the Amsterdam Schiphol airport, and in Toronto, Canada. Although large-scale deployment of the infrastructure started in Israel, the company heavily invested in the process of expanding to other countries such as Denmark and Australia and to Hawaii. In addition, the company signed a memorandum of understanding to develop an EV prototype with Chery Automobile from China and an associated agreement with the utility company, China Southern Power Grid. Better Place raised more than $850 million since it was established in 2007, but the company sold only about 1300 electric cars (approximately 900 in Israel and 400 in Denmark) since it began sales in 2012.

Better Place had opened 31 stations in Israel. The rationale for this was that the main reservation of customers about electric cars in the past has been the traveling range. By building a network of switching stations around Israel, the drivers can conduct long distance trips (for example, from Tel Aviv to Haifa), without a need to stop for hours in order to recharge the battery again and again. Creating this network of operation required the company to collaborate with the car manufacturer (Renault) in order to have a car designed with the battery underneath the car, in an accessible location. However, this approach led to a major drawback of Better Place’s infrastructure, in which only cars designed specifically with the ability to switch the battery could use the stations. In addition, the company’s steps for international expansion to areas such as Australia, China and Hawaii stretched its financial resources and created underestimated national culture barriers (Naor, Sanders, Bernardes, Goldstein, & Schroeder, 2014). The Israel Corporation announced in May 2013 that it would stop investing in the company, leading to the shutting down of its operations.

The raise of social welfare movement among the Israeli public and withdrawal of political will for bailout

In May 2013, despite strong initial political and government backing, Better Place applied to the court for appointment of a liquidator. The question should be asked, given the ministers’ commitment to cutting the country’s dependence on oil, why did the Israeli Government not create a bailout plan for Better Place?

One of the key reasons lies in a significant change in the priorities of the Israeli public. Although security was, and probably will remain, the major issue in Israeli public opinion, social policy issues are now much more dominant in the Israeli voters’ minds. During the summer of 2011, the country experienced an unprecedented wave of socioeconomic protests demanding changes in Israeli social policy and the rebuilding of the welfare state (Cohen, 2015). The targets of most protesters were Israeli politicians, who protesters argued had neglected the middle class and made it impossible for the average family to live with dignity. Within a month, this protest, which actually reflected a significant gap between Israeli public opinion about the welfare state and the socioeconomic policy in practice (Mizrahi, Yuval, & Cohen, 2014), led the Israeli Prime Minister to declare, ‘A change in my ideological
views is required’ (Ravid, 2011). Politicians want to control government so they can institute policies that are demanded by their public’s base (Dollinger, 2012). Now, for the first time in Israel’s history, economic issues were the main item on the agenda instead of the security concerns that had dominated past campaigns. As in Spain and Greece, the Israeli protests gained momentum. Beginning with an initial nucleus of activists, it spiraled into mass rallies that included people from age groups and demographic sectors who had not traditionally participated in this kind of protest activity over economic and social issues (Shalev, 2012).

As a result, in the January 2013 elections, a new party, ‘Yesh Atid’ (‘There is a Future’), won 19 seats (out of 120) in the Israeli Parliament and became the second largest party after the Likud. Its leader was appointed Minister of Finance. Since his party had capitalized on the protests and built its electoral campaign on the grievances and claims of the secular middle class, it was impossible for him to justify the costly bailout of a private company such as Better Place and the continuation of tax breaks for purchase of its EVs.

The Commissioner of Electricity Administration in the Ministry of Energy and Water further elaborated on this point in a post-bankruptcy interview on August 2014:

The Israeli government does not have a legacy of offering bail out plans for unsuccessful businesses, and Better Place's severe financial situation didn't justify an exception. Importantly, the company human resource was relatively small (about 250 employees in Israel), and its current assets were not sufficient to continue business operations, despite an initial success of its policy entrepreneur to recruit over $850 million based on a political agenda. A bailout plan was not an option considered by government in Israel's post-election political climate. There is no governmental initiative to salvage the infrastructure built by the company. Consequently, sustainability transition is not a national priority, and in the near future there are going to be small scale governmental projects to electrify transportation of buses.

Better Place had only $9 million in cash when it filed for bankruptcy, while it needed $7 million to cover monthly expenses. Further complicating the situation, the manufacturer of EV, Renault, implied that it wouldn’t build additional car models compatible with the battery-swapping mechanism. On July 2013, the court confirmed the purchase agreement of the bankrupt company by the Green EV consortium composed of Sunrise Ltd. and the Association for the Promotion of the Electric Car in Israel. The agreement included the sale of all the operations and assets of the company for $5 million. The court also approved the sale of Better Place Switzerland’s intellectual property to the same group for $6.84 million. According to the deal arranged by the liquidators appointed by the court, the Sunrise group will maintain operations of 15 battery-swapping stations for a period of two years. However, on August 2013, following the liquidators request, the court overruled Better Place’s previous selling decision to Sunrise Ltd. and agreed that the company’s assets would be sold to Success Assets, (a company that builds recharging points for EVs at Europe and North America) for $3.1 million. The Green EV consortium will retain Better Place’s intellectual property rights registered in Switzerland. The decision came after the Green EV consortium failed to make scheduled payments because a shipment of 350 EVs which it claimed to be part of the original agreement was not given import licenses by the Transportation Ministry. Further complicating the situation, a list of customers who bought EVs from Better Place and were supposed to be billed for services was absent too. On 3 October 2013, the liquidators requested the court to cancel the agreement with Success Assets too. On November 2013, the court ruled that Renault will provide technical support and maintenance services for
the 900 EVs sold by Better Place before it went bankrupt. The Israeli importer of Renault will also purchase the remaining 359 EVs from the liquidators.

**Discussion and conclusion**

The case study presented here is a rare investigation of a failure: most literature focuses on successful ventures (Raspin, 2011). Industries fail not only when customers value the industry’s output at less than the costs of producing it (Coelho & McClure, 2005), but also if needed government support wanes because political actors lose interest in helping them (Cope, 2011). Much can be learned from the exploration of unsuccessful policy entrepreneurship (Shepherd & Kuratko, 2009). As the transition to sustainable technologies gains international momentum, entrepreneurs who undertake businesses based on sustainable technology which needs government support and a concomitant political and policy agenda to make the transition from start-up to profitability will be able to draw useful lessons from this study. Better Place may have failed to grasp that initial successful policy entrepreneurship does not guarantee political backing in the long run. So, it is an important study of how sustaining policy entrepreneurship or looking for ways to package innovative technology and create demand for it is a key to success.

Faced with the need to meet the public’s demands, the new Israeli Government, particularly its Finance Minister, whose party declared that promoting the welfare state is one of their main goals, had little political will to spend taxpayers’ money to finance a rescue package for a private company whose agenda seemed no longer relevant.

Policy-makers in the transport sector are frequently required to make decisions in an environment inherently characterized by uncertainty because of the interplay between a wide array of technologies, multiple markets and institutional and socioeconomic elements (Ramjerdi & Fearnley, 2014). For example, in the case of Better Place, building a costly battery-switching infrastructure encompassed risky irreversible investment in deploying it at strategic locations on Israel’s main roads and in dependence on customers’ subscription to the new business model of pay-per-mile services. Therefore, a policy implication derived from this study is that entrepreneurs forming coalitions with politicians around the world to embark on future sustainability transition projects should design a flexible and adaptive policy. More specifically, they should be prepared to reconcile the emergence over time of countervailing societal movements that can influence voters to shift national priorities away from their intended objectives (Hess, 2014). Overreliance on initial success to recruit senior governmental officials for a national security agenda to cut dependence on oil, as occurred in the current case of Better Place, isn’t sufficient. Along with the need for careful contingency planning, this study demonstrates the necessity of also developing public relations strategies, a long-term continuous effort to maintain the public’s wide support for the sustainability transition.

An important lesson for policy entrepreneurs to learn is that the window of opportunity to diffuse environmentally friendly innovations into the market is short due to the temporary nature of political will to support sustainable transitions that have social economic implications. In democratic regimes that operate on a four-year fragile cycle of re-elections (specifically in Israel, most appointed governments don’t last the full term of four years), entrepreneurs need to carefully assess the scale of their projects, accelerate the focused deployment of infrastructure and be aggressive in marketing sales in order to realize return
on a large financial investment. While more study is needed to establish just how this could most effectively be done, this case study, as a beneficial lesson from failure, can give policy entrepreneurs revitalized awareness of their abilities and demonstrate the complexity of sustainability transition in today’s global geo-political economy. Finally, an avenue for future research would be to generalize the findings of this study beyond transportation to other industries by collecting data from other countries which embarked on national projects motivated from combination of sustainability policy and national security.

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