# Chapter 4
# Tradition, Inclusive Innovation, and Development in Rural Territories:
## Exploring the Case of Amiais Village (Portugal)

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## ABSTRACT

*This chapter discusses the relationship between inclusion and technological changes in the context of territorial development in all of its dimensions (social, economic, sustainable, and technological). In this context, the chapter aims to understand innovation processes used in rural territories, mainly those that are less developed. The regional innovation systems (RIS) approach is used to underline the collective nature and importance of learning networks in regions. Inclusiveness is another important element in this discussion in terms of the problems caused by exclusion and the opportunities offered by inclusion. Arguably, less innovative regions can make progress in inclusive innovation by relying on their cultural heritage. Empirically, this study shows an innovative experience in Amiais Village (Portugal), a rural territory, that unites tradition and informatics (internet of things).*

## INTRODUCTION

The technological patterns have changed in significant ways during the past decades, and these transformations will be more intensive in the next years. These changes affect not only the technology/science and economy, but also society and institutions and vice versa (societal and institutional dimensions influence technological and economic ones).

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Currently, the world is entering a period of technological change that some call a Technological Revolution (Pérez, 2004, 2016)—focusing on short cycles of change (about half a century)—and others call a Deep Transition (Schot & Kanger, 2018)—if considering long cycles (about 250 years). In this context, many authors emphasize that this set of transformations must be smarter (more innovative), "greener" (environmentally sustainable) and more inclusive (in terms of social and economic inclusion); the advantages for Europe will be related to its institutional structure and policies and will accommodate innovation, economic growth and societal shifts (Pérez & Leach, 2018; Mazzucato & Pérez, 2014).

In light of the above discussion, the concept of territorial development has been defined by new elements, compared to the classical notion, associated with sustainability and technological progress. Thus, territorial development can be described by five dimensions and the relationships among them (Tartaruga, 2019b): (a) social welfare (social development), (b) economic competitiveness (economic growth), (c) reduction of territorial disparities (social cohesion), (d) environmental sustainability (sustainable development), and (e) appropriate technology (technological development).

The last dimension (technological development) highlights the (in)capacity of regions or countries, mainly of low-income or labour-intensive ones, to create and develop technologies and to appropriate scientific and technological knowledge, the so-called "appropriate technology" (Kaplinsky, 2011). Here, the notion of absorptive capacity of (internal and external) knowledge gains importance in the sense that those capacities are very relevant to innovation processes (Cohen & Levinthal, 1990).

Very similar to the idea of appropriate technology is inclusion, another issue important to technological changes that can play a key role in territorial development in developing regions and countries, or even in developed (industrialized) ones. Here, inclusiveness can be thought of as a conjunction between innovation and inclusion as a measure of economic success of cities and regions. One example is the experience of the growing mobile phone sector in facilitating and enhancing business integration (transactions) in low-income markets (Foster & Heeks, 2013).

Specifically, rural territories are important in this discussion; in effect, these areas may show interesting forms of coordination for socioeconomic development (Schneider & Tartaruga, 2006). There are two reasons for this importance. On one hand, towns and rural spaces are currently considered less developed and less dynamic compared to cities. These areas—so-called "places that don't matter"—have revolted against central governments and their policies, promoting political populism; see, for instance, Brexit in the UK or Donald Trump's election in the US in 2016 (Rodríguez-Pose, 2018). Moreover, these confrontations against the status quo can frequently hinder development policies and, consequently, innovation policies based on territorial cohesion. On the other hand, rural places can offer opportunities for development in specific technological areas in partnership with other institutional agents (Asheim, 2018).

The aim of this chapter is to gain a better understanding of innovative behaviour and opportunities in rural territories, introducing some recent theoretical approaches that have emerged in Economic Geography and Innovation Studies. This work focuses on the European context and, specially, on Portugal.

The present chapter is structured in five sections as follows. The first section presents the concept of Regional Innovation Systems, with particular attention paid to types of knowledge bases and related variety approaches. The second section describes the inclusion–innovation relationship through the notion of inclusive innovation and its utilization for innovation policies. In the third section, the text discusses the role of tradition for innovation processes, and the fourth section focuses on innovation experiences of inclusion in a rural territory in Portugal. The final chapter outlines some conclusions.