

Agricultural Superclans

November, 2025

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Executive

Summary



The New Landlords

Agriculture is the defining feature of the longest stretch of recorded human history, and it may be said that the world ‘after Eden’ has been close to wholly shaped by it (page 8). One of the ways that happened is the establishment of tri-partite societies and economies, where about 10% of the population have the financial, social and cultural capital to handle most productive forces in the economy. Even contemporaneously, only about 10% of businesses produce genuine economic value and most wealth is held by the 10%. Occasionally, that 10% has successfully reproduced to create what may be called a superclan and, initially, most such superclans were agricultural in nature, otherwise known as the nobility (page 10).

While the First and Second Industrial Revolution created vast disturbances in this structure (page 19), the system itself returned to its long-term equilibrium in the same social structure after a brief interlude during the 1950s and 1960s, most notably in the United States.

Agriculture itself exemplifies this. Once upon a time, agricultural land was a matter of fiefdoms, inherited across generations. Those estates, over time began being broken-down through inheritances or personal decisions and the average farm size decreased significantly. However, agricultural land, alongside water rights, have grown in value and importance over the past decades (page 28), with a U.S. DoA figure of about 75% for U.S. agricultural land over the past decade alone.

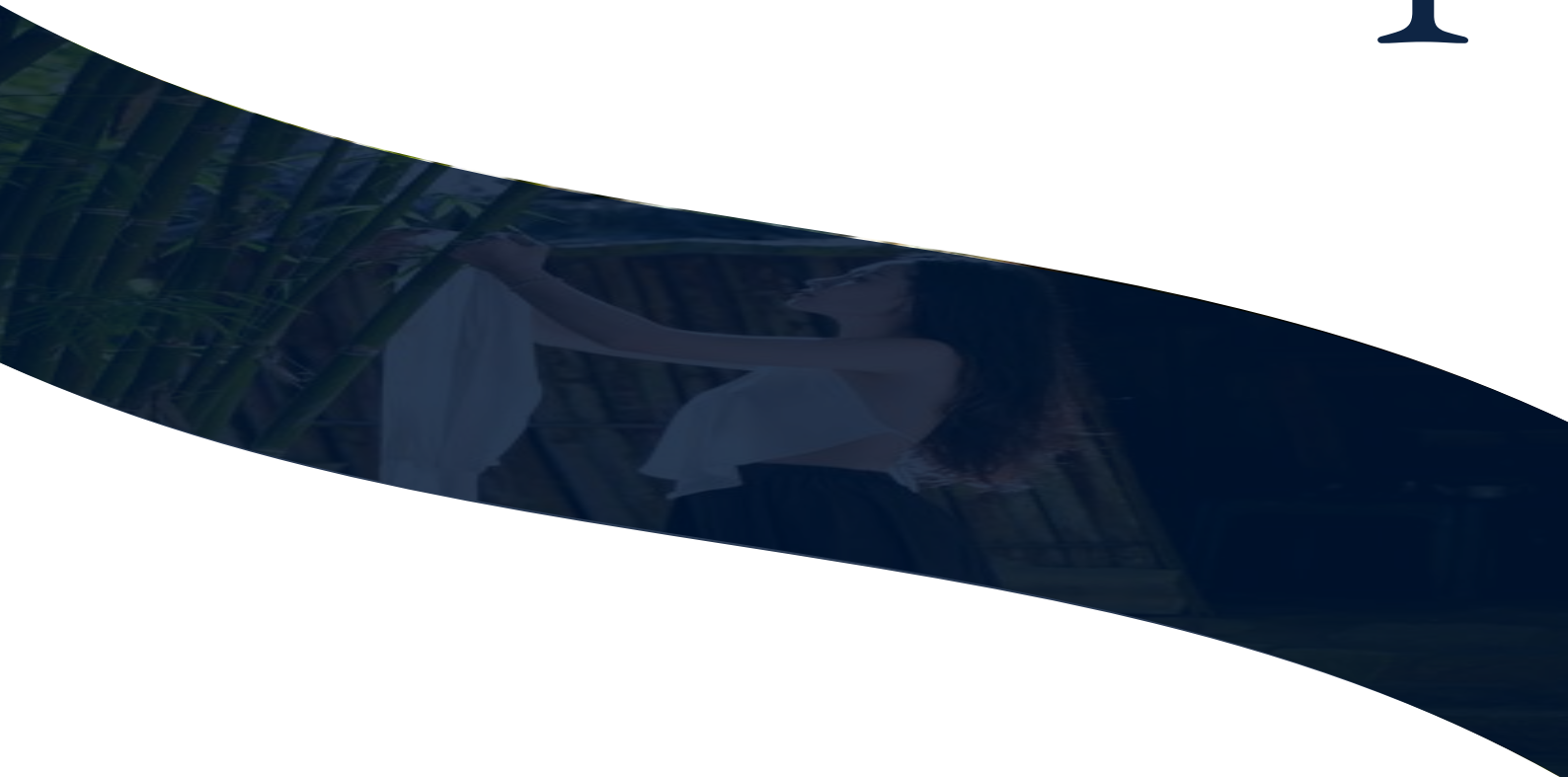
Coupled with the higher fixed capital investment needed for novel production methods (page 44), this dynamic has attracted significant financial capital (page 39) into the agriculture industry, a significant proportion of which comes from private capital in the form of family offices and family-run investment SPVs such as the Gates' agricultural investments. The effect, initially in the United States and now globally, is a shift in the agricultural market from one set of families to a new breed of agricultural nobility which takes the older owner-operator model and focuses solely on

ownership backed by private financial capital. This strategic investment decision is partially driven by the end of The Great Moderation as prices and geopolitics alike with the end of the Third Wave of Globalization potentially bringing, among other things, structurally higher market prices. As once happened to industrial production, this new agricultural nobility may reshape agriculture through higher investments, rationalization and openness to innovation and it remains to be seen how agriculture will look like under the aegis of its new superclans.

Radu Magdin

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CEO, Smartlink Communications



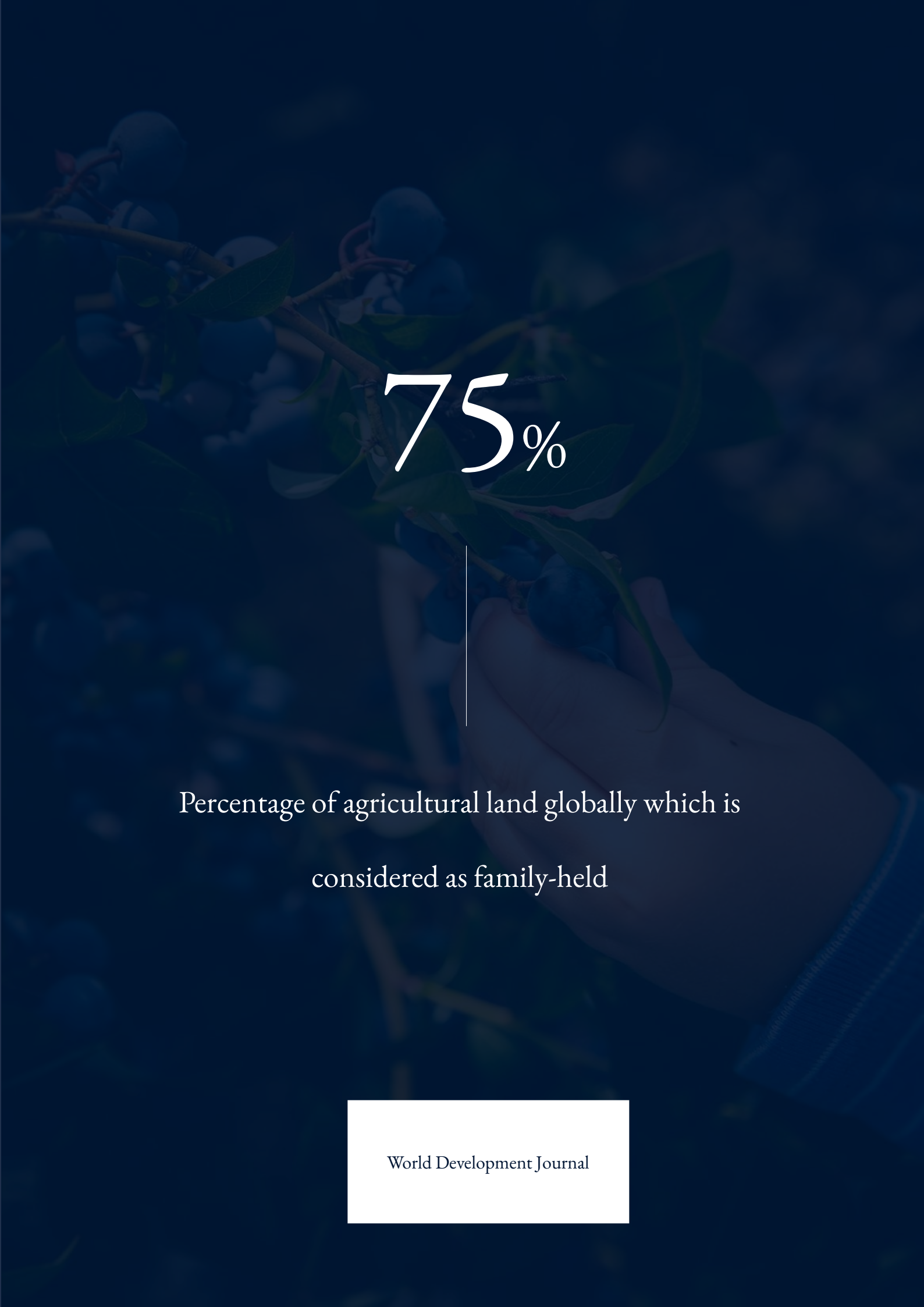
Agricultural
History



Land, Then & Now

For most of recorded human history, wealth has not been stored in gold coins, bank accounts or paper assets of any sort but in the territorial claims on the land beneath our feet. In fact it may be said that land has been the foundation of material survival, political power and social order – a dynamic as applicable to ancient Rome, feudal Europe, imperial China as to the colonial empires of the early modern world. In all of these places and times, agricultural land has been the primary store of wealth, the currency of loyalty in social relations and the indispensable means of production. Even contemporaneously, despite financialization and industrialization, ownership of fertile land remains tied to stability, prestige and enduring wealth, as reflected in the investments of family offices.

Quite simply, wealth in the agrarian world was never abstract. Unlike modern financial systems, where capital is fundamentally digital, wealth in agricultural societies was tangible, tied to harvests, herds and the land itself. Fertile fields yielded rice and grain, which in turn supported armies, bureaucracies and trades-focused urban populations. Rents, taxes and tribute were more often than not measured in produce or its gold equivalents. Landowners could store wealth through surplus harvests and pass on land through inheritance, dowry, bride prices or tribute. The reasons for land's centrality can be broken into three interwoven dimensions: land has been used as a store of wealth, the currency of social relations, and, not least, a means of production – more often than not the only means of production.

A dark blue background featuring a close-up of a hand holding a branch of blueberries. The hand is positioned on the right side, with fingers gently gripping the branch. The blueberries are small, round, and have a slight white bloom. The leaves are green and elongated. The overall lighting is soft, creating a calm and natural atmosphere.

75%

Percentage of agricultural land globally which is
considered as family-held

World Development Journal

The Roman Empire may serve as an example of the concentration of land-based wealth. The Roman aristocracy, particularly among the senatorial class, derived their fortunes from *latifundia*, vast estates worked by slaves or tenant farmers. These estates were not merely economic ventures but engines of political power: landowners controlled votes, could fund private armies and held sway in provincial administration. Thus, land served as the basis for Rome's patron-client relationships: patrons dispensed protection and favours to clients, who in turn provided loyalty, military service or political support meaning that, for practical purposes, landownership was the ultimate qualification for status within the Roman Senate.

The enduring Roman model — *large estates tied to elite dominance* — would find themselves as a pattern across medieval Europe and beyond.

After the collapse of Roman authority in the West, Europe fragmented into localized political units where, again, land was the binding agent of order. The feudal system, emerging around the 9th century, was fundamentally a similar land-for-loyalty arrangement. Kings granted fiefs — essentially parcels of land — to nobles in exchange for military service and allegiance. These nobles, in turn, sublet portions to knights and vassals, creating a cascading hierarchy of obligation. Land here was not only wealth but currency itself. Titles and estates were often inseparable and inheritance law revolved around securing lineage continuity through landholding. Castles, manors and villages were economic as well as military units. Agricultural surpluses sustained feudal lords and eventually enabled the rise of towns. The medieval Church also emerged as one of the largest landholders and monasteries accumulated estates through donations,

purchases, and inheritances, making the Church not only a spiritual power but also a noteworthy economic behemoth.

Meanwhile, in the Islamic world, land likewise remained central to wealth and governance. Under the Abbasid Caliphate and later empires, agricultural land was assessed and taxed, with revenues funnelled into the maintenance of armies, mosques and urban centres. Systems like the *iqta'* granted land revenues to military commanders or officials, fundamentally being quite similar to feudal practices in Europe.

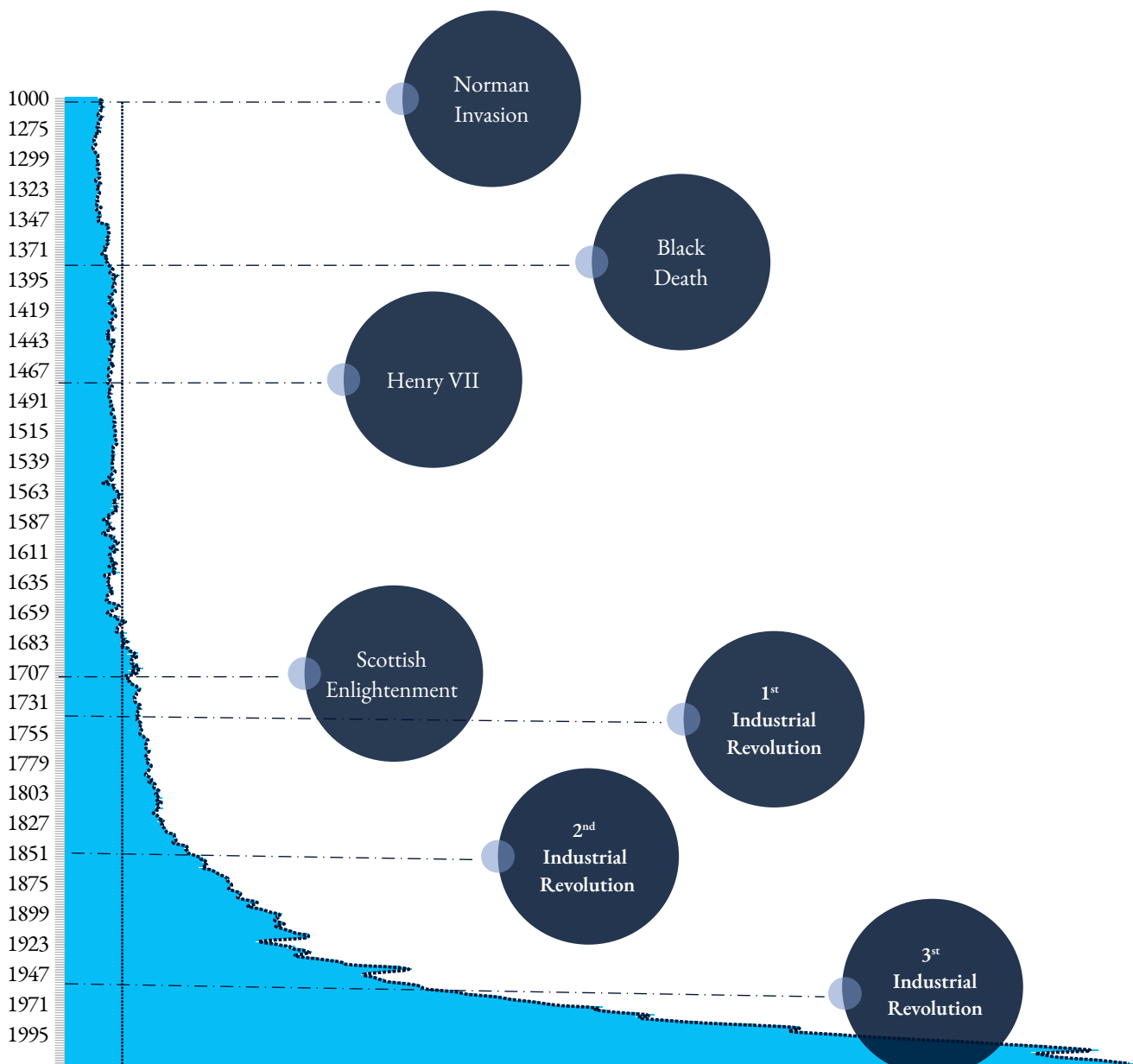
Somewhat later, in the Ottoman Empire, the *timar* system allocated land revenues to cavalrymen in return for military service. Land ownership itself legally remained the property of the sultan, or royal family, but usufruct rights tied elites to the state.

In East Asia, for centuries, the agrarian economy revolved around smallholder farmers, who were the backbone of both the tax base and the Confucian moral order. Land was revered not only as property but as the lifeline of family lineage, with an emotional relation that may often be heard in speech today relating to family.

This intergenerational focus also meant that great estates accumulated over time, often controlled by scholar-official families who combined bureaucratic positions with extensive landholdings. Periodic attempts at reform ought to check this concentration, but wealthy families all across East Asia consistently found ways to reassert dominance in the form of land ownership, an enduring theme to this day in places such as Korea or China.

United Kingdom GDP per capita

The United Kingdom GDP per Capita (PPP) between 1000 and 2018, based on the Maddison dataset, reflecting the impact of the First Industrial Revolution.





Land After Industrialization

The agricultural revolution, roughly dated to England between the 17th and 18th century, would trigger a tectonic change in agriculture, paving the way for industrialization. First it needs to said that it did not not spontaneously emerge but built upon close to a century of incremental change. Innovations such as crop rotation, selective breeding and the enclosure of common fields that solved the ‘paradox of the commons’ produced dramatic increases in agricultural productivity. The open-field system that had dominated Europe to that time, where peasants farmed strips of land in communal arrangements, gradually gave way to enclosed holdings controlled by private landlords. This enclosure movement, legally sanctioned and politically enforced, had profound consequences for the structure of rural society.

Peasants who lost access to common pastures or woodlands were forced either into wage labour or migration to urban centres. Landlords, for their part, consolidated holdings, invested in improvement, and began to view their estates less as sources of traditional rents and more in the framework of rational profit maximization. Simultaneously, the scientific revolution transformed the intellectual framework through which land and nature were understood. From the 17th century onwards, thinkers like Francis Bacon and later agricultural improvers applied experimental methods to farming, promoting systematic observation, trial, and innovation. The idea that nature could be understood, classified, and manipulated by human reason encouraged landlords and agronomists alike to treat soil, crops, and

livestock as objects of technical improvement rather than merely elements of customary routines. The scientific societies of the time published treatises on new fertilizers, drainage techniques and even rudimentary machinery. That diffusion of knowledge meant that land was no longer simply inherited and managed according to ancestral tradition: *it became a site of experimentation and investment*. This shift reflected a deeper epistemic break. Land was no longer a fixed background to social life, imbued with customary obligations and symbolic power, but rather an object of calculation, rationalization and exploitation. Where medieval landholding had bound lords and peasants in a web of mutual obligations, early modern innovations began to sever those ties. Landlords increasingly displaced what may be called traditional tenants in favour of more efficient leaseholders or wage labourers.

Meanwhile, agricultural surpluses allowed for population growth, urbanization, and the feeding of new industrial centres. The countryside, once an immutable hearth of society, became a dynamic arena of displacement, opportunity and at times unrest. In this sense, the agricultural revolution was not merely about higher crop yields or better plows: it represented the transformation of land from a communal foundation of subsistence into a commodity embedded in wider circuits of exchange. This transformation carried with it deep social tensions. The rural poor, dispossessed of access to commons, became the labouring poor of the towns just as the concentration of land in fewer hands magnified inequality. In some regions, riots broke out against enclosure or new machinery, testifying to the human costs of agrarian modernization. Yet for the landed gentry and aristocracy, the revolution initially reinforced their power.

GDP Per Capita in 1950 *compared to* 1000

Asia

1000-1950

65%⁺

Europe

1000-1950

887%⁺

U.S.

1000-1950

1500%⁺

Africa

1000-1950

200%⁺

By adopting improvements, investing in their estates, and leveraging their political influence, they increased both their wealth and their dominance over rural populations. Land remained the marker of social status and political authority: parliamentary representation in England, for instance, was tied to property, ensuring that those who controlled land also controlled law. Industrialization, beginning in the late 18th century and accelerating in the 19th, radically altered this equation. Factories, machines and new energy sources introduced a form of production that no longer depended directly on land. Urban centres swelled, drawing labour away from the countryside. While agricultural productivity remained essential for feeding growing populations, the relative weight of land in the economic order declined. Industrial capital rather than landed estate became the principal source of wealth and dynamism.

This further change of economic primacy produced cascading changes in social relations and class structures, with Polanyi's *The Great Transformation* offering a framework for understanding the significance of this moment. He argued that industrial capitalism required the creation of "fictitious commodities" — land, labour, and money — that were drawn into the self-regulating market despite not being originally produced for sale. Land, in this vision, was transformed from the lived environment of communities into an abstract factor of production to be bought and sold, something we may see as self-evident today but which was not actually the case before. The enclosure movement of earlier centuries did indeed foreshadowed this process, but industrialization brought it to its logical conclusion to deliver a society that we may recognise contemporaneously without much of a stretch of mind.

1.

First Industrial Revolution

This includes such developments as the spinning jenny and the first steam engines. This is the era when Northern Europe began its ascent in terms of GDP per capita as well as what became the greatest phenomenon of wealth creation in history, namely industrialization and the creation of modern nation states.

2.

Second Industrial Revolution

This includes such developments as electrification, the first steelworks and what we would today call mass manufacturing and Taylorism. This is also the era where the United States began overtaking Western Europe and eventually set-up the post-war political and economic order.

3.

Third Industrial Revolution

This refers to the developments in automation, digitalization and what came to be called the Information Technology Revolution during the 1970s. This in turn allowed for the globalization away from the United States while also dooming Soviet industry to increasing obsolescence

The decline of the landed gentry illustrates this transformation vividly. In early modern Europe, landowning elites not only controlled wealth but also dominated politics, culture and social prestige, with the aristocracy's identity close to inseparable from the estates which provided rents, sustained households and underpinned patronage networks.

Yet as industrial fortunes rose, the gentry found themselves increasingly eclipsed by new industrialists and financiers. Coal mines, textile mills, railways and banks produced fortunes that rivalled and then surpassed those of traditional landlords. The industrial bourgeoisie challenged the landed aristocracy not only economically but also politically, demanding representation and reforms that reflected their new weight in society. By the late 19th century in Britain, for example, industrial capitalists had joined and reshaped the

House of Commons, while landowners saw their political grip loosen. This was not merely a matter of money but of social relations. The gentry's paternalist role in rural communities, providing charity and leadership, declined as labourers left for cities. Agricultural workers, reduced to a dwindling proportion of the population, lacked the political leverage of the urban working classes. The landed estate ceased to be the centre of economic life. Many aristocratic families fell into debt, selling off portions of land or marrying into wealthy industrial families to preserve status. Others reinvented themselves as investors, using the proceeds of land sales to buy into industrial enterprises.

However, ultimately, the symbolic authority of the gentry weakened. Industrial cities, not rural manors, became the centres of culture, politics, and progress.

Industrialization thus reconfigured class relations. The traditional tripartite division of landlords, tenants, and labourers gave way to the industrial hierarchy of bourgeoisie and proletariat. Land lost its centrality as a store of wealth, displaced by capital. The urban working class, concentrated in factories, became the new focal point of what came to be called social struggle, as evidenced by the rise of trade unions and socialist movements. The bourgeoisie, rather than the gentry, became the dominant class shaping policy, culture and ideology.

Yet the legacy of land-based relations did not vanish entirely. In many parts of Europe, peasantries persisted, and conflicts over land reform remained acute well into the 20th century. But the structural dominance of land as the organizing principle of wealth and society had been broken.

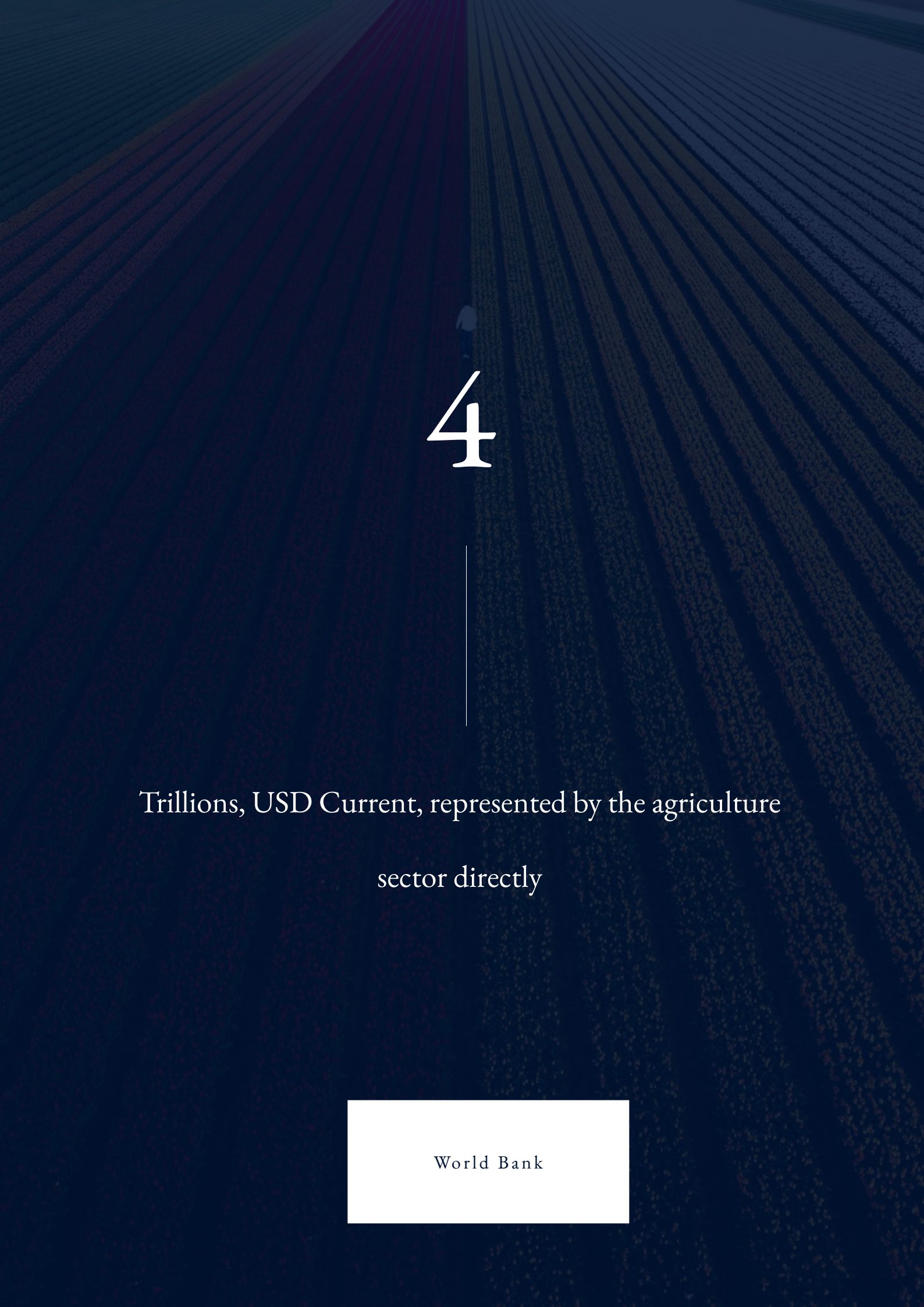
Polanyi emphasized that this transformation, whether one considers it beneficial or pernicious, was not natural or inevitable but enforced through political decisions, legal changes and state interventions. It was, in other words, a choice. The market system had to be created and in creating it society was dis-embedded from the traditional institutions that had in turn bestowed traditional meaning to land and labour. The commodification of land was, at least in his account, deeply destructive, uprooting communities and degrading the environment. Yet it also created the conditions for new forms of politics, as workers organized to protect themselves and the state eventually intervened to regulate markets. The decline of the landed gentry, then, was part of a broader process in which entire social orders were overturned, and new balances of power established.

Contemporaneously, land, and location, has been playing a diminishing role over the past 60 years. Globalization may also be understood as the progressive shrinking of space and time. From the 16th century onward, maritime exploration linked continents in new ways and by the 19th century the spread of steamships, railways and telegraphs had created an unprecedented compression of distance. Location remained crucial — ports like Liverpool, Singapore or Hong Kong thrived as global hubs — but its meaning was shifting from absolute geography to relative connectivity. What mattered was not only where a city or region was located physically but how well it was tied into global circuits of trade, finance and migration. The Third Industrial Revolution, beginning in the late 20th century with the rise of information technology intensified this trend dramatically. The value of location became less about immovable physical advantages

and more about integration into flows of data, capital, and knowledge — which in turn changed the underlying framework of agriculture and land-based wealth. In earlier industrial revolutions, access to coalfields, waterways or arable land determined geopolitical power. After the Third Industrial Revolution, strategic locations are defined by control over digital infrastructure, undersea cables, rare earth minerals, and semiconductor manufacturing facilities. Similarly, the placement of data centres, cloud servers, and internet exchange points gives certain locations out-sized geopolitical importance.

Nevertheless, the past two decades saw a reversal of this trend, with what may be called the tail end of the Third Wave of Globalization. Within the context of non-polarity and rising trade tensions, what we have been seeing is a return of global financial capital to what may be termed ‘the

fundamentals' of agriculture and basic commodities, including water rights. This, in turn, is creating a new breed of 'agricultural superclans' whereby significant amounts of private capital, including from family offices, are accumulating vast estates similar to the former nobility but in a very much contemporaneous manner.



4

Trillions, USD Current, represented by the agriculture
sector directly

World Bank

Agricultural
Wealth

Tri Partite Structures

A tripartite society is a social structure characterized by three distinct and more often than not hierarchical groups or classes. Such structures have remained more or less stable throughout recorded human history, irrespective of the economic, social, geographic context from the start of settled agricultural civilisations. What may be called the ruling class, composed of about 10% of the population, in Piketty's framework, with various degrees of heterogeneity inside it, tend to control more than the majority of wealth within that society, this pattern remaining more or less uniform from early society to contemporary society, with the exception of the period between the 1940s to the late 1970s in the United States.

35%

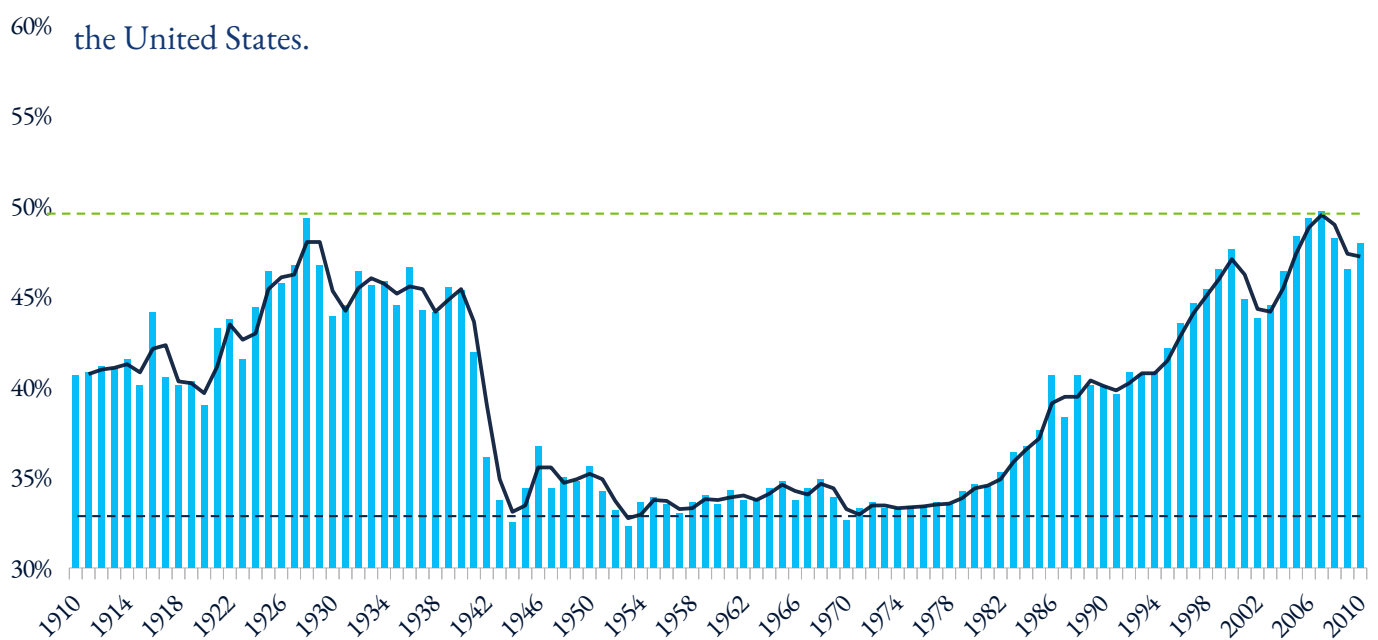
Proportion of national wealth held by the top 1% in the United States, 2023.

WID

35%

Proportion of national wealth held by the top 1% in the Uganda, 2023.

WID



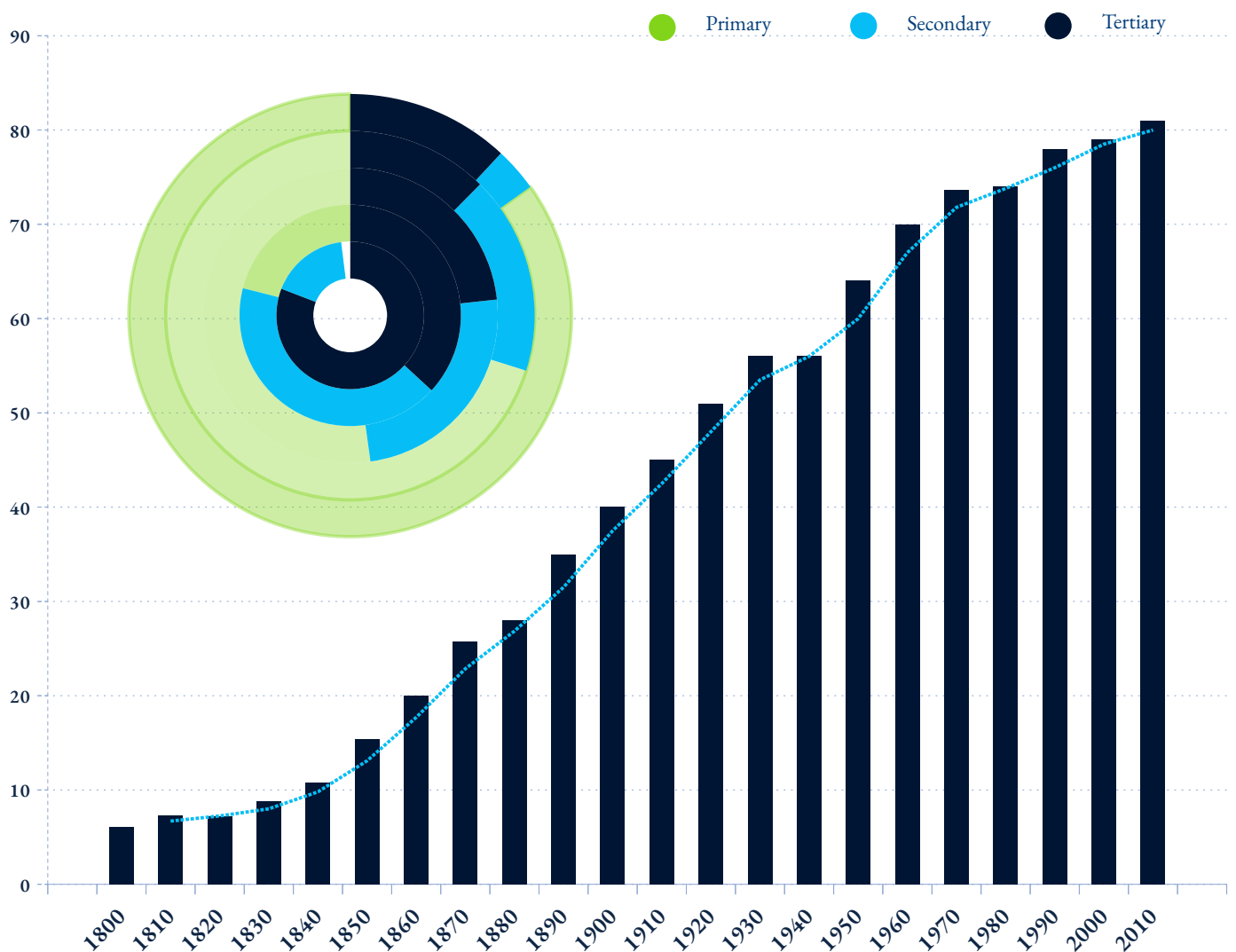
Economic Structure

0.9%

That pattern, based on ownership of capital, is related to the nature of that capital as a means of production and the economic value derived of it. The First and Second Industrial Revolution profoundly changed the nature of that capital, away from the primary sector towards the secondary and tertiary sectors.

Percentage GDP in the United States represented by the agricultural sector, in 2022.

World Bank



Rate of urbanisation in the United States, together with a breakdown of the sectoral composition of GDP in 1800, 1850, 1900, 1950 and 2000.

St. Louis Federal Reserve

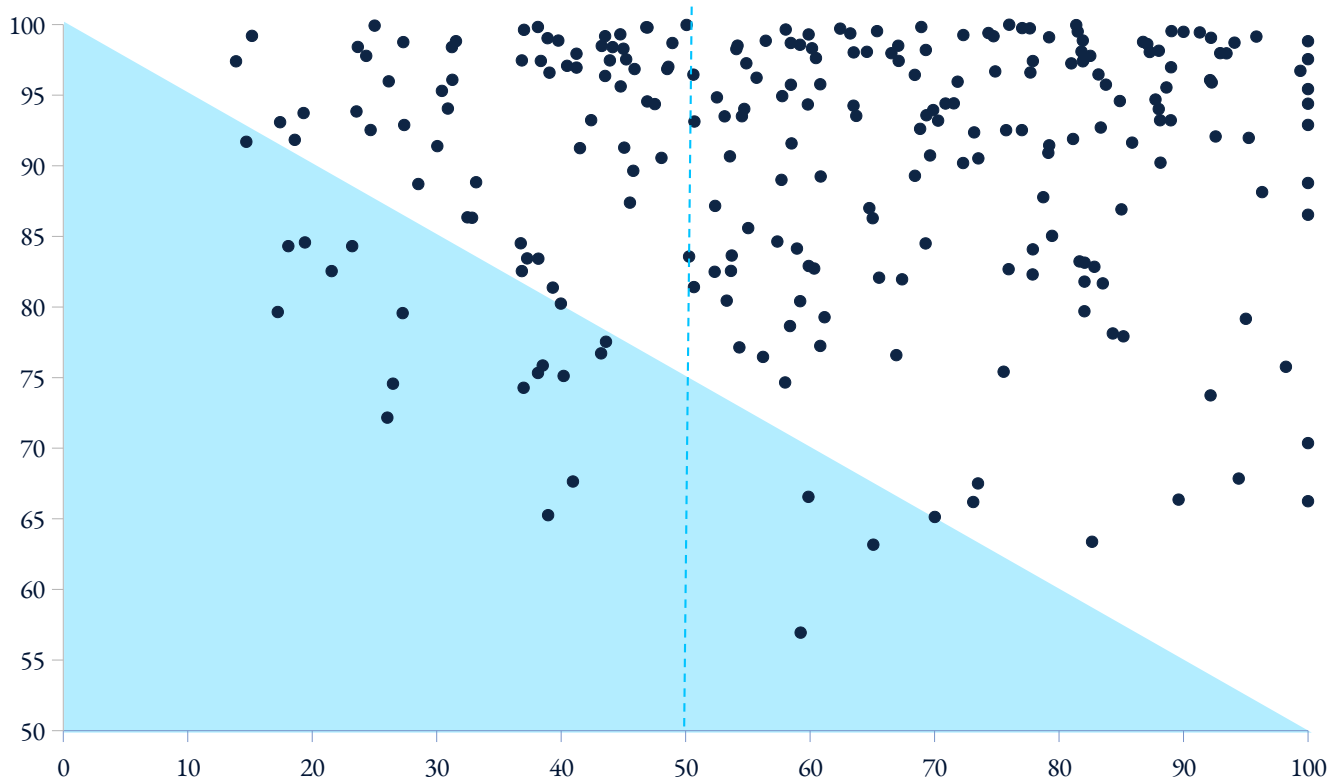
Global Changes

That pattern has repeated across the globe, with both the proportion of the population that is rural as well as the percentage added to GDP by agriculture, forestry and fishing diminishing considerably across the globe, irrespective of continent. Contemporaneously, using World Bank estimates, there aren't any countries that derive a majority of their GDP from agriculture and there are more countries with a rate of urbanization above 50% than below it.

167

Number of countries
in World Bank
categorization that
have a rate of
urbanization above
50%

Personal Research



Individual countries in the World Bank categorization. The X-Axis represents the rate of urbanization and the Y-Axis represents 100 – the percentage of GDP represented by Agriculture, Forestry and Fishing.

World Bank

The background of the entire image is a dark, blue-tinted photograph of wheat stalks. The stalks are arranged in a way that creates a sense of depth and texture, with some stalks in the foreground being more prominent than others.

26%

Employment in agriculture as a percentage of total
employment, global estimates

World Bank

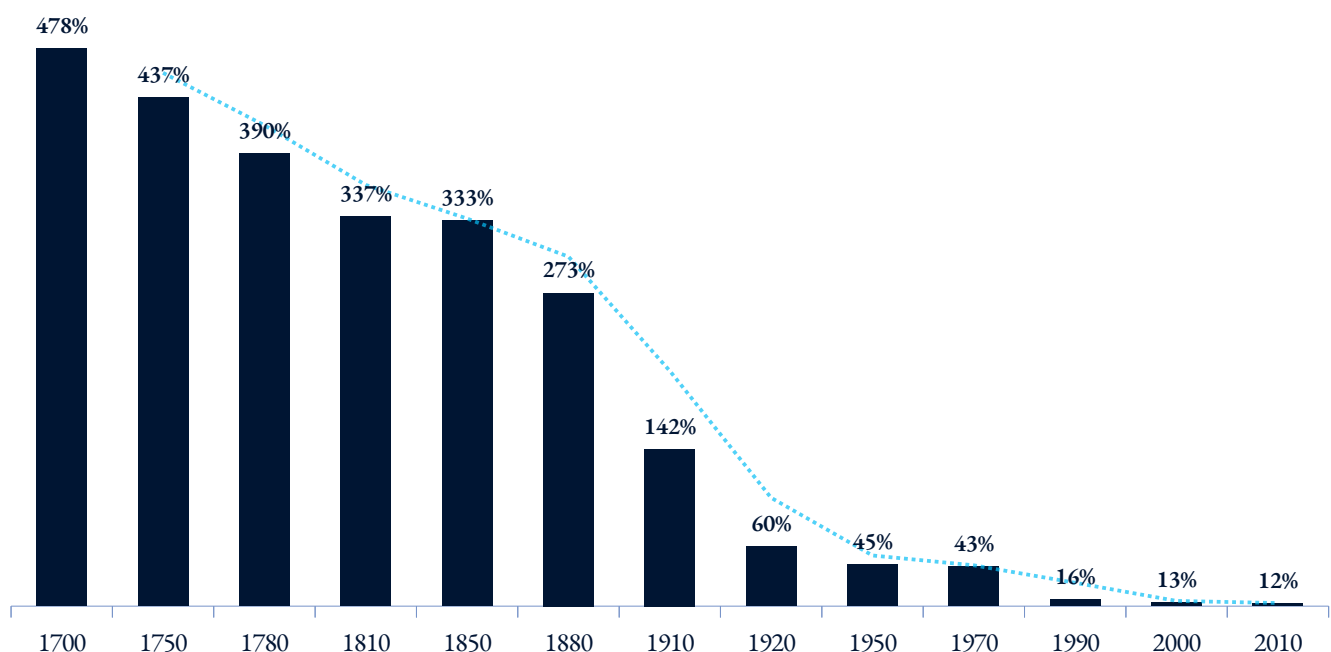
Structure of Capital

That change in turn has meant that, over the past three hundred years wealth held as land has diminished considerably. In turn, this changed the structure of wealth inside industrial and industrialising economies, with the older aristocratic classes and landed gentry giving way both the fast movers within their own ranks and to new entrants whose wealth began deriving from fixed capital in the form of machinery, patents and factory organisations, such that even in traditionally agriculture-focused France private wealth in the form of land accounted for just 60% of national income by 1920, down from 273% as late as 1880, with even faster patterns seen in the United States and the United Kingdom.

478%

Proportion of national income that was held as private wealth in the form of land in 1700, in France.

Piketty



Proportion of national income held as private wealth in the form of land ownership, in France, between 1700 and 2012.

Piketty

Structure of Wealth

This need not imply or be extrapolated into an implication of a catastrophic decline in the value of property in general, only of land as a proportion of national wealth.

Property in general had in fact both kept a significant proportion in national wealth as well as kept a significant role in the upper classes' maintenance of wealth beyond agricultural land, at time being the same families which have begun transferring wealth from the rural to the urban.

91%

Proportion of national property by market value that was held by the top 10% in 1912.

Piketty



Proportion of property, measured as cumulative market value, held by the top 10%. France, 1900 to 2020.

Piketty

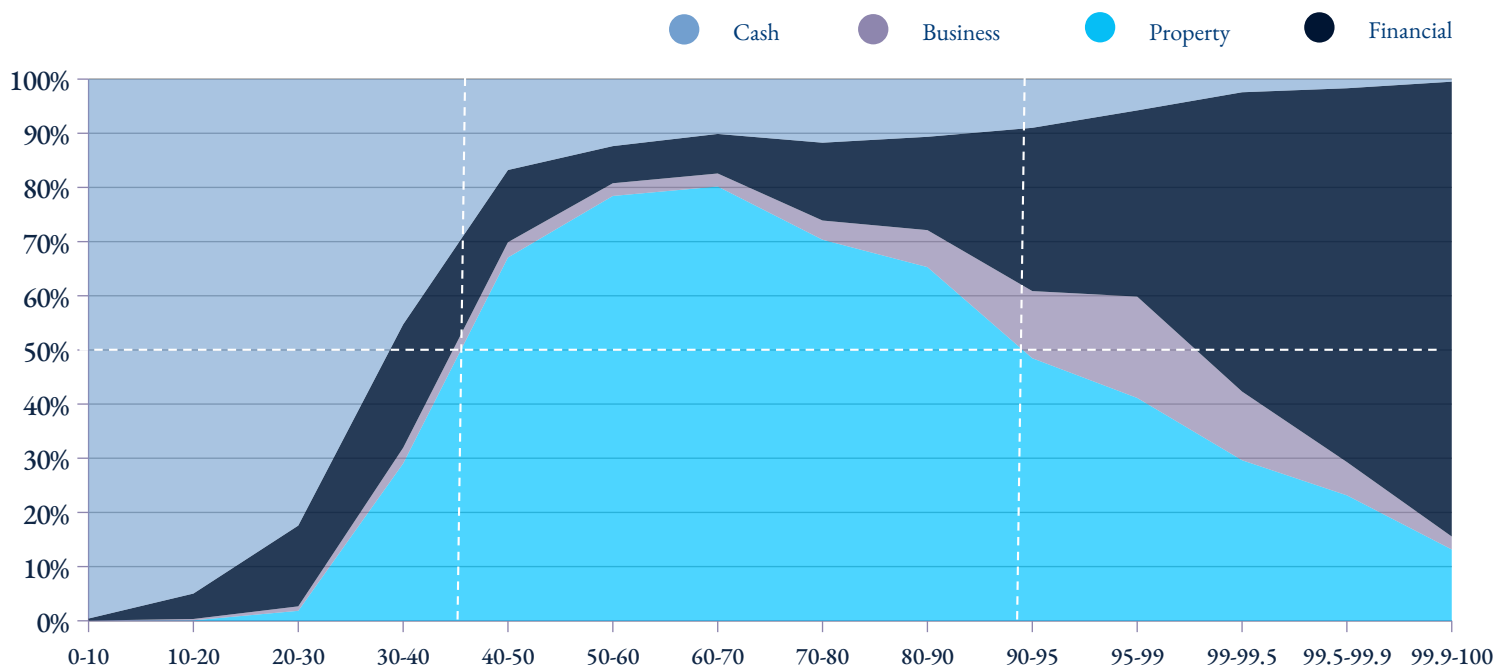
The Role of Property

Indeed, that property, inclusive of rural and urban holdings, remains the main store of wealth for most families across wealth percentiles up to the 90% level, meaning the top 10% of wealthy families, where financial assets start inexorably rising in importance to the 1% level of wealth, where they start representing more wealth than property. That implies that up until the 1% level, property in various forms represents the majority of families' wealth.

99%

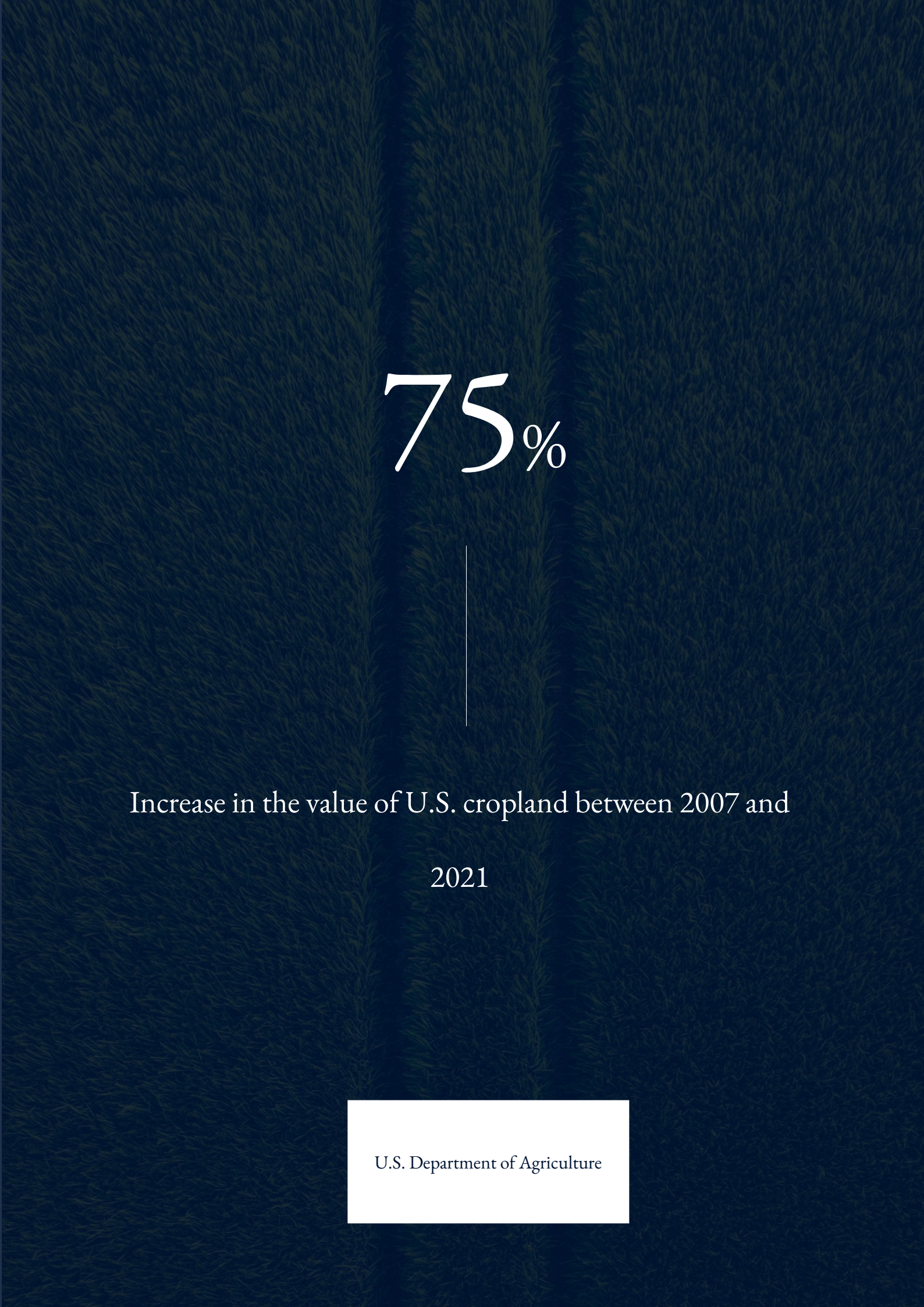
Wealth quantiles where property starts representing less than 50% of all household wealth.

Piketty



Proportion of national income held as private wealth in the form of land ownership, in France, between 1700 and 2012.

Piketty



75%

Increase in the value of U.S. cropland between 2007 and
2021

U.S. Department of Agriculture

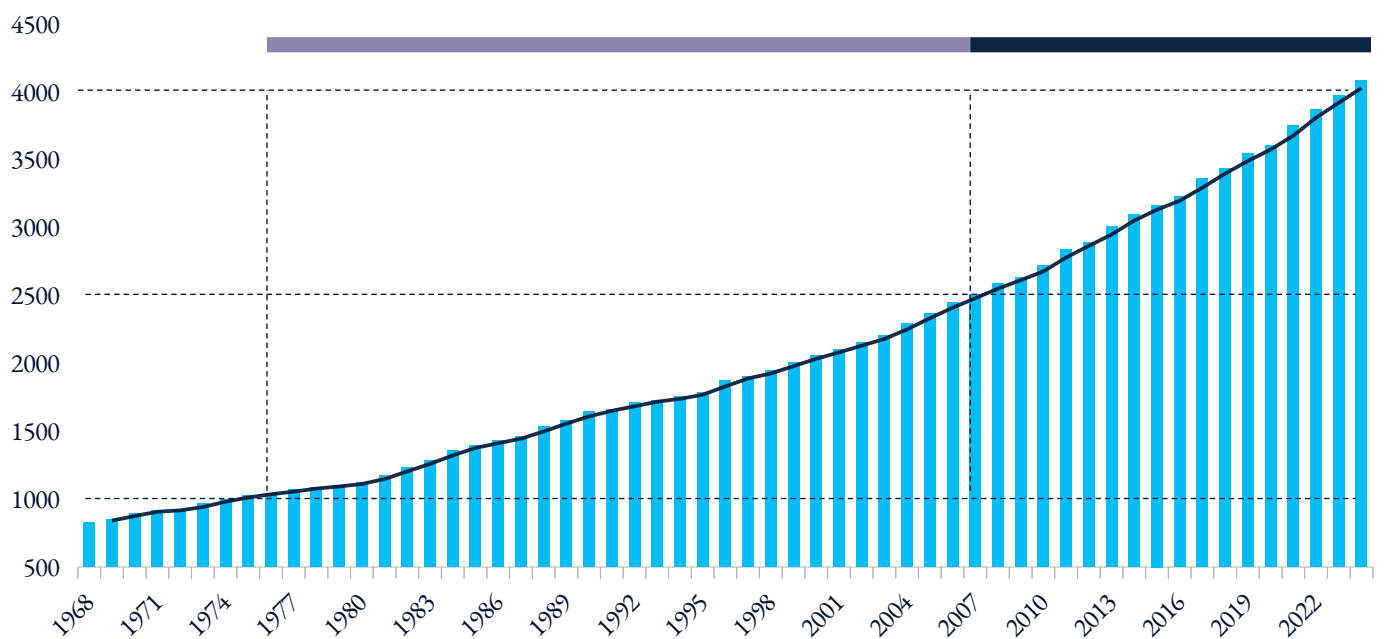
The Role of Agriculture

Furthermore, while agriculture as a percentage of total GDP or total employment has been declining, the absolute value of agriculture has been increasing, growing at an increasingly fast pace to USD 4,500 billion in 2023 from USD 830 in 1968. That implies that those who did sustain farm holdings and did adapt to changing market and technological conditions, hardly faced some reduction to penury but did in fact prosper along with the rest of the economy. Coupled with the endurance of property as a store of wealth, this puts agriculturists' wealth in a more nuanced context.

4

Trillion USD Current
represented by direct
agriculture globally,
not inclusive of
derivatives.

World Bank



New

Landlords

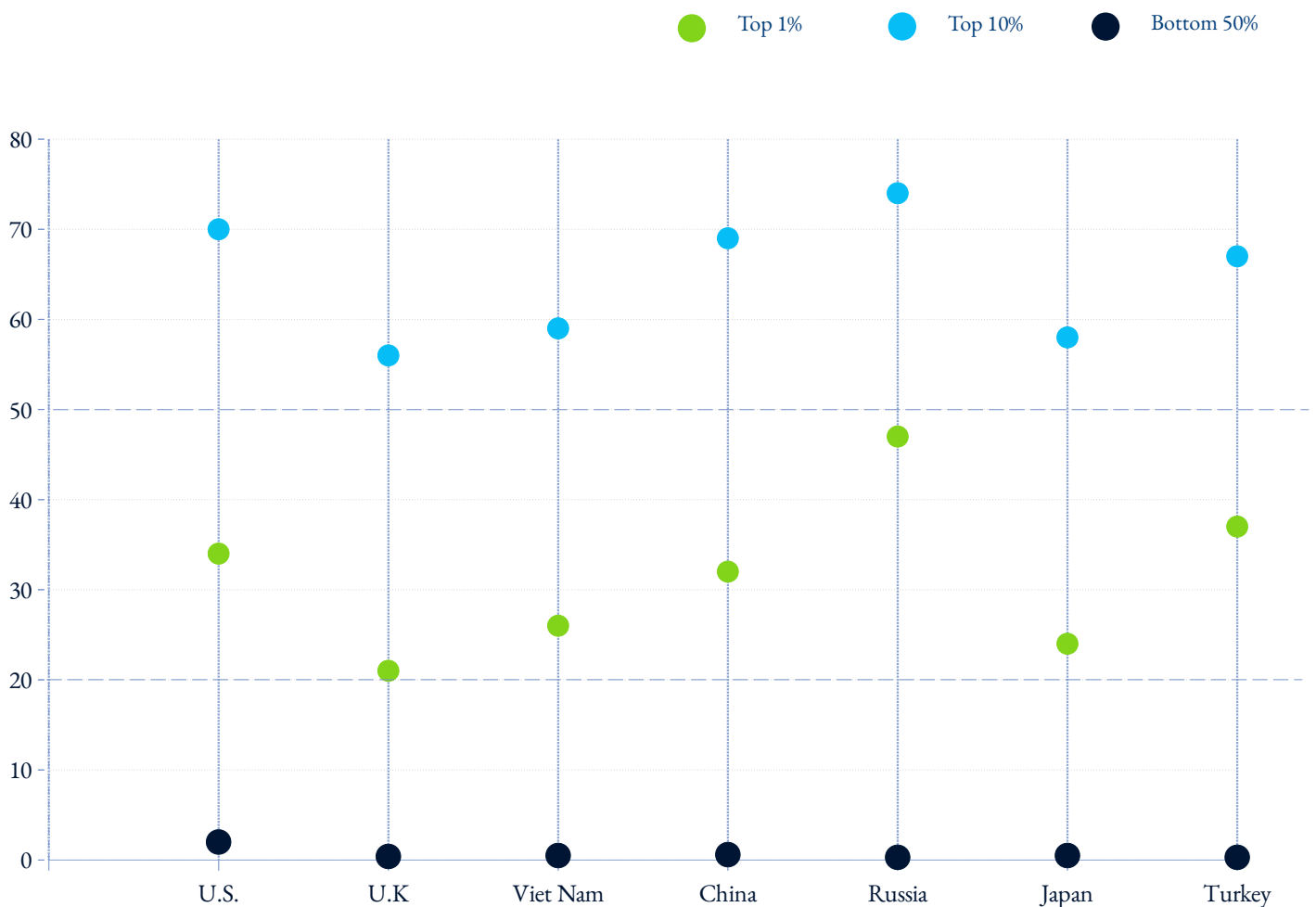
Global Wealth

The nature of the aforementioned agriculturists – often family-led – did however change significantly. This follows a general, global, trend towards the polarization of wealth towards the top 10% and, in that 10%, the 1% of families. Agricultural families and associated social strata faced more or less the same dynamic.

78%

Global wealth held by the top 10% of people in the world.

WID



72%



Percentage of farms globally which are less than 1
hectare in size

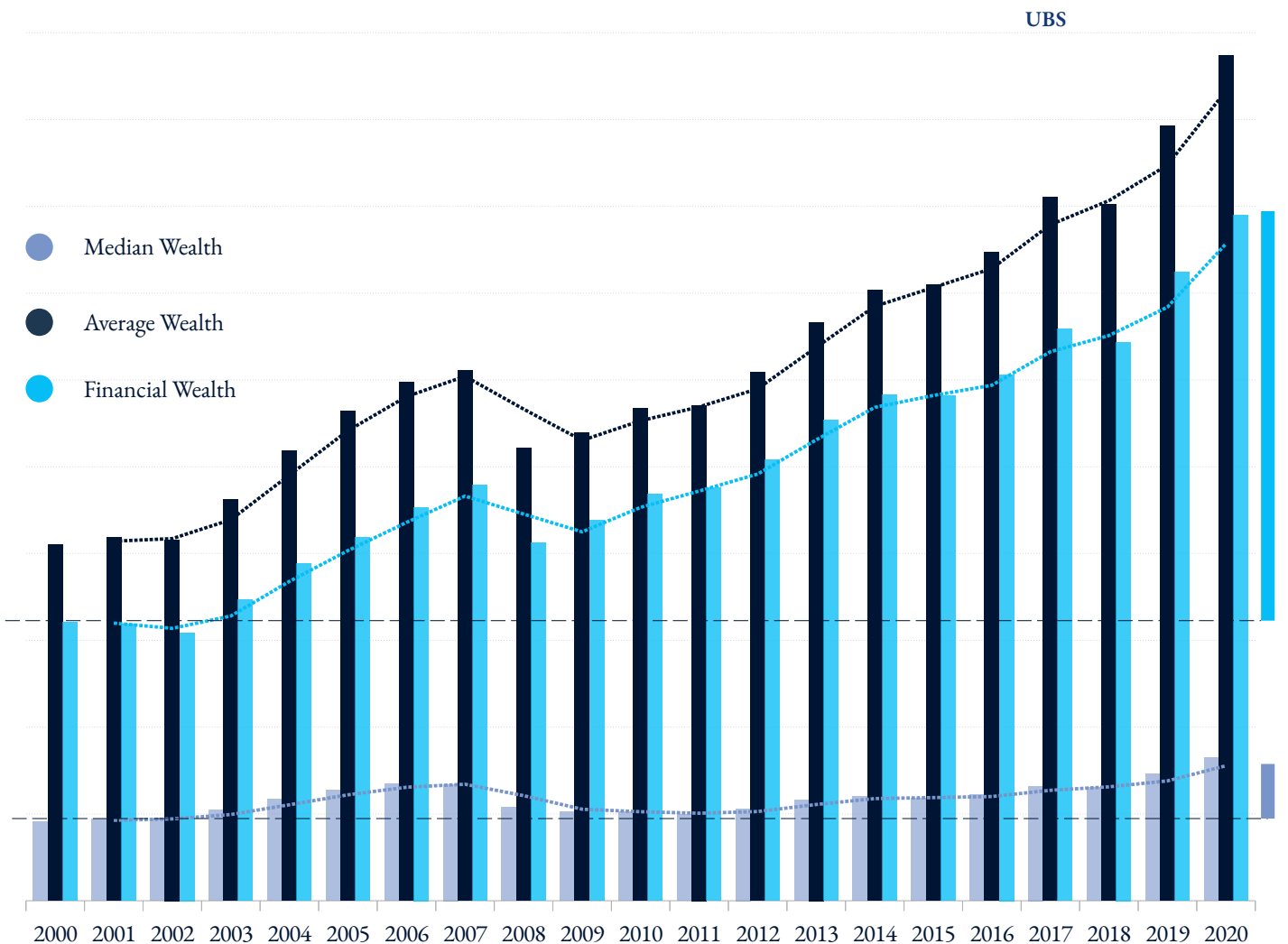
World Development Journal

Polarization of Wealth

A significant driver of the dynamic arises from the simple fact that the return on financial assets has been consistently higher than the return on labour income, in line with the g/r hypothesis. In other words, those families who had significant financial capital at the start of this dynamic grew it at a faster pace than those who relied solely on income, be it business income or labour income.

135%

Difference between the rate of growth of median wealth figures and the equivalent financial wealth between 2000 and 2020, United States.



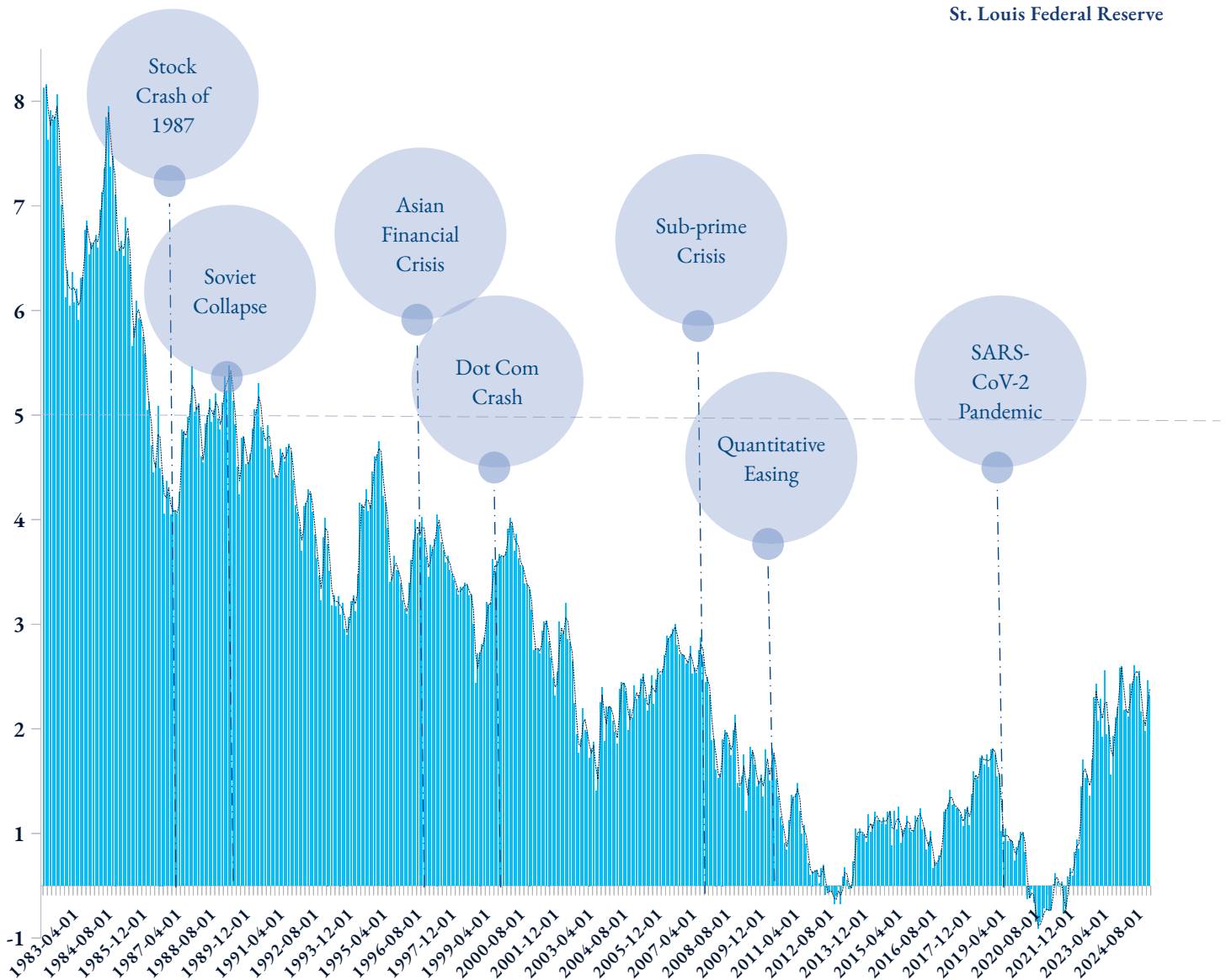
The Role of Interest Rates

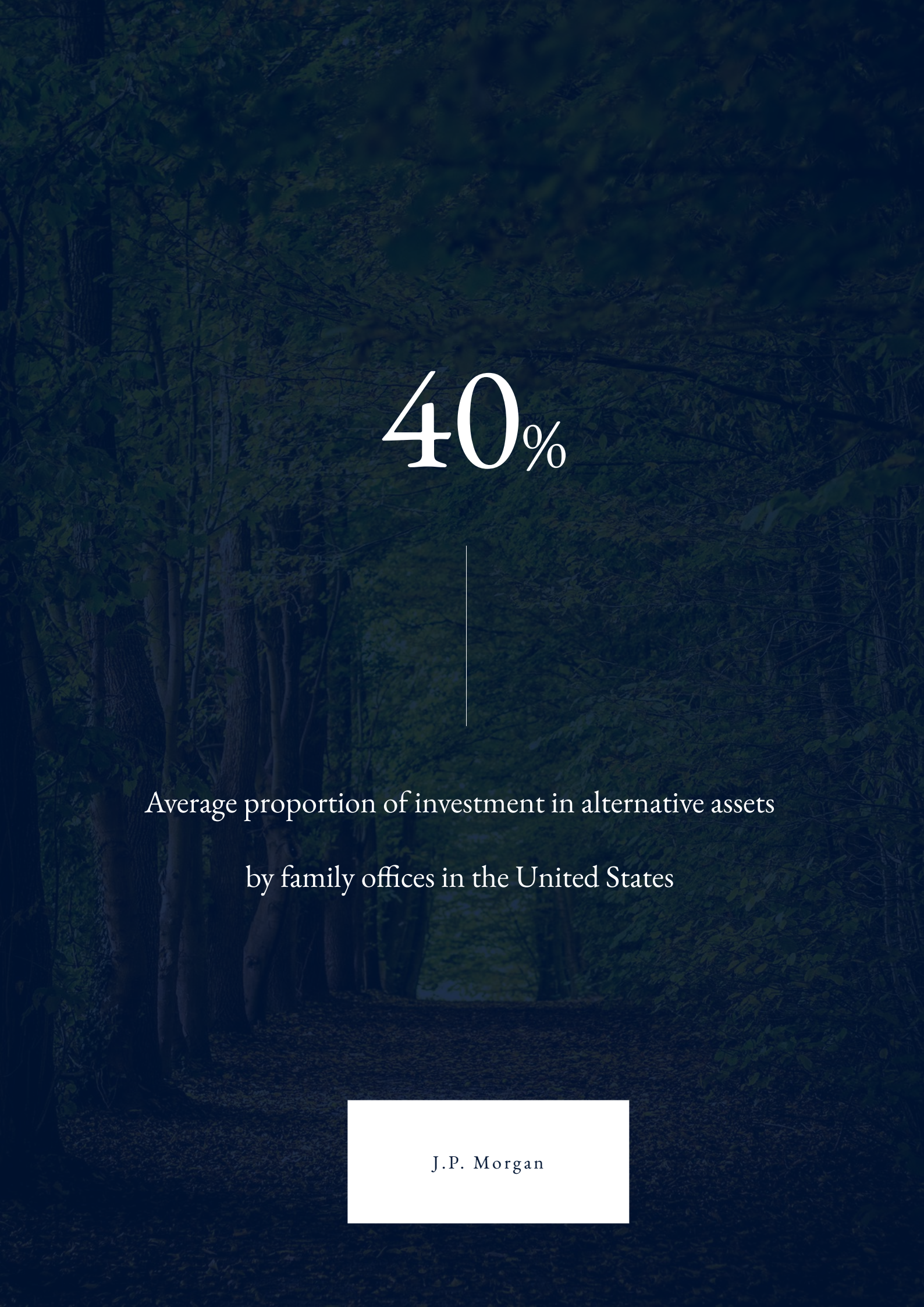
59

Secondly, the environment of low interest rates which dominated for almost three decades had the effect of allowing a force multiplier to pre-existing capital such that it could translate wealth into higher yield investments, particularly the predominately private alternative asset classes that farmland is part of.

The age an individual would need to have in order to have seen interest rates above 5% in the United States while in the labour market.

St. Louis Federal Reserve





40%

Average proportion of investment in alternative assets
by family offices in the United States

J.P. Morgan

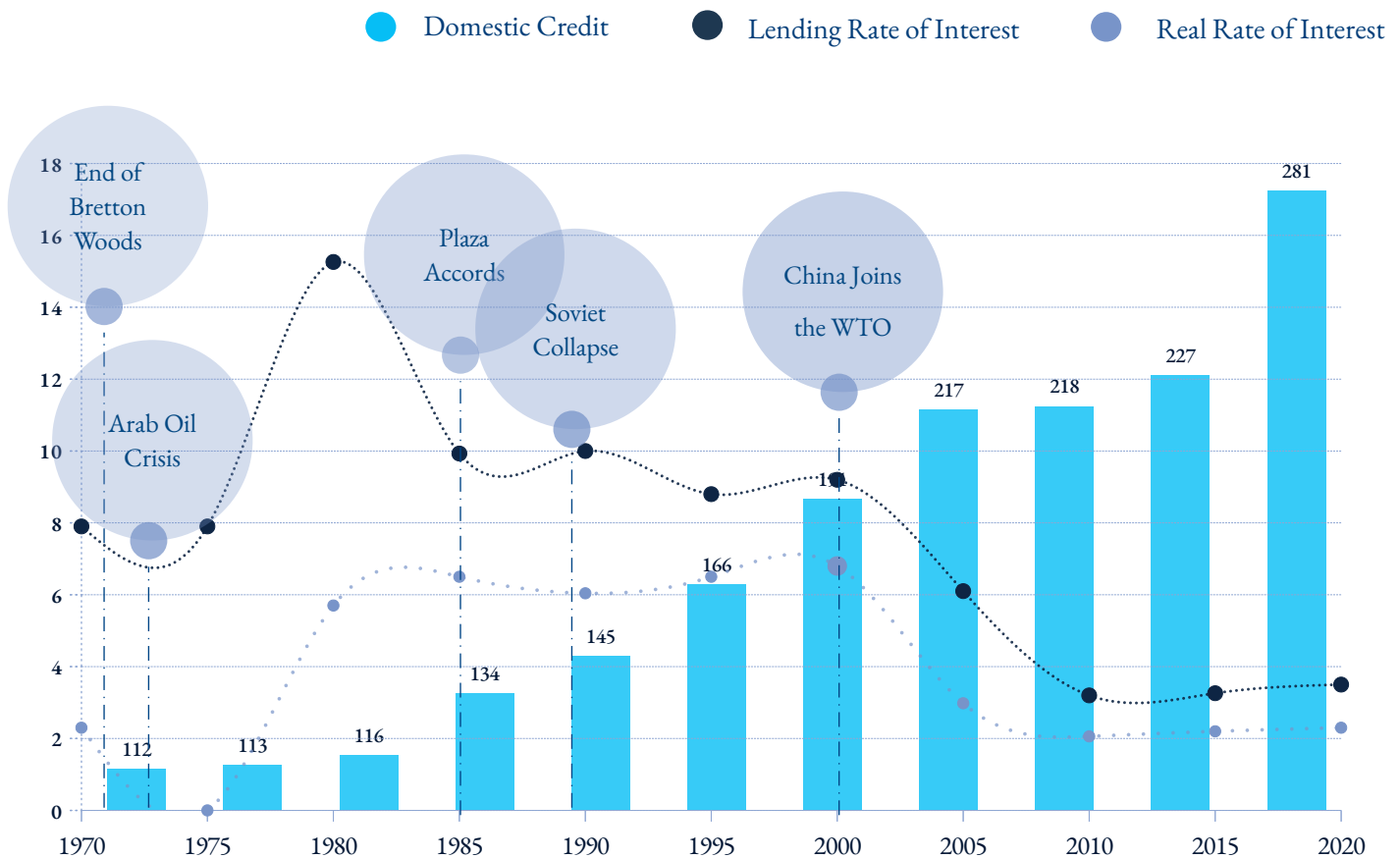
Domestic Credit

This period led to a dramatic expansion of domestic credit in the United States from slightly above GDP to almost 300% of GDP, which allowed wealth to scale up returns significantly both by the expanding consumer market as well as using leverage to purchase assets. Some of these assets were domestic but the important part to note is that many represented foreign assets, this being the time where Gross National Income bypassed Gross Domestic Product.

18

Trillion USD in credit given by commercial banks in the United States, 2024 figures.

St. Louis Federal Reserve



Domestic credit as a percentage of GDP, in addition to the Lending and Real Rates of interest, at official reported rates. United States. 1970 to 2020.

St. Louis Federal Reserve

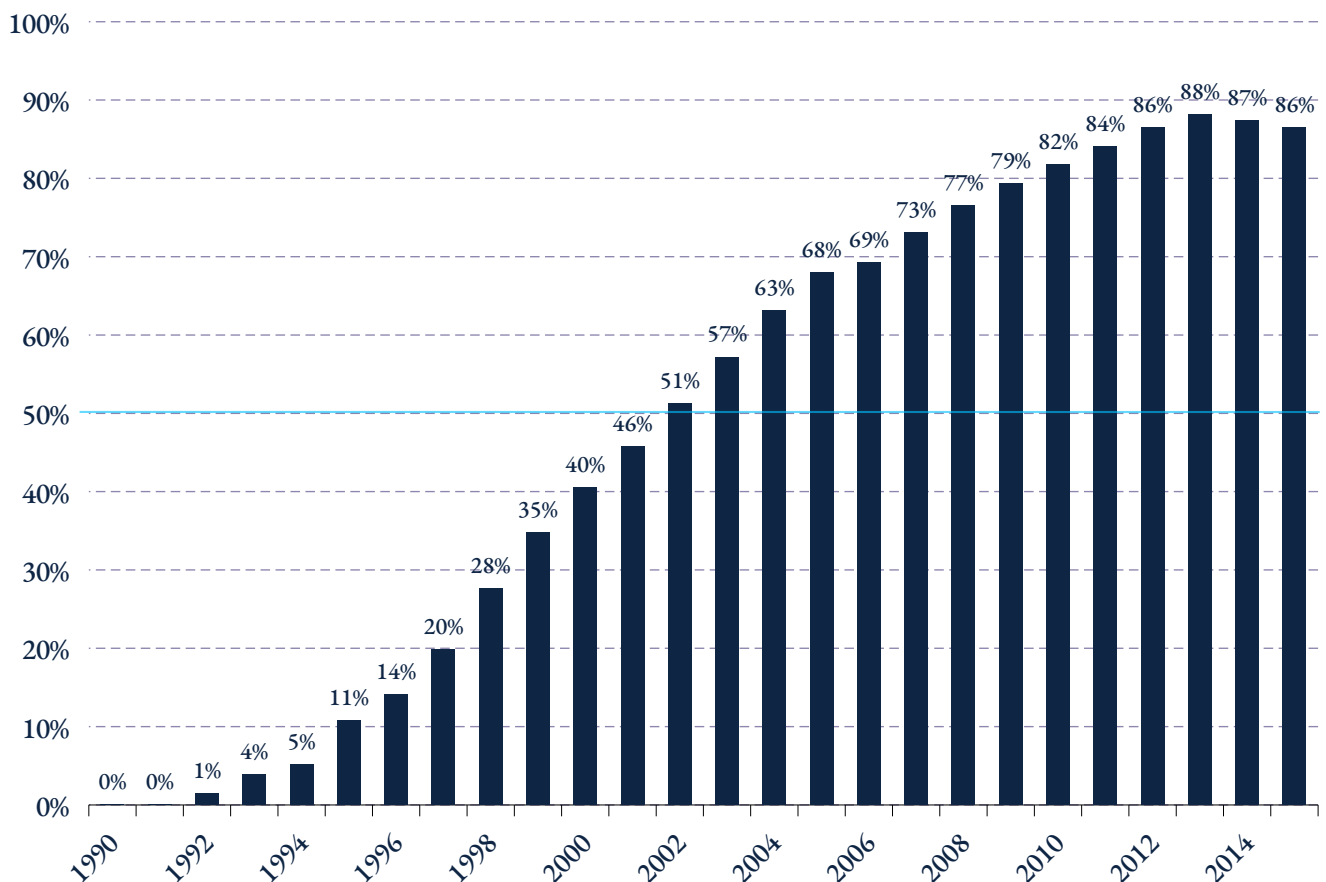
The Role of Tax Havens

Third, the Third Wave of Globalization also meant the globalization of financial capital inclusive of tax-optimisation environments. That led to significant amount of capital away from newly integrated areas such as Russia or China and into these countries, much of which had to be re-invested in economies considered safe, be it real estate in the United Kingdom or equities in the United States.

88%

Proportion of national income that is estimated to have been repatriated to tax heavens in 2013.

Piketty



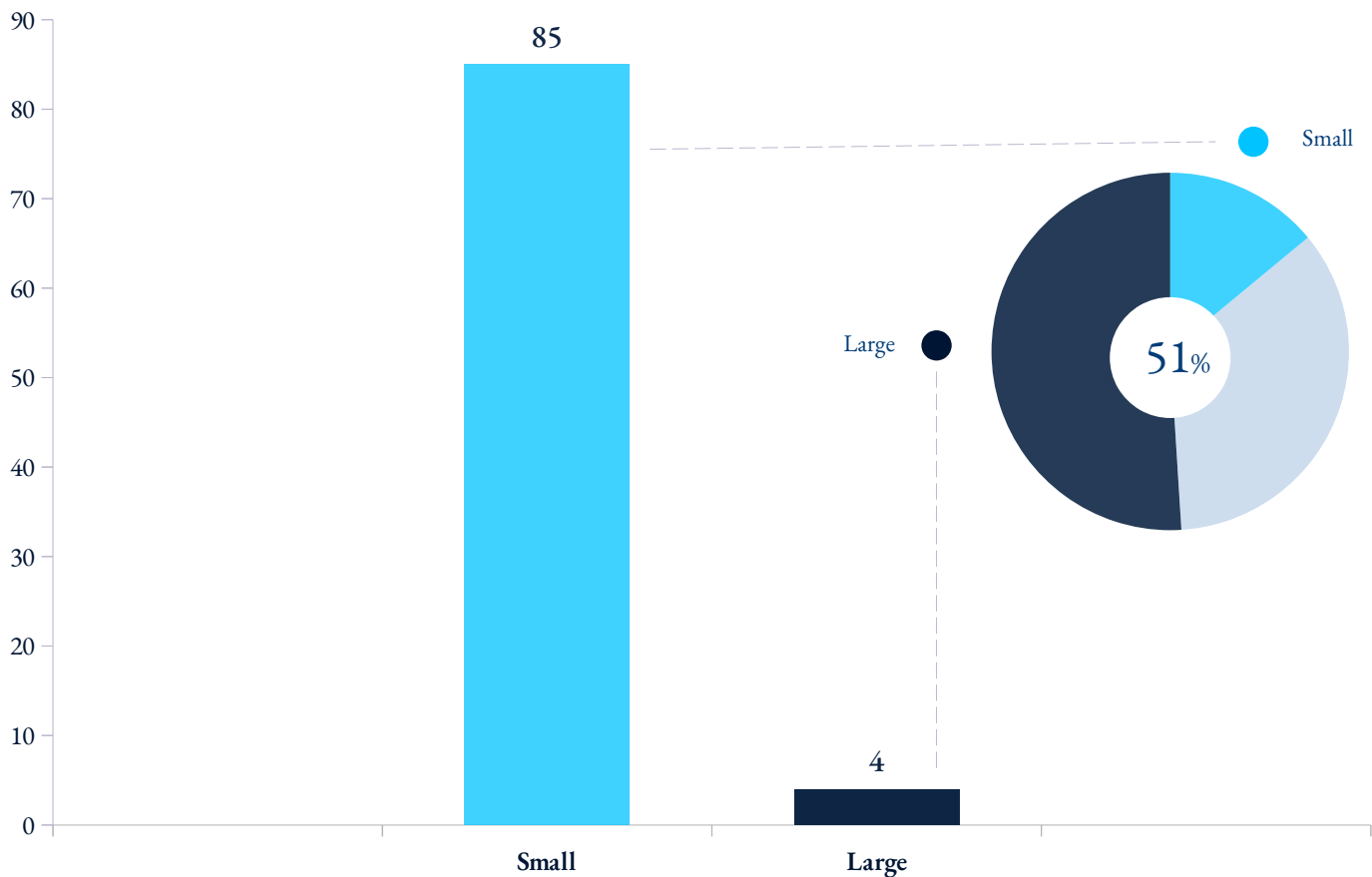
Polarisation of Agriculture

Some of that excess capital was reinvested in agriculture, triggering similar dynamics as to wealth. Irrespective of factor attribution it may be observed that, in the United States, large farms with over USD 3 million in assets now produce about 51% of all agricultural output despite being only 4% of all farms. Meanwhile, smaller farms with under USD 300,000 in assets, which comprise 85% of all farms, produce only 14% of all agricultural output.

95%

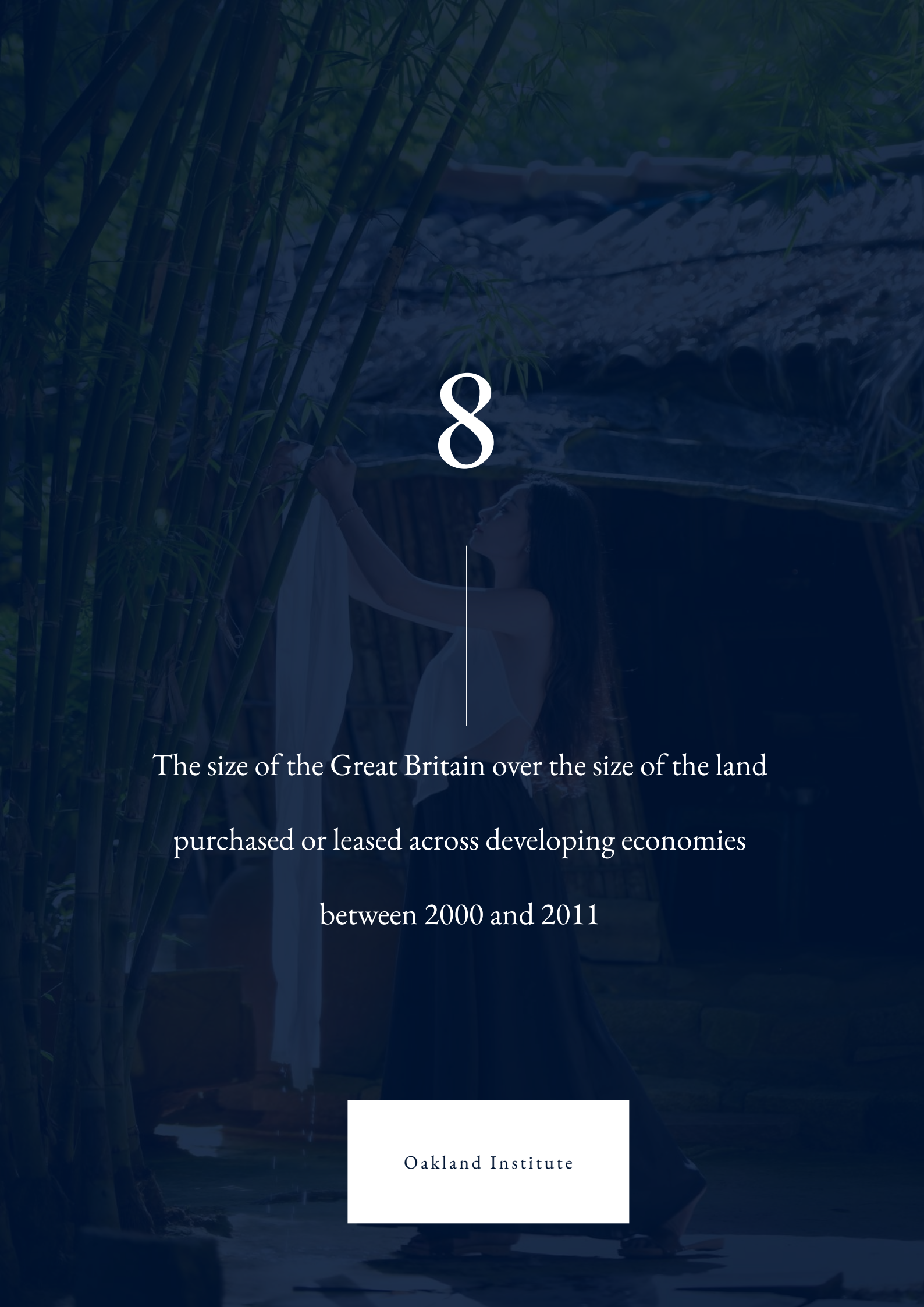
Proportion of U.S. farm holdings held by families.

U.S. Department of Agriculture



The number of farms categorised by size, as a column chart, next to a pie chart showing the proportion of agricultural output by farm size.

U.S. Department of Agriculture

A woman with long dark hair, wearing a white sleeveless dress, is reaching up to touch a bamboo stalk. She is standing in front of a thatched roof, possibly of a traditional building. The background is filled with bamboo stalks and leaves. The entire image has a dark blue overlay.

8

The size of the Great Britain over the size of the land
purchased or leased across developing economies
between 2000 and 2011

Oakland Institute

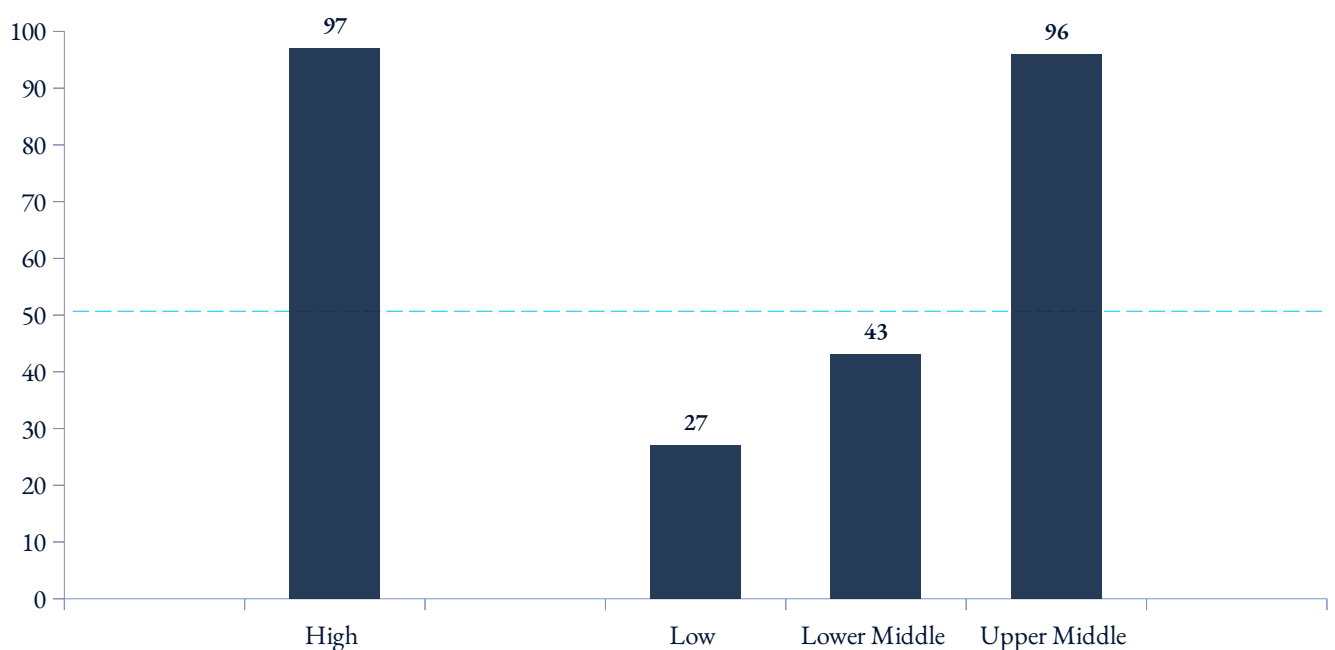
Global Polarisation

Besides the general centrifugal trend towards dis-centralization and renewed multi-centroid polarization, some of which is simply moving beyond the general middle across STEEPLED systems after the 1970s, the impact of technology may be seen as a key facilitator of the dynamic, through the investment needed to keep up with contemporaneous production methods. Farm with access to financial capital and high acreage that could spread that high fixed capital investment across wider economies of scale while those with low acreage face being left behind. The current proportion of large farms to small farms would imply such a dynamic.

97%

Proportion of farm holdings in High Income countries which have over 5 hectares of land

FAO





The first years of the twenty-first century will be remembered for a global land rush of nearly unprecedented scale. An estimated 500 million acres, an area eight times the size of Britain, was reported bought or leased across the developing world between 2000 and 2011.

Oakland Institute

Down On The Farm

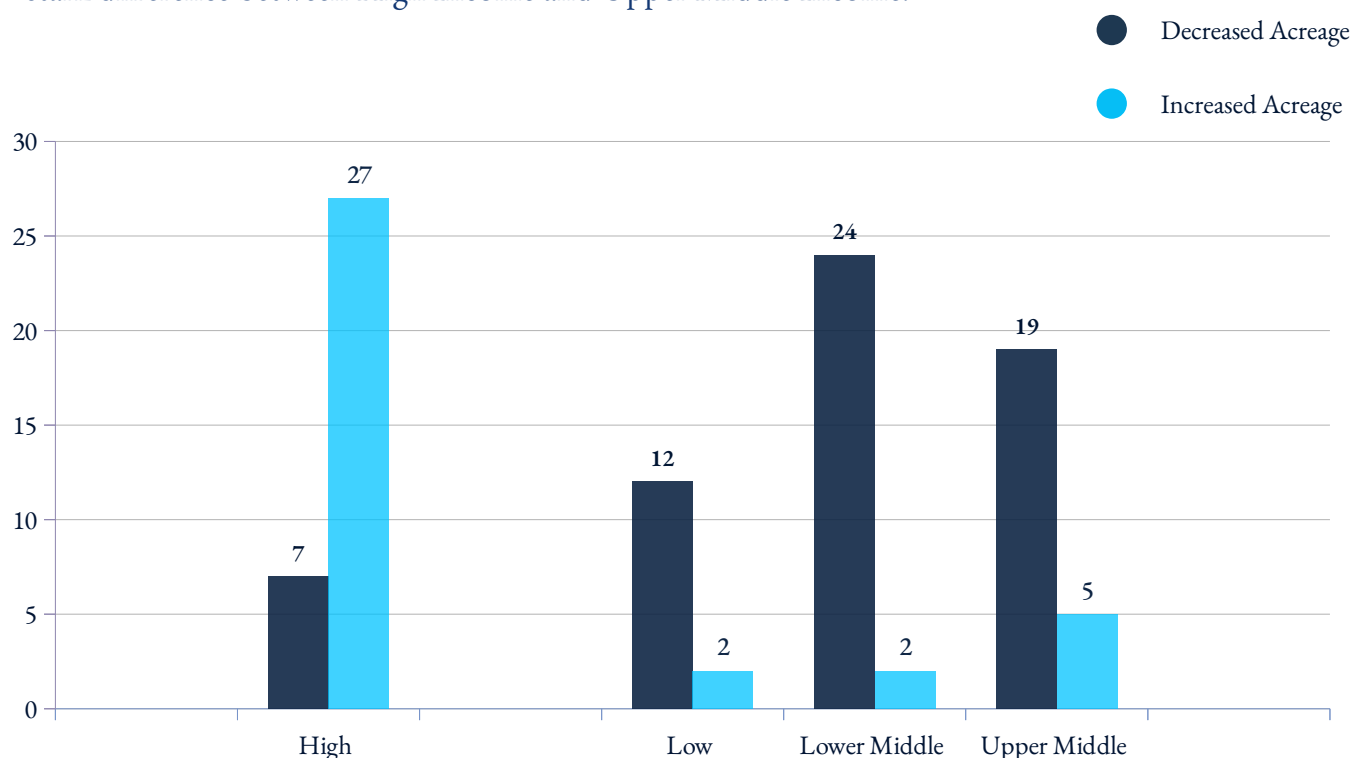
New Gradients

As such, the pattern observed with wealth in general seems to be closely replicated for agricultural holdings. First, those who have access to that excess financial capital, primarily those already in high income countries, tend to invest in profitability-conducive methods increase average acreage while those that don't tend to have to sell of land, split inheritances or generally decrease acreage. Simultaneously, even those at at the top face a further "1% - 10%" polarisation between those who are able to invest at scale and run things professionally and those who may just be keeping up, with a stark difference between High Income and Upper Middle Income.

79%

Proportion of countries in the Upper Middle Income category which experienced declining average farm size.

FAO



Number of countries with increasing (light blue) or decreasing (dark blue) average farm size, categorised by income group. 2014 figures.

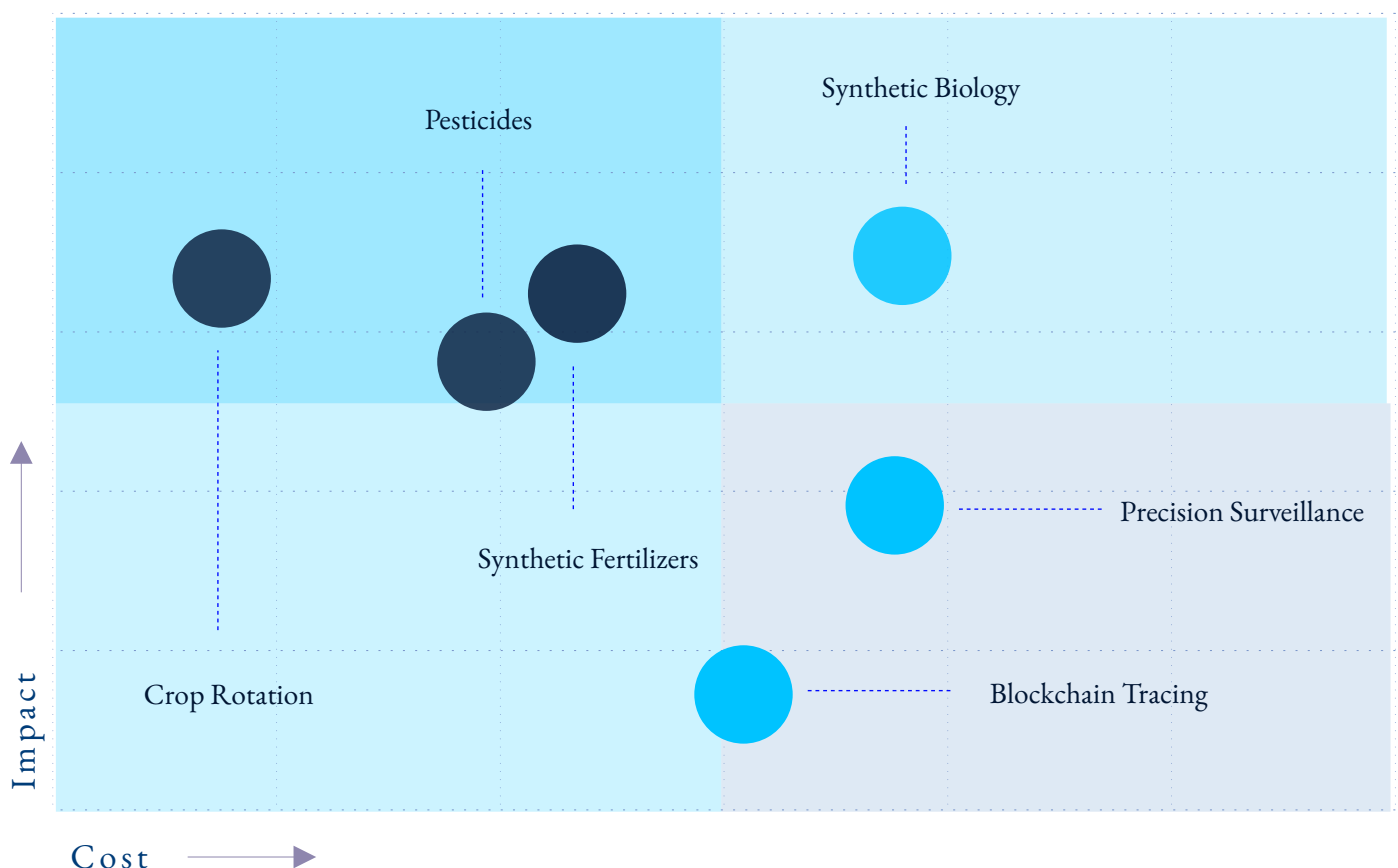
New Fixed Capital

That difference is exacerbated by the nature of the new technologies which increase productivity. While older yield-raising technologies tend to imply low fixed direct investments, the new technologies which arose after the 1990s tend to imply high fixed investments, which in turn require both a high acreage for cost effectiveness as well as access to capital to begin with. This in turn may be expected to further exacerbate the cycle of small farms eating into acreage to stay afloat while larger firms expand.

84%

Proportion of farm holdings, globally, which are smaller than 2 hectares

FAO



Estimates of effectiveness and cost for older yield-raising technologies (dark blue) and newer yield-raising technologies. Based on a study from the RAND Corporation

RAND



129

Number of private equity deals in the agriculture
industry between 2018 and 2023

Pitchbook

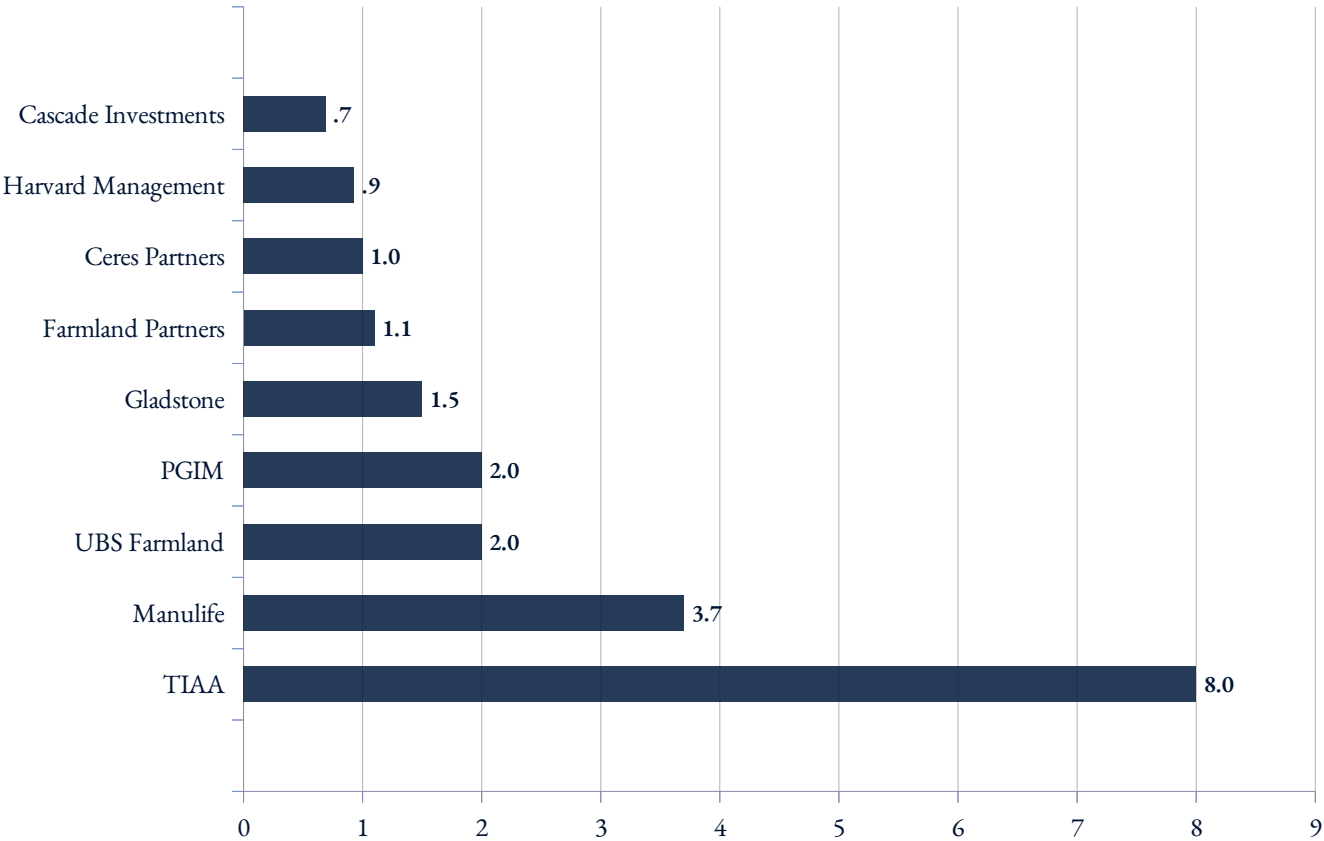
New Agriculturists

That in turn has led to the agglomeration of an increasing amount of farmland, both in the U.S. and globally in the hand of a limited number of investment companies which can only displace family-run companies. That said, it may be note that the focus on alternative assets amount the USD 4 trillion asset pool of family offices may be expected to imply that many of the farm being purchased are in fact still family-owned, alongside cases such as Cascade Investments, which is directly owned by the Gates family.

4

Number of the largest companies which may account for 50% of the agricultural sector. United States, 2023.

Action Aid US



Market Concentration

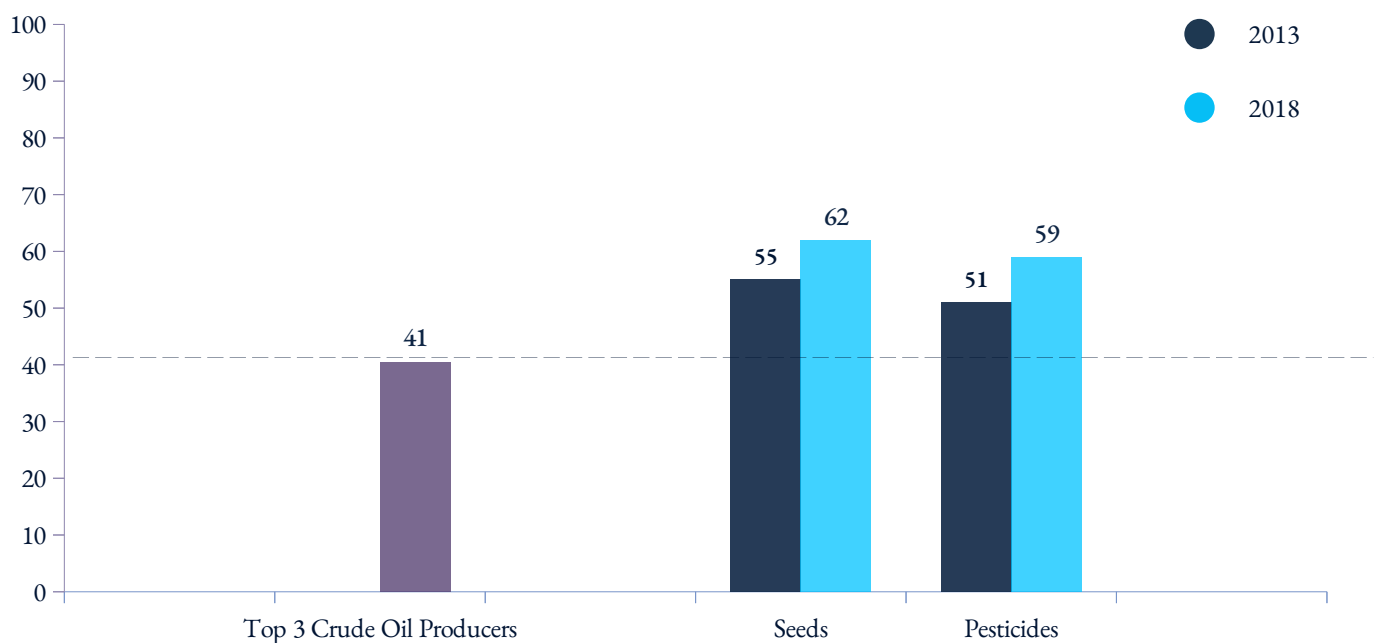
Simultaneously, we can see consolidation across the agribusiness sector itself, with seeds and pesticides markets showing near-oligopoly levels of concentration. If we look at the top 3 crude oil producing countries in the world, we see a concentration ratio of 40.5% using EIA statistics.

Meanwhile, if we look at the top 3 producers of seeds or pesticides globally, we see — *rising* — market concentration ratios of 62% and 59%, leaving the door open for cases of oligopolistic competition.

51%

Percentage to which the top-3 concentration in the seeds industry in 2018 was greater than the crude oil supplier concentration globally.

Personal Research





New Dynamics

Now, these dynamics, left unattended will most likely change the STEEPLED environment for agriculture.

Starting with, roughly, the 2000s and accelerating after exogenous shocks during the early 2010s private-equity firms, farmland funds, and institutional investors have increasingly purchased farmland, agribusiness assets, and exposure-gaining service providers such as logistics, storage or fertilizer and machinery companies.

Investment values reported by industry trackers and the financial press show rapid growth in assets under management and farmland valuations — farmland held by funds rose sharply in the early 2020s and reached record investment inflows.

What we may observe is that institutional capital, in general, brings financing for scaling up, access to technical assistance for farmers who remain in management of holdings, greater uptake of technological innovation, and, more often than not, the ability to professionalize management — potentially enabling investment in conservation practices, irrigation infrastructure and climate adaptation.

Where farming was somewhat inefficient to begin with, or suffered due to underinvestment, most of these changes may be regarded as beneficial overall, despite the potential for lower diversity among farmers themselves. Whether that is the case globally, and it merits extrapolating from the U.S. experience is a matter of debate.

What isn't is the fact that the trend is the same and industrialization in agriculture is not unique to the U.S.: large-scale, mechanized, market-oriented farming has spread in many regions such as Brazil, Ukraine, parts of Africa and Asia. This is often accompanied by the same dynamic of agribusiness consolidation, input company dominance and growth of export-oriented commodity systems.

Partially, this may be case that the financial part isn't necessarily driving the process: *technology is*. During roughly the same period that industrial technologies remade production, capital markets gradually re-framed farmland and agribusiness as asset classes attractive to institutional investors. From the late 2000s into the 2010s and beyond, pension funds, real-estate investment trusts, specialist farmland funds, and private-equity vehicles expanded allocations to farmland and agricultural

businesses, treating agricultural land as a durable store of value that produces both appreciation and cash yields. The Economist, for example, described this trend as a new wave of investors arriving at the "*farm gate*" attracted by farmland's ability to act as a hedge to inflation and by the resilience of food demand. In other words, if food exposure turns out to make for decent defensive equities, why not literally buy the farm given the limited downside risks, stable income and the potential for exogenous shocks increasing yields?

That said, taking the global view, it needs to be acknowledged that industrial agriculture has often displaced traditional smallholder systems, rewriting social relations around land, labour, and rural life. In many countries, small family farms have shrunk in number, with labour migrating to cities or into wage agriculture. The arrival of institutional capital can accelerate these

transitions. In places with weak land rights, land acquisitions or lease contracts by private-equity-backed firms can bypass customary procedures, potentially marginalizing existing users, exacerbating inequality and eroding rural social cohesion.

There is also the risk of “land grabbing”—whereby large-scale investors absorb land formerly held under customary or smallholder arrangement and with limited legal confirmation.

Furthermore, it may be said that in many low and middle-income countries, agriculture is still a major source of employment and identity. When control shifts from local to external actors, local power and decision-making may erode; farmers may become contract producers or tenants under conditions unfavourable to them.

The extent to which this is negative does

depend on the prior arrangements and one need not assume a pastoral bliss to begin with, but there are many cases of restrictive leases, lower profit sharing or farmers lose agency over crop choice.

Last but not least, the market may become less competitive in the long-run. As institutional demand pushes land prices upward, new entrants such as young farmers or smallholders will likely find access increasingly unaffordable. Leases become more rigid, returns shift more to investors and less to operators. Meanwhile, the consolidation of storage, processing, trade, and distribution further channels surplus toward capital-intensive nodes, further narrowing market participation among the investors themselves. The net effect is the same as observed with wealth in general: a greater share accumulates to a few and a few among the few have an increasingly large share of that accumulation.

Competition may arise from the emerging markets themselves, as well have seen with other ‘superclans’. Emerging-market agribusiness conglomerates have grown in scale and sophistication over the past two decades as national champions, family groups and investor-backed firms consolidated value chains that were once fragmented among smallholders and local traders. Many of these groups combine upstream production with downstream processing, logistics and, not least, trading functions. They benefit from close ties to domestic distribution networks and, in several cases, supportive industrial policy that privileges national food security and export promotion. Politically, emerging conglomerates often enjoy strategic advantages. In countries where governments view food systems as matters of national security and industrial policy, domestic agribusiness groups receive preferential procurement, protective measures, or

finance, enabling them to scale in ways that foreign PE-backed firms may not be able to.

In turn, this means that these conglomerates may be capable of challenging Western, PE-backed agribusiness in significant ways at regional and domestic levels where local knowledge, policy alignment and distribution networks matter.

It remains to be seen whether this will impact the general trajectory towards consolidation and market financialization but it may be the case that technology-driven dynamics will lead to these two groups, ultimately, looking quite similar.



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Writing

Radu Gheorghe Magdin

Data

World Bank, Bloomberg, Brookings Institute,
St. Louis Federal Reserve

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