



From learning to fragile governance: Regional economic development in rural Peru



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ABSTRACT

This article analyzes the potential of learning processes to promote governance and economic development in rural areas. It examines how three types of learning in the Lurín River Basin in Peru—technical expertise, storytelling, and experiential knowledge—combine to empower rural communities to act collectively. Based on an analysis of three community-led economic development processes—irrigation improvements, tourism and food processing—we show that learning can result in new, albeit fragile, forms of governance and social capital. Fragile governance can turn into regional economic development when learning results in the development of a regional narrative and coordination occurs across both vertical and horizontal network dimensions.

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1. Introduction

While the 21st century has brought new prosperity and global clout to Latin American cities, rural regions continue to lag behind in terms of economic development. Although some rural regions have been able to create new sources of rural livelihoods and economic development (Bebbington, 1999), there is no formula for success, and most continue to have high levels of poverty relative to urban centers. Moreover, in much of Latin America, decentralization has resulted in an extensive reorganization of territorial governance that resulted in more decisions taken at the subnational level (Falletti, 2010), particularly in local economic development, even if not always coupled with appropriate expertise and resources at the local and regional levels (Montero and Samuels, 2004). In this context, the process of learning about economic development in the local and regional context becomes critical.

Thus far, the lively debate about learning and regional development has largely focused on innovation and high-tech industries in the urbanized context (Asheim, 2012; Cooke and Morgan, 1998;

Doloreux, 2002). Yet, due to their very distance from urban agglomerations, as well as the weak role of the private sector and the diversity of local actors, rural areas offer a unique lens into how learning processes occur across space (Wellbrock et al., 2012). Using the case of the Lurín River Basin in Peru, in this paper we analyze the tangible and intangible governance factors that are key in translating these local learning processes into local economic development outcomes.

The Lurín River Basin is the southernmost of three river basins in the metropolitan region of Lima. Most districts of the Basin have lost population in the last two decades due to migration to Lima; however, Lurín has retained much more of its nonurban land than nearby river basins. Although non-governmental organizations (NGOs) have worked for over two decades to improve conditions and build local capacity in the valley, poverty persists for as much as half of the local population. Yet the past twenty years have brought significant economic transformations to the rural villages of Lurín. These include increased agricultural productivity due to the building of several artificial water reservoirs in the village of San Andrés de Tupicocha, the emergence of tourism as a new economic activity in Antioquia after the implementation of a community-led program that painted many of the village buildings, and the building and operation of a factory to produce marmalade with the region's fruits in Cochahuayco. The region is currently struggling to

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develop effective territorial governance institutions for economic development. In recent years, local and regional actors have created several institutional arrangements that seek to coordinate environmental and economic development strategies at the regional level. NGOs in Lurín have focused on building institutional capacity and governance structures as a way to coordinate and promote regional economic development. In this paper we focus on the emergent governance of economic development processes and collective action in the region.

Based on over thirty interviews with key actors in the area and the observation of meetings between NGOs, local officials and peasants in several villages in Lurín, we examine how economic development initiatives have occurred in the region. In this paper we understand governance as self-organizing networks of actors that facilitate collective action initiatives (Jessop, 1998). While public actors can be part of governance initiatives, they do not always have to be present (Jessop, 1998). We look at governance dimensions that are both *horizontal*, i.e., coordination across municipalities, peasant communities or families, and *vertical*, engaging the multiple levels of government from community to municipality to district to region to the nation-state. The mechanism that activates both of these governance dimensions is *learning*, which in rural Lurín occurs in many different forms, from the transmission of technical expertise by agricultural engineers to the building of confidence in community members through storytelling to the experience of different techniques through learning missions to other regions. In particular, we analyze three community-led processes of economic development in irrigation, tourism and agro-food industry. We argue that in Lurín's successful economic development projects, three different types of learning – technical expertise, storytelling, and tacit or experiential knowledge – combined to create new meaning for its territorial assets and collective vision for the future. When these learning processes activated governance along both vertical and horizontal dimensions, actors in the region created the potential for institutionalizing these emergent economic development processes in the long term.

We begin with a review of relevant literature on territorial economic development, governance, and learning. After presenting a framework for conceptualizing learning and governance in a rural context, we provide a brief historical overview of the socio-economic conditions and governance dynamics in Lurín. We then look at the success and failures of local and regional economic development strategies in irrigation, tourism, and fruit processing in light of the role of learning and governance. The conclusion discusses implications for policy and institution-building efforts to promote local and regional economic development in rural contexts in Latin America.

2. Economic development, governance and learning in rural Latin America

To develop a relevant theoretical framework that allows us to study economic development in the Lurín River Basin in Peru considering governance and learning as critical variables, in the following sections we review three academic debates: 1) the territorial aspects of economic development, with a focus on rural development; 2) the rise of governance and the possibility of governance failure; and 3) the role of learning in regional economic development.

2.1. The territorial aspects of economic development

In recent decades, cities and regions have assumed increasing importance in the design and implementation of economic

development strategies. Subnational territories have come to be seen as privileged nodes of the global economy and are increasingly seen as responsible for their own development; thus, governance and collective learning increasingly explain why some cities and regions do better than others (Amin, 1999; Chapple et al., 2012; Lawson and Lorentz, 1999; Scott and Storper, 2003). Local governments in Latin America, often in association with other stakeholders of the local and regional economy, are now at the frontline of designing and implementing economic development initiatives (Borja, 2001). However, the lack of local institutional capacity and clarity about how to organize local governance structures for economic development have often obstructed efforts to achieve clear and positive results in the region. This has been especially the case in Latin American rural areas where decentralization reforms have been met with high hopes from rural communities and NGOs but also with remarkable institutional deficiencies (Bebbington, 1997). Economic development in these rural settings has faced particular challenges such as persistently high poverty rates, the role of agriculture as dominant economic activity, the pull of nearby cities, the weakness of the private sector, or the lack of specialized human capital (De Janvry and Sadoulet, 1993).

Villages and rural regions have attracted little attention in the local economic development and innovation literature. Instead, most of these debates have taken place in the field of rural development, which, in recent years, has also moved towards a more territorial focus while maintaining its key preoccupation with the dynamics of agriculture and its impact on peasants' income and welfare (Murdoch, 2000; Marsden and Bristow, 2000; Ellis and Biggs, 2001). Most rural development scholars agree on the need for a renewed rural development approach in which agriculture is one among many options to improve the lives of the rural poor (De Janvry et al., 1989; De Janvry and Sadoulet, 1993; Ellis and Biggs, 2001). A new paradigm of sustainable rural livelihoods is emerging, i.e., broadening income sources beyond subsistence farming to a variety of rural and non-rural activities, such as crafts production, housing investment, and remittances (Bebbington, 1999; Ellis and Biggs, 2001). Rural livelihoods develop via the existence (and accessibility) of diverse assets that can be transformed into income, or, 'different types of capital (natural, produced, human, social and cultural) that are at once the resources (or inputs) that make livelihood strategies possible, the assets that give people capability, and the outputs that make livelihoods meaningful and viable' (Bebbington, 1999: 2029). Rural development authors have increasingly appealed to the need to better understand the role of governance, networks and social capital (Murdoch, 2000). In other words, economic development in rural areas is not only a matter of improving agriculture and connecting farmers to markets and global value chains, it is also about understanding the horizontal dynamics of governance and social capital that make certain development initiatives thrive in some regions and not others.

2.2. Governance, networks and social capital in rural areas

Governance refers to a new way of governing space in which NGOs, the private sector, and other non-state actors are given a more significant and active role in public decisions, policy-making, and planning (Rhodes, 1996). As defined by Jessop (1998:29), governance is the "self-organized steering of multiple agencies, institutions, and systems which are operationally autonomous from one another yet structurally coupled due to their mutual interdependence." In the case of rural areas, Ostrom (1990, 2002) has shown how the self-governance of "common pool resources" such as irrigation systems can be highly effective as "commons governance." As Ostrom (2002: 16) concludes, to increase benefits and decrease costs, "it is essential to draw on cultural endowments

and their knowledge of local resources to find innovative institutions that fit local conditions.”

According to Jessop (1998), for effective governance, local and regional actors need to simplify governance models and practices, develop the capacity for dynamic interactive learning, establish a common worldview, and develop a system of metagovernance to coordinate actions across space, time, and domains. These are, for Jessop, the key *mechanisms* for governance. The state may play a role here as a facilitator: “the state can help most by providing inputs that local people cannot provide for themselves and then maintaining a ‘hands-off’ stance with regard to activities that are within the scope of local action” (Evans, 1996: 112). According to Sorensen and Torfing (2009), facilitators (or metagovernors) should combine hands-on and hands-off methods, stepping back from network design but offering a more hands-on approach in terms of network management and participation.

Effective governance entails collective action and leadership. The existence of shared values, vision, and commitment can motivate actors across a region to collaborate (Horlings and Padt, 2011). Rural areas tend to be socially heterogeneous, creating a particular need for collective leadership to coordinate across multiple networks embedded in place (Collinge and Gibney, 2010; Horlings and Padt, 2011). Shared leadership structures should help actors in political networks to make decisions (Karlsen and Larrea, 2012) – yet, the way power is institutionalized can shape leadership practices, creating a need for more awareness of the siting of leadership (Hidle and Normann, 2012).

Woven throughout this notion of governance as self-organized networks is the idea of social capital (Putnam et al., 1993; Woolcock, 1998). Networks of trust and collaboration not only facilitate joint action but can also span private and public worlds to bring the state and society into a synergy that can then become a developmental asset (Evans, 1996). In rural areas, the availability and form of social capital is often structured by the political economy of development, which may either limit or grant local capacity for action (Bebbington et al., 2006). Local actors can construct synergy – or permeable social capital that spans public-private boundaries – by transforming social identities, innovating organizational design, or redefining problems (Evans, 1996). Shaping the development of both social and human capital are informal institutional arrangements that govern behavior and thus also shape the capacity to design and implement effective local and regional economic development strategies (Rodríguez-Pose, 2013). Institutional arrangements are always linked to specific places, and they can create barriers to intervention, for instance as local customs result in lock-in, or reinforce patterns of inequality (Rodríguez-Pose, 2013). This suggests that rather than designing institutions from the top down, altering local institutions, we should tailor economic development strategies to acknowledge and engage with local institutional arrangements and “institutional bottlenecks” (Rodríguez-Pose, 2013: 1044).

A network perspective can also be useful for studying the economy of rural areas: 1) vertical agro-food networks, in which farmers and rural areas are linked to broader supply and production chains, in part because of the market value of their proximity to nature; and 2) horizontal networks or what Murdoch calls “the new rural networks of innovation and learning” (Murdoch, 2000: 412). The “old structures” of rural areas such as small farm systems or artisanal workshops, with their high levels of trust and socio-cultural cohesion, are well equipped to form the new horizontal networks of rural economic growth – though they may also lead to resistance of change (Murdoch, 2000: 414). These networks also prove key to mobilizing assets, with the activation of social capital occurring either by rural communities reaching from the inside out, or external organizations connecting from the outside in

Bebbington (1999).

While many authors have noted the importance of understanding rural development through the language of governance, networks and learning (Murdoch, 2000; Wellbrock and Roep 2015), less is known about how can learning generate new local and regional networks and, therefore, new forms of governance. In the following sections we review the rich literature on learning and economic development in order to build a theoretical framework to understand the relationship between learning, networks and governance and the impact of this relationship in local economic development outcomes in rural areas.

2.3. Learning and local economic development

Many theorists influenced by evolutionary economics have begun to examine the role of learning in local economic development. To conceptualize learning, it is important to revisit Polanyi’s (1958) distinction between tacit and explicit knowledge. Explicit – or codified-knowledge is typically transferred verbally or in writing, acquired in educational institutions, and considered a key part of an individual’s human capital. But some knowledge cannot be conveyed symbolically, either because it is unconscious (e.g., knowing how to ride a bicycle) or because available codes are inadequate. Since it is built out of personal experience, is often context-specific, and is difficult to pass on to others, networks of associations are key to its transmission (Von Hippel, 1994). This tacit knowledge may best be acquired through demonstration, imitation, and practice, often in a master-apprentice relationship. A common social context, in the form of shared language, values, and culture, can facilitate the transfer of tacit knowledge (Lundvall and Johnson, 1994). It thus acts as social learning, or a change in practical activity that occurs through social practices (Friedmann, 1987). Schön (1971) uses the analogy of agricultural extension services, or demonstration farmers, that shatter fixed boundaries, creating a new organizational format. We refer to this particular form of tacit knowledge as *experiential knowledge*.

2.3.1. Territorial learning

The process of sharing tacit knowledge, recombining it into new knowledge, and overcoming the organizational inertia that creates resistance to change, creates collective learning. Collective learning can be understood as the territorial equivalent of the type of learning that happens within firms (Lawson and Lorenz, 1999). Collective learning can therefore generate new forms of local economic governance and, more importantly, it can also lead “to the development of new tailor-made institutions which in turn enhance local capabilities” (Helmsing, 2001: 304). At the local governance level, it can create new “regional competence” (Helmsing, 2001: 302), specifically, the ability to spot change, create and communicate awareness, and spur the mobilizing of resources.

The debates on learning regions can help clarify how learning occurs in places. Learning regions are premised upon the localized nature of tacit knowledge, specifically, the difficulty of articulating such knowledge over long distance, the need for learning experientially, and the role of common social context in effective knowledge sharing (Florida, 1995; Lundvall and Johnson, 1994). Yet, with its narrow focus on technology and knowledge transfers between industry and universities in urban centers, the learning region model may fail to address the diversity of actors, unique problems, and cultural context of rural regions (Wellbrock et al., 2013). Likewise, the idea of regional systems of innovation (Doloreux, 2002) — where new knowledge is created jointly between firms and institutions based on interaction with each other and their environment — seems to exclude rural areas, where the

innovation may be simple access to markets rather than new products per se. And in fact, to the extent that rural regions are lagging regions, they are subject to the regional innovation paradox, where they struggle even to invest effectively in innovation (Oughton et al., 2002).

More recent theorizing on learning regions offers some insights for rural areas. Asheim (2012) argues that policymakers have adopted the idea of learning region as an answer for regions with weak territorial competence, and sees the potential for regional development coalitions, a more broadly defined regional innovation system that includes a variety of organizations involved with competence building. Arguing for conceptualizing learning as happening in space rather than in a particular place, Hassink and Klaerding (2012) point out the role of different types of knowledge (analytical, synthetic, and arts-based) — not all which are based upon proximity in an urban or regional agglomeration — in the process of learning.

The idea of communities of practice is a different way of understanding learning, which may be more appropriate for rural regions. In this view, knowledge is acquired not through the simple transfer from one person to another, but as socially constructed out of environmental context, social relations, and historic paths. Learning is two-way, changing both how a learner sees the world and how the world sees the learner (Brown and Duguid, 2001). It often takes the form as a “living curriculum,” occurring in forms such as storytelling, conversation, coaching, and apprenticeship (Wenger, 1998). And because communities of practice are organized by social relations — whether organizations, networks, or occupational groups — tacit knowledge flows within them across geographic borders, regardless of spatial proximity, in an “extra-localization of cultural ‘closeness’” (Amin, 1999; Bunnell and Coe, 2001: 583). Yet, transmission of practice occurs most powerfully in forms such as apprenticeship and common experience, grounded in place.

2.3.2. Different types of knowledge and their impact in local economic development

How is learning related to economic development? According to Lundvall and Johnson (1994), various types of knowledge shape the capacity for local economic development:

- know-what: broad knowledge about facts;
- know-why: an understanding of scientific principles;
- know-how: specific skills, including not just the knowledge of how to produce goods and services but also to bring them to market; and
- know-who: the density and strength of social networks.

While the transfer of know-what and know-why can be done by local or external technical experts, the know-how and know-who tend to be transmitted tacitly and depend on local context. However, considerable uncertainty remains over the role of spatial proximity in providing this social context (Gertler, 2003).

Learning might best be understood not as the possession of human capital but the capability to engage meaningfully in the world and act as an agent of change (Sen, 1999). This capability both comes from assets, which Bebbington (1999) refers to as the five capitals — natural, produced, human, social and cultural — and enables people, on an ongoing basis, to transform the assets into income or improved quality of life. To the extent that these assets are grounded in space, learning is as well.

In this context, the role of storytelling and experiential knowledge can be helpful ways of situated learning about know-how and know-who. The power of storytelling has been rediscovered in the last decades in urban and regional planning (Throgmorton, 1996;

Sandercock, 2003). For example, Sandercock has shown how stories can act as a catalyzer of change “partly by inspirational example, and partly by shaping a new imagination of alternatives” (Sandercock, 2003: 18). However, not every story can act as a catalyzer of change. Stories need to be persuasively told (Throgmorton, 1996) and availability of financial and/or political will be eventually necessary. What makes storytelling different from transmitting knowledge through technical expertise? A story has a chronological logic (a beginning and an end), a clear plot and protagonists, a kind of moral tension and also a “potential for generalizability” (Sandercock, 2003: 13) or, in other words, the ability to apply a story to similar situations in other places and periods of time. Storytelling through the dissemination of “best practices” can also be an effective tool to align the goals of network actors and convince them of the urgent need for coordination and joint action (Sorensen, 2006; Sorensen and Torfing, 2009).

2.4. Conceptual framework: from learning to governance in a rural context

We develop our conceptual framework based on Jessop's (1998) definition of governance as self-organizing networks, adding in the notion of learning across space. Different self-coordinating networks exist in an economic sector, spatial territory, or other system (in Lurín typically small family associations, NGOs, and local government) (Fig. 1). They are reflexively self-organized, meaning that they develop a common language and vision around an issue, but also that they learn from failure and continuously attempt to adapt their behavior. This may create joint action either horizontally — between stakeholders in equivalent positions (such as associations) — or vertically, in hierarchies (as between levels of government). Where coordination and learning across these networks is occurring, there is metagovernance.

In this study we focus on one key governance mechanism in the rural context: learning. Recognizing the role of “know-how” and “know-who” in addition to technical expertise (“know-what” and “know-why”), we show how individuals transmitting knowledge via their networks can lead to new forms of governance. In our analysis of economic development processes taking place in Lurín (irrigation, tourism development and fruit processing), we find three different modes of learning: technical expertise, storytelling, and experiential knowledge. As these three types of learning converge, villagers are able to construct new meanings for their

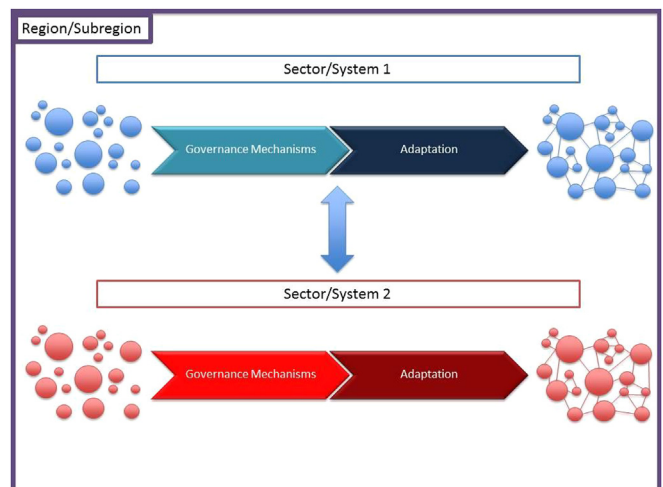


Fig. 1. Metagovernance for regional economic development.

livelihood, which in turn gives them the capability to act and develop shared leadership. When these learning processes are able to activate governance along both vertical and horizontal dimensions, actors in the region create the potential for institutionalizing economic development processes in the long term. This facilitates two-way learning: not only do locals learn about new ways of doing things, but also government officials become familiar with their practices, giving them legitimacy and access to resources.

2.5. Methods

This research relies on both extensive interviews and field observations over a period of six months in 2012. Over thirty interviews took place with actors in two different areas of the Lurín river basin, Antioquía and Tupicocha, as well as with NGOs and government agencies in Lima. The study was initially commissioned by the Multilateral Investment Fund of the Inter-American Development Bank, which sought to better understand the relationship between governance and local economic development drawing from the experience of the many projects they have funded in Latin America. Because of this, we were able to work closely with NGOs in the region to develop a list and make contact with key informants. From this initial list we snowballed into about a dozen more interviews with locals, which ensured that we heard voices from outside the Bank and the CGDD's influence. Interviews took place in Spanish and were semi-structured, covering a large range of issues from the changes in the community over time to the key actors involved in specific economic development initiatives. Because the research project occurred concurrently with a series of economic development workshops for local residents, we were able to observe six community meetings as well, each in different communities of the basin.

3. Socio-economic and institutional context of the region

3.1. Overview of the Lurín River Basin

The districts in Lurín (San Andrés de Tupicocha, Santiago de Tuna, San Damián, Lahuaytambo, Langa, Cuenca or San José de Chorrillos, and Antioquía) that were included in the study had just 7239 of the valley's 165,000 residents in 2007, concentrated in the upper part of the basin (Fig. 2). Most of the districts have lost population in the last two decades. In general, Lurín has retained much more of its nonurban land than the other river basins serving Lima; however, locals are abandoning much agricultural land as they seek livelihoods in the city. Approximately half of local land is in community ownership and guided by community rules, and the other half is held by individual landowners, who may lack property titles.

The population of the middle and upper Lurín River Basin is generally poorer, older, and less educated than that in the rest of Peru. The poverty rate in the seven municipalities ranged from 50 to 75 percent in 2007 (compared to 31 percent in Peru as a whole in 2010). Educational attainment at the college level is low (ranging from five to fourteen percent) compared to Peru, where 31 percent have some higher education.

The dominant economic sector in the seven municipalities (based on 2007 data) is agriculture, hunting, cattle and forestry, generally employing over 70 percent of the workers. Tourism provides minimal employment except in the municipality of Antioquía, where it has grown in recent years and currently accounts for about three percent of employment. There are a few family-based SMEs, accounting generally for five to ten percent of overall employment in the municipalities. Particularly in the upper basin, it has only

been a few years since locals have had access to electricity, sanitation, television, and the internet. Moreover, it is only since the development of reservoirs that agricultural production has been possible throughout the year (particularly in the upper basin), rather than just the three rainy months. These investments are likely altering the sectoral composition of the region.

3.2. Proximity to Lima

Lurín differs from other rural Andean regions because of its geographical proximity to Lima, which is from two to 5 h away (depending on the road). This proximity facilitates both economic and social connections, giving the region a dual identity as both a rural enclave and part of the country's largest metropolitan region. The debate about the role of spatial proximity in the transmission of knowledge, i.e., learning regions versus organizational communities of practice, presents an interesting framework in which to view the Lurín case. Much closer to Lima than other Andean communities, the region has benefited from this proximity, which fosters vertical connections and two-way communication, while also permitting many locals to live dual lives, as comuneros and Lima residents. Proximity thus enables both the acquisition of formal knowledge or technical expertise and stories about different ways of acting. At the same time, many of the region's successes come also from knowledge transmitted through rural communities of practice, i.e., learning about innovations in other regions through experiencing it first hand home in the village. This is a form of experiential knowledge that must be grounded in space in order to gain legitimacy.

The local economy is closely tied to Lima, with most agricultural products sent to the metropolitan markets. Local livelihoods depend on Lima also through migration: there is a constant outflow of youth to the city, and only a few return, even though, reportedly, life in Lima is itself challenging. Lurín inhabitants are divided between those who think of themselves as comuneros (local peasants, legally defined as those that have lived in the area for more than four years) or propietarios (landowners). Many members of either group are essentially dual citizens of Lurín and Lima, holding jobs in Lima but maintaining land in the valley. Most local leaders, including elected officials such as the mayors and the leaders of the comunidades campesinas, live in Lima most of the time and commute to the basin several times per week. The rootedness of the mayors in Lima helps facilitate connections to higher levels of government.

Lurín's proximity to Lima has also brought it more attention and resources from outsiders. Many NGOs choose to work there because of its convenient location close to Lima; working in the area allows them to maintain offices in both locations. Many refer to Lurín as the "last green valley" in Lima, highlighting its potential role as a local vacation spot. This visibility has put Lurín on the map, but also places it under more pressure to succeed.

3.3. Institutional context and key actors in the basin

Governing economic development in the basin are a number of public sector, civil society, and private sector actors at different levels. Multiple different politico-administrative divisions in Peru, all elected bodies, have jurisdiction over the basin: the regional and provincial governments of the Metropolitan Municipality of Lima, the provincial municipality of Huarochirí, and its seven district municipalities – each also made up of multiple divisions called *comunidades campesinas* (autonomous organizations with legal authority, typically consisting of families or groups tied together by place, economic or property interest). Since 2007, two or more district municipalities are allowed to enter into a voluntary

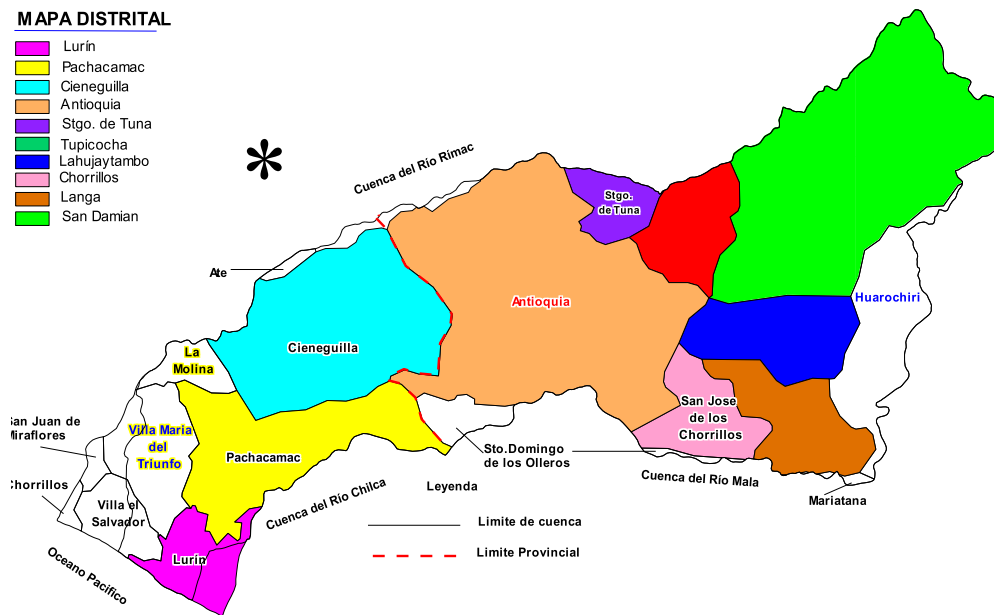


Fig. 2. Map of Lurín river basin.
Source: Alfaro & Claverías, 2010.

agreement to become a joint ‘Mancomunidad,’ in order to provide services and promote local development jointly; in Lurín, the Mancomunidad is comprised of the seven district municipalities and the provincial municipality of Huarochirí. In addition to the comunidades campesinas, NGOs play a powerful role in local governance. In contrast, the private sector, consisting mostly of associations of local producers, is minimally represented.

NGOs have been involved in the Lurín River Basin for two decades, although their presence became more important and visible after decentralization reforms took place in Peru since the 1990s. In 2003, thanks to the collaboration between the NGO Platform and 10 mayors in the Basin, an Association of Municipal Authorities (AAM) was established, a form of regional cooperation addressing the cyclical scarceness of water and the disarticulation of the transportation infrastructure within the Basin, which seriously limited intra-Basin movements (Governa, 2012). In 2004, the national government enacted the “Pro-Cuenca” program, choosing the Lurín River Basin as its first pilot program due in part to the relationships between NGO staff and the national president Alejandro Toledo. In 2009, two NGOs, the Global Center for Development and Democracy (CGDD) and the Research, Education and Development Center (CIED) started a territorial development project in Lurín with the technical and financial support of the Inter-American Development Bank to improve the competitiveness of the Lurín River Basin through the joint action of the region’s public and private entities.

These actors organize themselves in networks with both horizontal and vertical dimensions. Working primarily horizontally are the comunidades campesinas, which play an important role in terms of governing communal property and water usage, as well as fostering civic participation. Associations often grow out of family ties; as one NGO leader explained, “Andean development begins with the family and then gives work to others.” Families form building blocks for business networks that go beyond the traditional community interests in water and land management to conduct economic development. Associations range from the irrigation committees governing water usage that have existed for

hundreds of years to the more recent local tourism and producers’ associations (now 16 in total) for specific products such as apple vinegar processing and guinea pig farming.

Another horizontally organized association is the Mancomunidad Municipal de la Cuenca Valle de Lurín, which has focused on infrastructure development, particularly water and sanitation, but is increasingly involved in economic development governance, due to the strength of its vertical connections, with higher levels of government. Although there are other examples of Mancomunidades across Peru, many consider this Mancomunidad, which grew out of the territorial governance effort of the AAM, a model of combined environmental and economic governance, worthy of replication (Jurado, 2012). However, it grew in part out of vertical interventions of NGOs in the basin, particularly the support of CGDD and CIED.

In a rural river basin such as Lurín, it is critical to secure resources for development from higher levels of government. This may occur via competitive processes with other regions, or through personal connections with government officials. Either way, the process results in learning, often two-way, in a vertical dimension, between municipalities and regional and national government agencies. One key player in this vertical knowledge transfer is the intermediary, in this case, the mayor of the provincial government, Dr. Rosa Vásquez. Her awareness of opportunities from national programs, particularly in tourism, has helped keep resources flowing to the basin, and at the same time her influence with the national government has increased awareness of the Mancomunidad and Lurín’s potential. Likewise, the regional government and NGOs have played important roles in funding local projects, though some mayors complain that the projects are mostly symbolic, with minimal impact.

4. Learning, governance and economic development in Lurín: water reservoirs, tourism, and fruit processing

In this section, we analyze three community-led economic development processes in the region: the building of artificial

reservoirs in Tupicocha, the emergence of tourism in Antioquía, and the establishment of a fruit processing factory in Cochahuayo. These cases show how three types of learning — learning through technical expertise, storytelling, and experiential knowledge — combine to empower communities to act collectively. Through the combination of these three types of learning, each with its own geography, new, albeit fragile, forms of governance and social capital can emerge. The first case, the building of artificial water reservoirs and irrigation improvements, illustrates how three different learning mechanisms in combination create a convincing narrative for the area's future, thus activating both horizontal and vertical governance networks and creating capacity for change. The second and third cases, in tourism and food processing, show how the failure to combine the three types of learning results in governance failure.

4.1. Water reservoirs and irrigation improvements in Tupicocha

1983 is an important date for the agriculture history of San Andrés de Tupicocha. That year, Teodoro Rojas, a Tupicocha resident who had spent some years working elsewhere as an agricultural technician came back to the village resolved to build an artificial reservoir to improve agriculture irrigation, based on the Gallito Ciego dam he had seen in Cajamarca. Rojas gathered the comunidad and told them the benefits of the irrigation innovations that he had seen elsewhere. Initially, the comuneros were skeptical, particularly of the valve technology he was proposing, as they have traditionally used a stick to control water flow. According to Rojas: "They couldn't imagine it because they had never seen it before."

Eventually, Rojas was able to convince some people in the community to build it but lack of funding, specifically, the rejection of a funding application to *Cooperación Popular*, a national agency that promotes the creation of small companies and business initiatives in Peru, hampered implementation of the project. Therefore, Rojas had to seek funds among the interested families in the Cullpe and Tupicocha communities. Over a period of 8 years, each family lent Rojas what they could afford in the form of materials and labor. To coordinate this exchange of materials and work hours, a new "comité de regantes" (an irrigation committee) was created. After the reservoir was eventually built, the economy of the community improved substantially and they decided to build two more. This time some of the families that had been skeptical were now interested in collaborating, so two more irrigation committees were created in order to coordinate the construction of the reservoirs. The whole of Cullpe community was now involved.

After the first artificial reservoirs were built in 1991, and the irrigation and agricultural productivity improvements became obvious, a positive attitude towards change and innovation emerged in the Basin. As peasants in neighboring municipalities saw this success they became interested in improving their own agricultural production. Seeing these improvements in their own region, according to Rojas, "sort of gave hope to farmers." After the first reservoirs were widely acknowledged as successful, it became easier for peasants to access more sources of funding for this kind of projects. NGOs and different government agencies became very interested in promoting these irrigation innovations and have funded numerous "pasantías" to try to replicate them in other rural communities in Peru and beyond. Meanwhile, about 70 percent of Cullpe peasants in Tupicocha "have moved from a subsistence economy with food insecurity to a surplus economy with food security" (CIED, 2010: 40).

The public-private networks created around the building of water reservoirs represents one of the most interesting and effective cases of learning transformed into a governance mechanism in the Lurín River Basin. Under the leadership of Teodoro Rojas, who

was elected Tupicocha mayor and later the president of the Mancomunidad, the national government awarded the Mancomunidad funding for two technical studies for reservoirs that will provide fifteen million cubic meters of water for the region. Compared to the one million cubic meters of water of the 8 reservoirs built in the region in the last decades, this will represent a significant improvement for peasants in the region.

This case illustrates a successful combination of three forms of learning that created collective action and new governance capabilities in the village of Tupicocha. First, Mayor Rojas leveraged both his technical knowledge about reservoirs and his storytelling about other areas to have members of the community build a reservoir. Both these forms of knowledge come from outside the region, but the construction of the reservoir in the local area then provided the experiential knowledge that built the trust necessary for more collaboration in building other reservoirs. Combined, this learning aligned the goals of network actors in the region and convinced them of the urgent need for coordination and joint action around water issues. Finally, higher levels of government in partnership with NGOs have successfully institutionalized these bottom-up initiatives via *pasantías* and political leadership from the bottom up. This then has become the first major success of the Mancomunidad: to support and scale up a fragile public-private collaboration around an economic development initiative that was born out of the combination of three processes of learning.

In many ways the story of the reservoirs is reminiscent of the idea of commons governance (Ostrom, 1990). The Cullpe farmers adhere to several key design principles for common pool resources: equitable costs and benefits, broad participation, and recognition of management rights by higher authorities. Institutional innovation and new meaning emerge from local assets, particularly cultural endowments and knowledge (Bebbington, 1999; Escobal and Valdivia, 2004; Ostrom, 2002). As we will see in following section, this has not always happened with other economic development processes in Lurín. In the cases of both tourism and fruit processing, actors have not succeeded in combining the three types of learning, and they have failed to develop a joint capacity to act and sustain the projects over time.

4.2. The emergence of tourism in Antioquía

As the shift to a broader conception of rural livelihoods has occurred in recent decades, tourism has become a booming industry in Peru (Desforges, 2000) and an increasingly attractive economic activity for many rural communities in the country (Fuller, 2011). Tourism can be easily monopolized by a handful of private actors (such as big hotel chains) and be detrimental for the local environment and local culture, but in practice is often fragmented. For instance, in the Cusco-Macchu Picchu area, where Peruvian tourism is highly concentrated, tourism involves many actors and stakeholders and cannot be promoted by one single entity (Ladkin and Martinez Bertramini, 2002).

While tourism has been embraced by many local officials and NGOs in Peru, the development of a tourist infrastructure and services (such as roads, restaurants, and hotels) is inconsistent outside the well-known touristic areas. Given the decrease in agricultural production in the Lurín River Basin in the mid 2000s, CIED started to think of new ways to generate income in the area. Given the presence of rural tourism in the neighboring village of Cieneguilla —where many Limeños go during the weekend looking for better climate and nature—the idea emerged to attract at least part of this tourism to Antioquía. While the close proximity to Lima and Cieneguilla was an advantage in comparison to more isolated villages in the Andes, the town suffered from a poor image.

Working together with CIED, Cementos Lima, the biggest

concrete manufacturer in Peru, which is headquartered in the Basin, donated the equivalent of USD 2000 to Antioquía through their social responsibility office to organize an international competition to recruit an artist that would design house paintings for the village. About twenty-five artists participated in the competition and the winner was Peruvian artist Enrique Bustamante, who proposed painting different floral and animal designs in bright colors. The project was received with enthusiasm by a group of Antioquía residents interested in developing tourism in the village, who formed a local committee under the name “Colores para Antioquía” (Colors for Antioquía). This association, comprised of people that already had an economic interest in tourism or were trained in tourism by NGOs, oversaw the implementation process, which started in August 2004.

Colores para Antioquía was also key to building trust among residents and convincing them about the benefits of joining the project. Fuller (2011) has also shown how the tourism project gained legitimacy when the local priest of Antioquía allowed them to paint the town’s church, a major event that led to the participation of the rest of the residents. By November 2004, about 30 houses had been fixed and painted (Fuller, 2011). At this point, the vertical dimension was activated: the national government became interested and through the program “Mejorando mi pueblo,” funded the second phase of the painting project. The Ministry of Housing provided support for improvements to the main square, while the National Fund for Development Cooperation (or FONCODES, the infrastructure program of the Ministry of Social Inclusion) donated funds for a tourist office, as well as “pasantías” to learn about tourism initiatives in other places (Fuller, 2011). The Ministry of Foreign Commerce and Tourism, the provincial mayor, and the CGDD have also given them money to train local guides and conduct a tourist inventory.

This initiative, including the final phase of public-private collaboration, resulted in significant improvements. The number of tourists in Antioquía has increased from 2303 in 2006 to 5527 in 2008, which in turn has improved the quality of life of Antioquía residents (Alfaro and Claverías, 2010: 33–34; Fuller, 2011). Currently, about 200 tourists visit Antioquía every weekend during Lima’s winter (July–November) (Fuller, 2011). However, the lack of tourist infrastructure such as hotels, restaurants and roads to the main tourist attractions limits the length of stay of tourists and therefore the economic potential of this new activity.

Residents also acknowledge the benefits that the painting project has had for the town in terms of improving the residents’ self-esteem and local identity, strengthening women’s participation in local economic activities and political issues, and improving houses and public spaces in the village as well as the quality of life of the population in general (Alfaro and Claverías, 2010; Fuller, 2011). A distinctive feature of the emergence of tourism in Antioquía is that, as noted by Fuller (2011: 933), in contrast to other rural tourism projects arising from local uniqueness, in Antioquía difference was “produced” through the paintings. While this process experienced many obstacles, our interviews confirm that currently the project is seen in a positive light by most Antioquía residents and has also facilitated the emergence of a new generation of young people with interest in developing the tourism sector.

As noted by Fuller (2011), the Antioquía project is in many ways paradigmatic in Peru because it involved the collaboration of a large number of actors including local residents, the local government, national government agencies, an NGO and the private sector. Antioquía’s painting project has received many national and international prizes and, interestingly, it has become a model of sustainable tourism that has been replicated in neighboring villages such as San Damián and Lahuaytambo and other Peruvian villages far from Lurín such as Sogay (Arequipa) and San Jerónimo de Tunán

(Huancayo) (Alfaro and Claverías, 2010: 32). Lima’s Regional Government and the municipality of Huarochirí have also referenced the Antioquía painting project as a successful case of local economic development and public-private collaboration (Alfaro and Claverías, 2010).

However, by 2010 the collaboration around tourism issues in Antioquía had decreased substantially (Fuller, 2011). The local government had stopped collaborating with CIED and blamed the NGO for selling the project as its own. On the other hand, members of Colores para Antioquía blamed CIED for intervening too much in the association’s ‘internal issues’ and were skeptical of the local government given the mayor’s initial disapproval of the project. Colores itself lost participants, and the new mayor was not supportive. Multiple actors – from local associations, to NGOs, to the various levels of government – continue to battle for leadership of local tourism initiatives, with disagreement over next steps. Thus local actors have not succeeded in facilitating successful joint action either vertically, across multiple layers of NGOs and government, or horizontally, between associations or sectors.

Storytelling and experiential knowledge played a key role in promoting collaboration around tourism in Antioquía. Hearing about the success of tourism in Cieneguilla built support among villagers, and seeing the initial paintings completed bolstered confidence even more. Pasantías aided the learning process. Where the effort has fallen short, however, is in technical expertise and support from different government agencies and NGOs to buoy the weak governance structure created around Colores para Antioquía. Lacking a cohesive strategy for moving forward into the complicated arena of tourism development, actors have not been able to create shared meaning. Though the activity has activated some networks, there is no coordination between them, and no meta-governor has stepped forward.

4.3. The fruit processing plant in Cochahuayco

During the 1990s, NGOs were mostly focused on improving the lives of the Lurín River Basin by technical “supply” solutions, that is, by sending agricultural engineers to train peasants in improving methods of agricultural production in the area. In the 2000s, however, there was a shift towards diversifying the economic activities of the region and shifting into higher value added activities. Specifically, CIED supported fruit processing by encouraging an association of farmers and providing financial support in buying food-processing equipment. An example of this effort is the establishment of the Vallelindo association in Cochahuayco to produce apple vinegar and fruit marmalade.

Traditionally, local farmers in Lurín only sold harvested apples. CIED gave a group of women a training workshop on how to make apple vinegar and sent engineers to the village to teach them first production techniques and then how to make marmalade. CIED trainers pushed the women to form an association, in part because it was the only way to ask for funds from the philanthropic agency Fundación Katrina. Thus, they created the ValleLindo association of about twenty farmers, most of them women, to produce a marmalade called Frutsana. A visit by the Minister of MIMDES, Virginia Borra, to Cochahuayco resulted in a promise to help them with their business but only if the money was managed by the local comunidad. The processing plant was built in 2010, with training on the equipment. Learning also took place through numerous internships, sponsored by CIED, three-day workshops (“módulos”) in which women with businesses in other regions (Huancayo province and Ecuador) told them stories about their business and ways of producing, whether marmalade, trout, or other products. However, efforts to build technical expertise have been more focused on how to improve production than how to sell the product. Most of

their product—apple vinegar and marmalade—is sold either locally in Cochahuayco to tourists that visit the town or in the local festivals of Lurín villages. The association had to rent the machines for their business from the comunidad, making very little profit after paying all the costs. This has resulted in many of the founders leaving the association (only seven are left). Some still prepare the products they learned to make—vinegar and marmalade—but on their own, i.e., not using the processing plant and the formal market. The process has left them disillusioned about NGO efforts, as one association leader revealed: “We don't want more engineers to come and tell us what to do, all the money that CIED and other NGOs are going to spend in engineers they should give it to us because now we have the capacity to learn by ourselves.”

Thus, once again the learning process has fallen short. Although storytelling occurred via the intervention of outside actors, as well as *pasantías*, actors never gained the technical expertise in selling that they needed. The biggest gap was the lack of experiential knowledge to build confidence in the farmers. Without an immediate example of successful food processing, farmers remained unsure of the meaning they were to create. This case illustrates how economic development governance can present very different challenges from commons governance. The development of the fruit processing plant failed to meet many of the design principles so important to common pool resource management. The design and implementation of the project and its regulatory structure lacked broad participation, there has been little monitoring, no sanctioning system is in place, and costs exceed benefits for many participants. This failure hints at the challenges these communities face in developing governance for territorial economic development.

5. Conclusion: collective learning and fragile governance in Lurín

The last twenty years have seen catalytic changes in the middle and upper Lurín River Basin. Among the most transformative have been the reservoir projects in Tupicocha, which are being scaled up by a successful public-private collaboration effort. While the emergence of tourism and the establishment of a fruit processing plant have been innovative in providing new sources of economic activity to rural livelihoods in Lurín, they have also been less successful in their sustainability over time. Accompanying these developments is the emergence of new governance mechanisms in the region, including the Mancomunidad, the Council of Water Resources, and a network of NGOs. With a supportive national government as well, these new forms of governance offer hope to leverage even more change.

These examples illustrate how different types of learning enabled new forms of territorial governance for economic development in the region. The most successful cases draw on a combination of three types of learning: technical expertise (whether engineering or painting, both skills acquired from outside the region); storytelling (stories about other places and “*pasantías*” or brief learning missions to outside areas); and experiential knowledge (the learning from examples embedded in place). All three types of learning do not necessarily have to be present, but engaging meaningfully requires more than just formal human capital. As one NGO leader explains, “That one farmer sees that which the other is doing is better than having an engineer teach it to him.” In the most successful case—the building of water reservoirs—the different types of learning worked together. Learning creates new meaning from assets, which then supports the power to act collectively. This then complicates the idea of governance, on which we base our conceptual framework. For Jessop (1998), effective governance involves developing simple

models, new capacity for learning, shared vision, and a coordinating system of metagovernance. Our findings develop the idea of learning capacity, showing that learning must occur in multiple and reinforcing ways. We also find that coordination must happen across networks and hierarchies, horizontally and vertically in order to access not just knowledge but resources. The mechanisms for metagovernance, thus, may need to be defined more broadly.

Although the combination of these three types of learning resulted in different kinds of collaboration among farmers, the most successful cases also utilized both horizontal and vertical networks for “know-how” and “know-who,” creating a space for two-way learning around a common vision. For example, in the reservoir case, local families organized (horizontal) joint action, articulated a clear vision for the future, and gained the attention of higher levels of government. Although the specific institutional arrangements will vary by place, the development of this vision into a new narrative for the area is key to motivating collective action and leadership across this area, given the challenge of its social and geographic diversity (Horlings and Padt, 2011).

In all three cases, proximity to Lima has facilitated the transfer of knowledge but this was not a guarantee of success. Thus, local economic development in Lurín can be best understood by analyzing the various socio-spatial contexts where learning activated governance mechanisms rather than conceptualizing it as a “learning region.” This then suggests the usefulness of broadening the idea of the regional innovation system to regional development coalition (Asheim, 2012), and also the relevance of learning—and acquiring different types of knowledge—in space rather than place (Hassink and Klaerding, 2012).

The Lurín case has some important lessons for other rural regions with economic development needs. “Soft” mechanisms of learning such as storytelling and experiential knowledge can create collective action or governance, even if weak at the initial stages. Local, regional and national governments can institutionalize these fragile forms of governance into regional economic development when they take a “hands-on” approach to vertically and horizontally coordinate actors. It suggests that while joint action or governance mechanisms around a problem or need might emerge relatively easily through processes of learning, the development of a shared vision among public and private actors is key in order to scale up public-private projects to the regional level. It is by building and supporting the different types of learning that territorial projects can become part of a regional narrative that can eventually be developed and institutionalized sustainably. This, then, is another path towards the “constructability” of synergy, or social capital that reaches from public to private (Evans, 1996).

The failures in governance—specifically, the challenges in economic development in agroindustry and tourism—seem to occur when these dynamics of learning and networks—and the leadership that grows out of these dynamics—are absent. For instance, lack of technical expertise and experiential knowledge doomed the process of constructing meaning around the apple vinegar plant, an asset imposed largely from outside. Similarly, in the case of tourism, there is a collective action failure along both vertical and horizontal dimensions due to the inability of local government, NGOs and local residents to construct shared meaning about touristic assets around which to organize collective action.

Thus, the successes in the basin are not yet about economic development. Specific economic development interventions may need to wait until they become part of a vision shared by locals. Instead, policymakers might best focus on ways of fostering different types of learning, not just within the basin but also at higher levels of government. Obviously, “*pasantías*” can play a catalytic role, but ideally their participants will not just sight-see but also gain some technical expertise and practice (for instance,

in teaching themselves how to market their agricultural products). Future research in this valley and similar rural regions should seek to understand how learning and new institutional arrangements shape economic development over the long term.

In a sense, supporting this process of mutual learning is itself a sustainable development strategy, one that can stabilize rural communities by diversifying its economy into different sectors and slow the pull of youth migration to cities. This new regional competence (Helmsing, 2001) evens the playing field, reducing the power of the city as a magnet for the rural poor. Even if Lurín is not yet ready to join the market, it may be playing a vital role in the metropolitan region.

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