

Assessing the Prospects for a Sustainability Transition in Seoul, South Korea: An Analysis of Grassroots Innovations

So-Young Lee and Eric Zusman, IGES
Seejae Lee, Sungkonghoe University

1. Introduction

Five years ago, the South Korean government began to promote green growth as an alternative to traditional development paradigms. The endorsement of green growth was supposed to offer countries an alternative to development models fuelled by capital accumulation to ones powered by resource-saving technologies. Advocates of green growth, however, were largely silent on the role citizen participation played in this new approach. The absence of participatory dimension was particularly conspicuous in South Korea's capital, Seoul. More than four decades of rapid growth had transformed Seoul into a thriving metropolis that had become ever more disconnected from the natural environment upon which it was built. The evidence of this detachment was most readily apparent in the concrete tunnels that entombed the city's rivers. More discouraging still was the disenfranchisement of a citizenry who would arguably be the greatest beneficiaries from a closer affinity with nature.

But in 2011, the Seoul Metropolitan Government (hereafter Seoul), under the leadership of newly elected Mayor, Won-Soon Park, began to introduce a series of administrative reforms that opened a two-way dialogue between the citizens and local government. These reforms nurtured the development of a grassroots movement that either directly or indirectly enabled a series of innovative initiatives. Prominent examples of these innovations included the sharing city project, urban agriculture, one less nuclear plant, participatory budgeting system, and the listening open forum. To varying degrees, these innovations placed an important participatory dimension at their core. By all accounts, this participatory elements has helped Seoul transition from a nominally green city into one that comes closer to preaching and practicing sustainability. For many observers, Seoul had begun to take critical steps in a sustainability transition.

How far and to what extent Seoul will be able to maintain this transition nonetheless remains an open question. A growing body of sustainability transitions literature can help answer this question. A core insight from the transitions literature is that the critical first step in a transition is the creation of a niche wherein new innovations begin to take root and spark change. The formation of a niche can then pave the way for longer lasting and higher level regime and landscape changes (Frantzeskaki & Loorbach 2010; Rotmans et al. 2001; Kemp et al. 2001, 2007a, 2007b; Loorbach 2007; Smith et al. 2005). A complementary body of work on grassroots innovations suggests that "intermediary" change agents can support and scale not simply technological but social innovations (Hargreaves et al. 2013; Howells 2006; Seyfang and Smith 2007; Seyfang 2009). While the transitions literature can shed light on the drivers and the process underlying transformative change, it is based chiefly on national level experiences in Europe. This article employs work on transitions and grassroots innovations as a lens to assess how far Seoul has progressed as well as prospects for expanding the transition as the city reforms.

The case of Seoul underlines the importance of citizen engagement in augmenting the impacts of grassroots innovations. It further underscores how three key enablers in the transitions process—social learning, social networking, and reflexive governance—that can help scale changes to and within higher-level regimes. It also, however, illustrates the importance of distinguishing between organizational and institutional change within the regime level. As will be seen, some of the key innovations in the transformation of Seoul—

namely, the listening open forum—have yet to become institutionalized. The article also discusses why some innovations induce organizational while others reach a higher level of institutional change. This distinction not only has implications for the transition in Seoul, but a broader literature on transitions.

The remainder of the article is divided into four sections. The next section synthesizes literature on sustainability transitions and grassroots innovations. A third section then begins to apply insights from that literature to illuminate the drivers and prospects for transformational change in South Korea. The final section discusses the implications of the case of Seoul for the study and practice of transitions in other parts of the world.

2. Literature Review: Sustainability Transitions and Grassroots Innovations

More than three decades of advocacy for sustainable development has brought vast and varied attempts to formulate roadmaps detailing paths to a sustainable future (Smith et al 2005; Frantzeskaki & Loorbach 2010). The strength of the work on sustainable transitions is that it can help lend structure to the often messy multi-stage processes that can lead countries down such a path. The point of departure for much of the transition work is the root source of change is innovations. Innovations, moreover, was not solely about creating and disseminating new technologies. Economic and social considerations need to be carefully factored into attempts to induce and scale technological change (Kemp, 1994).

Reflecting on such economic and social considerations has led to several theories delineating the main stages of a transition. One of the more important set of claims envisages sustainability transitions as unfolding across three levels: the niche, regime, and landscape levels. This multi-level perspective holds that transformative change occurs in micro-level niches where radical innovations originates and gains ground. Niche innovations can then transform and be transformed by meso-level regimes consisting of both softer economic and social structures and harder institutions and infrastructure. Regime change can then induce or be induced by shifts to wider landscape comprised of meta-factors such as cultural values and political systems (Geels & Schot 2007; Lachman 2013). In sum, innovative change at the niche level can support more fundamental change in regimes, which, in turn, can transform more all-encompassing landscapes (Kemp et al. 2001; Geels 2002).

The transitions literature has also shown that putting these changes into motion is not easy. Established interests may prefer incremental to radical change. The incumbent technological and social systems may, moreover, further place a drag on significant departures from the *status quo* (Sanden & Azar 2005; Frantzeskaki & Loorbach 2010). In fact, work on strategic niche management (SNM) (Kemp et al. 1998; Schot & Geels 2007; 2008), a precursor to the multi-level perspective, has looked at “how niches grow, stabilise or decline in interaction with the dynamics of prevailing systems” (Hoogma et al. 2002; Kemp et al. 1998). Meanwhile another related branch of transition management (TM) literature has focused on the challenge of altering that prevailing system by arguing for an open-ended process that does not prescribe what needs to be done but allows stakeholders to determine what could be done to move a transition forward (Markard et al. 2012; Loorbach 2007; Loorbach & rotmans 2010). In a slightly ironic twist, a unifying theme running through different branches of transitions theory is how a transition that is intended to making societies sustainable can itself be sustained? To use the language of the multilevel perspective, how do societies move within and from one level to the next?

To varying degrees, the three branches of literature converge on three important sets of factors that can enable progressively larger scale changes. The first, social learning, involves providing stakeholders with opportunities to learn from each other. This often

consists of creating enabling environments that encourage “experimentation and pilot projects, the exchange of experiences, [and] training and competence building” (Kemp 2007: 327). As emphasized in a complementary strand of grassroots innovations literature, it further entails engaging NGOs, businesses, consumers, academics as ‘intermediaries’ in niche development who at each step and help adjust the direction of the transition (Hargreaves et al. 2013; Seyfang & Smith 2007; White & Stirling 2013). A second set of factors, social networks, consists of collaborative platforms that allow discussion and negotiations to take place. These platforms often help bring together fringe actors with established players to identify and promote mutually beneficial innovations. A third set of factors, reflexive governance, involves forging partnerships between varied actors with diverse beliefs. These partnerships can then help stakeholders arrive at shared visions of a sustainable future through a well-managed process of deliberation and decision-making.

While the transition literature has helped illuminate pathways and enablers of change, it has not escaped critique. One set of criticisms has focused on the rather deterministic reasoning underpinning the transitions logic. Even while acknowledging the challenges to transitions, there is an air of inevitability implicit in many of the claim’s main arguments; that is, change will happen regardless of who is participating in and leading the charge. A notable blind spot in the transitions work is the relatively limited attention to agency. Another shortcoming of the transitions work is it still tends to focus on technological as opposed to social innovations. Social considerations are important for enabling change but are not necessarily the source of innovations. Here the aforementioned parallel literature on grassroots innovations, which allows “room for people to design lifestyles that may be different from the mainstream but more adapted to their needs” (Akenji 2014: 21). Bringing in the grassroots can help balance the technological orientation of the transitions studies, as they focus on “social, ethical, and cultural rules and values” (Vergragt et al. 2014).

A third set of particularly salient concerns involves how agents supporting change work at the boundaries of softer organizational and harder institutions to enable wider scale reforms. Particularly at the second regime level, mediating agents who work at this boundary between organizations consisting of loose congeries of affected stakeholders and institutions consisted of more consolidated policies, legislation, and administrative structures play a potentially critical role in influencing the prospects for wider scale social innovations. As illustrated in Table 1, it then might be important to think of transitions operating on three levels, but to focus closely on how important agents of change manage to translate the human resources making up organizations into the rules and structures making up institutions. It might further be worthwhile to consider how change agents deploy the three aforementioned enablers of change—social learning, social networking, and reflexive governance—to work toward these ever wider scale ends.

Table 1. A Simple Analytical Framework Based on Transitions Theory

	Niche	Regime		Landscape
		Organisational Level	Institutional Level	
Project A	√	√	√	√
Project B	√	√	√	
Project C	√	√		

In South Korea, a country once lauded for a development miracle that was guided by a relatively autonomous technocratic bureaucratic elite, focusing on the interaction between

organizational and institutional change maybe particularly revealing. For the degree to which social innovations alter administrative structures in South Korea can give arguably an even greater sense of the prospects for broader change than Europe. This is particularly true since in many contexts in Europe the bureaucracy is not as autonomous and entrenched as South Korea. From here, the paper examines the role of a key agent of change, the Mayor of Seoul, who employed some of the aforementioned enablers to push forward wider scale change for some but not all social innovations. In so doing, the study employs sustainable transition and grassroots innovations literature as a lens to analyse a process that begins at the niche level and led to some changes that crossed a critical juncture at the regime level.

3. Research Methods: Case Study and Process Tracing

The article relies chiefly on qualitative case studies to trace this transition process. The case studies are focused on primarily project level innovations supported to varying degrees by the Seoul administration. The data used to analyse this process shaping these project's future is chiefly but not exclusively qualitative.¹ Between 2013 and 2014, authors conducted a series of face-to-face interviews with relevant government officials and representatives from key non-governmental organizations (NGOs).² To solicit views from a broad cross section of involved parties, the interviews were conducted with at least one official and at least one member of the municipal assembly; for instance, a member of the municipal assembly on the 13th of January 2014 and an action officer of the Listening Open Forum on 27th of December 2013 were interviewed.

In addition to interviews, the authors carefully examined municipal ordinances, city policies, white papers, and related government data. Seoul's recently passed information disclosure policy made it possible to access and review key documents and arguably made it easier to understand drivers and enablers of change. To help structure the analysis, the narrative that follows begins with a brief introduction to the Mayor Park and the life experiences that made him a strong advocate of grassroots innovations; examples of the innovations he helped foster then follow.

3.1 Won-Soon Park as an Agent of Change

Mayor Park has been a strong proponent of grassroots movements to remedy social problems for much of his professional life. His abiding belief in said remedies is arguably a by-product of his experience as a human rights lawyer and a founder of the non-governmental organization (NGO) 'People's Solidarity for Participatory Democracy' in the 1990s. His work at the 'Hope Institute'—a citizen run think tank established in 2006 to empower communities to drive socioeconomic change—also informed his thinking on these matters. His publications based on field research helped evince his support for innovating from the ground up (Park 1999; 2001; 2005; 2009; 2010; 2011). Some of the key messages from those publications help cast those beliefs into sharper relief, namely: practice in the

1 We suggest that following research should update the 'results' of the current innovative policy process with more concrete quantitative data analysis based on our research leaning to focus on 'process', as the evaluation for the completed 35th Seoul Mayor's term in June 2014. Additional research could follow to investigate how the 'process' of new term bridges and develops organisational level transition to concrete institutional level transition.

2 To balance both opinions, the interviews conducted at least one from related officials and one from member of municipal assembly for each agenda; for instance, member of municipal assembly on 13th of January 2014 and an action officer of the Listening Open Forum on 27th of December 2013 were interviewed for the participation area; for the welfare area, two Seoul welfare officials were interviewed on 16th and 24th of January respectively and four members of municipal assembly of the representative of citizens were interviewed on 20th, 23rd and 24th of January. For the communication area, a public service activist on 6th and one official on 9th of February were interviewed respectively.

field can avoid the unnecessary accumulation of paper; building communities is critical to fostering creativity; and multi-stakeholder communication can supplant top-down one-way decision making. It is these and other similarly themed beliefs that have led Mayor Park to take a distinctly different approach to public administration, supporting the transition of many initiatives from a niche to regime level change.

There have been dramatic changes in Seoul Metropolitan Government since Won-Soon Park was elected in 2011³. It is not easy to reform administrative structures in Korea but Mr. Park's embrace of deliberative decision-making, public consultation and information sharing have helped to do just that. The changes go beyond simply improving the performance of government agencies. Rather, they have fundamentally altered the practice of public administration. It may also wider change since when Seoul endorses innovations other cities often follow. It is therefore important to analyse this new approach affected several "sustainability projects."

3.2 The 'Sharing City, Seoul' Project

Korea is a rapidly growing country. A side-effect of this growth is the collapse of social spaces. It was the disappearance of these spaces and the resulting sense of malaise that led Seoul under the leadership of Mayor Park to develop its 'Sharing City, Seoul' Project. The primary aim of the project was "creat[ing] new economic opportunities, to restore reliable relationships, and to reduce the waste of resources..." (ref). The project got its name from with the belief that happiness could be created by sharing between the ten million inhabitants of Seoul. Sharing was not only about promoting the collective use of spaces and buildings but also the exchange of experiences and wisdom. This latter exchange could be a powerful source on information for raising children, locating employment, improving livelihoods, and ultimately finding happiness. From environmental perspective, sharing can reduce waste and curb environmental degradation.

To help strengthen this movement several institutions were created. For example, the Seoul Sharing Hub was established to archive, disseminate, and diffuse information while building networks with relevant domestic and overseas organizations, enterprises, media, and other pertinent organizations. To construct infrastructure for village restoration, Seoul established the Community Building Division under the Seoul Innovations Bureau in January 2012; two months later it announced the Ordinance for Town Community Support. In the months that followed, this same Bureau convened seminars and conferences with experts and citizens to lend more shape and substance to the project. Research was also conducted by the Seoul Institute, which served as the Basic Plan for Seoul's Town Community which was introduced in September 2012. In addition to crafting the legal basis for the project, nine Town Community Support Centres were opened to provide in-kind support and counselling for different needs when residents applied for support for the plans they drafted. The results of this work were clear: the numbers of village community projects registered doubled from the 2,233 in 2012 to approximately 4,400 in 2013; 68 per cent of the projects were initiated by residents.

Interestingly, the implications of The 'Sharing City, Seoul' Project extended beyond the project itself. As part of the project, the city government shared detailed information with citizens on how to communicate, negotiate and reach acceptable conclusions more generally. To a certain extent, this process proved costly and time consuming (confirming some of the claims in the transition literature i.e. Kemp 2007b). But viewed from a longer

³ Mr Park was elected on October 2011 at Korean by-elections and re-elected on July 2014 at the 6th local election. This research limits to cover only his first term of office as the research conducted between October 2013 and February 2014.

term vantage point, it also cut the rising costs of preserving unsustainable systems and the reduced the likelihood of conflict between local government and citizens.

3.3 Urban Agriculture Festival and One Less Nuclear Power Plant

Seoul has also adopted several policies that illustrate the mutually benefits when nature and the surrounding community come together. The Seoul campaign ‘Blooming Flower, Seoul’ was created to motivate citizens to become involved in the cultivation of trees and flowers in their daily lives. It also launched the Urban Agriculture Festival in 2012 that gave rise to similar festivals featuring information exchange and hands-on demonstrations. To highlight two of the more visible examples, Seoul planted rice paddies in *Gwanghwamun* Square in the city centre and raised honeybees on city hall’s rooftop gardens. These activities were part of the urban agriculture master plan under Urban Agriculture Fostering and Supporting ordinance. These efforts also created an environment favourable to low-impact urban lifestyles. By blurring the lines between urban and rural development and by drawing upon ideas and experience implementing grassroots innovations in Seoul i.e. direct trade cooperatives, farmers’ market, informal civic farming community groups, these efforts provided tangible example of how to move away from material-intensive lifestyles in Korea that have since spread nationwide.

Another illustration of an interesting project that brought relatively significant organizational and institutional change was the ‘One Less Nuclear Power Plant’. Beginning in May 2012, the program aimed to save 2 million TOE energy saving or a reduction equivalent to one nuclear power plant by December 2014. The proposed goal was to be achieved through the development of energy self-sufficient villages, photovoltaic power plants, cooperatives’ sharing power plants project, car sharing systems and other small-scale innovations. The initiative owed its success to diverse groups of citizens actively participating in the implementation of community-based energy conservation program (i.e. 1.7 million eco-mileage membership, energy clinic programme for individual household, energy guardian angel club at schools, good shop dedicated as leading energy saving commercial places etc.). The end results of these efforts were impressive in both their speed and scope: the project energy savings goal was actually reached six months ahead of schedule and average power consumption of Seoul decreased 1.4 per cent in 2013; while nationwide energy consumption average increased 1.76 per cent. Urban environment area illustrated the possibility of niches becoming institutionalized i.e. one less nuclear plant and urban agriculture.

3.4 Participatory Budgeting and Listening Open Forum

Another set of reforms provide examples of wider scale as well as potentially less lasting change. The Participatory Budgeting System (PBS) is an example of the former. Seoul allows citizens to participate in the multiple areas of the planning of policies, including budgeting. For instance, the budgeting committee is comprised of citizens that review community proposals to ensure financial transparency and equitable resource allocations. Importantly, the commitment to implementation has encouraged yet additional waves of participation as demonstrated by a sharp 80% increase in citizen participation in the budgeting committee. Moreover, the citizen-participatory system selected 223 projects (funded with the equivalent 50.3 billion KRW) in 2013 and the Seoul government underwrote 202 of the proposed projects. The reliability of budgeting under the citizen-participatory system is strengthened further with a review system that consisted of 25 districts’ meetings, sub-committee reviews, and general assembly meetings. As Seoul’s PBS has been supported by the Local Finance Act, the PBS Ordinance and a budget of 50

billion Won (equivalent to 50 million USD), it is now institutionalized. It generated broader civic participation and encouraged the introduction of open decision making. A possible challenge, however, may lay in conflict with Seoul municipal assembly’s own budgeting process.

The Listening Open Forum(聽策, *Chung-chee*, literally means listening policy rather than 政策, *Jung-chee*, which means policy more generally) illustrates a slightly less advanced of stage of change. The Listening Open Forum was a place where Mr. Park’s attendance was all but guaranteed; it thereby offered citizens as well as civil servants a chance to voice their concerns directly to the city leadership. It also drew attention due to its regular scheduling; this enables allowed citizens from different backgrounds with varying levels of political sophistication to become a source of inputs. Held 71 times annually over the nearly two year period of November 2011 to December 2013, the Listening Open Forum became a critical component of the participatory decision-making process. Listening Open Forum has yet to be institutionalized. It offers a good example on deliberation; it still focuses on daily lifestyle issues rather than resolving critical social conflicts.

3.5 Assessment and Discussion

The five cases presented in the previous section illustrate various degrees of progress along a transition beyond the niche and within the regime level. It is relatively clear that all five cases have expanded both softer economic and social structures and begun to bend harder institutions and infrastructure that constitute the regime. They further illustrate the importance of having intermediary agents that helped to carry forward the change—and offer the possibility for even broader change moving forward. Perhaps, most interestingly the case of the Listening Open Forum exemplifies change that is currently in place but may fail to retain its standing after Mayor Park leaves office. This innovative is not pegged to larger set of harder institutional and administrative reforms. Its prospects for sustainability are therefore arguably more fleeting.

Table 2. Analysis of Transition Process

Policy	Niche	Organisational Level	Institutional Level	Landscape
The ‘Sharing City, Seoul’ Project	√	√	√	
Urban Agriculture	√	√	√	
One Less Nuclear Power Plant	√	√	√	
Participatory Budgeting System	√	√	√	
Listening Open Forum	√	√		

Another set of questions relate to how and why some of the innovations have moved up from the niche level. This was not solely a function of strategic interventions from Mayor Park. Rather, they involve the three enablers of change manifesting themselves in varying forms. For instance, in the case of the Sharing City Project—arguably the most institutionalized of the grassroots innovations—there is influence of social learning, social networking, and, to some extent, reflexive governance. In the case of the urban agriculture, there is also visible evidence of social learning and networking among and within grassroots innovations and citizens. To point to yet a third example, the case of PBS gained momentum from reflexive governance and some networking. In sum, the five cases reinforce arguments that governance, networking, and social learning are critical drivers of sustainability transitions.

4. Conclusions

This article began from the observation that Seoul, like many other rapidly growing cities in Asia, found itself in rather precarious state approximately five years ago. With the national government endorsing green growth, the city itself was losing connection with the natural environment as well as its residents. Beginning in 2011, the city began to reclaim that connection due in part to the astute manoeuvring of Mayor Park. It then raised the question about the prospects of the reforms that Mayor Park helped introduce for maintaining momentum. To help analyse these prospects, the paper employed a lens based on transitions and grassroots innovations. That analytical lens used to assess five projects under Mayor Park's which suggest that the prospects for a more sustainable future in Seoul are, on balance, relatively strong. This is particularly the case for four out of the five appraised initiatives – Sharing City Project, Urban Agriculture, One Less Nuclear Plant, and Participatory Budgeting. Moreover, the development of these initiatives from a niche-level innovations to regime-level shift in organizations and institutions is owing to something to social learning, social networking, and reflexive governance. That these enablers of change left their impact in Seoul suggest the possibilities of extending this literature's insights more outside Europe.

To a certain extent, the notion of extending this framework points to other related areas for research. One such area would be to look more at changes to the landscape level and their influence below. This article, while acknowledging the dynamic interplay between different levels, focused chiefly on change moving from the bottom up. It would be interesting to see how changes in more encompassing cultures or political systems make some reforms feasible while proscribing others. It would similarly help to look at the potential for whether changes in Seoul can help lead to changes in other Korean or even other foreign cities. A similar set of potentially revealing inquiries would bring in more cases from Seoul with possibly fewer degrees of success moving from one level to the next.

In addition to expanding the scope of the cases studied, another area for strengthening the analysis would involve incorporating more precise measures of progress from one level to the next. Admittedly the judgement on what is a regime and niche level change is rather subjective at this point. This is partially a function of the transitions approach itself and its reliance on describing an interactive process that is ongoing and does not lend itself to single snapshot of achievement. It is also partially attributable to the authors' decision to rely chiefly on qualitative as opposed to quantitative data. Future iterations of this work would potentially benefit from the inclusion of more hard numbers to support qualitative observations. Time series data, illustrating the rise and fall, of measures of sustainability as well as the key enabling reforms would be particularly welcome in this regard.

A third potential need area that relates to transitions work more generally is translating the rather abstract language it uses into prose that can communicate with policymakers. As a post-2015 development agenda is likely to be set this year, it is imperative that both transitions theory and practice can be assimilated by those who do not speak in terms of niches, regimes, and landscapes. In fact, there appears to be ample room for using actual case studies like the ones featured in this article to translate transitions theory into a language that is more accessible to policymakers.

A final point relates to the green growth discussed at the onset. With the growing interest in new development paradigms have come a surfeit of slogans for new approaches to development. It is not uncommon to see the development community push for climate resilient, low carbon, green growth. In addition to potentially perplexing policymakers, these slogans also run the risk of overlooking the interests of people that growth is supposed to benefit. To make sure that these slogans do not ring hollow, there is a need to

make suffuse new approaches to development with often overlooked provisions for participation and engagement.

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