



Original research article

Institutional entrepreneurship in transforming energy systems towards sustainability: Wind energy in Finland and India

Suyash Jolly^{a,*}, Petr Spodniak^b, R.P.J.M. Raven^a^a Department of Industrial Engineering and Innovation Sciences, Eindhoven University of Technology, Eindhoven, The Netherlands^b LUT School of Energy Systems & LUT School of Business and Management, Lappeenranta University of Technology, Lappeenranta, Finland

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ABSTRACT

A growing body of literature has examined the dynamics of wind energy development across different mature and emerging institutional contexts. However, so far only few have paused to reflect on the differences between developed and emerging economies. Building upon the literature on institutional entrepreneurship, this paper compares institutional strategies in wind energy development in Finland and India by using the typology of political, technical and cultural work. We highlight the role of institutional approaches in studying sustainable energy transitions in mature and emerging institutional contexts, while being sensitive to the role of heterogeneous actors in shaping institutional arrangements. Our findings offer implications for debates in the institutional entrepreneurship literature by exploring how actors shape their institutional environment in different contexts, and the extent to which emerging institutional contexts provide more opportunities for institutional entrepreneurship. Finally, this paper underscores the need for developing insights into enabling conditions for successful collective institutional entrepreneurship and for developing typologies of institutional strategies which are generalizable across both mature and emerging institutional contexts.

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1. Introduction

Achieving major transformations in energy systems towards sustainability ('sustainability transitions') is a collective goal that requires action from diverse public and private actors with different interests, influence, and levels of power [43,33,32]. A transition towards sustainability is likely to be full of conflicts and contestations between different actors, with no win-win solutions [136,81,82]; at the same time, such sustainability transitions may vary considerably in different nations according to the institutional context, which configures different needs, priorities, imaginaries and levels of capabilities [75]. Despite this fact, comparative studies of sustainable energy transitions across different contexts are still limited, posing a challenge to drawing cohesive insights [115]. In particular, our paper responds to the recent debates suggesting that emerging institutional contexts found in emerging economies with a lack of well-functioning legal and regulatory systems, and high levels of risk and uncertainty are host to substantially more opportunities for strategic action for challenging

institutional arrangements by actors when compared to institutional contexts found in mature economies [125,83].

Our aim in this paper is to empirically illustrate the differences in institutional strategies directed at transforming the incumbent energy system, and to contribute towards cross-cultural comparative research on sustainable energy transitions [118,113]. Recent studies have indicated the need for comparing and contrasting sustainable energy transitions in different institutional contexts. For instance, China faces challenges for sustainable energy transition due to presence of homogenous institutional arrangements, restricted policy discourse and less pluralistic decision making processes often dominated by the central government. Chinese NGOs have often faced difficulties in policy design and deliberation due to the direct involvement of state government in policy decision making. The institutional context in China is very different from Germany, which has taken radical steps for institutional transformation of energy systems. Therefore, studies have emphasized that institutional context often shapes direction and pace of sustainable energy transition, including the opportunities for institutional experimentation [113].

Building upon these debates, our paper compares wind energy in Finland and India. Particularly, our paper tries to explore the dynamics of sustainability transitions by focusing on differences and similarities in the ways in which actors collectively engage

* Corresponding author.

E-mail addresses: S.Jolly@tue.nl, suyashjolly611@yahoo.co.in (S. Jolly), petr.spodniak@lut.fi (P. Spodniak), r.p.j.m.raven@tue.nl (R.P.J.M. Raven).

in institutional change for mainstreaming wind energy development in Finland and India. We focus on wind energy due to its major potential in transforming the incumbent energy systems based on fossil fuels in both countries, which currently rely mostly on large-scale, centralized energy production based on fossil energy sources. In this paper, we classify Finland as a mature institutional context due to its formal regulatory framework, well-developed nationwide infrastructure, low GDP growth rate, high human development index, and low level of corruption. Emerging economies, such as India, are characterized by several factors, such as high GDP growth rate, rapid industrialization, economic liberalization, and strong influence of government and state owned firms. These economies also experience less developed regulatory and government infrastructure, lack of transparency, long bureaucratic delays, culture of corruption, and significant trade barriers. Furthermore, institutional strategies for transforming institutional arrangements in mature institutional contexts might not be suitable for emerging institutional contexts [66,83].

The key research question we explore is: *What are the differences in the ways in which actors have collectively engaged in shaping the institutional context for wind energy development in Finland and India?*

This paper empirically highlights the development of wind energy in Finland and India in response to competing narratives, priorities and interests of diverse actors struggling for legitimising wind energy as a reliable source of energy. In order to do so, the paper mobilizes insights from the institutional entrepreneurship literature to empirically illustrate the differences in institutional strategies in mature and emerging contexts, which have caught only a limited amount of attention from scholars working on institutional entrepreneurship so far [2,83]. Finland and India have diverse priorities as well as challenges concerning wind energy development. Finland has acknowledged climate change as an important issue in policy making by drafting climate strategies, such as the National Climate and Energy Strategy. Nevertheless, Finland has not aimed at moving beyond the minimum EU targets, and further barriers have emerged due to its lack of political will and commitment [67]. India has acknowledged the climate change mitigation strategies under the National Action Plan on Climate Change (NAPCC) in order to address multiple concerns, such as continuously increasing energy needs, energy security, energy access for poverty reduction, and long-term development and economic growth [29]. India's energy policy has been driven by the needs for energy security due to the increasing demand-supply gap, industrialization-led growth, creation of a domestic industry, energy access and job creation [50]. Furthermore, climate change mitigation in India has to be balanced with competing policy priorities such as chronic energy shortages, persistently high levels of poverty and the high proportion of rural and urban population with no or limited access to electricity. Nonetheless, wind energy is currently rather small in the overall energy mixes of the two countries, in which the bulk of energy originates from coal, hydro and nuclear energy sources.

We note that there are major political, social, economic, cultural and size differences between India and Finland, which make such a comparison both interesting and challenging. Whilst we do not aim to generalize the results from our two-cases to all emerging and mature contexts, our paper tries to illustrate the opportunities and challenges for institutional entrepreneurship by considering India and Finland as relevant examples of emerging and mature institutional contexts. We also agree that there are several mature and emerging economies within the same geographical regions like Asia and EU, it might be difficult to develop generalized insights which are applicable to all mature and emerging institutional contexts. This article therefore seeks to draw lessons from the two different cases in terms of similarities and differences in institu-

tional entrepreneurship rather than directly comparing them in terms of success and failures. Rather, we use a comparative idiographic case study methodology [139] in order to find relevant patterns in the two cases to understand observed differences and similarities between them through interpretative analysis.

The paper is structured as follows. In Section 2 we present the theoretical framework, building on relevant debates in the institutional entrepreneurship literature. Section 3 describes our research methods; this is followed, in chapter 4, by a summary of the key findings of the study, with an overview of wind energy development in Finland and India. Section 5 compares Finland and India by showing similarities and differences between the two contexts. The paper ends with discussion and conclusions in Section 6.

2. Theoretical background

A key aspect in the institutional entrepreneurship literature is how actors change institutional arrangements while also being constrained by them. Existing research has suggested that formal and informal institutional arrangements constrain the actions of actors and shape their decision making process but actors also shape their institutional environment and the constraints imposed by it. The literature on 'institutional entrepreneurship' has looked into the paradox of embedded agency, which focuses on the manner in which socially embedded actors who create institutional change in spite of being constrained by the existing institutional arrangements [10]. Institutional entrepreneurship involves a range of actors such as firms, industry associations and advocacy groups. The literature suggests that actors are configured by their institutional environment, which they also try to reshape, for instance, by influencing policy and regulatory decision-making processes [41,22]. Consequently, actors are engaged in an ongoing struggle to challenge institutional arrangements through their creative efforts [11]. A range of actors—such as labour unions, political action committees, environmental and public interest groups, trade associations, ad-hoc associations, lobbyists, foundations and think tanks—are involved in shaping their institutional context [9]. Institutional strategies include, among others, cultivating and maintaining relationships with decision makers, lobbying to secure resources and political support, providing information during regulatory hearings and using media to politically highlight individual concerns [23,52].

Studies have also shown that actors such as firms contribute to implementing desired policy and regulations by influencing regulatory agencies by taking part in regulatory hearings for implementing new legislations and devoting substantial resources to lobbying. Furthermore, firms are involved in developing regular and personal contact with policy makers and also engage in influencing policy debates through media outlets, advertising and using press conferences to influence decision makers [38]. Further, key actors such as governments are likely to have more influence on regulations, firms would have more influence on technological standards, and NGOs are likely to have more influence on popular discourses around environmental values [15]. Also, institutional entrepreneurship is argued to be an act of experimentation and improvisation, in which success is not always guaranteed and contestations in the process can be expected; it involves adapting to unanticipated developments and improvising actions in order to face ongoing uncertainties [71]. Actors may imagine a certain sequence of action for transforming institutional arrangements but their efforts might be seldom realized due to inherent roadblocks emerging in the process [44].

A central argument is that institutional transformation is accomplished through distributed and uncoordinated actions of dispersed actors with different resources, justification principles, conflicting world views, and abilities to collaborate, compete and contest

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