DOI: 10.28934/ea.22.55.1.pp12-29

PRELIMINARY REPORT

State and Perspectives of Agricultural Land Acquisitions

Ana Budak[1]*

[1] Advokatska kancelarija dr Ana Budak / Independent Researcher, Serbia

ABSTRACT

Despite being marginal in both the general and scientific public, land acquisitions have brought agricultural land in the unprecedented focus of interest. The causes of these changes are the consequence of, *inter alia*, the growing world population, which undeniably leads to the increased need for agricultural products. Therefore, in this article, the most relevant cause of agricultural land acquisitions is considered – growing food demand. The history suggests that the acquisitions of agricultural lands are not a new phenomenon, but rather a new wave of *déjà vu*. The latest wave of agricultural land acquisitions, according to the general understanding, started with the global financial crisis. The growing demand for land acquisition began, which led developing countries to realize that the purchase of agricultural land, despite its potentially negative effects, could catalyze economic development. The main goal of this paper is to review and explore the state and perspectives of agricultural land acquisition on a global level. The research uses data from the Land Matrix database and employs historical method, conceptual analysis of law, classification method, content analysis, synthesis, systematic literature review, and descriptive statistics method. We drew the conclusion that more than a third of all the cross-border land acquisitions were caused by the growing food demand. The results of the research show that the growth of land acquisitions follows the growth of the world population, implying that the demand for agricultural land will not be stagnant for at least three more decades, *i.e.* land acquisitions undeniably are *in continuo*.

Key words: *agricultural land acquisitions, agricultural land, agricultural land market, causes of agricultural land acquisitions*

JEL Classification: F21, F60, Q15

INTRODUCTION

Although agricultural land acquisitions are not a new phenomenon, it indeed is significantly accelerated in 2008 by the global food crises when a large number of investors, perceiving a growing food demand, saw great potential for profit in agricultural land. In most cases, investors invest because of the demand for food, biofuels, or, in general, for the sake of making a profit. When they invest in food, they do so primarily because there is no suitable land for agricultural production in their home countries. Illustrative in that sense is the example of the countries of the Middle East. In addition to growing food demand, the increase in the number of international acquisitions of agricultural land was influenced by policies to attract foreign direct investment. Nevertheless, after more than a decade of accumulation of world capital, poverty and hunger remain persistent. Faced with the need for rural development, states are seeking assistance in investing in agricultural land. In other words, they are starting to work on attracting foreign direct

* E-mail: ana.budak@legis.rs

investment in agriculture. This is because they see it as a means to achieve their goals which include, but are not limited to, the revitalization of the agricultural sector.

Namely, decades of neglecting agriculture have taken their toll and led to low productivity and stagnation of agricultural production in many countries (Sharma, Lahiri, Neogi & Akhter, 2021). Some of the notable examples include African countries (Mfaniseni Wiseman & Mfundo Mandla, 2018), and transition economies (Kuhn & Bobojonov, forthcoming). In this regard, as one of the possible solutions, foreign direct investments in agriculture are imposed. This could significantly contribute to filling this financial gap in the agricultural sector. In such circumstances, although agriculture has been at the back of investors' priorities for decades, it has deservedly gained importance in recent decades.

However, there are some legal restrictions and specificities in certain countries related to land acquisitions. Some of these legislations are motivated by the aim of protecting family farms. Namely, family farms are considered to be among the best social tools for poverty reduction in many countries. For example, in Poland, there is a restriction which is reflected in the fact that foreign legal entities can acquire agricultural land up to 1,000 hectares (Dla Piper, 2021), while for natural persons this limit is set at 300 hectares (Interlegal, 2021). On the other hand, Hungary is the only member state of the European Union that completely forbids legal entities to style property rights on agricultural land, which means that the ban applies not only to foreign but also to domestic legal entities. This absolute ban on legal entities acquiring ownership of agricultural land became part of Hungarian legislation in 1994 and has been part of the legal system ever since. Similarly, in Serbia, privately owned agricultural land cannot be acquired by foreign legal entities, while the acquisition of state-owned agricultural land is reserved for domestic natural persons (Budak, 2021).

The emergence of the interest of world investors in agriculture is seen by many host countries as an opportunity for development and even as a solution to the problem of rural development. In other words, until almost a decade ago, investors were practically not interested in investing in the agricultural sector. Notably, it is of interest to know what has changed. We investigated whether this can be partly explained by the emergence of another wave of the "gold rush", where agricultural land is considered a commodity and worth investing in. To illuminate this uncharted area, we examined the crucial causes of modern agricultural land acquisitions.

Examples of modern acquisitions include Chinese companies' increasing investments in agricultural land in African countries or South America (which is in line with its Going Global policy). Other examples include large-scale agricultural land acquisitions by transnational companies, supported by some governments. which is often called neocolonialism in the literature. For example, between 2004 and 2009, Ethiopia leased 1.48 million hectares of agricultural land for approximately 1 USD for 2.5 hectares (GlobalVoices, 2020). The government of Mozambique has concluded a contract with the London company and left 30,000 hectares of agricultural land to it for the production of bioethanol. The move has been sharply criticized as the land was originally pledged to local communities involving more than 1,000 families (United Nations, 2020)

Certainly, among the most important investments are the ones that originated from the European Union. The member states of the European Union are becoming one of the most important actors in the world when it comes to the acquisition of agricultural land. Namely, conducted research (Antonelli, Siciliano, Turvani & Rulli, 2015) indicates that the member states of the European Union have concluded 23% of all concluded land agreements in the world. Others (Borras Jr et al., 2019) state that it is difficult to estimate the exact extent of "land grabbing" committed by European Union companies, given that a large number of these transactions are in the "gray zone", which makes it very difficult to establish precise categorizations. This will be the case, for example, when a European Union corporation buys goods from a reputable foreign company, and those goods come from a country that has been "grabbed" by peasants. By 2019,

European Union companies have concluded a total of 909 land contracts covering 23 million hectares of land worldwide.

Modern acquisitions of agricultural land differ from those already seen, *inter alia*, in new causes. Moreover, host countries, especially developing ones, have been shown to pursue active policies to attract investment in agricultural land to enable economic development and modernization of agriculture. At the same time, developed countries, driven by the need to meet the demand for food and biofuels, are starting to buy agricultural land in large quantities. The theory has identified several causes that, on a global level, lead to modern acquisitions of agricultural land. As a rule, they are reduced to demand for food, biofuel production, land availability, and prices, weak legal and institutional frameworks and policies of the European Union. In this paper, the demand for food will be examined as, in the author's opinion, the most significant cause of agricultural land acquisitions. The perspective we adopt is global in order to maximise the generalizability of our results.

In addition to the analysis of the policies of the host countries and the policies of the countries of origin of investments, the paper seeks an answer to the question of the long-term tendency of agricultural land acquisition: whether their number will decrease, increase, or stagnate. Furthermore, the paper points out that it should be borne in mind that the causes of the acquisition of agricultural land differ from the so-called "triggers" that led to them, such as the World Food Crisis.

The work is organized as follows. The first part of the paper describes the methodology. In the second part of the paper, we describe general tendencies and causes of agricultural land acquisitions. The third part presents the key causes of agricultural land acquisitions and their relationship with the increase in world population. The fourth part of the paper presents the dynamics of agricultural land acquisition. Based on the analysis in these chapters, the relevant conclusions are drawn, as well as their practical implications.

DATA AND METHODOLOGY

Data

The research uses data from the Land Matrix database, which includes only one transaction with over 200 hectares (Land Matrix Initiative, 2020b). The Land Matrix Initiative prepared two reports that represent a kind of compilation of international land transactions - the first one in 2012 and the second one in 2016. These reports show a smoothing of the curve when it comes to international transactions, which would mean that we are witnessing a period of stagnation in the acquisition of agricultural land. As of 2016, a new report has not yet been made. For this reason, the author of this paper decided to do it herself, based on available data on international transactions for the period 2000-2020. year, based on which the dynamics of agricultural land acquisition was presented.

The aforesaid limitation of 200 hectares must be borne in mind when drawing conclusions about agricultural land acquisitions and their implications. First of all, it could be rightly pointed out that the figures in this database are underestimated due to such incompleteness of the database. Namely, it is very likely that there is a huge number of contracts that individually have less than 200 hectares, but together make up a huge acquired area that has not been recorded.

However, the most prominent authors who study the acquisition of agricultural land think that this database is a good basis for research. They state that the mentioned database provides valuable, but approximated information on the scale of this phenomenon, emphasizing that this is the case if readers are warned about weaknesses and limitations related to data (Rulli & D'Odorico, 2013). Although fast data collection is very important, especially when we need fast information, their level of inaccuracy must be acceptable, *i.e.* their limitations must be clearly stated (Scoones, Hall, Borras, White & Wolford, 2013). Therefore, the data we have can be the basis for creating an image of this ubiquitous phenomenon, for making political decisions and

initiating social actions, primarily of small farmers, for shaping international politics, but with the restriction that these data must not be taken unreservedly. However, the paper focuses on this database, given that it is the most complete database in this area and that it is, of course, invaluable for monitoring this phenomenon.

Data are collected using the "snowballing" method, where one data source is the starting point for further research. Given the speed with which information changes, as well as the scarcity of information, primary data sources are given priority over publicly available reports, which is achieved, *inter alia*, by cross-checking available data. Data are obtained using a variety of data collection methods, including a network of partners in host countries, through which data are collected from regional and national coordinators, research associates, experts and NGOs, public and private actors, individuals (who are allowed to submit available data), peer-reviewed papers, reports of local and international organizations and non-governmental organizations, research papers dealing with this topic, governments of individual countries, companies' websites and other publications, such as annual reports and media reports.

It is likely that the figures, in cases where the state has transparent data, *i.e.* when reports are the main sources of the database, are likely to be underestimated. On the other hand, if there is no transparency of data in the country, *i.e.* if the media and non-governmental organizations are the main sources of data, it is very possible that the figures will be overestimated. So, having in mind the possibility that various actors, depending on their interests, will "beautify" the data, one gets the impression that, in this way, a kind of balance is created between the data.

Methodology

Considering the multitude of facets to this phenomenon, different methods of analysis were applied. In order to review the development of this phenomenon, the historical method was used. To understand the key terms, a conceptual analysis of the law was used. The classification method was used to disentangle the key concepts in the research, while the content analysis and synthesis were used to present the causes of the agricultural land acquisitions. To describe the existing knowledge about the phenomenon, the content analysis was combined with the systematic literature review. In order to understand the magnitudes, patterns, and dynamics of the change to this phenomenon more clearly, in this article we used the method of descriptive statistics. This method was also employed to visually clarify the considered variables and their dynamics over time, which complements the historical method also used in our analysis. Such a combination of methods allowed us to draw empirically based conclusions.

It should be useful to define the main concepts and definitions we use further in the analysis. Land Matrix database (Land Matrix Initiative, 2020b), which we use, defines a land deal as “any intended, concluded, or failed attempt to acquire land through purchase, lease, or concession for agricultural production, timber extraction, carbon trading, industry, renewable energy production, conservation, and tourism in low- and middle-income countries”. The data includes deals that: “entail a transfer of rights to use, control, or ownership of land through sale, lease, or concession; have been initiated since the year 2000; cover an area of 200 hectares or more; imply the potential conversion of land from smallholder production, local community use, or important ecosystem service provision to commercial use.”. We think that agricultural land acquisitions could be defined as the establishment of control (purchase, lease, concession, or otherwise) over large areas of land (agricultural or forestry) by investors (foreign or domestic, or investors who are a combination a natural person, a private company, government or investor who is a combination of these actors) for the production of food, biofuels, speculative or other reasons.

THE GENERAL TRENDS AND CAUSES OF AGRICULTURAL LAND ACQUISITIONS

For the first time in decades, there is consensus among policymakers that the agricultural sector in poor countries urgently needs investment to address hunger and poverty, as well as to ensure

economic growth. (Spieldoch & Murphy, 2009). With this in mind, the host country should pursue a liberal trade policy in order to attract as many investors as possible and thus contribute to economic growth. On the other hand, how trade liberalization will affect other aspects of the daily life of the average resident of that country is a question that does not necessarily have a positive outcome. In any case, concluding contracts that deal with agricultural land transactions, without an adequate strategy for attracting foreign direct investment, *i.e.* without previously clearly set goals of the host country (what investments it wants to attract and what it expects from them), often leads to negative effects of such investments. The most common adverse effects are effects on rural development, effects on competition, effects on the environment, effects on food security, and effects on human rights.

Given the undeniable need for investment, developing countries often pursue an intensive policy of attracting foreign direct investment in agriculture as they see it as one of the main means of economic growth and modernization of the economy. For instance, some research (Gerlach & Liu, 2010) has shown that sub-Saharan African agriculture needs at least 21 billion USD a year to reduce the poverty and malnutrition of its population. It must be admitted that it is a goal that this region will find very difficult to achieve on its own.

In such circumstances, host countries, especially developing ones, welcomed the foreign direct investment, considering it a unique opportunity for economic development, infrastructure improvement, development of new technologies, and improvement of know-how in agriculture. (Fernández, 2017). Therefore, foreign direct investment can be one of the levers of the economic development of these countries. The primary goal of attracting foreign direct investment in agriculture is, for example, to modernize agricultural production, new technologies, access to or better integration into the world market, or increase exports. These and similar goals are set by the state as primary in concluding contracts.

Simultaneously with the need of developing countries for investments, after the world crisis in 2008, investors saw agricultural land as a means of reducing risk, *i.e.* a "dam from inflation". In that sense, the acquisition of agricultural land can be motivated exclusively by lucrative goals (Cotula, 2013)**.** In addition, agricultural land can be considered an attractive investment not only because of the current prices at which it will be possible to make a profit but also because of the growing trend of demand for agricultural products. Hence, as the increased demand for food inevitably leads to an increase in land prices, investors often buy large areas of land to make a profit by reselling. In effect, investors perceive the profit, *i.e.* the difference between the low price at which they bought the land and the price of its later sale at a much higher price.

Therefore, it could be said that the cause of modern acquisitions of agricultural land is the "expected reciprocal profit" of investors in relation to the host country that expects economic development from the investment (Ojulu, 2013). it is estimated that the projected annual rates of return of investors in agricultural land are 10-40% in Europe and up to 400% in Africa (GRAIN, 2008). In this sense, the organization "GRAIN" (GRAIN, 2016) concluded that making a profit is the dominant cause of the latest wave of agricultural land acquisitions.

Land Matrix Database (Land Matrix Initiative, 2020b) detects a total of 18 causes that lead to the acquisition of agricultural land: biofuel production (contracts concluded for this reason have a total of 4,544,851 hectares), demand for food (7,826,132 hectares), livestock, non-food agricultural products, agriculture (unspecified), tree planting, deforestation/forest management, carbon sequestration, forests (indefinite), mining, oil/gas exploitation, tourism, industry, reserve creation, land speculation, renewable energy, other and many causes.

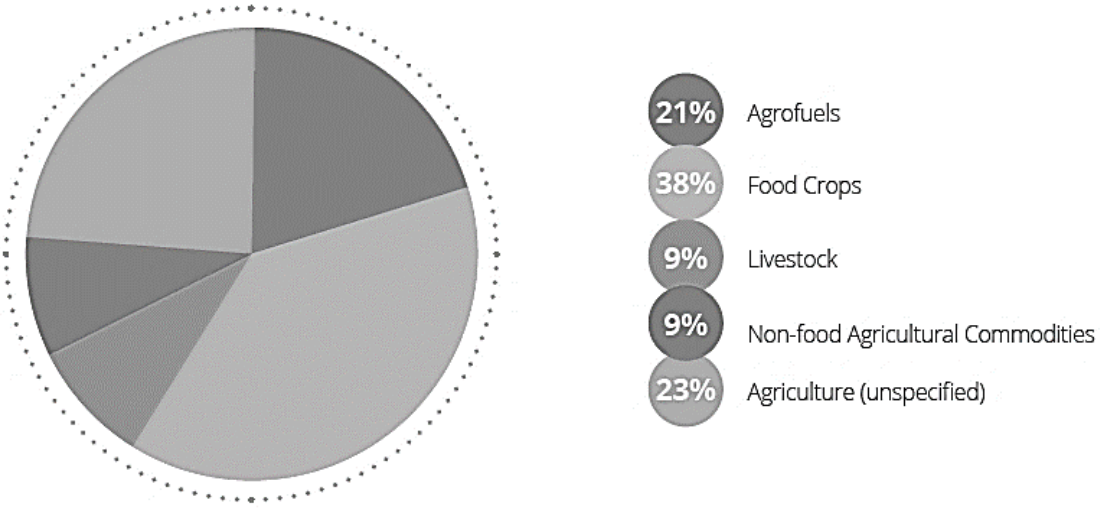

Figure 1. Causes of agricultural land acquisitions (% of all concluded contracts)
Source: (Nolte, Chamberlain & Giger, 2016)

For most of the concluded contracts, both in terms of number and acquired areas, agriculture is the dominant cause of the acquisition of agricultural land. Figure 1 shows that the demand for food is one of the main causes of agricultural land acquisitions, with a total of 38% of all agricultural land acquisitions. In second place is agriculture (indefinitely), which can include various crops with a variety of applications (for the production of food, animal feed, fuels, and industrial materials, *e.g.* palm oil, which is used for food, fuel, and cosmetics). In third place are biofuels with 21% of all contracts. However, one should keep in mind that theory (Anseeuw, Wily, Cotula & Taylor, 2012b) distinguishes the so-called "triggers" of a certain phenomenon from its causes. In this sense, the "trigger" for the emergence of agricultural land acquisitions would be the global crisis of 2007/2008, while the causes can be numerous.

It is very difficult to distinguish the causes of agricultural land acquisitions, given that they are often intertwined and interconnected, especially with the emergence of so-called "flexible crops".[1] In any case, there are many potential causes that literature and practice have recognized, but also an unlimited number of possible motives that guide each investor when investing. These causes will depend not only on each investor but also on the various factors that shape the local environment in which the investor invests - social, economic, or other.

The emergence of flexible crops is a logical consequence of multiple crises (Borras, Franco, Gómez, Kay & Spoor, 2012). Consequently, investors were given the opportunity to diversify risk. Risk diversification is extremely important from the perspective of profit maximization, as a primary goal of every market-oriented subject. Under those circumstances, the farmer will grow the crop and produce from it what is the most profitable for him at that moment (food, animal feed, biofuel, industrial materials).

Precisely due to the existence of these "flexible crops", it is not easy to separate the causes of food demand and biofuel production, since the same product can be used for both food and biofuel production. In this sense, the investor's investment plan may change as time passes in response to changes in international prices and other incentives (Cotula, 2013). This is because investors make a decision on the method of investment based on the legal regime of ownership, control, and management in the given circumstances, based on which they conclude which of the offered

[1] The four currently most popular "flexible crops" are corn, oil palm, soybeans, and sugar cane. The increase in world production of these crops has been significant in the last 50 years, with the largest increase in the last two decades. Many large-scale investments are located in this sector. More about this: (Borras, Franco & Wang, 2013)

opportunities gives them the greatest opportunity to enter and exit the investment (Campanale, 2013).

There is nothing new when it comes to reusable crops. For example, in the Philippines, coconut is considered a "tree of life" because each part of this plant has its use and value. However, for a single agricultural product with multiple uses to be considered "flexible", it must be possible to change the multiple uses according to profit (Borras Jr, Franco, Isakson, Levidow & Vervest, 2016). However, the infrastructure needed to promptly replace one use with another requires huge investments, so only those actors who possess such technology can benefit from flexibility. In other words, small farmers do not benefit from flexible crops as they do not have the necessary financial capacity (Genoud, 2018). For these reasons, it can be said that flexible crops have the potential to worsen already unequal power relations between small and large farmers. In such a state of affairs, large farmers have the opportunity to profit from the production of such crops, while small ones do not have that opportunity. It is also pointed out that flexible crops deepen the commoditization of land through additional standardization and speculation. Therefore, it can be concluded that crop flexibility can be an important limiting factor when it comes to small farmers' access to land (Genoud, 2018).

The crucial causes of agricultural land acquisitions and their relation to the growing world population

The key causes of agricultural land acquisitions are primarily driven by increasing world population (which has been shown to lead to rising food prices), policies to attract foreign direct investment in agriculture led by host countries, especially developing ones, and policies pursued by countries of origin of the investment. In addition, since they are persons with predominantly lucrative motives, investors are investing for the reason that they perceived an exceptional increase in the prices of agricultural land. All of the above highlights the demand for food and biofuels as the two most important causes of agricultural land acquisitions, then the difference in prices and availability of agricultural land, as well as the weak legal and institutional framework of the host countries. In addition, European Union policies have been shown to be a significant cause of agricultural land acquisitions.

In the literature (Anseeuw et al., 2012b) the water demand is most often cited as a key cause of agricultural land acquisitions. Water scarcity is increasingly one of the main obstacles to agricultural production, leading to increased demand for water sources. First of all, we have in mind the countries of the Middle East, in which declining water reserves have led investors to increased demand for agricultural land abroad. For this reason, Saudi Arabia completely abandoned the production of food for its own needs in 2007. Some authors (Cotula, 2013) point out that water is the main cause of the modern trend of foreign direct acquisitions, given that "land in arid and semi-arid areas would not be useful without water". The water demand was caused by many factors, but the literature most often mentions the fact that there is no unlimited oil, climate change, growing concern for energy security, and interest in renewable energy sources, which results in increased biofuel production and hydropower (Mehta, Veldwisch & Franco, 2012). Such acquisitions are referred to in the literature as water grabbing and green grabbing.

Data from the non-governmental organization "GRAIN" show that the acquisitions concern water as much as land, considering that, with only a few exceptions, each concluded contract included access to water (GRAIN, 2016). Likewise, a general pattern was observed that investors are not interested in land that is not supplied with water for production. This is because there is no point in using the land without water (Mehta, Veldwisch & Franco, 2012). The literature states that agricultural land acquisitions, as a rule, are concentrated in areas with safe water sources and that the demand for food and biofuels will increase the pressure on water sources (Anseeuw et al., 2012b). This is because the production of all agricultural goods (excluding fish) requires, directly or indirectly, the use of both land and water. Given that about 86% of all known water

sources are used in the production of agricultural products, acquisitions of agricultural land represent, to a large extent, the demand for water sources (Rulli, Saviori & D'Odorico, 2013). The problem is that the quantities of water that will be needed to carry out a particular project are not explicitly stated in the contracts (Woodhouse, 2012). Therefore, it is necessary to assess the required and available water for each contract (Mehta, Veldwisch & Franco, 2012).

It could be concluded that the term "green grabbing" means acquisitions carried out in the name of environmental protection. Just like "land grabbing", "green grabbing" has a negative connotation in the literature. However, it does not always have to be motivated by speculative reasons or result in negative effects. In other words, the demand for agricultural land has increased not only due to increased demand for food or biofuels, but also due to the need to reduce environmental degradation, and sometimes this is indeed the only or primary motive of investors.

Nevertheless, it could be said that water sources have not yet reached the significance of the key cause of the acquisition of agricultural land. In a world in which, according to previous estimates, there will be a gap between supply and demand by 2050, it can be concluded that the demand for food is still more important. As the main cause of the acquisition of agricultural land, it is certainly joined by the production of biofuels, as a ubiquitous reaction to the fight against climate change. Such a gap has led many investors to invest in agriculture, since, in the foreseeable future, they perceived an exceptional increase in the price of agricultural land. Since investors are persons with predominantly lucrative motives, this was a completely expected scenario.

Having in mind the above, the author limits her work to studying, in her opinion, the most relevant cause of the acquisition of agricultural land - the demand for food. This is because the water demand, although undeniably present, is still subsidiary and accessory in the acquisition of agricultural land in the sense that it appears as a naturally necessary condition for the use of agricultural land, and not as a goal in itself. All things considered, water is a necessary, but not a sufficient factor for attracting foreign direct investment (which does not mean that it will not be the one in the future).

World Food Crisis 2007/2008 convinced many investors that they could not fully rely on the international market, *i.e.* that it would be increasingly volatile in the future, and that, therefore, it could not be trusted when it came to food security. The United Nations Special Rapporteur on the Right to Food (De Schutter, 2008) pointed out that the increase in food prices on the international market during this period was "unprecedented in its scale and brutality". Namely, many countries have become concerned about how they will feed their nations in security. Therefore, the interests of low-income countries whose economies are largely based on agriculture have met the interests of high-income countries, which are the largest importers of food and exporters of capital. Hi-income countries that lacked agricultural land and water to meet their food needs realized that it was in their interest to transfer food production abroad. So, they realized that it is better to acquire land abroad and produce food themselves than to depend on the supply on the international market (De Schutter, 2011).

About 38% of all concluded contracts were concluded precisely for food production (Nolte, Chamberlain & Giger, 2016). However, there are different opinions on this issue, namely that most of what is produced on the acquired land is not food (Hall, 2011). Yet, the facts refute such claims. Namely, food production as a cause of acquisitions plays a big role everywhere in the world, and especially in Europe. According to data from the database "Land Matrix" (Land Matrix Initiative, 2020b), food is the main cause of agricultural land acquisitions, leading to a total of 7,826,132 acquired hectares, of which 2,685,887 hectares in Eastern Europe, 2,572,746 hectares in Latin America and the Caribbean, 2,123,023 hectares in Africa, and 374,222 hectares in Asia.

Acquisitions motivated by food production most often come from China, India, South Korea, Saudi Arabia, and Qatar (Anseeuw et al., 2012b). Situations in these states vary significantly. For example, China is incredibly "self-sufficient" when it comes to food. However, it has a huge population, and its agricultural land is disappearing due to industrial development. With 40% of all farmers in the world and only 9% of the total agricultural land in the world, it is not surprising

that the demand for food is highly ranked among China's political goals (GRAIN, 2008). China and India currently have enough food for the needs of their population. However, both countries have high population growth, so agricultural land and water sources are under great pressure due to increased urbanization and industrialization. These causes lead investors from these countries to invest abroad to meet the future food needs of their people. The same is the case with Middle Eastern countries, such as Saudi Arabia, where there is not enough agricultural land to meet the future food needs of its population (Friis & Reenberg, 2010).

Moreover, the countries of the Middle East face other problems. Since they are located in the desert, they are in short supply when it comes to arable land and water, so they do not have opportunities for food production. On the other hand, they own large amounts of oil and money, which gives them enough space to rely on food imports. The global food crisis has negatively affected these countries. Namely, given that they depend on food imports from abroad (especially from Europe), as well as that their currencies follow the US dollar (except Kuwait, but only since 2008), the simultaneous increase in food prices on the world market and the fall of the US dollar meant that these countries were affected by "additional" inflation. Their account for imported food jumped rapidly from 8 to 20 billion US dollars. Given that the majority of their population are low-paid migrant workers, it is necessary for these countries to provide food at reasonable prices (GRAIN, 2008). Their goal is to secure food supply through direct ownership or control of agricultural land abroad and, as far as possible, to exclude traders and other intermediaries in order to reduce the cost of food imports by 20-25% (GRAIN, 2008).

Under such circumstances, Saudi Arabia realized that, given the growing scarcity of water, it would make sense to stop producing wheat by 2016 and, instead, produce it and export it back from abroad, ensuring, of course, that the whole process is under their control. The idea was to conclude agreements with Islamic states, which would allow their companies access to the land and allow them to export the produced products back to their country. At the same time, as host countries, they would, in turn, receive oil and capital. Most affected by this policy were Sudan and Pakistan, a large number of Southeast Asian countries (Burma, Cambodia, Indonesia, Laos, Philippines, Thailand, and Vietnam), followed by Turkey, Kazakhstan, Uganda, Ukraine, Georgia (the list is not exhaustive) (GRAIN, 2008). However, the literature states that the allegations of substitution for oil/gas and capital have not been verified, *i.e.* that there is no evidence for them, but that they are "excessive and uninformed allegations based on secondary sources" (Woertz, 2013). It seems that the large increase in demand for agricultural land is mainly the result of the increased need for food due to the growing population. For example, according to research by some authors (Faure, 2015), the population of the Middle East is expected to double from 30 to 60 million by 2030, and therefore, food imports from these countries, which already are 60%. are expected to increase.

Namely, the growth of the world's population is one of the basic factors that determine the demand for food.[2] The relationship between population growth and agricultural land acquisition is presented in Figure 2. From Figure 2 it can be concluded that the growth of agricultural land is accompanied by world population growth, which indicates a positive impact of world population growth on increasing demand for agricultural land in the world. It is also clear from the aforementioned figure that the linear growth trend of the acquired areas of agricultural land follows the growth of the world population. Therefore, we conclude that this trend is likely to continue in the future.

The increase in population and food consumption will increase at least until 2050 when it will flatten to about 9 billion people. Increased competition for land, water, and energy, overfishing, and the urgent need to reduce the impact of food production on the environment, will affect our ability to produce food. With all this in mind, the world faces a threefold challenge: to combine the

[2] Due to the increase in world population there is an increase in demand for agricultural land. Given that the supply of agricultural land is fixed, this inevitably leads to an increase in agricultural land prices.

rapidly growing demand for food with supply, while taking care to do so in an environmentally and socially sustainable way, and simultaneously ensuring that the world's poorest people are not hungry (Godfray et al., 2010). Therefore, the question arises how, sustainably, to produce more food? In the past, the primary solution to food shortages was to put new areas of agricultural land into use or find new places to fish. However, since the early 1960s, world cereal production has more than doubled, while, at the same time, agricultural land has increased by only 11% (from 4.5 to 5 billion hectares) and arable agricultural land has increased by only 9 % (from 1.27 to 1.4 billion hectares) (Pretty, 2008).

It can be concluded that in about 6 decades we have managed to double food production, while for that purpose we have increased the area of agricultural land by slightly more than 1/10. Undoubtedly, we have become much more productive, which is, *inter alia*, a consequence of new technologies and knowledge applied in agricultural production. Having in mind that new technologies and knowledge, as a rule, are available to developed countries, the conclusion is that, on the wings of globalization, new technologies and knowledge should be allowed to cross the borders of developed countries and spill over into less developed ones. This should be allowed in order to increase productivity, which would have a positive effect not only within the borders of the host country but, ultimately, in the world as a whole.

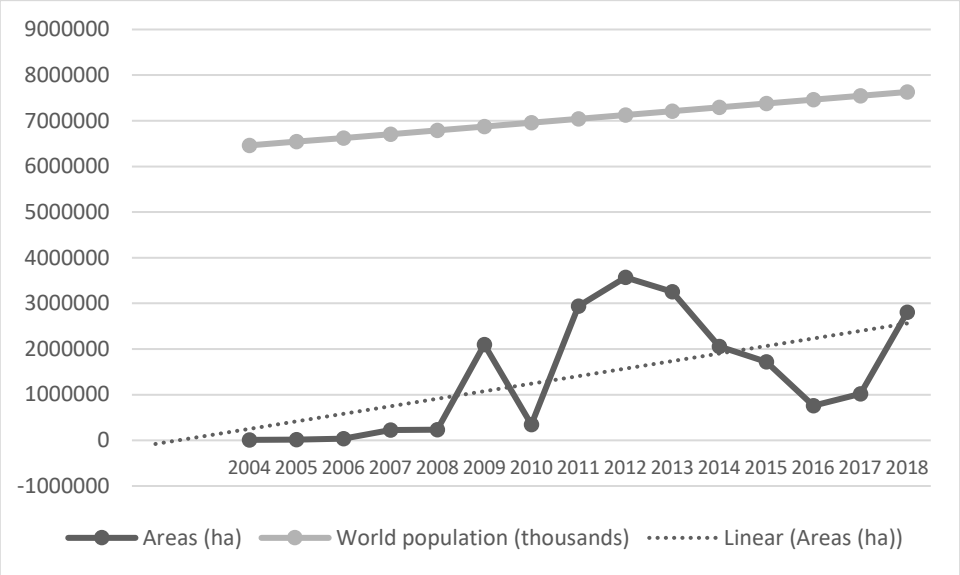

Figure 2. World population growth and the area of acquired agricultural land through international acquisitions over time

Source: Prepared by the author based on data from the Land Matrix database (Land Matrix Initiative, 2020b)

Food demand is projected to increase not only due to world population growth but also due to dietary changes[3], which are associated with the economic development of developing countries. Opportunities for food production are limited in many countries around the world, especially due to limited water availability, but also due to reduced productivity and climate change (Anseeuw et al., 2012b). Many investment institutions, such as Deutsche Bank, have pointed out that agricultural production can be increased in two ways: by increasing yields and increasing arable land (Deutsche Bank Group, 2009).

We should especially keep in mind the fact that the supply of agricultural land is practically fixed, which means that the supply is predetermined and that we cannot increase it in accordance

[3] It is interesting to note that 77% of people's caloric intake is derived from only 12 basic foods: wheat, rice, corn, beef, lamb, pork, chicken, soy, palm oil, potatoes, milk, and sugar (Anderson, 2014).

with the possible growth of demand. However, there are suggestions in the literature by which such an obstacle can be overcome. For instance, having in mind the non-multiplicity as one of the characteristics of agricultural land, it seems that, within the given land fund, it is possible to redistribute it. In other words, it is necessary to take such measures aimed at using the available land as efficiently as possible (Keča, 1993).

Increased demand for agricultural land could have been predicted according to long-term projections of imbalances in the relationship between world supply and food demand (Campanale, 2013). According to the estimates of the Food and Agriculture Organization of the United Nations, it is assumed that, in order to feed 9 billion people in 2050, the production of agricultural products in the period from 2005 to 2050 should increase by 70% globally and almost 100% in developing countries. Therefore, insufficient production growth will lead to higher and more volatile prices (Food and Agriculture Organization of the United Nations, 2011). In that sense, the value of owning agricultural land is increasing in the world of growing demand for agricultural products, especially food. It has become clear that agricultural land has turned into a commodity in which investors saw an opportunity to secure profits.

The question that arises is whether the acquisition of agricultural land can lead to meeting the increased demand for food while promoting sustainable development. In that sense, it is pointed out that the governments of the host countries generally approve foreign direct investments, even in cases when their population does not have enough food, which is the case of Madagascar, Sudan, or Cambodia. In such circumstances, large-scale agricultural land acquisitions motivated by the food security of richer countries in the poor (where people are starving) are seen as unethical (Zoomers, 2010). Although such understandings can be justified and even understood, it seems that they are not completely grounded. It seems that such an attitude does not take into account the fact that there was a famine in the mentioned countries even before the arrival of investors. Also, it is a fact that investors did not come to the mentioned countries by fraud and took the food previously produced in those countries to their home countries. On the contrary, they came, invested in production, produced it themselves by investing capital, and exported the finished product to their home countries.

In addition to the above, the need for food is physiological and therefore not related to the question of where the food producer comes from. In other words, the fact that an investor comes from a rich country should not be discredited as unnecessary and bad. On the contrary, rich countries, as well as poor countries, need a certain amount of food. Unlike poorer countries, some developed countries do not have enough (adequate) land for agricultural production. In this regard, there is a need for the proper distribution of natural resources in order to feed all those who live on the planet. Of course, the problem of hunger is not related to the rich, but to the poor countries in which investors, as a rule, invest.

Considering the aforementioned, it should be borne in mind that rich countries would not be able to efficiently produce enough food to meet the nutritional needs of their population. Likewise, poor countries would not be able, despite sufficient resources available for their production, to produce enough food for their own needs, due to low yields resulting from outdated agricultural production. In such circumstances, we can conclude that there is a need to reconcile the interests of rich and poor countries, *i.e.* the need to allow foreign investors access to agricultural land, provided that they contribute to the food security of poor countries or at least not endanger it.

The dynamics of agricultural land acquisitions

The analysis conducted in this part of the paper aims to review the current state of agricultural land acquisitions and draw relevant conclusions about what we can expect in the future. Figure 3 shows that agricultural land acquisitions remained low until 2005, with a slight increase between 2002 and 2006. The sudden increase in acquisitions in the period from 2006 to 2014 can be

explained by the global food crisis of 2007/2008. In any case, the above data could indicate a steady and long-term trend of interest in agricultural land.

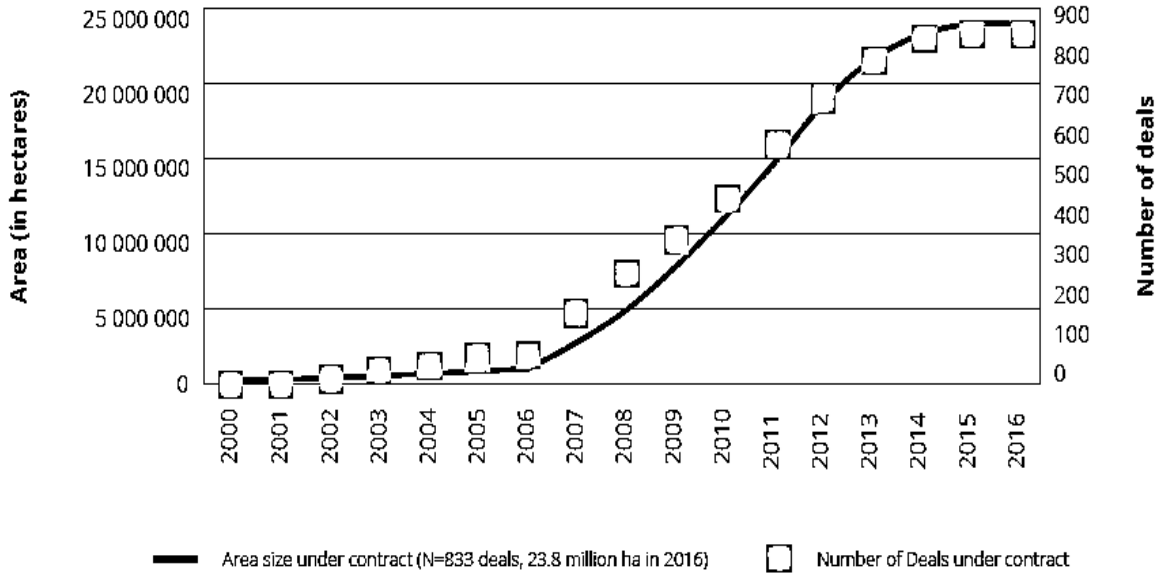

Figure 3. International transactions - concluded agreements 2000-2016
Source: (Nolte, Chamberlain & Giger, 2016)

Figure 3 shows a leveling off in the period from 2014, but the authors point out that this does not necessarily mean that fewer agricultural land contracts have been concluded, but that it may also be a consequence of the need for time to reach information on concluded contracts to the public. At this point, we are not able to say with certainty whether the stated stagnation reflects the true picture of things or whether it is just a hoax caused by the need for a certain period to pass for some information to reach the public. However, it should certainly be mentioned that something like this has already happened in the previous report from 2012 (Anseeuw et al., 2012a)[4]. This report showed a sharp and steep decline in the acquisition of agricultural land in 2010, which, as the new report showed, was not the case, but probably a consequence of the lack of information about the concluded contracts at the time when the report was made. In fact, the new report from 2016 showed that the report from 2012 did not present the real state of affairs when it comes to 2010. The next and last report to date, and since the Land Matrix database has existed, shows the leveling of agricultural land acquisitions in the period from 2014.

However, the authors are skeptical that we are witnessing a period of stagnation in agricultural land acquisitions and believe that this is because data on international transactions do not reach the public (immediately), which is why there seems to be stagnation. However, this assumption of the author of the aforesaid report from 2016 has not been verified to date, since a new report, which could confirm such an assumption, has not been made yet. For this reason, the author of this paper decided to do it herself, based on available data on international transactions for the period 2000-2020.

[4] The comparison with the above report is significant since only two reports of this type exist. Namely, Land Matrix prepared two reports that represent a compilation of international land transactions, the first one in 2012 and the second one in 2016.

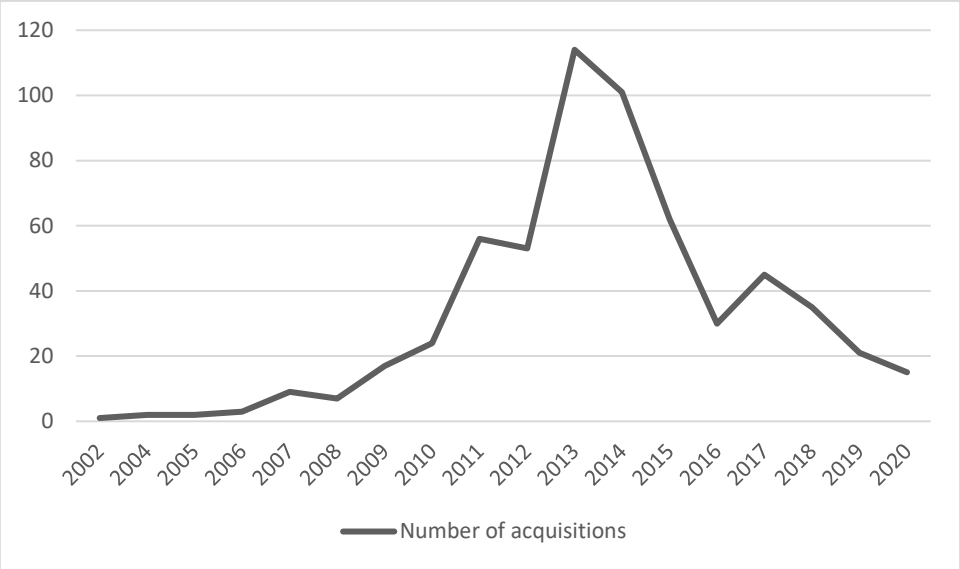

Figure 4. Number of international acquisitions of agricultural land greater than 200 ha in the world

Source: Prepared by the author based on data from the Land Matrix database (Land Matrix Initiative, 2020b)

Having in mind the previous knowledge about the acquisition of agricultural land, as well as what they have shown in practice, it seems that the second possibility mentioned by the authors of the 2016 report is more probable. Namely, it is likely that it is not stagnation of acquisitions, but only ignorance of the media transactions. This is supported by the results of this research presented in Figure 4, from which it can be concluded that in the period from 2014 there was no flattening of the curve. On the contrary, there was a large increase in the number of acquisitions of agricultural land.

It can be concluded from Figure 4 that from 2001 until the beginning of the global food crisis in 2008, the number of concluded land contracts was relatively negligible. The peak of growth in the number of concluded contracts on agricultural land, which are related to the deals of acquiring over 200 hectares, was recorded in 2013 when there were a total of 114. After 2013, the number of concluded land contracts decreased steadily, to reach a constant 20-40 contracts per year. Despite the above data, which show a decrease in the number of concluded contracts on agricultural land, the above should be taken with a grain of salt, since it is possible that a large number of concluded contracts have not been recorded yet. In other words, the true scale of land transactions is likely to be visible only in a few years.

From Figure 5 it can be concluded that the areas of acquired agricultural land through international acquisitions of agricultural land were at a low level until 2008, *i.e.* until the beginning of the global food crisis, when a large increase in acquired agricultural land was recorded. The data show that the highest number of acquired hectares was in 2013 when more than 3,500,000 hectares of agricultural land were acquired. As Figure 4 shows, the fact that *prima facie*, the acquired areas in recent years are negligible should not be taken without reservation. This could be, as in the previous case, only a consequence of the delayed data on the acquired areas.

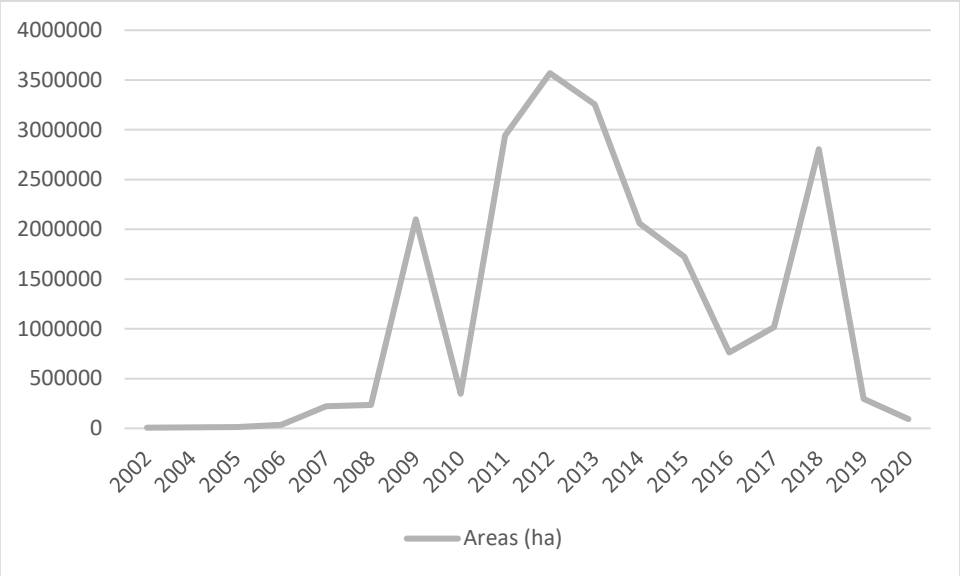

Figure 5. Areas of acquired agricultural land through international acquisitions over time
Source: Prepared by the author based on data from the Land Matrix database (Land Matrix Initiative, 2020b)

This small experiment conducted by the author of this article based on available data also speaks about the long-term growth trend of this phenomenon (Land Matrix Initiative, 2020a). By January 2019, over 1,500 international transactions at the global level were completed, which are related to the deals of acquiring a total of 47.3 million hectares of agricultural land. By September 2020, the number of international transactions had increased by 20%, i.e. from cca. 1,500 to cca. 1,800 hectares. Simultaneously, the acquired area had increased by 40.35%, i.e. from cca. 47.3 to cca. 79.3 million hectares. To put this figure into perspective, the entire Balkan is spread over about 47 million hectares.

Eight years after the publication of the report "Seized!", which has captured the attention of the public, which is still abating, GRAIN has published another report entitled "How big, how bad?" (GRAIN, 2016). This report contains data documenting almost 500 cases of agricultural land acquisitions covering 30 million hectares worldwide. However, the inherent limitation of this database should be borne in mind since, similar to the Land Matrix database, it includes only certain transactions, i.e. a large number of contracts were not even considered. In other words, it is likely that the scale of the phenomenon is underestimated and that we are talking about much larger areas. The danger is that land deals not included in the database (the ones referring to the land acquisitions of less than 500 hectares) make up a considerable share in total acquisitions.

Likewise, the reader might wonder how it is possible that the acquisition of agricultural land according to the GRAIN database counts a significantly smaller number of acquired agricultural land than the Land Matrix. It is only a methodological difference that arises from the different definitions of the term. Namely, the Land Matrix database considers only those land contracts that cover an area of 200 hectares or more, while the farmlandgrab.org platform, which GRAIN uses as a basis for its research, considers only those contracts related to the deals of acquiring over 500 hectares. An additional limitation of the data from the platform is that it takes into account only contracts concluded after 2006, which have not been terminated, in which the investor is a foreigner and which are concluded for food production.

From all the above, it can be concluded that the true scale of land transactions (both in number and in the acquired area of agricultural land) is probably much larger than the current data show, but that this will be visible only in a few years, *i.e.* when data on international transactions made in the last few years will be made public. In any case, it can be concluded that agricultural land acquisitions show a long-term growth trend.

CONCLUSION

Bearing in mind that in some developing countries agriculture has been neglected for decades, it is not surprising that states stimulate investors to invest in the agricultural sector since it is seen as one of the efficient and quick solutions to problems that have long been out of the state's financial radar. In this sense, it seems that investment in agricultural land should probably be encouraged rather than hampered, especially given the fact that they can be a lever of economic development. However, the eternal controversy regarding this issue does not abate. Particular suspicion regarding investment in this sector stems from the fact that acquisitions bring with them several potentially negative effects. For this to happen, host countries must pursue well-designed policies to attract foreign direct investment, based on well-designed development strategies.

In other words, international transaction agreements must not be concluded on an *ad hoc* basis if the chances of negative effects of agricultural land acquisitions are to be minimized. It could be said that the recommendations for the policy of attracting foreign direct investment are: to ensure the rule of law and an adequate legal and institutional framework in advance (if they are weak, these countries have a great chance to experience the negative effects of agricultural land acquisitions), as well as to ensure non-discrimination of investors and good business conditions.

It turned out that one-third of all concluded contracts on agricultural land acquisitions were concluded for food production. Namely, the increased demand for food, *i.e.* agricultural products, has resulted in increased demand for agricultural land. The result of this increased demand is a large number of investments in agriculture, especially in developing countries where land is often considered underused. Investments in these countries are no surprise. On the contrary, they are only a reflection of investors for whom making a profit is always a motive, even if it was a secondary one, as in this case when the main motive is to satisfy the need for food.

The research showed that the growth of the acquired areas of agricultural land follows the growth of the world population. This indicates the positive influence of the increase of the world population on the increase of the demand for agricultural land in the world. In addition to the above, it has been shown that the linear growth trend of the acquired areas of agricultural land follows the growth of the world population. Therefore, we conclude that this trend is likely to continue in the future, *i.e.* that it is unlikely that the demand for agricultural land will decrease. World population growth will continue to be the background cause that will manifest itself through, *inter alia*, increased demand for agricultural products. This is supported by the conservative assessment of the World Bank (Deininger & Byerlee, 2011), that in developing countries, 6 million hectares of agricultural land will be put into use every year until 2030.

Furthermore, the paper showed that the number of international acquisitions of agricultural land over 200 hectares, *i.e.* the biggest number of acquired hectares in the world, was in 2013. Likewise, it was concluded that the true scale of land transactions (both in number and in the area of acquired agricultural land) is probably much higher than the current data show. Furthermore, this will be visible only in a few years when data on international transactions made in the last few years will hopefully be made public. In any case, it can be concluded that agricultural land acquisitions show a long-term growth trend.

All things considered, it can be concluded that the acquisitions of agricultural land are *in continuo*. Given the aforesaid, there is a need for policies to attract foreign direct investment in agriculture to be designed to maximize benefits and minimize potential drawbacks. This is because agricultural land acquisitions, on the one hand, have the potential to create new jobs, bring new technologies, knowledge, improve existing or build new infrastructure and improve agricultural production but, on the other hand, they can worsen the existing environmental situation, living standards, food security, rural development, competition, and human rights.

In any case, concluding contracts dealing with agricultural land transactions, without an adequate strategy for attracting foreign direct investment, *i.e.* without previously clearly set goals

of the host country (what kind of investments it wants to attract and what it expects from them), often leads to negative effects of such investments on the host country. For this not to happen, host countries must pursue well-designed policies to attract foreign direct investment, based on well-designed development strategies. In other words, international transaction agreements must not be concluded on an *ad hoc* basis if the chances of negative effects of agricultural land acquisitions are to be kept to a minimum. It could be said that the recommendations for the policy of attracting foreign direct investment are to ensure the rule of law and an adequate legal and institutional framework (this is because it turned out that, if they are weak, these countries have a great chance to experience the negative effects of agricultural acquisitions land), as well as to ensure non-discrimination of investors, and good business conditions. The mechanisms that would enable this could be the subject of some future research.

REFERENCES

Anderson, Kym. 2014. "Globalisation and agricultural trade." *Australian economic history review,* 54(3): 285-306.

Anseeuw, Ward, Mathieu Boche, Thomas Breu, Markus Giger, Jann Lay, Peter Messerli, and Kerstin Nolte. 2012a. "Transnational Land Deals for Agriculture in the Global South: Analytical Report based on the Land Matrix Database."

Anseeuw, Ward, Liz Alden Wily, Lorenzo Cotula, and Michael Taylor. 2012b. "Land Rights and the Rush for Land Findings of the Global Commercial Pressures on Land Research Project." https://www.cirad.fr/en/publications-resources/publishing/studies-and-documents/land-rights-and-the-rush-for-land.

Antonelli, Marta, Giuseppina Siciliano, Margherita Emma Turvani, and Maria Cristina Rulli. 2015. "Global investments in agricultural land and the role of the EU: Drivers, scope and potential impacts." *Land Use Policy,* 47: 98-111.

Budak, Ana. 2021. "Liberalizacija tržišta poljoprivrednog zemljišta u okviru pristupanja Republike Srbije Evropskoj uniji." PhD. diss. University of Belgrade.

Ethiopia: Are "Land Grab" Deals a Path to Food Security? 2020. GlobalVoices. https://globalvoices.org/2011/05/18/ethiopia-are-land-grab-deals-a-path-to-food-security/ (accessed April 10, 2020).

Borras Jr, Saturnino M., Jennifer C. Franco, Ryan S. Isakson, Les Levidow, and Pietje Vervest. 2016. "The rise of flex crops and commodities: implications for research." *The Journal of Peasant Studies,* 43(1): 93-115.

Borras Jr, Saturnino M., Elyse N. Mills, Philip Seufert, Stephan Backes, Daniel Fyfe, Roman Herre, and Laura Michéle. 2019. "Transnational land investment web: land grabs, TNCs, and the challenge of global governance." *Globalizations*: 1-21.

Borras, Saturnino M., Jennifer C. Franco, Sergio Gómez, Cristóbal Kay, and Max Spoor. 2012. "Land grabbing in Latin America and the Caribbean." *The Journal of Peasant Studies,* 39(3-4): 845-872.

Borras, Saturnino M., Jennifer C. Franco, and Chunyu Wang. 2013. "The Challenge of Global Governance of Land Grabbing: Changing International Agricultural Context and Competing Political Views and Strategies." *Globalizations,* 10(1): 161-179.

Campanale, Mark. 2013. "Private investment in agriculture." In *Handbook of Land and Water Grabs in Africa: Foreign Direct Investment and Food and Water Security*, Eds. Allan, Tony, Martin Keulertz, Suvi Sojamo, and Jeroen Warner (Vol. 25, pp. 358-386). London and New York: Routledge.

Cotula, Lorenzo. 2013. "The international political economy of the global land rush: A critical appraisal of trends, scale, geography and drivers." *The Journal of Peasant Studies,* 39(3-4): 649-680.

De Schutter, Olivier. 2008. "Building resilience: a human rights framework for world food and nutrition security, A/HRC/9/23, 8 September 2008." Geneva: https://www.refworld.org/docid/48cf71dd2.html.

De Schutter, Olivier. 2011. "How not to think of land-grabbing: three critiques of large-scale investments in farmland." *The Journal of Peasant Studies,* 38(2): 249-279.

Deininger, Klaus, and Derek Byerlee. 2011. *Rising global interest in farmland: can it yield sustainable and equitable benefits?* Washington, D.C.: The World Bank.

Deutsche Bank Group. 2009. "Investing in Agriculture: Far-Reaching Challenge, Significant Opportunity An Asset Management Perspective." https://www.db.com/us/docs/Ag_whitepaper_062409.pdf.

Faure, Alexandre. 2015. "Public international law controversies over land acquisition and lang grabbing: a socio-legal perspective." 1-9.

Fernández, Luis Tomás Montilla. 2017. *Large-Scale Land Investments in Least Developed Countries: Legal Conflicts Between Investment and Human Rights Protection.* Cham: Springer.

Food and Agriculture Organization of the United Nations. 2011. "The State of Food Insecurity in the World: How does international price volatility affect domestic economies and food security?". Rome: http://www.fao.org/3/i2330e/i2330e.pdf.

Foreign land purchases for agriculture: what impact on sustainable development. 2020. United Nations. https://sustainabledevelopment.un.org/content/documents/no8.pdf (accessed March 7, 2020).

Friis, Cecilie, and Anette Reenberg. 2010. "Land grab in Africa: Emerging land system drivers in a teleconnected world, GLP Report No. 1, GLP - A Joint Research Agenda of IGBP and IHDP." Copenhagen: https://www.farmlandgrab.org/wp-content/uploads/2010/08/GLP_report_01.pdf.

Genoud, Christelle. 2018. "Flex crops neverland: finding access to large-scale land investments?" *Globalizations,* 15(5): 685-701.

Gerlach, Ann-Christin, and Pascal Liu. 2010. "Resource-seeking foreign direct investment in African agriculture." FAO Commodity and Trade Policy Research Working Paper No. 31. Food and Agriculture Organization of the United Nations.

Godfray, H. Charles J., John R. Beddington, Ian R. Crute, Lawrence Haddad, David Lawrence, James F. Muir, . . . Camilla Toulmin. 2010. "Food Security: The Challenge of Feeding 9 Billion People." *Science,* 327(5967): 812-818.

GRAIN. 2008. "SEIZED! The 2008 land grab for food and financial security." Barcelona: https://www.grain.org/article/entries/93-seized-the-2008-landgrab-for-food-and-financial-.

GRAIN. 2016. "The global farmland grab in 2016: how big, how bad?". Barcelona: https://www.grain.org/article/entries/5492-the-global-farmland-grab-in-2016-how-big-how-bad.

Hall, Ruth. 2011. "Land grabbing in Southern Africa: the many faces of the investor rush." *Review of African Political Economy,* 38(128): 193-214.

Keča, Ranko. 1993. *Zemljišno pravo i pravni režim poljoprivrednog zemljišta.* Novi Sad: Centar za izdavačku delatnost Pravnog fakulteta u Novom Sadu.

New Regulation On Selling Agricultural Properties in Poland. 2021. Interlegal. https://www.interlegal.net/new-regulation-on-selling-agricultural-properties-in-poland/ (accessed March 7, 2021).

Kuhn, Lena, and Ihtiyor Bobojonov. Forthcoming. "The role of risk rationing in rural credit demand and uptake: lessons from Kyrgyzstan." *Agricultural Finance Review*.

Global Observatory. 2020a. Land Matrix Initiative. https://landmatrix.org/global/ (accessed July 27, 2020).

Land Matrix public database on land deals. 2020b. Land Matrix Initiative. https://landmatrix.org/ (accessed March 25, 2020).

Mehta, Lyla, Gert Jan Veldwisch, and Jennifer Franco. 2012. "Introduction to the Special Issue: Water grabbing? Focus on the (re)appropriation of finite water resources." *Water Alternatives,* 5(2): 193-207.

Mfaniseni Wiseman, Mbatha, and Masuku Mfundo Mandla. 2018. "Small-Scale Agriculture as a Panacea in Enhancing South African Rural Economies." *Journal of Economics and Behavioral Studies,* 10(6): 33-41.

Nolte, Kerstin, Wystke Chamberlain, and Markus Giger. 2016. "International Land Deals for Agriculture: Fresh insights from the Land Matrix, Analytical Report II." Montpellier/Hamburg/Pretoria: https://landmatrix.org/publications/.

Ojulu, Ojot Miru. 2013. "Large-scale land acquisitions and minorities/indigenous peoples' rights under ethnic federalism in Ethiopia." PhD diss. Bradford University.

Fewer restrictions on the acquisition of agricultural land. 2021. Dla Piper. https://www.dlapiper.com/en/us/insights/publications/2019/07/real-estate-gazette-35/fewer-restrictions-on-the-acquisition-of-agricultural-land/ (accessed March 7, 2021).

Pretty, Jules. 2008. "Agricultural sustainability: concepts, principles and evidence." *Philosophical Transactions of the Royal Society B: Biological Sciences,* 363(1491): 447-465.

Rulli, Maria Cristina, and Paolo D'Odorico. 2013. "The science of evidence: the value of global studies on land rush." *The Journal of Peasant Studies,* 40(5): 907-909.

Rulli, Maria Cristina, Antonio Saviori, and Paolo D'Odorico. 2013. "Global land and water grabbing." *Proceedings of the National Academy of Sciences,* 110(3): 892-897.

Scoones, Ian, Ruth Hall, Saturnino M. Borras, Ben White, and Wendy Wolford. 2013. "The politics of evidence: methodologies for understanding the global land rush." *The Journal of Peasant Studies,* 40(3): 469-483.

Sharma, Sachin Kumar, Teesta Lahiri, Suvayan Neogi, and Raihan Akhter. 2021. "Revisiting domestic support to agriculture at the WTO: Ensuring a level playing field." *The Journal of International Trade & Economic Development*: 1-17.

Spieldoch, Alexandra, and Sophia Murphy. 2009. "Agricultural Land Acquisitions: Implications for Food Security and Poverty Alleviation." In *Land grab? The race for the world's farmland*, Eds. Kugelman, Michael and Susan L. Levenstein (pp. 39-54). Washington, D.C.: Woodrow Wilson International Center for Scholars.

Woertz, Eckart. 2013. "The Governance of Gulf Agro-Investments." *Globalizations,* 10(1): 87-104.

Woodhouse, Philip. 2012. "New investment, old challenges. Land deals and the water constraint in African agriculture." *The Journal of Peasant Studies,* 39(3-4): 777-794.

Zoomers, Annelies. 2010. "Globalisation and the foreignisation of space: seven processes driving the current global land grab." *The Journal of Peasant Studies,* 37(2): 429-447.

Article history:	Received: November 11, 2021
	Revised: March 8, 2022
	Accepted: April 5, 2022