State-led path creation in China’s rustbelt: the case of Fuxin

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Introduction

The restructuring of regional economies is a key research topic in economic geography. Recently, the question of how regional new growth paths emerge has become one of the most intriguing issues (Neffke, Henning, & Boschma, 2011). The evolutionary economic geography (EEG) framework tied conceptual accounts of regional path creation to regional positive path-dependent mechanisms. Martin & Simmie (2008, p. 186) stated: ‘New paths do not emerge in a vacuum, but always in the contexts of existing structures and paths of technology, industry and institutional arrangements.’ The core argument is that past regional development leaves imprints in today’s development that set the scope for future paths. A growing literature on ‘related variety’ addresses how new industries branch from technologically similar sectors (Boschma, Minondo, & Navarro, 2013).

Despite EEG’s explanatory power, it is not universally applicable, seemingly relevant for advanced, organizationally thick and diversified regions, where local actors have much leeway to create new combinations based on local existing resources and structures (Tödtling & Tripl, 2004). However, it may fail to explain path-creation mechanisms in old industrial areas (OIAs). OIAs often exhibit difficulties in path renewal and creation by being locked-into heavy specialization in mature sectors. Evidence showed OIA path creation is less affected by local firm-oriented actions and more by multi-scaled, systematic and collective socio-political forces. Hudson (2005) emphasizes that the changing role of the state and governmentality should be considered to understand OIAs’ dynamics. Likewise, Morgan (2012) claims that industrial ‘novelty’ in OIAs is more or less fostered by state initiatives, where the state can mobilize policy leverage to underpin an enabling environment by encouraging cross-regional industrial transplantation and knowledge transfer (Dawley, 2013; Hu, 2015). Nevertheless, previous studies overemphasize the role of the local state in regional path-creation process.
overlooking the state’s several spatial levels, particularly the national state. Additionally, existing state-related accounts have tended to ignore state agents’ relational and collective power in broader institutional and political economy contexts (MacKinnon, Cumbers, Pike, Birch, & McMaster, 2009). This article, therefore, aims to contribute to OIAs’ path creation literature by asking the following questions:

- How do states from both local and national levels play a role in creating new growth industries?
- In what conditions may OIAs form state-led path creation?

It explores how multi-scalar states work collaboratively to create new growth paths in lock-in situations, focusing on one specific case where that appears to have taken place, namely the state-led creation of wind power in Fuxin, a typical coal-mining region in North-east China. This research is based on face-to-face key informant interviews undertaken between December 2013 and January 2014, from eight power developers, three equipment manufactures and seven government departments in Fuxin and Shenyang. It concludes that the wind power path was created over time by a combined force of the national and the local state. This research highlights that multi-scalar state interaction is embedded in a historically conditioned and changing national political economy, and that should be taken into account in analyses of OIAs’ path creation.

China’s changing regional development

China’s regional economic evolution is closely linked to the changing role of the state (Wei, 2000). The early industrialization of resource-rich regions was primarily empowered by Mao’s centralized policies, whilst strong central-state control on sub-national development was relaxed by Deng’s neoliberalism ‘coastal centred’ policy. This inevitably caused uneven development between coastal regions and previously industrialized inland areas (Fan & Sun, 2008). Under this circumstance, in 2003 China adopted a new development ideology, namely ‘Scientific Development’, seeking to achieve a more spatially balanced development model by mainly restructuring mature industrial economies in a top-down manner. This approach inspired the 2003 national strategy ‘Revitalizing the Old Northeast Industrial Bases’.

China’s OIAs can be regarded as once-prosperous natural resource and heavy (military) industry regions (in Mao’s era), which failed to adapt to market-oriented reforms, thus losing economic momentum in the 1980s and 1990s. Compared with other OIAs, the North-east (known as China’s rustbelt) has experienced the most severe economic stagnation. That stagnation in fact is a consequence of the long-term centralized development model with state-owned enterprises (SOEs) alongside top-down command institutions, which resulted in a lack of and/or resistance to adaptation to marketization.

More recently, by receiving explicit central state preferential policies, the region has been significantly revitalized (The Economist, 2012). Fuxin, a mining region in Liaoning province (Figure 1), has embarked on a new industrial path of wind energy dating to the 2005 introduction of the Renewable Energy Law. Fuxin’s economy was previously severely stagnated following the depletion of local coal reserves, regressing into one of the North-east’s poorest regions. Although the local state sought to cultivate alternative industries, these efforts were hindered by a lack of local non-mining resources and external linkages. Based on the general questions raised in this paper, it poses the following specific operational questions:
To what extent does the national state influence the formation of a wind power industry in Fuxin?
What role does the local state play in responding to top-down actions?
What general lessons can be learnt from this case to reflect on the theorizing of regional path creation?

Empirical evidence of Fuxin’s new path creation
Fuxin has been recently recognized as one of the China’s fastest-growing wind power regions. Between 2005 and 2011, its installed capacity leapt from 49 to 2094 MW, accounting for almost half of the total in Liaoning (Figure 2). This remarkable growth took place across two periods, one of selection/initiation, and then consolidation.

The path (pre)emergence period (1998–2005)
In 1998, the national state initiated a radical ownership reform of SOEs that caused massive layoffs and consequent social unrest in Fuxin, with rising social tensions driving the local state to seek national emergency aid. Between 1998 and 2001, Fuxin’s leadership put full effort into lobbying national authorities, repeatedly reporting local crises and making policy enquiries. This interactive process helped establish a close local–central relation. Consequently, the State Council qualified Fuxin in 2001 as a ‘Resource-exhausted Pilot City’, deploying 23 investment projects for local job creation and social security (State Council, 2001). Fuxin’s experience, namely, the bottom-up lobbying for national direct intervention, inspired other OIA groups in North-east China, such...
as Fushun, Liaoyang and Daqing, to mimic this ‘asking for’ strategy, eventually leading to the larger-scale ‘Revitalizing Northeast China’ policy.

Despite having considerable inward investment from the national state since 2001, Fuxin still failed to diversify its economy. This reality, which deviated from the centrally expected ‘pilot’ city, led Beijing to drive more effective action in Fuxin. In 2005, the Minister of the National Energy Bureau (NEB), Guobao Zhang, visited Fuxin to identify whether and which renewable industries could develop there. Given Fuxin’s rich endowment of wind resource, combined with explicit local political enthusiasm for new industries, the NEB issued a mandatory arrangement following Zhang’s return to Beijing, with China Huaneng – China’s largest state-run wind power developer – designated to deploy a 500-MW project in Fuxin (NEB, 2005).

This central decision quickly spurred the local state into strategic action. The municipal mayor set up a new organization, the Wind Power Taskforce (WPT), to provide Huaneng with tailored public services. More significantly, local authorities proactively co-opted local agents into the project by conveying forthcoming preferential policy information (e.g., local content requirements), and guaranteeing long-term policy support from the local state. Dajin, for example, shifted its main production from steel to wind turbine towers, thereby becoming a key local equipment supplier for Huaneng.2

The path development period (2006–present)

Since 2006, the national state initiated a policy portfolio of domestic trade protection, price regulations and tax incentives for wind power. The adoption of feed-in tariffs in 2009 has supported a large-scale concentration of firms and capital to wind-rich regions, including in Fuxin. Under this central policy approach, by 2009 five central state-owned developers (e.g., Datang, Guodian), two private developers (e.g., China Wind Power Group), and one leading turbine manufacturer (Goldwind) reached contract agreements on investment with Fuxin.3

This top-down policy promotion (portrayed by some as the Great Leap Forward of wind power) helped Fuxin clarify clear developmental goals and reframe governance institutions for enhancing wind power. First, the Fuxin Communist Party Committee urged an organizational reform with the WPT upgraded in 2010 into a more important

![Figure 2. Growth of installed capacity of wind power in Fuxin and Liaoning.](image-url)
Fuxin New Energy Bureau (FNEB). It played an instrumental role in attracting new wind capital: ‘FNEB is an unique institution that you cannot find elsewhere. Our decision to be here is mainly due to the clear-cut government attitude towards wind power’.

Second, FNEB introduced an informal institution of ‘construction first, authorization second’, helping new developers to simplify administrative procedures, thereby accelerating project construction processes. Drawing upon a national regulation, investment projects over 50 MW must follow a strict authorization process before accessing the state grid. ‘This could delay and even constrain the development of large-sized project in Fuxin’. The informal approach allowed developers to avoid reporting a large project as a whole to NEB, but permitting its division into several small schemes (often of 49.5 MW) for separate reporting to the provincial state. This facilitated the approval of large projects and allowed developers to accelerate project construction and reap profits earlier than usual.

Third, state elites developed the ‘resource brings industries, wind farms brings factories’ concept. To implement this, the local state formulated a specific policy for wind farmland requisition, subsidizing local peasants (e.g., with higher prices for land acquisition and free electricity usage) to solicit inward investment from central SOEs. Meanwhile, the local state-owned financial system was regulated to provide low-interest bank loans and tax exemptions to local entrepreneurs starting wind power-related businesses. Consequently, Fuxin’s state not only attracted five extra wind SOEs in 2013, but also gave birth to seven local companies in wind power manufacturing, logistics and related sectors.

Analysis and discussion

Drawing upon this evidence, the rise of wind power in Fuxin cannot simply be understood as a top-down, monodirectional, single-scalar state-led path-creation process. Rather the interplay of the local and the central state led to new industry formation. Prior to the path emergence, North-east regions lacked sufficient power to manage local economic affairs resulting from long-term economic centralization and incomplete SOE reforms. Fuxin’s inability to tackle local crises drove direct contact with the national-state, with local crises not merely caused by localized problems, but ascribed to national actors’ past policy errors. This has made the ‘deng, kao, yao’ idea (waiting, asking, depending) ubiquitous in North-east China; and why local states decided to ‘go [to] Beijing and ask for help’ once a crisis occurs. This ‘asking for’ approach inspired the central state to be (more) aware of its responsibility for previous policy failures, cumulatively leading to national interventions in Fuxin (alongside other North-east China OIAs).

Zhang’s visit may be driven by the introduction of the renewable energy law. But without the initial local enquiry and interaction with the central state, this visit may not have happened. The initial impetus to develop wind power in Fuxin did not emerge in a vacuum but emerged from the already close central–local nexus developed in the previous ‘asking for’ process. New industry creation was driven by the combined force of a mutual match of national top-down green economy policies and local bottom-up attempts to address industrial lock-in.

The new industry was further developed in the second period, within a stronger national policy pressure for Chinese wind power (Liu & Kokko, 2010). Fuxin’s wind power grew faster and earlier than elsewhere because the local state played a
constructive role in embracing external opportunities, implementing new governance and corresponding measures to reinforce the new path. A deep awareness of the problems and barriers of industrial locking led local officials to have a higher sensitivity to national policies. Conversely, the history of explicitly dependence on national policies led to a quick and active local response, demonstrated by the recent project-based local–central collaboration on wind power. Fuxin’s specific political economy desires under external policy interventions became a source for generating local endogenous capabilities. Such path creation can thus be understood as a localized process where the local state played a vital role in turning external stimuli into internal transformative forces.

Conclusions
This investigation explores how local and national states jointly fostered a new growth path in an old industrial region. This form of path creation is neither related to the recombination process of local existing assets, nor the result of market-selected firm actions as claimed in the EEG literature. Rather, path creation has benefitted from the collective and combined effect of national policy actions and local needs-based reactions. This paper observes the explicit ‘visible hand’ of the national state in the restructuring of North-east China, partly because of the past centrally planned history in the region and partly because of the current national agenda focusing on OIA revitalization. Despite a lack of appropriate industrial assets for launching new paths in China’s rustbelt, the latent entrepreneurial role of the local state for new governance capacity-building and policy-incentive inputs should not be underestimated. National intervention can be understood in this way as activating and catalysing the rise of local state entrepreneurship for change.

From this analysis, three overarching conclusions can be drawn concerning new path creation in OIAs. First, OIAs bear limited endogenous ability when it comes to path creation. New industries are more inclined to be initiated by external interventions. Second, the national state can play an enabling role in introducing new firms, knowledge and technologies into OIAs by policy-driven inward investments. Top-down policy incentives may improve OIAs resilience, such as stimulating local actors to put forward new institutions for engaging with a new activity. Third, and relatedly, OIAs are not like passive ‘receivers’ completely at the mercy of external forces. Local agency, related to political and policy factors, remains dynamic, and in certain conditions can make a contribution in encouraging path creation.

In summary, the existing OIA literature on path creation has developed a critique of the endogenous economic factor-based EEG approach, calling for a multi-scalar, context-sensitive and state (policy) agency engaged encompassing perspective. This paper hereby confirms the critique, and further argues that a multi-agency and multi-spatiality perspective is urgently needed to explain path creation in OIAs. It particularly suggests that future related research should pay more attention to the role of the state and its relational power in a broader institutional environment when affecting the geographies and mechanisms of regional path creation.

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Notes

1. China’s local state could refer to provincial, municipal, county or township level of government. To avoid possible confusion, the ‘local’ in this paper only refers to the municipal-level state of Fuxin.

2. Interview with the founder of Dajin, 2013.

3. Interviews with four SOE wind developers in Shenyang, 2013.

4. Interview with a SOE developer, 2014.

5. This regulation gives a fairly high national control on wind power investment entry in locality. It aims not only to prevent local redundant construction and environmental issues, but also to balance total installed national wind power capacity with capacity-limited electricity grid systems.

6. Interview with the FNEB Deputy Director, 2014.

7. Interview with the Director of Fuxin Development and Reform Commission, 2013.

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