



INSTITUTO
UNIVERSITÁRIO
DE LISBOA

Financialisation of the agri-food sector in Portugal: The case of olive groves in the area served by the Alqueva Multipurpose Project

Timothy Daniel Hogg

Masters in political economy

Professor Mariana Mortágua, Assistant Professor at ISCTE - Instituto
Universitário de Lisboa

Professor Tiago Carvalho, Integrated Researcher,
CIES - ISCTE - Instituto Universitário de Lisboa

October 2023



CIÊNCIAS SOCIAIS
E HUMANAS

Department of Political Economy

Financialisation of the agri-food sector in Portugal: The case of olive groves in the area served by the Alqueva Multipurpose Project

Timothy Daniel Hogg

Masters in political economy

Professor Mariana Mortágua, Assistant Professor at ISCTE - Instituto Universitário de Lisboa

Professor Tiago Carvalho, Integrated Researcher,
CIES - ISCTE - Instituto Universitário de Lisboa

October 2023

Agradecimentos

Os meus agradecimentos são dirigidos aos meus orientadores, a Professora Mariana Mortágua e o Professor Tiago Carvalho, que, apesar das suas agendas preenchidas, sempre se disponibilizaram para me orientar neste processo.

Agradeço ainda ao Paulo Barriga, ao Professor José Muños-Rojas da Universidade de Évora e a todos os entrevistados, que conhecem o Alqueva melhor que ninguém e assim me elucidaram sobre a situação do olival intensivo na região.

Por último, gostaria também de agradecer aos meus amigos e familiares que, através do seu apoio incondicional, me ajudaram a concluir esta dissertação.

Resumo

Desde 2015, a produção portuguesa de azeite registou um aumento substancial. Este facto deve-se, sobretudo, às novas plantações de olival superintensivo na zona irrigada servida pela barragem do Alqueva. Os fundos de investimento e as empresas agroalimentares estão a liderar a intensificação agrícola (sobretudo do olival) nesta região, alterando profundamente o setor. Estes actores são o veículo através do qual se desenrola um processo de financeirização da agricultura. Os fundos de investimento estão a adquirir terras e a arrendá-las, ou a supervisionar a produção agrícola. Ao fazê-lo, os fundos de investimento dão prioridade ao aspeto financeiro da agricultura, muitas vezes em detrimento das comunidades locais e dos ecossistemas. Além disso, a crescente interação entre o setor financeiro e as empresas agroalimentares agrava os desequilíbrios ao longo das cadeias de abastecimento do azeite. Muitos pequenos e médios agricultores incorreram em custos crescentes devido a este desequilíbrio de poder. Para garantir a viabilidade económica, um número considerável de agricultores adotou métodos agrícolas superintensivo, reforçando assim a tendência predominante. Como tal, o processo de financeirização é um importante fator de intensificação da agricultura e das consequências associadas nesta região.

Palavras-chave: Financeirização; agricultura; setor agroalimentar; Portugal; Semiperiferia

Código JEL: Q15.

Abstract

Since 2015, Portuguese olive oil production has experienced a substantial increase. This is driven primarily by the new super intensive olive grove plantations in the area served by the Alqueva reservoir and irrigation system. Investment funds and agri-food corporations are spearheading agricultural intensification (mostly of olive groves) in the region, changing the sector deeply. These actors are the vehicle through which the financialisation of agriculture is unfolding. Investment funds are acquiring land and leasing it out or overseeing the agricultural production. By doing so, the investment funds prioritise the financial aspect of farming, many times to the detriment of local communities and ecosystems. Furthermore, the increasing interaction between the financial sector and agri-food corporations exacerbates imbalances along olive oil supply chains. Many small and medium scale farmers have incurred increasing costs due to this power imbalance. To ensure economic viability, a considerable number have adopted super intensive farming methods, thereby furthering the prevalent trend. As such, the process of financialisation is an important driver of the intensification of agriculture and its associated consequences, in the region.

Keywords: Financialisation; agriculture; agri-food sector; Portugal, Semi-periphery

JEL Code: Q15

Contents

1. Introduction.....	1
2. Literature Review.....	4
a. Financialisation of the Agri-Food sector.....	4
i. Commodity Derivatives and Speculation	5
ii. Financialisation and the “land grabs”	7
iii. Shareholder Maximisation and Market Concentration.....	9
b. Agriculture and the Olive Oil sector in the Alentejo	10
3. Theoretical Framework.....	14
4. Methodology	16
4a. Process Tracing	16
4b. Data.....	19
5. Financialisation of the Agri-Food sector in Portugal: the Case of Olive groves in the Alqueva irrigation system.....	19
5a. The Main Actors in the Alqueva Olive and Olive Oil industry	21
i. Investments Funds: Own-operate	21
ii. Investment Funds: Own-lease out	24
iii. Agri-food Corporations	26
5.b. Consequences of agricultural intensification	29
6. Discussion.....	34
7. Conclusion	37
8. References.....	39
Attachment.....	45

1. Introduction

The increasing interaction between the financial and agri-food sectors has ignited scholarly interest in the field of political economy, resulting in an extensive body of literature on the topic. A significant portion of this research explores the relation between the agri-food sector and commodity speculation, equity-related investment funds, and financial products related to farmland (Clapp, 2014, 2019; Clapp & Helleiner, 2012). Notably, the focus of such research often lies on core countries with developed and modern financial sectors, such as the United States.

An additional branch of literature delves into the nexus between agri-food systems in the global south and the financial sector in the global north. This research uncovered how the commodity price spikes caused, to a certain extent, by commodity speculation in the global north, affected disproportionately food security in the global south (Clapp, 2009; Ghosh, 2010). Furthermore, there is also literature that scrutinises the role of innovative financial instruments, such as Index-Based Agricultural Insurance¹, promoted by several institutions of the global north, as policies that foster economic development for the global south (Isakson, 2015).

Nevertheless, there is a notable gap in the research pertaining the financialisation of agri-food systems in countries of the semi-periphery, i.e., countries that share characteristics with both core and peripheral nations (see Kuns et al., 2016). This line of research is insightful, as it uncovers the different forms in which the financial and agri-food sectors interact in countries that do not have as sophisticated financial systems as core countries but are geographically and economically closer to core countries than the peripheral nations are.

In an attempt to shed light on the workings of the financialisation of the agri-food sector in semi-peripheral nations, this dissertation focuses on the Portuguese case. It explores how the financial sector increases its role and importance in the agri-food sector in a country with a peculiar institutional configuration. In the words of Rodrigues et. al (2016), Portugal's political economy combines "elements of relatively backward structures with a rapidly modernised financial sector fully articulated with core financial centres" (p.502). Particularly within the agri-food sector, commodity markets have a very limited role in Portugal, rendering a substantial portion of the analyses put forth by the literature pertaining to core countries, unapplicable.

¹ A form of agricultural insurance whereby payouts are linked to an index that is based on agriculture production losses, for instance, due to rainfall.

On the other hand, Portugal progressively liberalised its financial sector in the context of its accession to the European Economic Community (EEC). Therefore, unlike peripheral nations, the country is fully integrated in the world's largest single market and, thus, in the circuit of one of the largest financial sectors.

Regarding the Portuguese agri-food sector, in particular, one industry has been substantially growing in the recent years - the olive oil industry. Olive groves are the single crop with most area dedicated to it, representing 10% of the total Utilised Agricultural Area (UAA) (Instituto Nacional de Estatística, 2019). Furthermore, over the recent years Portugal has become the 6th largest olive oil producer in the world, representing around 3.4% of world production (Expresso, 2022; GPP, 2020).

This significant increase in olive oil production Portugal primarily stems from plantations located in the Southern region of Alentejo. This region constitutes 1/3 of the national territory and was historically mostly comprised of arid land. The advent of the Alqueva Multipurpose Project, a reservoir and global irrigation system, has made available 130 000 ha of irrigable land (see Figure. 1). Since the functioning of the project, the region served by the AMP has become the most productive olive growing region in the country. Of the total area of irrigable land, 52%² of the total are occupied by olive groves, corresponding to 19% of the total national

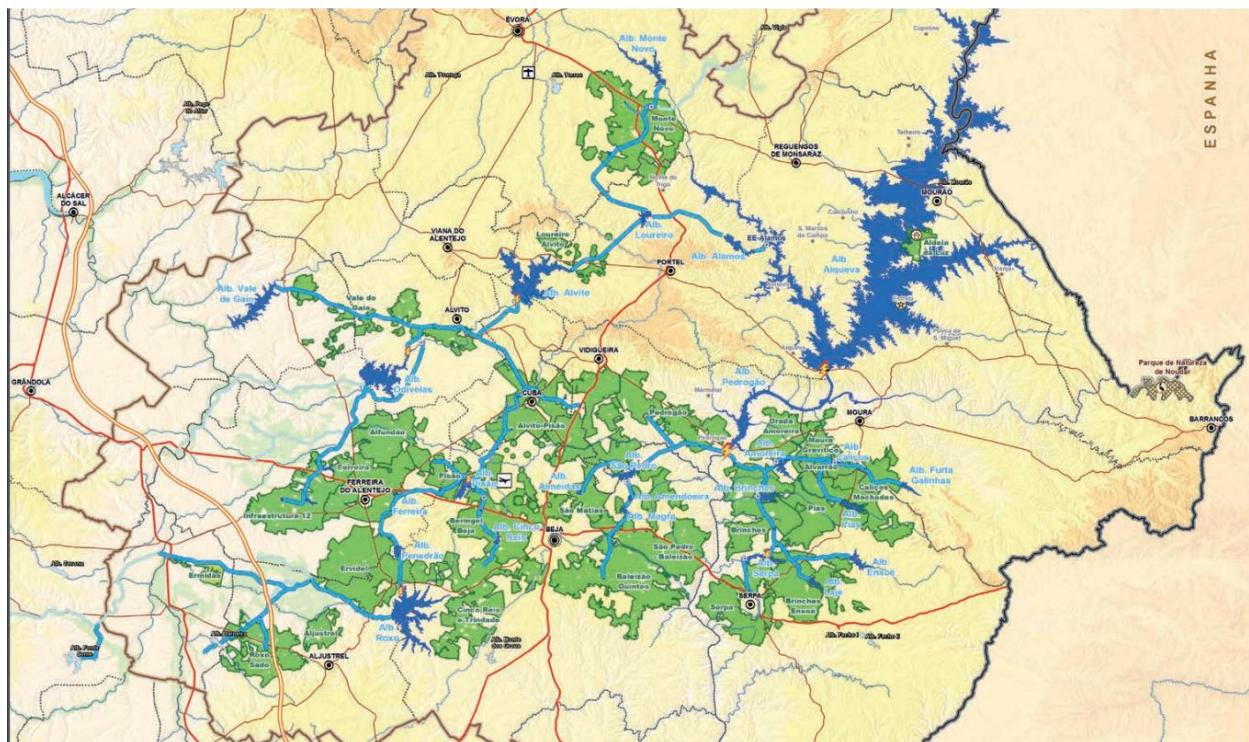


Figure 1. 1- Area of irrigable land (in green) made available by the AMP Source: EDIA (2022a).

² When considering only the area that is cultivated, olive groves occupy 62% of the total area.

area of this crop (EDIA, 2022a). The Alentejo now produces 80% of all olives in Portugal and more than half of all national olive oil is produced in the area of the AMP (EDIA, 2022a; Interview, EDIA representative).

This “unlocked” irrigable land in southern Europe has garnered substantial interest on behalf of large agri-business corporations and investment funds, both national and international. The appeal of the region lies not only in its extensive irrigable land but also in the accessible water prices, and the comparatively lower land prices than the adjacent Spanish region of Andalusia. Additionally, the saturation of water and land access in Andalusia – the most productive olive growing region in the world – further enhances the allure of the Alentejo.

Agri-food corporations and investment funds are becoming the main actors in the region, changing the functioning of the sector by furthering agricultural intensification. These 130 000 ha of irrigable land are increasingly dominated by very large holdings of high yielding crops that are grown using intensive and super intensive farming methods. Olive and almond groves, the crops most associated with industrialised and intensive farming, occupy 69% of all area of the AMP (EDIA, 2022a).

The agricultural intensification that is being witnessed in the region served by the AMP has brought with it several socioecological consequences. Intensive and super intensive farming has been connected to different forms of environmental degradation, from the disappearance of Mediterranean temporary ponds to the destruction of ancient ruins in the name of expanding cultivable areas, to increasing pesticide use, and carbon emissions from overloaded processing factories (Público, 2012, 2017a, 2017b, 2019a, 2019b, 2019c).

Simultaneously, land is becoming concentrated in few very large holdings, with a correspondent decrease in small farms. Few very large corporations are concentrating tremendous power, both on the side of agricultural production, due to their financial capacity to acquire vast areas of land and to invest in high yielding mechanised agriculture, and on the processing side, where large firms are able to impose abusive price deals, shifting costs on to farmers. Lastly, there is a deterioration in working conditions, as resort to illegal migrant labour, sometimes associated to human trafficking rings, is becoming prevalent (Cabral & Swerts, 2021; Jornal de Notícias, 2022; Público, 2012, 2017a).

The entrance of actors directly (investment funds) and indirectly (agri-food corporations) connected to the financial sector in the Alqueva region is indicative of a deeper process of financialisation of the agri-food sector. This dissertation explores the relationship between these two sectors in the irrigated area served by the Alqueva dam, focusing on the olive and olive oil sectors. The guiding research question is thus: How is financialisation related with

agricultural intensification in the region served by the AMP, and what are the resulting consequences?

2. Literature Review

In this section, the academic literature surrounding the financialisation of the agri-food sector, and the Portuguese agri-food sector, is presented. The aim is to survey the research produced hitherto on these topics, in order frame the research question in the context of the academic literature.

a. Financialisation of the Agri-Food sector

The process which has been coined “financialisation” has become increasingly explored in the academic world. It refers to the rise in importance of the financial sector in the world economy. In her article, Krippner (2005) provides a succinct overview of the academic discussion surrounding financialisation. There are scholars who refer to financialisation as the process whereby companies are increasingly generating their profits from the financial sector, rather than through the production of goods and services (Krippner, 2005). Some refer to financialisation as the shift to the shareholder maximisation ethos in corporate governance (Froud et al., 2000; Lazonick & O’Sullivan, 2002; Williams, 2000) whereas others argue that it consists of firms resorting increasingly to capital markets, rather than the banking sector, for finance (Phillips, 2003). There are also those who argue that financialisation is the process whereby the rentier class rises to political and economic power (Duménil & Lévy, 2002; G. Epstein & Jayadev, 2005). Lastly, there are academics who put forward that the process refers to the “explosion” in new financial instruments (Phillips, 1996).

In this dissertation, financialisation is understood as “the increasing role of financial motives, financial markets, financial actors and financial institutions in the operation of the domestic and international economies” (Epstein, 2005 p.3). While running the risk of blurring the lines between financialisation and other processes, such as globalisation and neoliberalism, such a broad definition allows us to explore just how far-reaching “the growing power of money and finance in contemporary processes of economic, political, and social change” has been in the agri-food sector in Portugal (French et al., 2011 p.807).

Following the commodity prices spikes, associated with the Great Financial Crisis of 2008, scholars started to question whether this represented a sign of a deeper process of financialisation of the agricultural sector. It was in this context that literature on this topic started to appear. The literature on the financialisation of the agri-food sector can be broadly

divided into four complementary strains. First, there is the literature focused on the negative effects of speculation on commodity derivatives. Second, there are scholars who explore the increasing investment in, and purchase of, farmland by the financial sector. Thirdly, some research puts forth the increasing role of the financial sector as an exacerbator of power imbalances along agri-food supply chains. Lastly, some scholars attempt to combine some of these changes in light of the transition to the shareholder maximisation logic of corporate governance.

i. Commodity Derivatives and Speculation

While many different accounts regarding the agricultural commodity price spikes have been presented, there is little consensus on the causes of these price changes. For instance, Irwin et al. (2009) and the World Bank (2008) state that there is no relationship between speculation in commodity futures markets and price spikes, attributing little importance to this factor. Instead, their analyses attribute price spikes to changes in market fundamentals. Frenk (2010) directly addresses Irwin's (2009) article, arguing that the research is flawed for various reasons, the main one being that the Granger causality test, used in the latter author's article, is known to not be adequate for testing volatile variables, such as commodity prices in this period. Also based on econometric analyses, Robles et al. (2009) reached a different, though anticlimactic, conclusion – that speculation *might* have exacerbated the price volatility. Nonetheless, Robles et al. (2009) advocate for stronger regulation and disincentives to speculative activity emphasising that despite the potential costs, these measures are warranted to mitigate the greater costs posed by a food crisis.

There is a significant body of literature that argues that speculation had a significant role on the price spikes, as many of the changes in market fundamentals are not sufficient to justify such changes in prices. Ghosh (2010) claims that speculation on commodity derivatives and the increasing demand for biofuels, driven by rising oil prices, played a pivotal role in the price spikes (along with some longer-term factors such as soil depletion and rising input costs). Gilbert (2010), on the other hand, agrees that a massive increase in investments in commodity index funds seems to be the main culprit for the commodity price increase. However, he argues that the phenomenon of rising demand for grains and oilseeds to produce biofuel is insufficient to explain the price increases. Furthermore, Gilbert (2010) further suggests that the belief in continued growth in China (and the rest of Asia) provided an incentive for increased investment in commodity index funds, as demand for agricultural commodities was expected to increase.

Clapp (2009) downplays the importance of the "China effect" since the demand increase on China's behalf had been steadily growing long before the price spikes. Furthermore, China was, at the time, largely self-sufficient in food. Ghosh (2010) provides data that China had a decline in both per capita and aggregate cereal consumption in the 2007-08 period, thus also arguing against the China effect. Despite disagreements concerning what fundamentals contributed to the price spikes, the data converges on the fact that, for instance, wheat futures prices were 60% beyond what market fundamentals could explain, indicating that speculation was a significant exacerbator of price fluctuations (FAO, 2008).

To gain a deeper insight on how the aforementioned events unravelled, scholars began to delve into how the financial sector infiltrated the commodity derivative markets to such an extent. The 1980's were, as for the rest of the financial sector, a time of change for the agricultural commodity markets. As Clapp and Helleiner (2012) show, this decade witnessed banks introducing over-the-counter (OTC)³ swaps⁴ that tracked commodity prices. Subsequently, other instruments such as swaps on commodity indices also appeared, serving to illustrate investors' continuous effort to gain exposure to this market. This motivated lobbying that successfully managed to relax the limit on futures contracts that non-commercial traders⁵ could buy on the Chicago Mercantile Exchange (the most important commodity trading market worldwide), which had been in place since the Commodity Exchange Act in 1936.

In the wake of the dotcom bubble, investors started to perceive commodities as more secure investments than other financial products, further incentivising the rise in capital geared towards this market. However, the shift that consolidated a new relationship between financial markets and agricultural commodities was the Future's Modernisation act, approved by the USA Congress in 2000. Among other things, the new law assured that OTC derivatives were not to be regulated. Subsequently, the value of commodity futures contracts rose significantly, going from an estimated \$200 billion in 2005 to an estimated \$400 billion in 2008, having risen a further \$70 billion in the build up to the financial crisis (Clapp, 2009). Beyond the negative effects of speculation, the proliferation of new financial instruments linked to agricultural commodities meant that large agrifood companies had new streams for capital accumulation,

³ Over-the-Counter refers to the process of trading securities directly with a broker-dealer, as opposed to on an exchange.

⁴ A financial derivative in which two parties swap cash-flows from two different financial instruments.

⁵ Non-commercial traders are those who have no commercial interest in the underlying commodity of the derivative they are trading.

in a market where they not only have privileged access to information, but also had strong enough positions to influence prices.

Fuchs et al. (2013) add to the discussion by analysing the political dimensions behind these changes. More specifically, they explore not so much why banks and investors wanted to gain exposure to commodity markets (as this is to be expected), but why regulators were so permissive to these demands. Complementing Clapp and Helleiner's (2012) arguments - that financial markets are deemed too complex to regulate and that the financial system is shaped by elites that share a faith in self-regulating markets - Fuchs et al. (2013) theorise that the agrifood sector has become depoliticised. In other words, the shared normative predispositions of interacting elites had been instrumental in presenting speculation as part and parcel of equal parties competing in free markets, thus devaluing distributional struggles within the agrifood system, and creating fertile ground for financialisation.

ii. Financialisation and the “land grabs”

The financial sector's influence on agricultural real estate is also notable. Following the financial crisis, there was a significant influx of capital into agricultural real estate, leading some to describe the phenomenon as a “global land grab” (TNI, 2013). News articles around this time reported that investment funds, mostly pension and private equity funds, started to plough their money into agricultural real estate (Economist, 2015; Reuters, 2012). Thus, several authors sought to explore the role of the financial sector on the land grabs.

It is important recognise that while financialisation had a significant role in the land grabbing, not all instances of land acquisition are directly linked to financialisation. There is, however, a caveat that makes the relationship between agricultural real estate and financialisation unique. As Fairbairn (2014) formulates, the distinction between real, or productive, sources of profit and financial sources of profit, is not applicable with regards to farmland. Instead, she argues, the wave of investment in farmland represents a renewed interest in productive assets, but with an underlying logic of financialisation. In essence, these investments are made with a primary objective of prioritising capital and financial gains, but this does not mean they are detached from the real, productive capacity of farmland. This is rooted in the fact that, unlike other real estate markets, the value of farmland is largely influenced by its capacity to produce, rather than its location. Thus, investors tend to have two approaches when investing in farmland (which is generally done through an investment management company): own-lease out (where they buy the land and expect to receive from

rental payments as well as the appreciation of the land) or own-operate (where the investor is involved in the purchase and in the production that takes place on the land). During the global land grab many investors were taking the latter approach (Fairbairn, 2014).

For some scholars, the renewed interest in farmland comes from a neo-Malthusian view of a limited resource base for the survival of the world's growing population (Fairbairn, 2014). As such, along with population growth, other factors such as increasing meat consumption, climate change, growing demand for biofuels, and rising commodity prices, all signal to investors that there is reason to believe the agricultural sector will be presenting higher returns on investment (Buxton et al., 2012; Cotula, 2012; Daniel, 2012; Fairbairn, 2014). These reasons, dovetailed with farmlands' value having high correlation with inflation and low correlation with stock market volatility, provide large incentives for the entrance of financial investors in this market (Cotula, 2012; Van Der Ploeg et al., 2015). Even for investors with concerns of the illiquidity of farmland, instruments like Real Estate Investment Trusts (which act like a mutual funds but focused solely on real estate) were created to address these concerns (Fairbairn, 2014).

The crucial issue, however, is how this surge of capital from the financial sector into farmland influences the political economy of the agricultural sector. Buxton et al. (2012) assert that these large-scale acquisitions of land by financial investors does not genuinely improve the lives of locals, as it changes local landscapes and shifts them away from the traditional forms of agriculture locally practiced hitherto.

Furthermore, Cotula (2012) contends that the global land grab has further incentivised vertical integration in the agricultural sector. This contributes to agricultural trade happening increasingly in "close circuits" of corporations or country systems, pushing out local farm operators. Echoing these concerns, Fairbairn (2014) puts forth that these large-scale acquisitions change local structures of agriculture, as increasingly those who operate the farms are not those who own them. This shift in the relationship between locals and farmland diminishes incentives for sustainable agricultural practices, given that farmers become less concerned about their role in the future productivity of the land.

A significant portion of land grabbing involves the consolidation of small properties to make them more appealing to large agribusinesses. This deeply alters the structure of the agricultural sector by pushing out small, family-owned operations. In the European Union (EU) for instance, between 2005 and 2020, the number of farms decreased by 37%. This decline in small farms was accompanied by an increase in farms over 100 ha of above 20% (EUROSTAT, 2022). It is important to note that it is not implied here that financialisation is the reason for

such land concentration, rather than the growing influence of finance exacerbates this prevalent trend.

iii. Shareholder Maximisation and Market Concentration

Certain scholars also emphasise the role of financialisation in promoting concentration of market power in agri-food systems. As advocates of this argument point out, the process of financialisation is connected to the enormous power of agri-food corporations since the end of the 20th century (Baud & Durand, 2012; IPES-Food, 2017; Isakson, 2014; Stichele, 2015). Many of these corporations are publicly traded, thereby facing significant pressure from shareholders to increase their dividend payouts. This pressure is aggravated when investment funds, by pooling investment from multiple sources, have sufficient capital to buy a large portion of shares, thus giving them a strong ability to influence companies' decisions. Clapp (2017) illustrates the influence of institutional investors in the agri-food sector, showing how asset management firms⁶ own 15%-30% of each of the "big-six" agro-chemical companies (before they merged to become the "big-four") – Bayer, Monsanto, Dow, DuPont, Syngenta, and BASF.

Simultaneously, pressure on behalf of shareholders to increase their returns often makes firms engage in mergers and acquisitions to boost stock prices, further concentrating power. In the 2015-16 period alone, Dow and Dupont, ChemChina and Syngenta, and Bayer and Monsanto announced they were going to merge (Clapp, 2017). Following these mergers, there is a risk that firms attain such a scale, that they can disproportionately influence supply chains. For instance, the consolidation of companies in an oligopoly for consumers, and monopsony for suppliers, allows these larger companies to push costs onto smaller stakeholders. In some cases, small and medium suppliers are increasingly in vulnerable positions due to fears of losing outlets for their production and having distinctly large discrepancies between the date of the supply of their production and the receiving of payments (Baud & Durand, 2012; Vander Stichele et al., 2009).

In part, some of the developments mentioned in the different strands of literature can be linked to the turn to shareholder-maximization - the idea that firms should prioritise shareholder remuneration in relation to any other corporate goals. As argued by Lazonick and O'Sullivan (2002), the rise of large institutional investors was fundamental in this deep transformation.

⁶ A firm that pools funds from various clients, allocating it to a wide array of investments with the intention of profiting.

This situation arises due to the substantial financial capacity of institutional investors in comparison to individual investors that purchase stocks or shares. The financial strength of institutional investors enables them to wield enough power to influence the price and yield of the corporate stocks they hold and to influence the decisions of key players in the sector.

Furthermore, the pressure exerted by shareholders to increase profit margins compels firms to seek additional profit sources from financial markets, rather than retaining and investing their gains into their productive capacity (Krippner, 2012). The four largest agricultural trading companies – Archer Daniels Midland, Bunge, Cargill, and Louis Dreyfus (also known as the ABCDs) - all have financial subsidiaries that offer a plethora of financial products, including OTC derivatives (Clapp & Isakson, 2018). Lastly, the persistent pressure to cut costs for profit maximisation has translated into wage suppression and reduced job security. This trend has become apparent in the agri-food sector, where workers have seen stagnant wages and deteriorating working conditions (Clapp & Isakson, 2018).

The financialisation of the agri-food sector, thus, goes far beyond speculating on agricultural commodities and has various ramifications. The commodification of farmland, promoted in part by the financial sector, has negative socioecological consequences for local communities. The general rise of finance has promoted even more power imbalances in the agri-food sector, implying that smaller stakeholders are in increasingly vulnerable positions. Lastly, the rise in the shareholder maximisation logic of corporate governance, which is inextricably linked to financialisation, is connected to important structural changes occurring in the agri-food sector.

b. Agriculture and the Olive Oil sector in the Alentejo

In this subsection, a survey of the literature pertaining to the Portuguese agri-food sector in the Alentejo is presented. The aim is to provide a backdrop that helps situate the case-study amongst the literature on the topic.

Even though it is a small country, Portugal has varied topographic and climactic characteristics that have made the agricultural sector evolve in a variegated manner. Continental Portugal can be roughly divided into three regions, South (Alentejo and Algarve), Ribatejo e Oeste, and North. Monke (1986) briefly characterises key differences in the regions. Agriculture in Ribatejo e Oeste is the most technologically advanced. Farms are on average around 100ha, and conditions are diverse, with dryland, rolling hills suitable for tree crops and fertile land around the Tagus River. In the North (though to a lesser extent today), due to its

higher population density, small scale family farms (associated to low levels of productivity, technology, and income) are the most common, with the existence of some dispersed large scale mechanised farms. Lastly, the South is mostly comprised by the Alentejo, which is a vast rolling plane with a hot and arid climate, which makes highly productive agricultural activity quite difficult in a great deal of the region. Though certain elements have changed, Monke's (1986) characterisation remains a useful starting point to understand the general landscape of Portuguese agriculture, as well as its trajectory.

Moreira (1989) provides a detailed account of the evolution in the agricultural sector in Portugal from the 1950's up to the accession to the EEC in the late 1980's. In the 1950's, agriculture contributed 23.1% to GDP, yet this number hides the sector's actual societal importance at the time. Even though 1/3 of all imports were agricultural products, the sector had a positive trade balance and it used up 42% of the labour force. It is important to note that, due to the conditions mentioned in the previous paragraph, there were very stark differences between the structures in the North and in the South.

The Northern region was characterised by small family-operated holdings, whereas in the South notably large holdings relied on temporary wage labourers. With the intensification of the industrialisation process, the 1960's and 1970's, the agricultural labour force saw a sharp decline of around 30%. It was in this context that some areas of the South started to modernise their agricultural production, resorting to more intensive forms of farming, increasing both capital accumulation and the consumption of intermediate inputs (Moreira, 1989).

Despite the agrarian reforms associated with the 1974 democratic revolution, which particularly impacted large landowners of the Alentejo, their effects were not lasting. Large landowners quickly regained their privileged position. Nonetheless, a general decline in the importance of agriculture to Gross Domestic Product (GDP) and decline of population in rural areas persisted. This tendency progressed in the 80's as the country entered the EEC. The increasing competition with countries that had already modernised their agricultural sector and could produce agricultural products at far lower costs, meant that many Portuguese farmers were pushed out of the market (Moreira, 1989).

Baptista (1994) introduces a crucial element to the analysis, focusing on the relationship between landowners and labourers. In most areas other than the South, small to medium family-owned holdings predominated. These often maintained close relationships with the labourers, providing them with housing and, in some cases, even shared meals. Alternatively, there were more extensive properties owned by large landlords, which either rented out parcels of land, directly explored the resources through waged labour, or created partnerships with producers.

In contrast, in the South, large holdings owned by wealthy landlords, which were in collaboration with the fascist regime, dominated. In these properties temporary wage labourers represented the majority of the labour force. The threat of unemployment and the lack of alternative employment opportunities, especially prior to the onset of industrialisation, compelled workers to endure their circumstances. However, this situation brought out a strong presence of class conflict.

In a similar vein to the influence exerted by landowners in the South during the *Estado Novo*, Oliveira Batista and Cordovil (2021) put forth that a parallel influence is markedly observed today concerning the allocation of funds under the Common Agricultural Policy (CAP) from the European Union. Despite a momentary concern instilled in the wealthy landowners of the South during the revolution, subsequent governments did jeopardise their interests. Even after the accession to the EEC, their capacity to influence the allocation of CAP subsidies illustrated how the power structures that existed before the revolution were still present. For instance, Cordovil (2021) produced an extensive study on the discrepancies and inequalities in the allocation of CAP subsidies. The findings reveal that 1/3 of direct payments to farmers (which is almost half of the national public expenditure of the CAP) goes to only 2% of the recipients, with the Alentejo getting half of all direct payments.

Through another lens, Moreira (2017) argues that financialisation, seen as part and parcel of the neoliberal shift of the 1980's associated to EEC adhesion, exacerbated the discrepancies in the Portuguese agricultural sector. This was a result of multiple factors, including the structural constraints of Portuguese agriculture - technologically underdeveloped, small holdings, unskilled workforce - coupled with low overall yields and uncertainty associated to agriculture sector in general. Consequently, private investors exhibited a limited interest in the agricultural sector. With a decline in subsidies and protectionist measures from the State, due to restraints from the EEC, and without private investment, only under certain specific conditions could farmers attract capital. For instance, despite the surge in credit due to the process of financialisation, most of it was geared to the non-tradable sector rather than to manufacturing and agriculture. In the 1999-2007 period, credit growth in the Hotels and Restaurant and Real Estate sectors was of 18.3% and 16.7%, respectively, whereas for agriculture it was of 8.5% (Barradas et al., 2015; Rodrigues et al., 2016).

As Moreira (2017) further posits, only with the existence of three conditions could Portuguese farming attract private investment: adequate natural conditions; publicly funded infrastructures (transport, irrigation, protection against natural adversities, etc.); and structural

land conditions that allow for large holdings. Thus, the region served by the Alqueva dam exemplified the ideal conditions to attract private investment.

Focusing on olive oil, Freire (2017) presents a historical analysis of the different institutional configurations that regulated this market during the 20th century. Even prior to the *Estado Novo*, the large landowners, mostly from the south, had sway or were part of executive and advisory state bodies, allowing them to exert pressure so that their interests were catered to. The proceeding years of dictatorship consolidated this arrangement, with the same landowners still exerting strong influence within state institutions. The agricultural sector was thus characterized by the existence of many organizations, backed by the large landowners, that served as lobbying mechanisms. Thus, up until the 1950's, the sector was guided by a protectionist ideology that strived to ensure stable profits to producers and stable prices for consumers (Freire, 2017).

In the 1960s, as the industrialisation process gained momentum, less support was given to the olive oil industry. Thus, it was increasingly subjected to fluctuating prices and rising costs due to labour shortages. This adverse scenario led to a decline in olive oil production until the turn to the 21st century. Nonetheless, despite the advent of the democratic revolution and the adhesion to the EEC, certain key players associated to the corporatist fabric of the *Estado Novo*, managed to maintain certain influence in state bodies under the guise of different organizations.

Freire (2017) thus situates the irrigation systems in Southern Alentejo as part of a long-term plan to counteract the trajectory of olive oil production in Portugal. With free markets and heightened competition from major global producers, modern industrial and capital intensive farming was necessary. The policies were in part successful as Portugal is producing record amounts of olive oil, with Alentejo region alone now producing 50% of all national production. However, she contends that this process has been one of “deterritorialisation promoted by globalisation” (p.214). On one hand production has risen, as have exports, giving consumers worldwide access to high quality Portuguese olive oil. On the other hand, due to price differences, olive oil imports have also risen, as demand for cheap olive oil from other countries is higher.

Silveira et al. (2018) studied specifically the intensification of olive-growing in the region served by the Alqueva dam, and the emerging ecological and social trends that have accompanied it. The entrance of corporate owners of land in the region is promoting a process deterritorialisation in two self-reinforcing ways. On one hand, the new forms of intensive industrialised farming require a combination of human and non-human elements that were not the norm in the region. This takes the form of both industrialised and less labour-intensive

forms of agriculture, foreign olive varieties that give faster yields but are short lived, and the use of unskilled, mostly migrant, labour that live and work in poor conditions and that are rarely allowed to integrate local communities. On the other hand, the trend of depopulation in the Alentejo has not stopped as opportunities for young people to remain in the region are very few. This causes a decoupling of agriculture both with the ecological context and with the social context.

In sum, this subsection contextualises the Alqueva irrigation system as part of a longstanding objective to modernise the Portuguese agricultural sector. Simultaneously, it gives an overview of the different forms in which the sector evolved given the different natural and social contexts of the various regions. As such, the intensification of farming in the Alentejo was a response to the declining importance of the agricultural sector in Portugal, however it brought with it its own set of problems. In the following section the theoretical framework for the case-study is delineated.

3. Theoretical Framework

This case-study resorts to a theoretical framework from the political economy of the agri-food sector literature. The framework puts forth three channels through which financial motives, financial markets, financial actors, and financial institutions have increased their role in the operation of the olive growing and olive oil sector in the Alqueva region.

The first channel refers to the commodification of agriculture and farmland. From the end of the 20th century to the beginning of the 21st century, investment from non-commercial actors in the agricultural sector began to gain momentum. The perceived stability of commodity markets compared to stock markets, and the inflation-protected quality and stability of agricultural real estate, proved to be attractive to investors. Accordingly, following the bursting of the DotCom bubble in 2001, there was a notable upswing in investment in commodity markets. Likewise, proceeding the 2008 financial crisis there was a rise in farmland investment (Clapp, 2009; Clapp & Helleiner, 2012; Fairbairn, 2014; Van Der Ploeg et al., 2015).

The commodification of agriculture thus refers to new actors entering the agricultural sector, solely with a perspective of seeking a financially sound investment. This brings out and inherent risk that new actors merely adopt an economic logic of maximising returns on investment, without due consideration of the role that agriculture plays in local communities and ecosystems (Buxton et al., 2012). This process implies first and foremost the commodification of farmland, as there is a need to detach farmland from its socioecological context. This detachment occurs through the acquisition of land by financial institutions that

have no connection with the land, and many times not even with the agricultural sector. In this sense, farmland is increasingly treated as an asset which produces returns to investors, ignoring that it is embedded in, and is an integral part of, local communities and ecosystems (Fairbairn, 2014).

Fairbairn (2014) provides a useful lens to study the effects of financial actors investing in farmland. She posits that the distinction between “productive” and “financial” investment in farmland is not clear. This is essentially due to the fact that, unlike other real estate markets where land’s value is very much dependent on its location, farmland’s value is directly related to its productive capacity. Therefore, although financial actors seeking to invest farmland represents a renewed interest in productive assets on behalf of the financial sector, there is an underlying logic of financialisation, i.e., prioritizing, above all, capital gains and other financial returns.

The second channel extends from the prior one, focusing specifically on instances when financial institutions directly engage in agricultural production. As Fairbairn (2014) postulates, investors seek one of two investment strategies with regards to farmland - own-lease out or own-operate. The latter strategy is the focus of this channel, as it consists in a certain break from conventional views on financialisation, wherein financial institutions do not directly engage in production of any sort.

Fairbairn (2014) puts forth the idea that underlying many financial investors’ motives for investing in farmland, is a desire to get exposure to long term trends. As such, the Malthusian view that a shrinking resource base with a simultaneous population growth will drive up commodity prices, indicating that investing in agriculture will show long term returns. Simultaneously, financial investors are driven by the principle of “value investing”, a strategy popularized by Warren Buffet. This strategy entail investing in assets that have intrinsic value, thus guaranteeing long term demand for the respective asset.

These narratives offer a plausible explanation for the prevalent adoption of the own-operate strategy by many financial institutions, wherein they are buying farmland and actively engaging in agricultural production. Crucial to this shift is the realisation that while financial firms are employing the own-operate strategy, seemingly deviating from the expected rentier behaviour, their primary perception of farmland is rooted in regarding it primarily as a store of value and only in subsequently as a means of production (Fairbairn, 2014). In essence, although this process diverges from the usual “rentier” behaviour associated to the financial sector, it does not symbolise a change in trajectory. Rather, it signifies of a morphing of the logic of the financial sector into productive activities.

Lastly, the rise of the financial sector has directly contributed to the concentration of power along agri-food supply chains. A select number of notably large corporations, mostly (though not exclusively) retailers, have amassed significant market power influence since the end of the 20th century. A driving force of this process has been financialisation (Baud & Durand, 2012; IPES-Food, 2017; Isakson, 2014; Stichele, 2015). These large agri-food companies are often publicly traded and have a significant proportion of their shares owned by institutional investors. As such, pressure on behalf of shareholders to increase their returns often makes firms engage in mergers and acquisitions to boost stock prices, further concentrating power. Moreover, even in cases where these major firms are not publicly listed, there exist nearly ubiquitous connections with the financial sector. This poses general a risk that an emphasis on short-term objectives will imply cost cutting, by shifting costs progressively onto smaller stakeholders.

In sum, this study resorts to a theoretical framework that posits that there are three channels through which the financialisation of the agri-food sector in Portugal could take place. First, the commodification of agriculture, with an emphasis on farmland. Second, that in distinction to conventional wisdom on financialisation, financial actors are increasingly buying farmland *and* operating the agricultural production that happens therein. Lastly, financialisation contributes to large power concentrations in the agri-food system, putting smaller stakeholders a more vulnerable and dependent situation.

4. Methodology

4a. Process Tracing

This dissertation resorts to a theory-testing process tracing methodology. Process tracing can be defined as a research design that aims to shed light on causality, by tracing the causal mechanisms that produce an outcome. Theory-testing process tracing, as conceptualised by Beach and Pedersen (2013), consists of gathering theory from the existing literature, and testing whether the mechanisms are empirically observed in a case-study. As such, a strong theoretical base is needed for this methodology.

In arguably the most complete work on the financialisation of the agri-food sector, Clapp and Isakson (2018) integrate in a comprehensive framework with the various dimensions of this process (Table 4.1). Several of the potential direct consequences of the financialisation of the agri-food sector can be seen in the olive growing sector in the Alqueva region, namely: rising land prices, dispossession of farmers, environmental degradation, corporate

concentration, cost externalisation, livelihood/job insecurity, and reinforcement of industrial agriculture. This could be indicative of a process of financialisation in the Portuguese agri-food sector. In order to test the hypothesis, there must be considered the causal mechanisms that connect financialisation to these outcomes. However, there is a distinct characteristic that allows us to make an initial prediction that the causal mechanisms proposed by Clapp and Isakson (2018), will not align with the specific circumstances of the case. This is of the fact that capital and derivative markets are not as widespread and developed in Portugal as in the USA (where most of Clapp and Isakson’s analysis is based) (Rodrigues et al., 2016).

Table 4. 1 - Mutually Reinforcing Aspects of Financialisation and Food System Change (Clapp & Isakson, 2018)

Aspect of Financialisation	Shifts that enable financialisation to take hold in the agricultural system	Specific Mechanisms through which financialisation is expressed	Potential Direct consequences
New Arenas for Capital Accumulations	Abstraction of food, agriculture, and farmland into financial values for investment; deregulation of financial markets	Commodity and farmland speculation; new financial products such as index funds and derivatives based insurance	Food price volatility; rising land prices and dispossession of farmers; environmental degradation; redistribution of value from food workers to finance
Prioritization of Shareholder Value	A growing belief that the primary function of firms is to generate shareholder returns.	Profits paid as dividends rather than productive investment; mergers and acquisitions	Corporate concentration; cost externalization; livelihood/job insecurity; reinforces industrial agriculture
Financialisation of everyday life	Neoliberal reconfiguration of the state; offloading of responsibility for risk management onto private actors	Mass-marketed investment products for retirement savings; private sector consumer and producer financial services	Dependence on financial service providers; individual interest in financial gains; reduced security for farmers and consumers

As such, many of the mechanisms provided in the second row of Table 4.1 are not adequate for this case-study. For this reason, the theoretical framework developed in section 3, based on elements explored in Clapp and Isakson’s (2018), is used to provide a more specific lens for the study of the financialisation of agri-food systems in Portugal. The framework posits that there are three ways in which the financial sector increases its influence in the Portuguese agri-food sector: (1) through investment funds buying farmland; (2) through investment funds

operating agricultural production; (3) through the increasing interaction between large agri-food firms and the financial sector.

To ensure that causal mechanisms are being clearly studied and exposed, Beach and Pedersen’s (2013) formulation of causal process tracing is used. As such, between an X (financialisation) and an outcome Y, there must exist defined entities that engage in activities that transmit causal forces. With resort to the chosen theoretical framework, Figure 2 illustrates the theorisation of this process. On the left side there are two groups of entities, financial institutions, and large agri-food corporations. Financial institutions engage in the commodification of agriculture and farmland. In turn, this promotes a detachment of agriculture and farmland from their socioecological surroundings. Financial institutions can also engage in agricultural production, which signals a morphing of the logic of the financial sector into agricultural production, and simultaneously reinforces the aforementioned detachment of agricultural activities from their surroundings. Regarding large agri-food corporations, their activities are increasingly enmeshed with their financial activities and partnerships. This enforces a focus on short-term objectives, that implies amassing even more market influence, leading many times to costs being shifted onto smaller stakeholders.

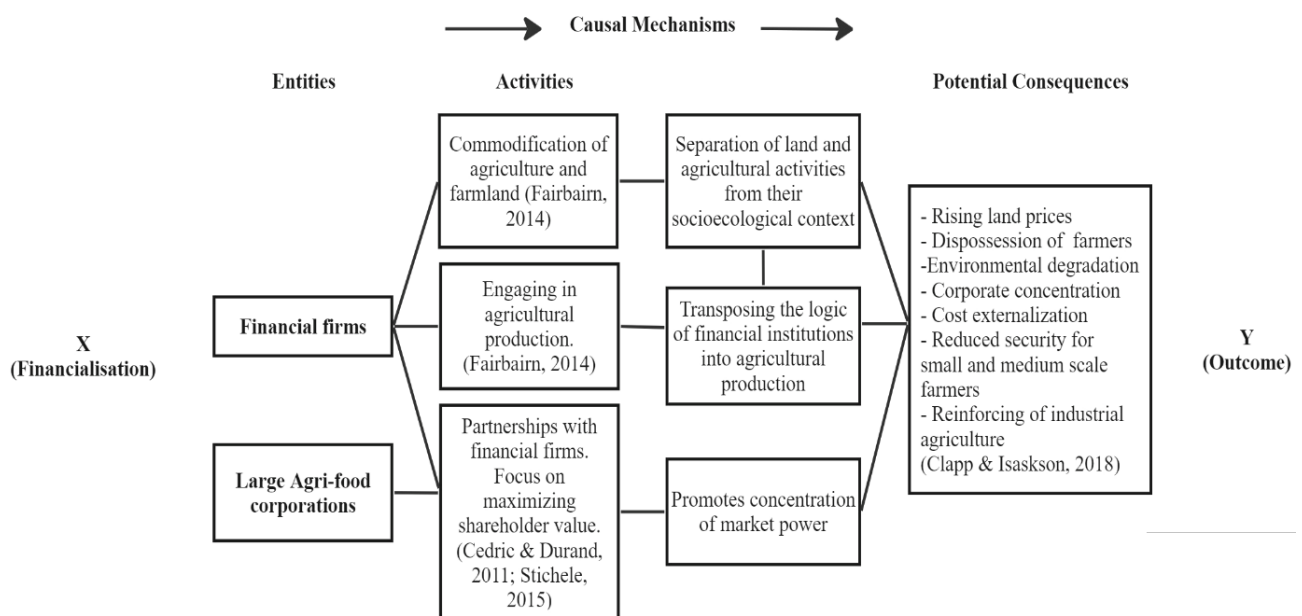


Figure 4. 1 - Causal Mechanisms of the Financialisation of the Agri-Food sector. Source: Own elaboration

4b. Data

As in this case-study the central focus is on causal mechanisms, an extensive amount of qualitative and quantitative data is required, much of which are not publicly available. To overcome this hurdle a wide array of primary and secondary data is used, allowing for a triangulation of these different sources. In this case-study, the time frame chosen is from 2012, the first year with publicly available data from EDIA, to 2022, the most recent year with publicly available data.

The secondary quantitative data utilised is sourced from the Instituto Nacional de Estatística and the Empresa de Desenvolvimento e Infra-Estruturas do Alqueva (EDIA) (the state-owned company that manages the Alqueva Multipurpose Project). This data is used illustratively to paint a picture of the general trends of the agricultural sector in Portugal. As such, it is not taken to have explanatory value in itself, unless substantiated by the other sources that elucidate on the working of the causal mechanisms.

Secondary qualitative data was collected from academic journals, books, think tank publications, reports from the European Union, financial reports from agri-food companies, newspaper articles, documentaries, and company websites. This triangulation of sources allowed for an in-depth inquiry into the different emerging players in the agri-food sector, as well as the emerging conflicts of interest that exist within national and international food systems.

Lastly, new qualitative insights are provided by six elite interviews with one representative of EDIA, one olive farmer, one representative of the Association of Farmers of lower Alentejo (AABA⁷), one member from Quercus Environmental Institute, one member from the citizens movement *Alentejo Vivo* and one academic from the University of Évora. The interviews constitute the primary original contribution and were instrumental in substantiating the causal mechanisms developed in the dissertation.

5. Financialisation of the Agri-Food sector in Portugal: The Case of Olive groves in the Alqueva irrigation system

The Alentejo Irrigation Plan was elaborated in 1957 and constructions started in 1976. With a 17-year gap in between, the doors of the Alqueva dam were closed in 2002. In 2016 the Alqueva Project I was completed, leaving the area with around 120 000 ha of irrigable land.

⁷ *Associação de Agricultores do Baixo Alentejo*

Since then, the Alqueva project II has started and a further 10 000 ha are now connected to the irrigation system. Amongst other objectives, this half-century-long process originated from the intention to provide irrigation to an area traditionally habituated to dry farming. Essentially, this translated into an unlocking of 130 000 ha of irrigable land that has favourable conditions for highly productive agriculture. In addition, the area neighbours the Andalusia region in Spain, which is one of the most productive olive growing areas in the world. For this very reason, land is expensive and water usage is heavily controlled in the area. The Alqueva region thus acts almost as an extension of this Spanish region, yet with relatively cheaper water and land, adding to its attractiveness. As such, the recent establishment of conditions rendering this land suitable intensive and super intensive farming, makes it an interesting case-study to explore how quickly agricultural intensification occurs and the subsequent transformations it entails.

Olive growing for olive oil production is the main crop of the AMP. According to EDIA's agricultural yearbook, in 2022 there were a total of 67 801 ha of olive groves, representing 52% of the irrigated area of the Alqueva region (EDIA, 2022a). Figure 5.1 serves to illustrate the weight the new olive groves in the region have on national production. From the completion of Alqueva Project I in 2016, both the area of olive groves and the production of olives⁸ for olive oil steeply increased. Furthermore, despite containing scarcely more than half of all area of olive groves, the Alentejo produces 80% of all olives (EDIA, 2022a). There is no precise data, but it is estimated that more than 50% of all national production of olive oil comes from the AMP (Freire, 2017; Interview, AABA representative; Interview, EDIA representative).

The data therefore shows how quickly the olive groves planted in the AMP affected Portuguese agricultural output. New plantations that are farmed using intensive (8t/ha to 9t/ha of olives) or super intensive (12t/ha to 14t/ha) agriculture are now possible due to water access in this vast region, allowing national production to increase. Nevertheless, not all farmers have the financial resources required to engage in these modernised forms of agriculture. An inquiry into the emerging actors behind the emerging intensive and super intensive farms is thus necessary to understand the changes in the Alqueva region.

⁸ The yearly changes in the production of olives comes from the alternate bearing of olive trees, in which every productive year is followed by a less productive year and vice-versa.

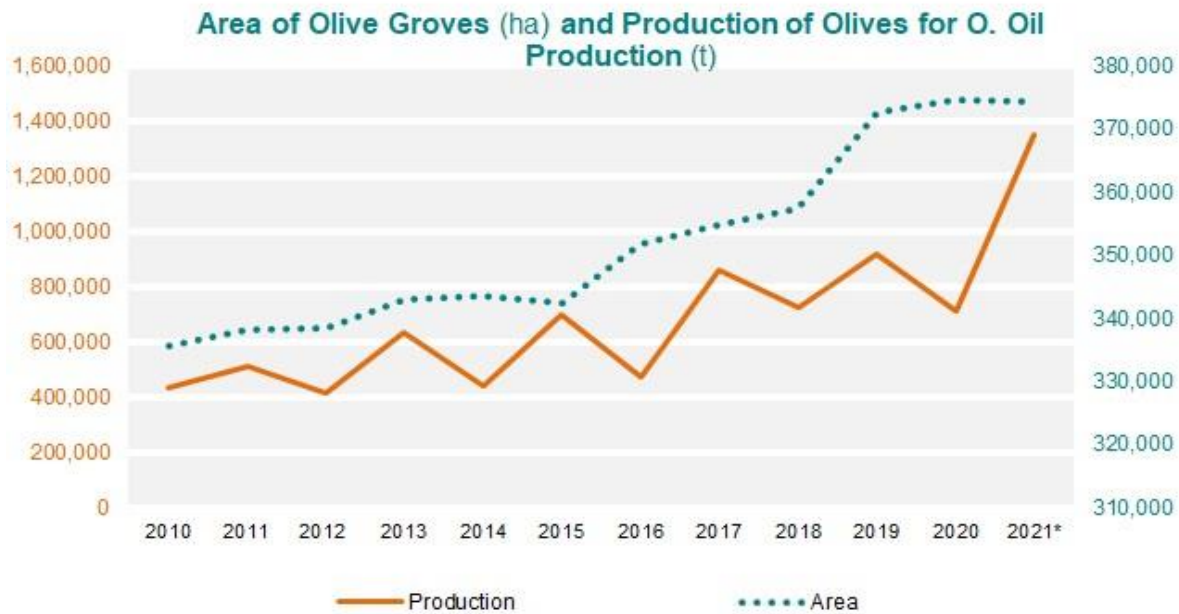


Figure 5. 1- Evolution of the Area of Olive Groves and Production of Olives in Portugal. Source: GPP (2022)

5a. The Main Actors in the Alqueva Olive and Olive Oil industry

Traditionally, the majority of olive growers in the region would sell their olives to cooperatives or other businesses equipped with mills for olive oil production. Few large family companies had their own mills and would simultaneously buy olives from local producers. Presently, large enterprises that dominate the olive growing sector have their own mills, allowing them to have a greater control over their supply chains. Furthermore, a considerable number of corporations which possess their own olive groves and mills, are also some of the main buyers of olives from local growers. These dominant players are predominantly large Portuguese and Spanish agribusinesses and investment funds.

In one investigative report, it is estimated that six firms own 65.5% of all olive groves in the Alqueva region (Barriga, 2020). Amongst them are agri-businesses, agricultural consulting firms, agricultural management firms and private equity funds. A deeper look at some of these different players quickly leads to connections with the financial sector.

i. Investments Funds: Own-operate

One of the first large scale players to see an opportunity in the Alqueva was a company called Elaia, which was founded in 2007. This company originated as a joint venture between Sovena, a Portuguese agribusiness which operates in three continents (and owns one of the largest olive oil companies in the world) and Atitlan, a Spanish investment fund. Although

changes in the ownership structure of Elaia have transpired, both firms continue to own olive groves in this region. This partnership provides valuable insight into the peculiarity of this case-study. It demonstrates simultaneously an early interest on behalf of investment funds in the AMP, and an example of how an established family company has become increasingly involved with the financial sector.

Atitlan Alpha, established in 2005, is an investment fund that has since invested more than €800m in over 20 companies primarily in Spain and Portugal. The firm focuses on long-term, off-market investments. Apart from possessing more than 10 500 ha of olive groves, the fund also owns ARES real estate investment trust, that owns 200 000 m² of rental property and manage 1.5 million m² of property. Furthermore, the firm owns a share of SEA8, a company focused on sustainable aquaculture that supplies fish to main distributors of the Iberian Peninsula. The presence of an investment fund of such dimension in the Alentejo underscores the transformative impact of the AMP on the perception of Alentejo's farmland. Simultaneously, the range of companies in Atitlan's portfolio are illustrative of the fact that its agricultural investments are merely a financial pursuit.

The Sovena group has a long history in Portugal. Its origins stem from the *Companhia União Fabril* (CUF) in the 19th century. Eventually it became the largest industrial, commercial, and financial (mixed conglomerate) group in Portugal during the dictatorship, which lasted from 1933 to 1974. After the democratic revolution, the company was nationalised, but eventually it reverted to the ownership of the Mello's, a family with longstanding involvement in the CUF group since its inception. In the 80's and 90's the Mello family bought several companies from the cooking oil sector and expanded to various countries through the Sovena group (Sovena, 2023). It is now one of the largest olive oil companies in the world, and in Portugal it owns one of the largest olive oil brands – Oliveira da Serra. This brings insight into how certain family-owned companies manage to preserve their continued eminence in Portugal. Simultaneously, its partnership with an investment fund is indicative of a marriage between old, established actors with new emerging actors, as part of the continued effort to preserve its favourable position in the domestic olive oil industry.

The partnership between Atitlan and Sovena has since come to an end, culminating in the sale of Elaia to De Prado, a prominent Spanish agri-business and one of the world's largest olive oil companies. Both companies of the partnership still own land in the Alqueva, as is publicised on their websites (Atitlan, 2023; Sovena, 2023). Although the precise extent of land owned by each company in the region remains uncertain, an estimate of approximately 9000 ha owned by Elaia has been deduced from the analysis of news articles and their official

webpages (Atitlan, 2023; *ELAIA – Tecnolivo*, 2023; Sovena, 2023). Due to the unavailability of precise up-to-date data, Atitlan and Sovena's olive groves are considered together as Elaia, in this case-study.

Another key player has been a Portuguese private equity firm called Oxy Capital. Their portfolio includes Herdade Maria da Guarda, a 700ha olive grove farm in the Alqueva region, almost exclusively farmed using super intensive agriculture. On a documentary shown on Portugal's public broadcasting channel – *Rádio Televisão Portuguesa*, the owner of Herdade Maria da Guarda states that “We have an agreement with Oxy Capital, we have a managing director from Oxy Capital (...), and therefore all the management is done by professionals [from the fund]. We [the family] are there to monitor [the productive process], but not to execute the day-to-day management”. The owner further states that the production is all sold in bulk to large olive oil packaging companies, mainly in Italy, but also in the USA and a select few other countries (Radio Televisão Portuguesa, 2022).

Herdade da Rabadoa is also included in Oxy Capital's portfolio under the category of “restructuring” (*Oxy Capital*, 2023). This term refers to the process whereby private equity funds invest in failing companies in order to take control of their management, to turn them around and eventually sell them. Therefore, another 1150 ha of intensive and super intensive olive groves are under control of this financial firm. This implies that Oxy Capital own at least 1850 ha of olive groves in Alqueva region. On their website it explicitly states that all their harvests are mechanised, indicating their engagement with super intensive farming (*Olival / Rabadoa*, 2023). Oxy capital had no particular prior interest in agricultural activity. The fund's portfolio is very diverse, having shares in casinos, hotels, ceramic companies, coffee companies etc. In total they own shares in 36 companies with no particular focus on a specific sector. This signifies that the fund's involvement in olive groves is purely driven by financial motives.

Oxy Capital and Elaia, together, have significant weight in the olive growing sector of the Alqueva. To put into perspective, when considered together these two actors own at least 16% of the total area dedicated to olive groves in the region. Both these players illustrate the preference for intensive and super intensive farming, and the selling of undifferentiated olive oil in bulk, predominantly with a preference for foreign markets. In fact, two trends can be seen in the Portuguese olive oil industry, rising exports, and rising imports (see figure 4) (GPP, 2022). According to Silveira et al. (2018), this happens because large producers prefer to sell the high-quality product that is nationally produced to foreign markets to be sold for higher

prices, and packagers supply the Portuguese market with cheaper, lower quality, imported olive oil.

In the two cases put forth, there is a simultaneous process of agricultural intensification and of commodification that can be directly linked to financial firms. Thus, a significant portion of olive plantations are totally or partially controlled by investment funds, with no particular affinity for agricultural investments. Moreover, the investment funds not only own the land but are also, to different degrees, in control of the agricultural production. Given that in both cases focus is almost exclusively on super intensive farming of a high yielding crop, this is indicative of a two-tiered process of commodification. On the one hand an interest in farmland as a safe asset that promises stable returns on investment, on the other hand there is the same financial logic applied to agricultural production itself.

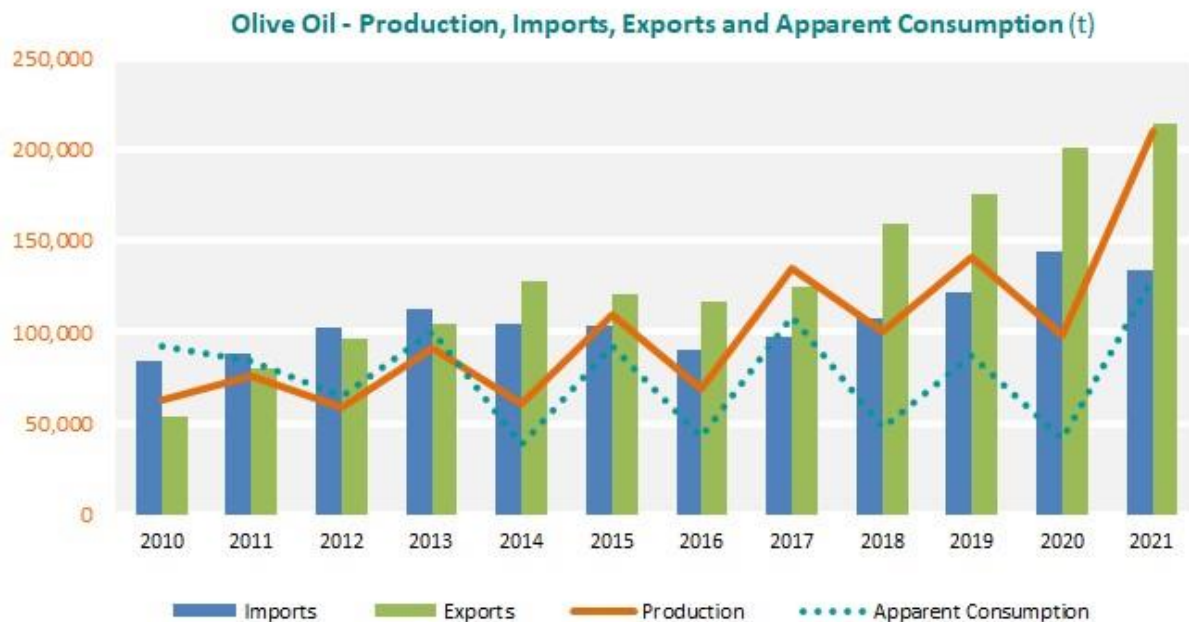


Figure 5. 2 -Olive Oil in Portugal – Production, Imports, Exports and Apparent Consumption. Source GPP (2022)

ii. Investment Funds: Own-lease out

So far, the emerging players that have been presented own farmland and manage the agricultural production. However, there has been an emergence of investment funds that are resorting to the own-lease out strategy, i.e., investment funds who buy land, but lease it out to farmers who are in operate the agricultural production.

The private equity fund Terra Verde Capital, has investments in the Alqueva region. Though it is not clear how much of their land is in the region served by the AMP, they state on

their website that they own 15 071 ha in the Centre and Alqueva region, 400 ha of which are olive groves. The fund states that they “aim to opportunistically invest through companies targeting the acquisition of prime agricultural land and subsequently lease it to tenants with a strong operating history and deep farming resources.”. In line with the literature on farmland commodification (see section 2a. ii), the benefits of investing in farmland portrayed to potential clients are its “downside protection thanks to its asset backed nature; Low volatility returns (...); Inflation-protected thanks to inflation - linked rents as well as faster land values growth during periods of inflation; uncorrelated to other asset classes, performing well amidst market volatility thanks to robustness of food demand”. This description depicts the portrayal of farmland merely as a financial asset. The value investing rhetoric is also seen in statements such as “[t]he attractive supply/demand outlook for food (+70% increase in crop production by 2050 to meet demand) can offer a combination of income stability and growth prospects to landowners, making the investment in agricultural land a unique and attractive opportunity.” (*Terra Verde Capital, 2023*).

Another peculiarity of the Portuguese case is the easy access to European Union residency for investors. The Golden Visa program, which is due to end in 2023, allows investors who put more than 500,000 Euros into real-estate or an investment fund, will obtain a Portuguese residency permit and, after five years, access to citizenship (and therefore access to all EU 27 member states). Terra Verde capital markets this as one of Europe’s most attractive offers and a key factor of attraction to invest in Portugal and its farmland. Another investment fund - Pela Terra, which owns 400 ha of almond groves in the Alqueva, focuses almost exclusively on investors who seek to take advantage of the Golden Visa programme (*Pela Terra, 2023*).

Both these funds are found on many websites targeted for non-European Union citizens seeking to find a path to citizenship. Thus, there seems to be a two-tiered commodification process - the commodification of a European citizenship, that in turn promotes the commodification of agricultural real estate.

It is worthwhile to point out that many of the above-mentioned firms (including in the previous subsection) stress their focus on “green” investments, and on sustainable agricultural practices. There is a debate on the ecological soundness of these statements. In Silveira et al. (2018) provide a sum of the arguments surrounding the ecological implications of intensive and super intensive farming of olive groves and how there are still many gaps in the research. The fact that there is no conclusive evidence on the ecological impact of these forms of farming, yet firms advertise their activities as “environmentally friendly”, could be indicative of a certain degree of greenwashing. Nonetheless, in this case-study I will refrain from referring

to consequences that cannot be directly traced back to intensive and super intensive farming practices.

iii. Agri-food Corporations

The financialisation of the agri-food sector goes beyond direct involvement of investment funds in the agricultural sector. The agri-food sector is complex with different types of actors involved along supply chains. The interdependencies between different actors along the supply chains imply that changes in one actor almost always affect others. Financialisation is argued to have had an important role in the corporate concentration that has developed in the agri-food sector in the 21st century (Baud & Durand, 2012; Isakson, 2014; Stichele, 2015). Power imbalances along supply chains have a series of negative implications regarding the sustainability and security of agri-food systems. A look at the olive oil market in Portugal shows how financialisation could be a driver of power imbalances.

Two of the largest olive oil companies in the world are Portuguese. These companies have direct connections to the financial sector. One company – Gallo, is owned by two publicly listed large multinationals: Jerónimo Martins and Unilever (see Figure 5.3). A brief look at both companies leads to clear connections with the financial sector. The former, owner of one of the top retailers in Portugal and Poland, is publicly listed in Euronext Lisbon. Unilever is one of the largest consumer goods companies in the world and is publicly traded in the London Stock Exchange, Amsterdam Stock Exchange, and New York Stock Exchange. By being publicly listed, these companies subject themselves to pressure from shareholders to maximise the value of their share prices and dividends (Stichele, 2015). On average, in the last ten years Unilever has paid 60% of their yearly net profits to shareholders, and Jerónimo Martins 70%⁹ (Jerónimo Martins, 2015, 2018, 2022; Unilever, 2013, 2023). In other words, significantly more than half of both companies' yearly profits have gone to shareholders.

Both companies have or have had a significant part of their shares owned by large institutional investors, such as Blackrock and Vanguard (CNN, n.d.; Jerónimo Martins, n.d.). Blackrock, for instance, owns 10-20% of most of American companies, making them one of the most important institutional investors (Economist, 2016). As (Lazonick & O'Sullivan (2002) argue, the rise of the institutional investors had a large role in the rise of the shareholder

⁹ In the case of Unilever, the calculation involved the division of cash dividends paid by net profits, with subsequent averaging of these ratios across the 2012-2022 timeframe. Conversely, for Jerónimo Martins, a similar approach was taken, wherein dividends per share were divided by earnings per share, and the resultant ratios were averaged over the same period.

maximisation logic of corporate governance. Though they do not influence the companies' decision making, they can use their influence to ensure high returns for shareholders. The concern then lies in companies prioritising their short-term financial gains above other commitments, such as sustainability and food security (Clapp & Isakson, 2018).

The other prominent Portuguese olive oil company is Oliveira de Serra, owned by Sovena. Though it is a private company there are still evident relations with the financial sector. Elaia, established through a collaboration between Sovena and the Spanish investment fund Atitlan, is a notable example of this (see Figure 5.3). As Sovena is not a publicly listed company the corporate structure is more opaque. Nonetheless, and despite the conclusion of the partnership, it was through this joint venture that one of the largest national olive oil companies acquired the largest super intensive olive plantation in the Alqueva region. This is indicative of the role of financialisation in allowing large agri-businesses to amass even more market influence.

De Prado, a Spanish family-owned enterprise, represents another significant agri-food corporation that possesses extensive olive and almond groves in the Alqueva region, also ranking as one of the world's largest olive oil companies. Its main company in Portugal – De Prado Total Agricultura - has 42% of its shares owned by a Canadian Pension fund manager (see Figure 5.3). Establishing a direct causal link between the concentration of market influence and the increasing interaction between agrifood corporations and the financial sector is a complex task. By considering the literature that supports this argument and complementing the argument with a characterisation of how smaller stakeholders have been incurring increasing costs in the recent years, this relationship becomes clearer (Baud & Durand, 2012; IPES-Food, 2017; Isakson, 2014; Stichele, 2015).

Though there is not any public data on how much of the market share is dominated these large players, the situation of small and medium olive producers is indicative of the power imbalances that have come to exist. There are numerous ways in which these large companies shift the costs on to smaller stakeholders in the supply chain. As one olive farmer puts it “all the power is in their hands, they name the price according to POOLred¹⁰, and I have to take it. We have no bargaining power as producers” (Interview, olive farmer). A symptom of this issue is that most farmers have had to switch to super intensive farming of Spanish varieties of olive trees, which are the ones that allow them to have the most financial return in a short time span.

¹⁰POOLred is an organization that reports through its website the average trading price of different categories of olive oil. Producers roughly stipulate that a certain weight of olives, will produce 20% of this weight of olive oil. As such, the price they pay for the olives is, per unit of weight, 20% of the trading price of olive oil.

De Prado Total - Agricultura Lda.	
De Prado Family Lda.	PSP Investments Holding Europe
58%	42%

Gallo Worldwide		Elaia*	
Unilever	Jerónimo Martins	Atitlan	Sovena (Oliveira da Serra)
55%	45%	50%	50%

* Before De Prado acquired 99% of the shares

Figure 5.3 - Ownership structure of 3 major olive oil companies operating in Portugal. Source: Own elaboration from public data from the Publications of Corporate Acts and of other entities (<https://publicacoes.mj.pt/pesquisa.aspx>)

There has been a shift from seeking to protect old dry farming of traditional Portuguese varieties of olives, that produced high quality olive oil, to just merely focusing on the quantity produced. Although some smaller Portuguese olive oil producers still give premiums for farmers producing Portuguese varieties, the large buyers do not. One farmer state that “One thing that really bothers me, as a farmer, is that the Spanish varieties, that are higher yielding, produce olive oil that does not last very long. To stabilize it they add olive oil produced from Portuguese varieties, that is more expensive to produce, yet they pay us the same amount independent of the variety” (Interview, olive farmer).

Furthermore, recently the large buyers have started to charge the producers for the “transformation costs”, i.e., a percentage of the price of every kilogram of olives is removed to pay for the costs of transforming the olives into olive oil. In addition to these costs, they also charge a *lagar*¹¹ fee. Assuming that a certain weight of olives roughly produces 20% of that weight into olive oil, it is a known phenomenon that a part of this 20% cannot be removed from the *lagar*. So, when large buyers pay the seller the price that is established on POOLred at the time, they remove this fraction, meaning an even smaller financial return to the farmer (Interview, olive farmer).

There is a clear imbalance between the bargaining power of the large olive oil producers and packagers, and the olive growers, that has allowed costs to be shifted onto the latter. It is important to note that the role of the distributors is not put into question, as one farmer puts it

¹¹A traditional term used in Portugal and Spain for an oil press.

“growing is easy, you tell us how much and we will grow it, selling is the hard part.” (Interview, olive farmer). The issue lies in a deeper transformation of certain areas having to adapt to being part of new global supply chains. Cooperatives play an important role in the olive oil market in the Alqueva, and they pay significantly higher prices for olives. The problem is they are not managed in the same way as these large corporations. For instance, they are frequently managed by farmers themselves and not managers, making it extremely difficult for them to compete with the international distribution networks these large agribusinesses have. Farmers are thus left to sell mostly to a few large corporations who dominate the market and have no bargaining power as there is a situation of oligopsony. The implication is that more farmers would rather switch to super intensive farming and sell in bulk to make their operations more financially rewarding, further contributing to the monoculture of olive groves and the environmental costs it brings.

Thus, a complete analysis of the actors involved in the olive and olive oil sectors in the AMP cannot reduce itself solely to those who operate in the region. As seen in the previous paragraphs, large agri-food corporations, that are at times geographically removed from the area, still affect the functioning of the sector in the Alqueva region. Therefore, the consequences of the increasing influence of the financial sector on the productive sector also go far beyond just how firms are managed. In this case, the pressures from shareholders to increase payouts could be a contributing factor to the continual imbalance of power along supply chains. This imbalance has put small and medium producers into financially vulnerable positions. As a means to avoid going out of business, these small and medium producers are pushed to farm in the same manner as the investment funds and large companies. As such, there is a herd behaviour whereby the emergence of new actors focusing on super intensive farming of financially rewarding crops, leads to established actors following suit.

5.b. Consequences of agricultural intensification

The commodification of agriculture and farmland play a pivotal role in the phenomenon of agricultural intensification. In this case study, the process of commodification of agriculture refers to the perception of farmland and agricultural production as merely forms of financial gain, without acknowledging its integral part in local communities and ecosystems. Specifically in this case, it also refers to the “large-scale exports of olive oil, sold in bulk and treated as a commodity rather than a differentiated high-quality product.” (Silveira et al., 2018). Thus, the process of commodification exhibits a consequential relationship with agricultural

intensification, as the latter allows to enhance the financial returns of farming. As a member of the Alentejo Vivo movement puts it “people who have nothing to do with agriculture are investing (...) it is a factory, an industrial unit, and as long as it is lucrative, they are going to keep expanding” (Zero, 2021).

One of the most noticeable consequences of the excessive focus on intensive and super intensive olive grove plantations has been the transformation of the rural landscape. The once arid land of the Alentejo’s rolling plains had an array of medium and large-scale plantations of crops such as wheat, corn, and various oilseeds. However, since the beginning of the irrigation in the Alqueva region, a significant proportion of this land has repurposed for the cultivation of olive groves.

In 2012 there were 13,431 ha of olive groves in the AMP. As of 2022 there are already 67,801 ha, signifying a 500% increase (EDIA, 2021, 2022a). This transformation is indicative of a broader trend observed in Portugal, where the period between 2013 and 2019 witnessed a notable expansion in the area of olive groves, the majority of this portion of which can be attributed to the new hectares integrated into the Alqueva region. This transformation of the landscape has instigated a multitude of concerns voiced by various actors.

A documentary photographer has released a photobook entitled “Oil Dorado”, which captures the changes that have occurred in the region. These transformations range from the landscapes of vast areas of monoculture, to the conditions of migrant workers that work on the plantations (Paxiuta, 2021). Additionally, there has been an emergence of movements specifically dedicated to putting a break on the expansion of more intensive olive grove plantations, such as “*Basta Superintensivos*” (Enough of super intensive farms) and “*Movimento Alentejo Vivo*” (Alentejo alive movement). Numerous Portuguese environmental associations such as Quercus, Zero, Geota and Liga Para a Proteção da Natureza, have also publicly voiced their concern regarding the intensification of agriculture in the Alqueva region.

The excessive cultivation of a single crop is a potential factor of risk for the agricultural sector of a region. The practice of diversifying crops is one of the oldest forms of agricultural insurance, as it acts serves as a safeguard from potential threats such as pests and adverse weather conditions. There exists a concern that the monoculture in the Alqueva region poses as a threat to the agricultural sector (Interview, AABA representative). With regards to olive trees, there is a concern that much like the *Xylella fastidiosa* pest devastated a portion of Italy’s olive groves, that the same could happen in Portugal (Interview, olive farmer).

Another significant concern is the herd behaviour, whereby smaller farmers, noticing that large firms are growing olive-groves, feel compelled to start growing them themselves to not

fall behind financially. This phenomenon exacerbates the issue of an excessive focus on a singular crop (Interview, AABA representative). This problem is aggravated as the irrigation conservation fees per hectare are equal for all farms, regardless of their consent and socio-economic situation. This incentivises smaller landowners who are either not actively engaged in farming or are unable to derive sufficient yields from their farms, to sell their land. Large businesses who are seeking to practise intensive farming are often the main buyers (Silveira et al., 2018). Additionally, the ministerial decree of 2002, which permitted the replacement of old olive trees by newer varieties (usually higher yielding, Spanish, varieties), played a pivotal role in further disconnecting traditional farming practices from the land.

One issue directly related to the intensification of olive growing, is the excessive emission of fumes from olive pomace factories. The recent upsurge in olive production has resulted in a substantial increase in the operational activity of the same three pomace factories. Over a span of approximately 9 to 12 months, these factories emit brown fumes continuously, which have been observed to deposit an oily brown layer on buildings located up to 30 kilometres away (Público, 2019c). This has caused protests in several villages surrounding the factories, which have attempted to put pressure on local governments to address the issue.

Residents have lodged complaints regarding health effects, including coughs associated with the worsening air quality, which compel them to spend more time indoors to avoid being exposed to the fumes (Zero, 2021). One individual expressed frustration with perceived inadequate efforts by authorities to monitor the practices of one of the factories, characterising such efforts as ineffective or illusory, leading her to accuse the olive and olive oil industry of being protected by the state (Zero, 2021).

A recurring topic is the lack of regard the businesses behind the new intensive and super intensive olive grove plantations have for local communities. As stated by one local resident “with these new plantations, there is no minimum respect for the population. Because they do not respect the security perimeters, there is no respect for planning in what concerns the direction of the ridges to avoid erosion. In the hillside area of the village, the ridges are pointed towards the village. “If there is a rigorous winter what will become of the people who live there?” (This last concern refers to the occurrence of mudslides on to villages due to heavy rain) (Zero, 2021).

The proximity of certain olive groves to villages has also become a significant concern. As described by EDIA, “This occasional reality, which is also associated with precarious areas¹² has led to the existence of some complaints from the population about the quality of the air in some localities, and especially when some phytosanitary treatments are carried out.” (EDIA, 2020). In one specific instance, a woman consistently filed complaints with the city council for a period of two years regarding the establishment of an intensive olive grove situated less than 15 meters from her residence. Notably, this area falls within a peri-urban boundary of the irrigation perimeter, meaning that permission for planting intensive or super-intensive plantations had not been granted (Zero, 2021). The concern relates primarily to when plant protection products are being sprayed, contaminating the air that residents breathe.

Efforts to stop this expansion have been to no avail, despite clear violations of the stipulated rules. During one interview it was stated that there were hundreds of cases such as these. “There is a general feeling of impunity (...)” the interviewee states, “the fact that most of the population is elderly also means they are more complaisant” (Interview, Alentejo Vivo representative). A recurring complaint on behalf of local residents and local movements, is the lack of response from local governments, giving them the perception that local authorities are biased in favour of large companies: “We’ve had several attempts to stop the expansion of intensive farming, next to houses, next to schools, in some cases they are actually in the perimeter of the actual town! The local governments are always unresponsive (...)” (Interview, Alentejo Vivo representative). There are numerous of cases that illustrate this lack of concern owners of these new plantations have for local communities and ecosystems. This trend underscores the commodification of farmland and its associated deterritorialisation.

Another clear example of both the herd behaviour and the commodification of agriculture is the sudden surge in almond production in the Alqueva. Several factors, including a drought in California, which is the world's largest almond-producing region, have led to a significant uptick in almond prices. For this reason, intensive and super intensive almond groves have soared in the AMP over the last years. From 2015 to 2022, the area occupied by almond groves in the region has risen by more than 2000%, from 975 ha to 22 319 ha (EDIA, 2021, 2022a). To contextualise this further, since almost all area occupied by almond and olives groves refer to intensive and super intensive farms, this means that 90 000 ha of the 130 000 ha (or 69% of

¹²EDIA delimited specific regions to be served by the irrigation system. Some owners of land outside this perimeter paid for the installation of irrigation pipes connected to the main system. These farms that benefit from the irrigation system, but are not part of the designated area, are considered precarious areas.

the total UAA) are allocated to these kinds of farms (EDIA, 2022a). Furthermore, most of the businesses and investment funds investing in almond groves are the same ones who own the olive groves (EDIA, 2022). This situation vividly exemplifies how firms readily shift to different crops solely based on their financial profitability, often without regard for the social and ecological repercussions (Interviews, Quercus representative and recognized academic of this field).

A direct effect of the entrance of investment funds in the Alqueva agricultural sector has been the steep rise in the price of farmland. According to estimates, farmland has increased from 5000€/ha in 2005 to 30 000€/ha in 2022 (Barriga, 2020; Terra Nova, n.d.). “I know of a case, this man I actually know, he bought some land not too far from here two or three years ago, for around 5000€. He set up the irrigation system, planted olive trees, and sold it recently for 35 000€”, states one farmer. As one interviewee states “one thing they [investment funds] did, was push up the prices of land. The financial power they have is far greater than that of any local, so they accept to pay prices that are significantly higher than what locals could afford, instantly driving up prices (...)” (Interview, EDIA representative). This can be beneficial for landowners, especially those who rent out. However, this simultaneously disincentivises young farmers from entering the agricultural sector - a long standing concern at the European Union level, where subsidies have been implemented to counteract this trend.

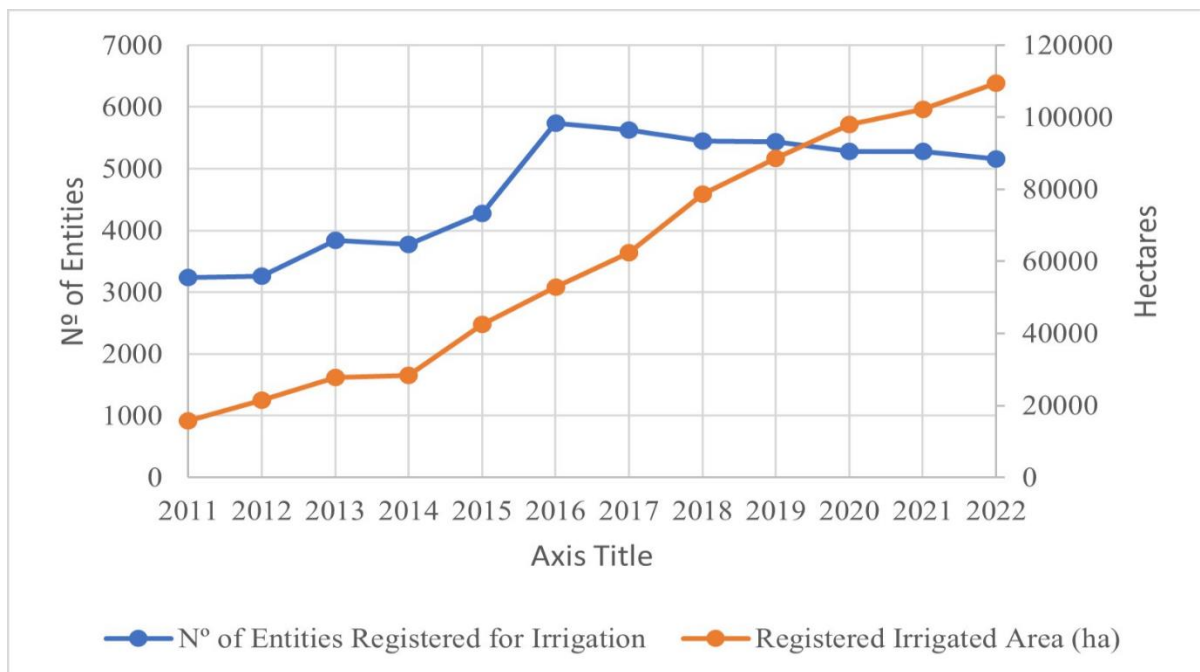


Figure 5. 4 - Evolution of the registered area and of the Number of registered Entities in the AMP in the 2011-2022 period. Source: EDIA (2022b)

Concurrently, individuals who own smaller holdings, confronted with unattractive conservation fees and rising land price, are inclined to sell their property. According to the same interviewee, the main driver of land concentration has been the consolidation of small properties (Interview, EDIA representative). Figure 5.4 shows how despite a constant increase in the area enrolled in the irrigated area, from 2016 onwards, the number of clients is decreasing. This is attributed to landowners acquire more parcels of land and registering it under the same entity (EDIA, 2022b).

One of the aims of the Alqueva Multipurpose project was to counteract the rural exodus that is prevalent in the Alentejo region. However, the emerging actor and agricultural intensification have not served to counter this tendency. The few new employment opportunities created are predominantly occupied by highly specialized managers and technicians, who are often not from the region (Silveira et al., 2018).

There has been, however, a notable increase in seasonal migrant labour associated with the agricultural sector. Considering that most olive groves owned (entirely or partially) by investment funds are mechanised, it is argued that they do not significantly contribute to the use of illegal migrant labour in the region. However, the assertion that super-intensive farming does not require labour is contested by some (Alentejo Vivo and Quercus). Though much of the farming is mechanised in these farms, olive trees still require through pruning that must be done manually. Additionally, many firms frequently alter their crops to cultivate more profitable ones, many times resorting to temporary workers.

The reliance on this form of labour brings with it several concerns. Firstly, the majority of workers are brought illegally through human trafficking rings. Deceived by promises of improved living conditions, many of these individuals endure awful work conditions (Público, 2012; Sapia de Campos, 2021). Moreover, they often reside in overcrowded houses with substandard conditions. There is extensive literature that has explored the reasons and the implications of these waves of illegal migrant labour to the rural areas of the south of Portugal (Cabral & Swerts, 2021; Fonseca et al., 2021; Sapia de Campos, 2021). On the whole, there is a consensus that this population increase dependent on waves of seasonal migrant workers is not sustainable or beneficial both neither the workers nor for the local residents.

6. Discussion

The findings of this case-study have shed light on how financialisation is a driver of agricultural intensification, with a specific emphasis on highly financially rewarding crops, in the region served by the AMP. Investments funds are becoming significant players in the olive

oil market, which is one of the largest growing industries of the country's agri-food sector. Funds that operate the farming of olive groves focus exclusively on super intensive farming. In addition, when including investment funds who operate on an own-lease out strategy, these emerging actors are driving up land prices at a significant rate.

The increasing interaction between agri-food corporations and the financial sector could also be an explanatory factor of the power imbalances along olive oil supply chains, which put smaller-scale farmers in a vulnerable situation. Thus, the crux of the argument is that the emerging actors (investment funds and agri-food corporations) in the region are generating, in part due to a process of financialisation, a situation that renders any other form of traditional dry or extensive agriculture financially unrewarding. Therefore, the increasing interaction between finance and agriculture has led to the intensification of agriculture far beyond the scope of actors who are directly connected to the financial sector.

The role of the financial sector as a driver of change in the Portuguese agri-food sector is the main contribution of this case-study. Freire's (2017) work touches on many of the central elements required to understand the trajectory of the olive oil sector in Portugal. in the 20th and 21st centuries, namely the changes in the institutional configurations within Portugal's political economy, state and private sector relations, changes in the country's position in the world economy and foreign demand for olive oil. This dissertation argues that for a full account of the changes in the sector during the 21st century, the role of the financial sector must be considered.

Silveira et al.'s (2018) work brings together an analysis the focuses solely on the olive oil sector in Southern Portugal in the 21st century, considering the emerging actor-networks and their role in agricultural intensification. Though the financialisation process is brought up as a significant driver of change, the specific causal mechanisms of this process are not discussed. As such, this case-study attempts to flesh out the workings of the causal mechanisms of the financialisation of the agri-food sector in this semi-peripheral country. The dissertation thus simultaneously contributes to the financialisation of agri-food sector literature by illustrating how even in a country where commodity derivative markets are not widely used by the agri-food sector and where there is not a widespread investment in financial markets on behalf of the population, there is still and evident process of financialisation.

An important facet, however, that is missing to better understand the changes in olive farming in southern Portugal, is the role of the state. Often, the Portuguese state has shored up public policies that promote competitiveness in global markets, mostly benefitting large players, in lieu of public policies aimed at promoting regional development (Freire, 2017). The

2002 Ministerial decree is an example, as a piece of legislation aimed at regulating the new plantations of olive trees, allowed for the destruction of existing olive groves without public permission. Permission was then frequently granted to plant a Spanish variety of olive tree that is higher yielding. Furthermore, the decision to lower prices for water for irrigation in 2017 was a public policy that represented a *de facto* subsidy that incentivised agricultural intensification (Silveira et al., 2018). Thus, an analysis of the reasoning behind these policies, namely what coalition of actors were supporting them, would greatly contribute to the literature.

By analysing the reasoning behind these public policies, a deeper look at the relation between the state and the private sector could be brought to light. Freire (2017) argues that certain power structures of the olive oil sector from the corporatist organisation of the *Estado Novo* were transferred to other organisations after the democratic revolution. The literature on the Portuguese agri-food sector would greatly benefit from a deeper look at the trajectory of these organisations in relation to certain dynamics within local and national politics. A deeper look at this question could give insight to the unresponsive attitude of local governments regarding residents' concern of the expanding super intensive olive groves. It could also shed light on the inequalities in the allocation of CAP subsidies (Cordovil, 2021; Freire, 2017; Silveira et al., 2018). For instance, a theme that came up in one interview was the important role one association – Olivum Sul – has as an interlocutor between olive growers and the state. However, as voting rights in this association are directly tied to hectares of land, there is a concern that mostly large growers have their interests represented (Interview, recognized academic of this field). A look at the constitution and history of this association could prove to be insightful in better understanding the state's policies regarding the new olive groves.

The state's public policies also affect the agricultural sector in other, indirect, ways. In line with Helleiner's (1995) argument that the state has an integral role in the globalisation of financial markets, the Golden Visa programme seems to be a specific example of the state's role in promoting the financial (and real estate) sector in the country. The Golden Visa was the main factor of attraction advertised by farmland investment funds operating on the own-lease out strategy. As such, the state had an integral role in allowing for the commodification and financialisation of farmland in Portugal, by opening up its borders to foreign investors seeking to take advantage of the program. The state's public policies thus seemed to prioritise the competitiveness of the real estate and financial sectors in global markets.

It is crucial to acknowledge that within a market economy, farmers and agricultural businesses naturally gravitate towards activities that promise greater financial returns.

However, if social and ecological sustainability are an objective, the success of the agricultural sector cannot be perceived merely through its financial success. As Baptista (1994) puts it, there is a difference between the agricultural question and the land question. The former pertains to the economic contribution of the agricultural sector to the national economy. The latter refers to the social and political spheres *within* the agricultural sector. Though in modern market economies, the financial reward will be the metric that takes the upper hand when analysing the soundness of the agricultural sector, the land question is of utmost importance if indeed any form of sustainable agri-food system is to be built.

There is then a need to address this schism as to how a sustainable agri-food sector can be shored up in a context where an integral part of this project - the social and ecological soundness of the sector - is overshadowed by the financial contribution it has to the national economy. There should, therefore, be financial incentives to maintain traditional forms of agriculture, for various social and ecological reasons. A large issue in the AMP is precisely the lack of sufficient planning and regulation to maintain variegated agricultural landscape, that acknowledges the role of intensive forms of farming, but also the importance of traditional olive groves, almond groves, and other crops, despite their lower financial reward.

7. Conclusion

The emergence of investment funds as significant actors in the olive growing sector in the region served by the Alqueva irrigation system is indicative of a process of financialisation in the Portuguese agri-food sector. Financial institutions are furthering the commodification of farmland by predominantly appraising its financial attributes. Thus, when engaging in agriculture they are merely aiming to maximise their financial gains. As such, these funds are focusing their production almost exclusively on super intensive, mechanised, farming of monocultures of high financially rewarding crops (mostly olives), thus promoting the intensification of agriculture in the area.

Furthermore, investment funds seeking merely to profit from the farmland (and not the agricultural production) are also appearing in the region, marketing their land to investors seeking to gain exposure to this asset class. As such, the emergence of these financial firms in the sector, besides furthering the commodification of farmland, contribute to a two-tiered process of deterritorialisation in this region. On the one hand, owners are increasingly from outside the region (or even the country) and the production is almost totally mechanised, so there is no creation of employment for locals. On the other hand, what is being produced is most often exported in bulk to foreign markets (Freire, 2017).

Furthermore, investment funds have directly contributed to the steep rise in farmland prices. This acts as an incentive for landowners to sell their land. However, due to high costs of land that disincentivise new small-scale farmers from entering the market, the main buyers of property are large corporations or investment firms that already own land in the region. This has been the main driver for the land concentration that has been seen in the region.

Financialisation has also contributed to a concentration of market power in the hands of already large players. The growing interaction between large agri-food companies and the financial sector is thus argued to be a significant driver of imbalances along olive oil supply chains. In the case of the olive sector in the Alqueva, this has meant that large companies have been gradually shifting costs on to smaller farmers. Many times, to maintain their operations financially rewarding, smaller farmers switch to intensive and super intensive plantations of olive trees, thus contributing to the general trend of intensification.

The intensification of olive farming in the Alqueva, that is explained partially by the financialisation process, has brought with it several negative consequences. The excessive emission of fumes from pomace factories due to increasing inputs, the spraying of plant protection products in the vicinity of residential areas and the rise of monocultures are all threats to local communities and ecosystems.

Likewise, agricultural intensification has brought with it some social concerns. The use of illegal migrant labour in the South of Portugal connected to intensive farms has been a source of concern for several years. Furthermore, the new mechanised forms of farming do not generate employment, contributing to the depopulation that is occurring in the Alentejo region. Lastly, there has been increasing discontent from local residents due to malpractices associated with the new super intensive olive and almond groves. This has led to many residents lodging complaints to local governments and to the creation of citizen movements to counteract the expansion of super intensive farms.

In sum, this dissertation argues that financialisation is a significant driver of intensification in the agricultural sector in the region served by the AMP. As such, to fully address the negative consequences associated to agricultural intensification, a deeper look at how the financial sector interacts with the agri-food sector is presented. By delving into the causal mechanisms that are at play, this dissertation adds to the literature, by exposing how the financialisation of agri-food sector takes place in a semi-peripheral country of southern Europe.

8. References

- Atitlan. (2023). *Atitlan*. <https://www.atitlan.es/en/>
- Baptista, F. O. (1994). A agricultura e a questão da terra — do Estado Novo à Comunidade Europeia. *Análise Social*, 29(128), 907–921. <http://www.jstor.org/stable/41011193>
- Barradas, R., Lagoa, S., Leão, E., & Mamede, R. (2015). *Financialisation in the european periphery and the sovereign debt crisis: the portuguese case*. <https://doi.org/10.15847/dinamiacet-iul.wp.2015.12>
- Barriga, P. (2020, January). Os Novos Donos do Alentejo. *Sábado, Grande Investigação*.
- Baud, C., & Durand, C. (2012). Financialization, globalization and the making of profits by leading retailers. *Socio-Economic Review*, 10(2), 241–266. <https://doi.org/10.1093/ser/mwr016>
- Beach, D., & Pedersen, R. B. (2013). *Process-Tracing Methods : Foundations and Guidelines*. The University of Michigan Press. <https://doi.org/10.3998/mpub.10072208>
- Buxton, A., Campanale, M., & Cotula, L. (2012). *The global land rush*. <http://pubs.iied.org/17121IIED>
- Cabral, I., & Swerts, T. (2021). Governing precarious immigrant workers in rural localities: Emerging local migration regimes in portugal. *Politics and Governance*, 9(4), 185–195. <https://doi.org/10.17645/pag.v9i4.4506>
- Clapp, J. (2009). Food price volatility and vulnerability in the global South: Considering the global economic context. *Third World Quarterly*, 30(6), 1183–1196. <https://doi.org/10.1080/01436590903037481>
- Clapp, J. (2014). Financialization, distance and global food politics. *Journal of Peasant Studies*, 41(5), 797–814. <https://doi.org/10.1080/03066150.2013.875536>
- Clapp, J. (2017). *Bigger is Not Always Better: Drivers and Implications of the Recent Agribusiness Megamergers*.
- Clapp, J. (2019). The rise of financial investment and common ownership in global agrifood firms. *Review of International Political Economy*, 26(4), 604–629. <https://doi.org/10.1080/09692290.2019.1597755>
- Clapp, J., & Helleiner, E. (2012). Troubled futures? The global food crisis and the politics of agricultural derivatives regulation. *Review of International Political Economy*, 19(2), 181–207. <https://doi.org/10.1080/09692290.2010.514528>
- Clapp, J., & Isakson, S. R. (2018). *Speculative Harvests*. Practical Action Publishing, Fernwood Publishing. <https://doi.org/10.3362/9781780449920>
- CNN. (n.d.). *UL - Unilever PLC Shareholders*. Retrieved September 26, 2023, from <https://money.cnn.com/quote/shareholders/shareholders.html?symb=UL&subView=insti>tutional
- Cordovil, F. (2021). *Agricultura e Política Agrícola*. Instituto Nacional de Investigação Agrária e Veterinária, I.P.

- Cotula, L. (2012). The international political economy of the global land rush: A critical appraisal of trends, scale, geography and drivers. *Journal of Peasant Studies*, 39(3–4), 649–680. <https://doi.org/10.1080/03066150.2012.674940>
- Daniel, S. (2012). Situating private equity capital in the land grab debate. *Journal of Peasant Studies*, 39(3–4), 703–729. <https://doi.org/10.1080/03066150.2012.674941>
- Duménil, G., & Lévy, D. (2002). Neoliberalism: The Crime and the Beneficiary. *Review (Fernand Braudel Center)*, 25(4), 393–400. <http://www.jstor.org/stable/40241744>
- Economist. (2015, January 3). *Barbarians at the farm gate* | *The Economist*. <https://www.economist.com/finance-and-economics/2014/12/30/barbarians-at-the-farm-gate>
- Economist. (2016, March 26). Too much of a good thing. *Economist*. <https://www.economist.com/briefing/2016/03/26/too-much-of-a-good-thing>
- EDIA. (2020). *Olival em Alqueva: Caracterização e Perspetivas*.
- EDIA. (2021). *Anuário Agrícola de Alqueva 2021*.
- EDIA. (2022a). *Anuário Agrícola do Alqueva 2022*.
- EDIA. (2022b). *Relatório de caracterização dos clientes da EDIA 2022*.
- ELAIA – Tecnolivo. (2023). <https://www.tecnolivo.eu/pt-pt/elaia/>
- Epstein, G. A. (2005). *Financialization and the World Economy* (A. E. Gerald, Ed.). Edward Elgar.
- Epstein, G., & Jayadev, A. (2005). The rise of rentier incomes in OECD countries: financialization, central bank policy and labor solidarity. *Financialization and the World Economy*.
- EUROSTAT. (2022). *Farms and farmland in the European Union - statistics - Statistics Explained*. https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Farms_and_farmland_in_the_European_Union_-_statistics#The_evolution_of_farms_and_farmland_between_2005_and_2020
- Expresso. (2022). *Portugal já é o 6º maior produtor mundial de azeite*. <https://expresso.pt/economia/2022-05-27-Portugal-ja-e-o-6-maior-produtor-mundial-de-azeite-4ed22176>
- Fairbairn, M. (2014). ‘Like gold with yield’: evolving intersections between farmland and finance. *Journal of Peasant Studies*, 41(5), 777–795. <https://doi.org/10.1080/03066150.2013.873977>
- Fonseca, M. L., Esteves, A., & Moreno, L. (2021). Migration and the reconfiguration of rural places: The accommodation of difference in Odemira, Portugal. *Population, Space and Place*, 27(8). <https://doi.org/10.1002/psp.2445>
- Freire, D. (2017). Changing the olive oil value chain: Food regime and development in Portugal. *Research in Rural Sociology and Development*, 24, 197–220. <https://doi.org/10.1108/S1057-192220170000024010/FULL/XML>

- French, S., Leyshon, A., & Wainwright, T. (2011). Financializing space, spacing financialization. *Progress in Human Geography*, 35(6), 798–819. <https://doi.org/10.1177/0309132510396749>
- Frenk, D. (2010). *The Impact of Index and Swap Funds on Commodity Futures Markets*. <https://doi.org/10.1787/18156797>
- Froud, J., Haslam, C., Johal, S., & Williams, K. (2000). Shareholder value and Financialization: consultancy promises, management moves. *Economy and Society*, 29(1), 80–110. <https://doi.org/10.1080/030851400360578>
- Fuchs, D., Meyer-Eppler, R., & Hamenstädt, U. (2013). Food for thought: The politics of financialization in the agrifood system. *Competition and Change*, 17(3), 219–233. <https://doi.org/10.1179/1024529413Z.00000000034>
- Ghosh, J. (2010). *The Unnatural Coupling: Food and Global Finance*.
- Gilbert, C. L. (2010). How to understand high food prices. *Journal of Agricultural Economics*, 61(2), 398–425. <https://doi.org/10.1111/j.1477-9552.2010.00248.x>
- GPP. (2020). *Análise Setorial do Azeite*. https://www.gpp.pt/images/PEPAC/Anexo_NDICE_ANLISE_SETORIAL___AZEITE.pdf
- GPP. (2022). *Azeite*. <https://www.gpp.pt/images/gam/1/de/Azeite.xlsx>
- Helleiner, E. (1995). Explaining the globalization of financial markets: Bringing states back in. *Review of International Political Economy*, 2(2), 315–341. <https://doi.org/10.1080/09692299508434322>
- Instituto Nacional de Estatística. (2019). *Recenseamento Agrícola 2019 - Resultados Preliminares*.
- IPES-Food. (2017). *To Big to Feed. Exploring Impacts of mega-mergers, consolidation and concentration of power in the agri-food sector-*.
- Irwin, S. H., Sanders, D. R., & Merrin, R. P. (2009). *Devil or Angel? The Role of Speculation in the Recent Commodity Price Boom (and Bust)*.
- Isakson, S. R. (2014). Food and finance: the financial transformation of agro-food supply chains. *The Journal of Peasant Studies*, 41(5), 749–775. <https://doi.org/10.1080/03066150.2013.874340>
- Isakson, S. R. (2015). Derivatives for Development? Small-Farmer Vulnerability and the Financialization of Climate Risk Management. *Journal of Agrarian Change*, 15(4), 569–580. <https://doi.org/10.1111/joac.12124>
- Jerónimo Martins. (n.d.). *Key Data of the Jerónimo Martins Share*. Retrieved September 26, 2023, from <https://www.jeronimomartins.com/en/investors/jeronimo-martins-shares/key-data-jm-shares/>
- Jerónimo Martins. (2015). *Relatório de Contas*. <https://www.jeronimomartins.com/pt/investidor/apresentacoes-e-relatorios/>

- Jerónimo Martins. (2018). *Relatório de Contas*.
<https://www.jeronimomartins.com/pt/investidor/apresentacoes-e-relatorios/>
- Jerónimo Martins. (2022). *Relatório de Contas*.
<https://www.jeronimomartins.com/pt/investidor/apresentacoes-e-relatorios/>
- Jornal de Notícias. (2022, November 23). *PJ ataca tráfico de seres humanos no Alentejo e resgata 60 imigrantes*. <https://www.jn.pt/justica/pj-ataca-trafico-de-seres-humanos-no-alentejo-e-resgata-60-imigrantes-15381659.html>
- Krippner, G. . R. (2012). *Capitalizing on Crisis: The Political Origins of the Rise of Finance*. Harvard University Press.
- Krippner, G. R. (2005). The financialization of the American economy. *Socio-Economic Review*, 3(2), 173–208. <https://doi.org/10.1093/SER/mwi008>
- Kuns, B., Visser, O., & Wästfelt, A. (2016). The stock market and the steppe: The challenges faced by stock-market financed, Nordic farming ventures in Russia and Ukraine. *Journal of Rural Studies*, 45, 199–217. <https://doi.org/10.1016/j.jrurstud.2016.03.009>
- Lazonick, W., & O’Sullivan, M. (2002). *Maximizing Shareholder Value: A New Ideology for Corporate Governance* (pp. 11–36). https://doi.org/10.1057/9780230523739_2
- Monke, E. (1986). PORTUGAL ON THE BRINK OF EUROPE: THE CAP AND PORTUGUESE AGRICULTURE. *Journal of Agricultural Economics*, 37(3), 317–331. <https://doi.org/10.1111/J.1477-9552.1986.TB01601.X>
- Moreira, M. B. (1989). The crisis of Portuguese agriculture in relation to the EEC challenge. *Agriculture and Human Values*, 6(1), 70–81. <https://doi.org/10.1007/BF02219423>
- Moreira, M. B. (2017). Impacts of Financialization on Agricultural and Rural Investment: Lessons from the Portuguese Case. In *Transforming the Rural* (Vol. 24, pp. 25–44). Emerald Publishing Limited. <https://doi.org/10.1108/S1057-192220170000024002>
- Olival | Rabadoa*. (2023). <https://www.rabadoa.pt/olival/>
- Olveira Batista, F., & Cordovil, F. (2021). Prefácio. In *Agricultura e Política Agrícola*. Instituto Nacional de Investigação Agrária e Veterinária, I.P.
- Oxy Capital*. (2023). <https://oxycapital.com/>
- Paxiuta, A. (2021). *Oil Dorado*.
- Pela Terra. (2023). *Pela Terra - The Green Golden Visa*. <https://pelaterra.com/welcome/>
- Phillips, K. (1996). *Arrogant Capital: Washington, Wall Street, and the Frustration of American Politics*. Little, Brown and Company.
- Phillips, K. (2003). *Wealth and Democracy: A Political History of the American Rich*. Crown.
- Público. (2012, November 21). *Imigração no Baixo Alentejo ameaça tornar-se um grave problema social*. <https://www.publico.pt/2012/11/24/jornal/imigracao-no-baixo-alentejo-ameaca-tornarse-um-grave-problema-social-25644075>

- Público. (2017a, January 18). *Autarca denuncia “trabalho escravo” no Alqueva*. <https://www.publico.pt/2017/01/18/sociedade/noticia/falta-de-maodeobra-no-alqueva-alimenta-novas-formas-de-escravatura-1758670>
- Público. (2017b, October 9). *Ponte romana e sítios arqueológicos destruídos para plantar amendoal | Beja*. <https://www.publico.pt/2017/10/09/local/noticia/beja-ponte-romana-e-sitios-arqueologicos-foram-destruidos-para-plantar-amendoal-1787981>
- Público. (2019a, April 13). *A outra face do sucesso do Alqueva é um Alentejo envenenado por químicos*. <https://www.publico.pt/2019/04/13/local/noticia/alentejo-comeca-pagar-pesada-factura-ambiental-alqueva-1869068>
- Público. (2019b, September 18). *Olival e amendoal arrasam charcos temporários mediterrânicos em Alqueva*. <https://www.publico.pt/2019/09/18/local/noticia/olival-amendoal-arrasam-charcos-temporarios-mediterranicos-alqueva-1887038>
- Público. (2019c, December 22). *Explosão do olival no Alentejo deixa fábricas de bagaço no limite*. <https://www.publico.pt/2019/12/22/economia/noticia/explosao-olival-alentejo-deixa-fabricas-bagaco-limite-1898197>
- Radio Televisão Portuguesa. (2022). *Faça Chuva Faça Sol, S06 E36*.
- Reuters. (2012, June 28). *Big pension funds plough money into farmland | Reuters*. <https://www.reuters.com/article/uk-pensions-farmland-idUKLNE85R02420120628>
- Robles, M., Torero, M., & von Braun, J. (2009). *When Speculation Matters*.
- Rodrigues, J., C. Santos, A., & Teles, N. (2016). Semi-peripheral financialisation: the case of Portugal. *Review of International Political Economy*, 23(3), 480–510. <https://doi.org/10.1080/09692290.2016.1143381>
- Sapia de Campos, R. L. (2021). Imigração, “desenvolvimento” e trabalho precário na agricultura alentejana: a marca do “azeite português.” *SER Social*, 23(49), 380–398. <https://doi.org/10.26512/sersocial.v23i49.35723>
- Silveira, A., Ferrão, J., Munoz-Rojas Morenes, J., Pinto-Correia, T., Guimarães, M. H., & Schmidt, L. (2018). The sustainability of agricultural intensification in the early 21st century: insights from the olive oil production in Alentejo (Southern Portugal). *Changing Societies: Legacies and Challenges. Vol. 3. The Diverse Worlds of Sustainability*, 247–275. <https://doi.org/10.31447/ICS9789726715054.10>
- Sovena. (2023). *SOVENA*. <https://www.sovenagroup.com/pt/o-nosso-mundo/historia/>
- Stichele, M. Vander. (2015). FFS - How financialization influences the dynamics of the food supply chain. *Canadian Food Studies / La Revue Canadienne Des Études Sur l'alimentation*, 2(2), 258–266. <https://doi.org/10.15353/CFS-RCEA.V2I2.135>
- Terra Nova. (n.d.). *Investment Opportunity In The Portuguese Agricultural Land*. Retrieved July 3, 2023, from <https://www.imidaily.com/wp-content/uploads/2022/10/TerraNova-GoldenVisa-Deck.pdf>
- Terra Verde Capital. (2023). <https://www.terraverde.capital/>

- TNI. (2013). *The Global Land Grab*.
- Unilever. (2013). *Unilever Charts 2003-2012*. <https://www.unilever.com/investors/annual-report-and-accounts/archive-of-annual-report-and-accounts/?tags=annual-report-accounts&dateFrom=4-2012&dateTo=8-2023>
- Unilever. (2023). *Unilever Charts 2013-2022*. <https://www.unilever.com/investors/annual-report-and-accounts/archive-of-annual-report-and-accounts/?tags=annual-report-accounts&dateFrom=4-2012&dateTo=8-2023>
- Van Der Ploeg, J. D., Franco, J. C., & Borras, S. M. (2015). Land concentration and land grabbing in Europe: A preliminary analysis. *Canadian Journal of Development Studies*, 36(2), 147–162. <https://doi.org/10.1080/02255189.2015.1027673>
- Vander Stichele, M., Young, B., & Economics, E. (2009). *The Abuse of Supermarket Buyer Power in the EU Food Retail Sector Preliminary Survey of Evidence On behalf of: AAI-Agribusiness Accountability Initiative*. www.somo.nl
- Williams, K. (2000). From shareholder value to present-day capitalism. *Economy and Society*, 29(1), 1–12. <https://doi.org/10.1080/030851400360532>
- World Bank. (2008). *G8 Hokkaido-Toyako Summit Double Jeopardy: Responding to High Food and Fuel Prices SUGGESTED ACTION ITEMS ON FOOD PRICES FOR CONSIDERATION BY THE G8 A New Deal for Global Food Policy: A 10-Point Plan*.
- Zero. (2021). *Verde que Mancha*. Zero - Associação Sistema Terrestre Saudável.

Attachment

List of Interviews

1. EDIA representative (09/05/2023)
2. Association of Farmers of lower Alentejo representative / *Associação de Agricultores do Baixo Alentejo* (04/05/2023)
3. Quercus representative (24/05/2023)
4. Alentejo Vivo representative (23/05/2023)
5. Recognized academic of this field (22/02/2023 – 04/04/2023 – 21/04/2023)
6. Olive Farmer (23/05/2023)