

Chapter 1

Introduction

Vítor João Pereira Domingues Martinho

This publication is intended to be a contribution (considering approaches among many others) towards the understanding of the evolution of agricultural economics over recent years and around the world. In this way we analyzed several variables related to the economic performance of the farming sector and associated to it the relationship between agriculture and other sectors, the dynamics of rural areas, multifunctional aspects, the environment, and sustainability.

This handbook was divided, apart from this first chapter for the introduction and the last chapter for the conclusion, into nine more chapters that investigate these questions in the European Union, USA, BRICS countries, and in Portugal. In the following paragraphs what was intended and considered in each one of the nine chapters will be outlined.

Beginning with the second chapter, in this part of the handbook, the aim was to analyze the interrelation between the agricultural output and other variables associated with it, in the context of the USA, from 1961 to 2012, with data from the World Bank, using time series econometric instruments, through the Stata software and taking into account the Cobb–Douglas function of production in a linear format as a base model.

The third chapter analyzes the performance of some variables related to agricultural economics in the former twenty seven European Union countries and their influence in the agricultural production, with statistical data that was obtained via European Union statistics, for the period 1973–2013, that were analyzed through cross-sectional estimations and with spatial econometric instruments, considering the GeoDa software.

The performance of the manufacturing sector, was the objective in the fourth chapter, namely that based on agriculture and fishery, in the first 27 countries of the European Union, through the Verdoorn law extended with new variables (the wages

V.J.P.D. Martinho (✉)
Agricultural School, Polytechnic Institute of Viseu, 3500 Viseu, Portugal
e-mail: vdmartinho@esav.ipv.pt

and salaries, number of people employed per enterprise, share of employment in manufacturing total, investment per person employed, and the share of R&D employment in the number of people), from 1996 to 2008, and with data which was obtained from Eurostat.

The fifth chapter aims to analyze some economic, social, and environmental causes of the agricultural output in some European Union countries, analyzing data from the World Bank and considering time series econometric instruments. Some influential countries, such as Spain, France, Italy, Germany, and UK were also considered along with the three countries (Portugal, Ireland, and Greece) that have received financial assistance from International Institutions.

Not forgetting the emerging economies, with data from the World Bank, for the period 1961–2012, and considering the traditional function of production, the contextual agricultural economics within BRICS countries were also analyzed in the sixth chapter through time series econometric techniques.

In the seventh chapter the objective was to analyze the demographic, scientific, and social sustainability of the economic growth in Portuguese sectors, with data for the Portuguese NUTs II (seven), obtained via Eurostat for the period 1995–2010 and with panel data econometric instruments, based on the Keynesian models.

Considering the period 2004–2011, in the eighth chapter we investigated the influence of the environmental variables within Portuguese economic growth, specifically in the manufacturing sector, including those having the agricultural sector as a base, taking into account the Keynesian models, for the Portuguese regions (NUTs III), and the data (in panel) available for the Statistics of Portugal.

In the ninth chapter we analyzed the influence of other sectors related to the farming sector in the performance of some indicators in agriculture, namely the output, using statistical information from the Statistics of Portugal for the year of 2009 and considering cross-sectional estimations through several tests and techniques, including those related to spatial econometrics.

The tenth chapter intends to identify and find the objectives and priorities of the Azorean dairy farmer's decision making. The proposed methodology is based on multicriteria models, by simulation of the dairy farmers' behavior through data of the Farm Accountancy Data Network.