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COUNTRY VIEW

Dear Colleagues!

The US presidential elections are always a big event and a great show. They mark a fork in the road between different socio-economic and political trends. The 2024 election campaign was difficult, and voter support levels for both candidates and both political parties were generally close. However, the presidential election ended in a convincing victory for Donald Trump, with the Republican Party gaining a majority in both houses of Congress. As a result, a situation unique to the United States has emerged: for the first time since F.D. Roosevelt, a president simultaneously has a majority of his party in the Senate and the House of Representatives and the support of the Supreme Court.

This arrangement largely unties the hands of the presidential administration and provides Trump with much greater freedom of maneuver than he had in his first term. The next stage is the activity of implementing campaign promises with minimal distraction to the fight with opponents. A wide field of work is open for analysts from different sectors to compare pre-election plans with actual policy measures that will be presented after the inauguration, further on the "100 days" of the president, as well as will be discussed in Congress. The implementation of these measures will be equally important for the global economy: both through the economic channels of influence proper (flows of trade, capital and migrants, commodity prices, and the cost of borrowed capital) and through political ones (policies regarding the conflicts in Ukraine and the Middle East, relations with China and NATO allies).

The configuration of this issue of *Contemporary World Economy* was determined, as is customary in economics, by the intersection of the demand for understanding the key socio-economic problems of the United States and the supply of articles by the authors. The main thing is that the team that worked on this issue wanted to give the fastest but comprehensive response to the reader's interest in the US, to provide him or her with information about substantive socio-economic issues in conditions when political issues are covered and analyzed by the media and political commentators much faster than by quarterly publications.

We begin with a comprehensive review of the key parameters of the functioning of the US economy against the background of the economies of other leading countries: the article by **Leonid Grigoryev** (HSE University) "Key Issues in the Long-Term Growth of the US Economy" touches upon the issues of major imbalances (balance of payments, budget, and public debt of the United States) in a global context, taking into account the role the US plays in the world economy. The US economy is growing faster than the economies of the EU and many other countries around the world. In the long term, this is the result of rapid scientific and technological progress, partly resulting from the influx of talent from around the world. An important factor in financing US growth over the past decade and a half has been the huge inflow of capital from abroad, most notably from Europe. The US is facing complex and costly problems: aging infrastructure, financing a growing national debt, and pursuing an active industrial policy in the face of increasing competition with China. It is not entirely clear how to approach the issues of overcoming deep social inequality and related political polarization under these conditions.

The article by the famous Brazilian economist **Renato Flores** (Getulio Vargas Foundation) "Replacing the Dollar in International Payments: A Preliminary Assessment" analyzes one

of the foundations of American economic dominance—the special role of the US dollar in the global financial system. The author sees good opportunities for dedollarization in servicing flows of international trade and payment transactions. The BRICS countries should play a key role in these processes. Some of them are already gradually switching to settlements in national currencies.

The article by **Dzhanneta Medzhidova** (World Bank Group) "The International Investment Position of the United States in the Twenty-First Century" is devoted to analyzing the dynamics of international assets and liabilities of the United States for three consecutive periods of time. The article shows how the US was able to attract huge funds (actually $1 trillion a year) from the rest of the world for its development in the period after 2010, which in many respects was the key to its faster growth compared to Europe, which in many respects acted as a donor of these funds.

Trump's victory in the 2024 presidential election came with a significant margin in the number of the electoral votes and an unexpectedly large advantage (about 5 million) in the number of popular votes. The article by **Natalia Petrovskaya** (Georgy Arbatov Institute for US and Canada Studies, Russian Academy of Sciences) "Transformation of the Ethnic Structure of the US Electorate" shows the importance of analyzing the social situation of various ethnic groups in the United States for the electoral process. One of the reasons for Trump's confident victory (including in all seven swing states) were shifts in the electoral preferences of men of Hispanic origin. At the heart of these shifts is the focus of this group of voters on economic and cultural issues on which the Democratic Party, that they traditionally support, was unable to offer a program that suits them.

The US energy sector has gone from significant dependence on energy imports to exports, as shown in the article "Trends in the Development of the US Energy Sector" by **Ekaterina Kheifets**. Accordingly, energy policy in recent years has been increasingly determined by the goals of ensuring the country's energy security (in terms of energy prices for companies and households), the sustainability of energy companies' business, including their exports, and only then by climate objectives. Trump's victory will likely mean another victory for business interests over climate programs and aspirations.

Finally, the article "US Emissions and Climate Policy: National and State Trends" by **Marianna Esayan** demonstrates that the situation with greenhouse gas emissions and renewable energy development differs dramatically at the state level. These differences are due not so much to the party preferences of the states (as one might expect based on the polar perception of the climate agenda by the two parties), but rather to the nature of their economic base—economic specialization and natural resource wealth. This proves the thesis mentioned above: energy transition in the US happens when it corresponds to the business interests of key economic agents.

Yours sincerely,
Chief Co-Editors
Leonid Grigoryev
Igor Makarov

Key Issues in the Long-Term Growth of the US Economy

Leonid Grigoryev

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Abstract

The US economy in the 21st century continues to grow along the traditional trajectory, faces old and new problems, experiences external shocks and internal socio-economic difficulties. But the country is growing faster than the European Union and is striving to maintain its leadership in the field of scientific and technological progress. The level of welfare is growing, although the gap between the wealthy strata and the bulk of the population is not diminishing. The electoral process in a two-party political system regularly exacerbates debates on key economic policy issues, resulting in a constantly difficult search for compromises. The 2024 election, which ended with the victory of Donald Trump and the Republican Party, illustrates a significant split in the electorate's (and elites') views on social and economic policy and heralds new changes in the way the country's key challenges are addressed.

The 21st century is not an easy one for the United States and its elites: the country has overcome several severe crises and is undergoing a complex interparty struggle. The presidents of this quarter century have represented very different strands of thought and action. The next administration inherits

a significant set of complexities, including high inequality, environmental problems, aging infrastructure, and rising public debt.

The constant sources of benefits for the US economy are the significant inflow of low-cost labor from Latin America and huge capital investments from outside into the US economy. In the last decade, the country has started to actively use industrial policy methods. All this gives high rates of economic growth against the background of other developed countries. But deep social inequality is built into the country's economic model, even with overall income growth.

Introduction

In the 19th century, the United States experienced faster economic growth than Europe, primarily due to its abundant natural resources, the influx of skilled migrants, and the absence of significant institutional impediments [Grigoryev and Morozkina 2021]. However, a significant turning point in the economic history of the United States occurred in the 1920s, marking a period of considerable divergence in terms of efficiency and productivity from both Europe and the rest of the world [Grigoryev and Morozkina 2021]. During this period, the average annual increase in labor productivity was 4.21%, primarily driven by the large-scale electrification of production processes [Grigoryev, Astapovich 2021. P. 12]. This foundation persisted through the economic downturn of the 1930s and was subsequently put to use. The steady influx of migrants over the past century has consistently supplied the United States with a low-cost labor force and talented individuals nurtured globally. In the last 80 years, numerous countries have made substantial advancements in development, including Japan, Germany, the USSR, and China, enhancing their technological base. However, the United States has consistently maintained a certain "reserve."

The evolution of the US economy in the 21st century unfolded within a complex series of business cycles. The global financial and economic crisis of 2008–2010, the disruption of global regulatory stability, and the challenges in implementing the United Nations Sustainable Development Goals (SDGs) in 2015 engendered an unstable international environment for the development of the US economy. The business cycle was largely associated with the emergence of financial shocks that stemmed both from the financial system of the US itself and from outside [Grigoryev and Grigoryeva 2020]. The economic policies of presidential administrations were far from uncontroversial. Thus, the authorities' struggle with economic fluctuations and (starting from the 2020s) inflation itself created the effects of growth attenuation.

The financial crisis of 2008–2010 inflicted substantial damage on the US economy, particularly the housing and financial sectors [Grigoryev 2013]. Originating in the United States, it manifested profound international ramifications. The crisis's "roots" are multifaceted, originating from imbalances and the accumulation of risks. These preexisting conditions were exacerbated by the mortgage-backed securities crisis,

the liberalization of banking regulations, and the bankruptcy of Lehman Brothers in September 2008, a decision that arguably reflected a regulatory misstep.

The magnitude of the US financial system is such that domestic crises in the country have historically exerted substantial negative external influence. However, the nature of the global economy has undergone significant transformation as a result of this crisis. Notably, the growth rate ratio within the group of developed countries has undergone significant changes, with many countries experiencing a decline in their growth rates, thereby leading to an increase in inter-national inequality among the "upper floors."

The crisis has precipitated a tightening of financial control in the US and worldwide, the emergence of novel regulatory types ("quantitative easing," among others), and a decline in the intensity of accumulation. However, the most significant, albeit initially unapparent, consequence of the global financial crisis has been the initiation of the dissolution of the existing global regulatory framework ("global governance"). Evidence of this dissolution emerged well in advance of the crisis associated with the COVID-19 pandemic. The Sustainable Development Goals (SDGs), which were established to address pressing global challenges such as poverty, inequality, and climate change, have not yielded substantial progress, both prior to and following the pandemic. Although local changes, including economic successes in some small nations and shifts in energy production structures, have occurred, the overall impact has been negligible.

The United States has not effectively promoted the SDGs, is embroiled in conflicts in Europe and Asia, and is increasingly engaged in competition with China. However, the nation's internal development is predominantly shaped by its own institutions, major corporations, and the private sector, with economic policies aimed at achieving the objectives of the national elite (regardless of party affiliation).The period from 2020 to 2023 witnessed a confluence of factors, including the instability of the global economy and the escalating geopolitical crisis, coinciding with a marked intensification of internal socio-economic (and political) challenges faced by developed countries [Grigoryev, Pavlyushina 2020]. In the United States, this is exemplified by the intensification of divisions (which some perceive as a schism) among active proponents of Republican and Democratic ideologies, reflecting a struggle among prominent business interests.

As evidenced by the outcomes of recent elections, voters are endeavoring to influence the trajectory of events and socio-economic policy. However, the rigidity of party preferences and electoral groups, in conjunction with the intricacies of the electoral system, has culminated in a noteworthy outcome for the evolution of democracy: a select group of voters, numbering in the tens of thousands, residing in "fluctuating" states, wields the capacity to determine the selection of the president, the prevailing party, and the character of public policy. In 2024, the state of the country's economy was perceived as "neutral" by voters in relation to the election. There was no recession, inflation was relatively low, and unemployment was relatively low. Economic growth and scientific and technological progress in the US remain dynamic, which, given the gigantic size of the economy, remains one of the important pillars of global development as a whole. A notable aspect that garnered minimal attention during the electoral discourse pertains to the national debt, a matter that, in essence, lacked the urgency typically attributed to it within media discourse.

However, the electoral process has culminated, thereby paving the way for a renewed focus on the long-term challenges confronting the nation. The challenges to the US economy's long-term growth and stability persist, including social and racial inequality, aging infrastructure, mounting public debt, reliance on foreign financial resources, significant military expenditures, and involvement in global tensions and conflicts.

The objective of this paper is to evaluate the state of the US economy in the global context, its potential growth drivers, and the key challenges that the new administration must address. The first chapter of this study examines the United States' position in relation to other developed countries and leading developing nations. The second chapter focuses on the GDP structure and external sources of development finance. The third chapter addresses the major socio-economic challenges, particularly social inequality, and the prospects for US economic development in the coming years.

1. Parameters of US economic growth against the background of competitors

The long-term economic growth of a nation is determined by a multitude of factors, including the contributions of labor and capital, the advancements in technology, the effectiveness of institutions, and the economic system's resilience to external shocks. The United States has historically experienced frequent and significant economic crises, yet it has consistently demonstrated resilience in overcoming these challenges. The nation's unique position within the global economic landscape is characterized by its role as a major hub for labor and financial flows, as well as a significant recipient of scientific and technological advances from domestic and international sources.

The United States has historically experienced a notable degree of scientific and technological progress, largely attributable to its robust R&D expenditures, which account for over 3.5% of its GDP, a figure that exceeds those of its primary competitors. The nation's ability to attract and retain talent, both domestic and foreign, has also played a significant role in its economic development, contributing to a substantial increase in labor productivity. It is noteworthy that the disparity in labor productivity between the United States and Europe emerged as early as the 1920s. During this period, Europe, particularly Germany and France, was undergoing complex processes that hindered industrial development. In contrast, the US experienced a large-scale economic recovery, significant immigration growth (net inflow of 3 million people), and export growth. The economic boom of the 1920s was punctuated by crises in 1924 and 1927, leading to the perception that the subsequent crisis in 1929 was merely a continuation of a recurring pattern. The Great Depression imposed a substantial economic burden on the United States, yet it did not diminish its competitive edge over European countries. It was not an inevitable occurrence in its extraordinary magnitude [Grigoryev, Astapovich 2021]. Its genesis and progression can be attributed largely to the actions and inactions of the Federal Reserve, as well as the negative ramifications of the 1930 Smoot-Hawley Act on global trade [Greenspan, Wooldridge 2018. P. 266–267]. The crisis, which initially emerged in the United States and subsequently spread to the global developed economy, failed to alter the developmental disparity between the United States and other major

economies, including Germany, Japan, and other countries. During the period of World War II, this gap further widened, and it has persisted to the present day.

It is noteworthy that the full implications of the Great Depression were fully realized only in the last ten to fifteen years. The analysis of Ben Bernanke, a future Nobel laureate, applied to the preceding crisis (2008–2010) influenced the nature of anticrisis measures during the 2020s. The measures included a flood of cheap money and fiscal stimulus at the height of the crisis (from spring 2020 onward). This innovative method of crisis management, born out of the previous American experience, yielded favorable results. However, it also resulted in inflation, subsequent interest rate hikes, and macroeconomic regulation difficulties that persist to this day in both the US and the EU.

A cursory examination of aggregate PPP GDP per capita (2021) reveals a stark picture of global economic development over the past two decades, set against the backdrop of several major crises. The United States' position within this broader context is of particular relevance to our analysis, as it has undergone significant shifts in the last quarter century [Elwell 2006]. As predicted by general theories of economic growth, the US has exhibited a growth rate that is less than that of the most dynamic developing countries but has not lagged significantly behind the largest developing countries taken together (see Table 1 on p. 13). Medium-developed countries, such as Argentina, Brazil, South Africa, and Russia, with their complex recent development histories, are encountering challenges in achieving growth. This phenomenon may be referred to as the "middle-development trap." Conversely, China, India, and Indonesia are undergoing various stages of industrialization and are demonstrably "catching up." The rapidity of economic recovery has brought China, for example, closer to the United States in relative terms, as evidenced by a shift from 1.8% ($4,000 PPP per capita to $55,000) to 30.1% ($22,000 to $73,000) (see Table 1). However, the "linear" distance between the two countries has remained at a constant level of $51,000. The salient point of this analysis is not the "mysticism of numbers," but rather the observation that the American economy, despite domestic challenges and global economic turbulence, has exhibited sustained growth over an extended period.

A comprehensive study of the long-term growth of the United States reveals that the per capita real GDP of this nation has exhibited a growth trajectory over the span of 125 years, with an average annual growth rate of 1.8%, as documented by Elwell (2006. P. 4). The economic progress accumulated since the 19th century has resulted in a substantial disparity between the developed world and countries that have experienced a later onset of development. This phenomenon, characterized by the sustained high growth rates of highly developed countries despite their relatively modest annual growth rates, can be attributed to the accumulation of advantages and the relatively limited impact of catching-up growth by developing countries. This dynamic has been aptly described as "Achilles will never catch up with the Tortoise" [Grigoryev, Maykhrovitch 2023]. This phenomenon is a salient aspect of economic growth theory on a global scale, particularly with regard to achieving the Sustainable Development Goals, specifically Goal 10 ("Reducing Inequality"). In recent decades, however, developed countries have exhibited a multifaceted growth pattern within their respective groupings. In October 2024, The Economist articulated this complex dynamic in an uncharacteristically direct

manner: "The US economy has left the rest of the rich countries on the sidelines in the dust" [Rabinovitch, Curr 2024]. The major developed countries shown in Table 1, in contrast to a few developing countries, lagged behind the US over the past 24 years in terms of GDP per capita at PPP, which accounts for currency fluctuations. The linear gap between the US and the EU, which expanded into Central and Eastern Europe during this period but lost the UK, was $15,000 in 2000. By 2023, this gap had grown to $20,000. The distance by this indicator between the US and the UK has doubled, and between the US and Germany has also increased significantly. It is noteworthy that even among the most developed countries and those experiencing rapid economic growth, there has been an observed increase in inequality between nations rather than a significant convergence.

Table 1. GDP dynamics by PPP, 2000–2023.

GDP per capita (at PPP 2021), thousand dollars				Average annual GDP growth (PPP-2021 per capita), %	
Country	**2000**	**2011**	**2023**	**2000–2011**	**2011–2023**
US	55.1	60.3	73.6	0.83	1.68
UK	44.8	48.9	54.1	0.80	0.85
Germany	49.8	57.7	61.6	1.35	0.59
France	47.6	51.3	55.2	0.69	0.61
Japan	39.2	41.2	46.3	0.45	0.97
EU	40.5	46.5	53.8	1.28	1.22
Russia	20.3	34.8	39.8	5.02	1.12
China	4.0	11.2	22.1	9.83	5.85
Brazil	13.9	18.3	18.6	2.59	0.09
India	3.1	5.3	9.2	4.95	4.74
Indonesia	6.1	9.4	14.1	3.95	3.45
South Africa	11.3	14.6	14.3	2.38	-0.17
Argentina	22.4	29.8	26.5	2.63	-0.9
Egypt	10.2	13.4	17.0	2.46	2.01
Saudi Arabia	40.4	44.7	49.6	0.91	0.87

Source: compiled by the author on the basis of the World Bank's World Development Indicators.

The United States has consistently demonstrated the capacity to allocate its human, financial and technological resources toward supporting the legal framework and the entrepreneurial spirit, thereby facilitating the development of its institutions. While numerous countries have achieved notable advancements in development over the past century, the United States has maintained a substantial lead in terms of per capita output. The configuration of the United States' economic parameters has exhibited

a relatively stable nature, as illustrated in Table 2 (p. 14). Despite high and cyclically fluctuating unemployment, employment has generally increased. Inflation in recent decades (through 2022) can be considered moderate. Public debt has risen substantially (double to GDP), but the essential parameter—its servicing (interest payments)—has been within acceptable limits until recently, especially since a large part of it is held by the Fed. However, from 2023 to 2024, the rise in interest rates on government bonds (in response to inflation) coincided with the "renewal" of the bond stock, transitioning from older, "cheap" bonds to newer, "expensive" ones, which are to be serviced by the Treasury. This transition has led to an increase in debt payments and has exacerbated the debt problem.

Table 2. Key indicators of the US economy by period

Period	1993-2002	2003-2012	2013-2019	2020	2021	2022
Real GDP growth, %	3.4	1.9	2.3	-2.2	6.1	2.5
Labor force growth, %	1.2	0.7	0.8	-1.7	0.3	1.9
Unemployment, %	5.2	6.8	5.1	8.1	5.4	3.6
Growth of real private investments in fixed assets, %	6.8	3.4	5.6	-0.6	8.2	2.9
Inflation, CPI, %	2.5	2.5	1.6	1.2	4.7	8
Budget deficit, % of GDP	-0.6	-4.8	-3.5	-14.9	-11.9	-5.4
Personal consumption rate, %	65.4	67.8	67.4	66.6	68.0	68
Savings rate, %	19.4	16.8	18.9	18.3	17.7	18.1
Rates on 10-year government bonds, %	5.9	3.7	2.3	0.9	1.4	3
Public debt, % of GDP	60.7	75.1	103.1	126	120.1	119

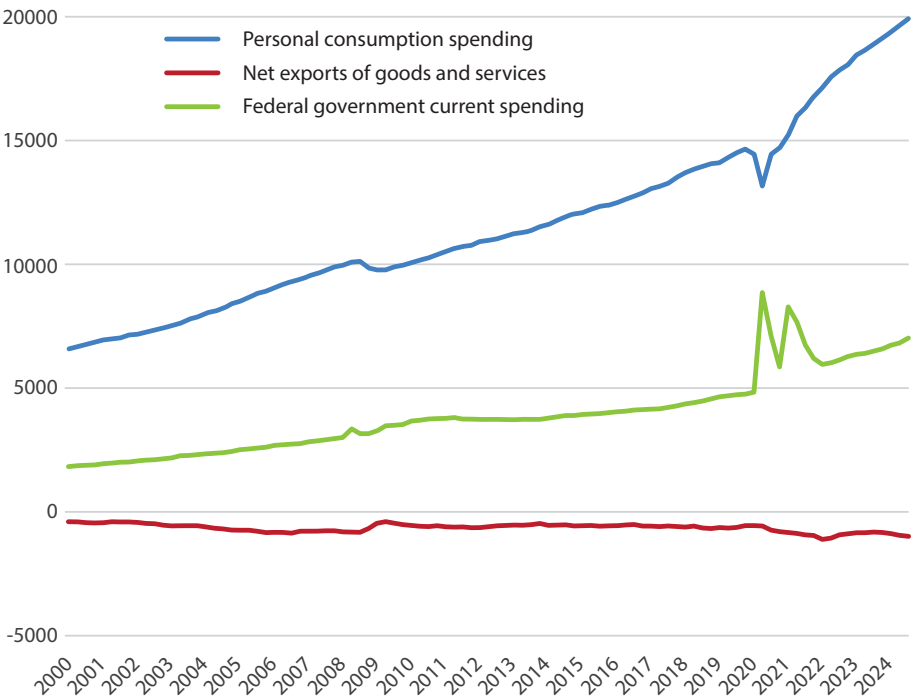
Source: Bureau of Economic Analysis (BEA).

Two salient features of the American economy merit particular attention: a moderate savings rate (up to 20%) and a remarkably high rate of personal consumption in GDP (66–69%). The former, when considered in conjunction with a budget deficit, necessitates external injections. The latter is noteworthy when compared to the prevailing 50–55% of GDP in most regions of the world (with China's figure standing at approximately 40%). This phenomenon, characterized by a pronounced consumption-based spending pattern, is further accentuated by the unique composition of GDP, amplifying its effect by approximately one-fifth. This amplifying effect ensures a relatively high standard of living without the need for restrictive government spending and accumulation policies.

The imbalance in the GDP formula is counterbalanced by a negative current account balance, which is financed by capital inflows. Figure 1 (p. 15) illustrates the rise in government spending and personal consumption in the 2020s against a backdrop of global turmoil and increasing trade deficits. Figure 1 demonstrates a distinctive and potentially irreproducible set of trends for the 2020s, characterized by a brief decline in personal consumption in 2020 and a rapid rise in nominal consumption following

the pandemic (partly due to inflation). Concurrently, there has been a marked surge in government expenditure and a widening of the foreign trade deficit.

Figure 1. US personal consumption, net exports, and government spending, $ billion, 2001–2023.



Source: compiled by the author on the basis of World Bank data.
Note: the figure shows the quarterly dynamics adjusted for seasonality.

2. Interaction of the US economy with the external environment

The United States' economy is substantial in size, constituting approximately one-sixth to one-fifth of the world's GDP, depending on the measurement approach. It is regarded as an independent analytical entity, and as a substantial economic entity, it naturally interacts with other countries, companies, and international organizations. However, it possesses numerous advantages, including large-scale economic and military power. Consequently, the nation possesses the capacity to influence the institutional and legal framework of the surrounding world, primarily through coalitions with allies, corporate entities, and domestic courts, with the recent addition of administrative decisions by state agencies. Any form of opposition from diverse actors is often perceived as unreasonable and frequently categorized (directly or indirectly) as a violation of the law. The establishment of global regulatory institutions (governance) has a substantial history and theoretical underpinnings [Grigoryev, Kurdin 2013], yet the present discussion does not allow for a comprehensive review of this intricate and compelling subject. It is widely acknowledged that the distinctiveness of the dollar offers

considerable benefits for trade and capital attraction. The distinctive role of US financial institutions, notably banks, in conjunction with the presence of international financial organizations within US borders, enables the nation to effectively mediate a substantial proportion of global financial flows, thereby influencing the direction of investments, regulatory oversight, competition policy, and the evolution of its financial system.

Table 3. Assets and liabilities of sectors of the US economy, 2010–2023. Data at the end of Q4, trillion dollars and % of GDP (annualized data)

2010			
Obligations	**Assets**	**Obligations**	**Assets**
Households	**Financial sector**		**Households**
13.3	75.1	69.1	52.4
87.0%	490.8%	451.3%	342.0%
Non-financial business			**Non-financial business**
14.3			28.3
93.2%	**Assets**	**Obligations**	184.7%
State	**External sector**		**State**
13.8	21.8	24.3	4.5
89.8%	142.2%	158.6%	29.2%
2023			
Obligations	**Assets**	**Obligations**	**Assets**
Households	**Financial sector**		**Households**
19.2	135.95	121.7	112.5
68.5%	486.5%	435.4%	402.7%
Non-financial business			**Non-financial business**
28.7			60.5
102.6%			216.6%
Obligations	**Assets**	**Obligations**	**Assets**
State	**External sector**		**State**
32.7	34.4	54.3	8.6
117.1%	123.1%	194.1%	30.9%

Source:

GDP: BEA. Table 1.1.5. Gross domestic product // https://apps.bea.gov/iTable/?reqid=19&step=2&isuri=1&categories=survey&_gl=1*cu88fg*_ga*MTM4NDI4NzkyNy4xNzI0MTk5NzA1*_ga_J4698JNNFT*MTcyOTAzOTAwMi4xMi4xLjE3MjkwMzkwMDkuNTMuMC4w#eyJhcHBpZCI6MTksInN0ZXBzIjpbMSwyLDMsM10sImRhdGEiOltbImNhdGVnb3JpZXMiLCJTdXJ2ZXkiXSxbIk5JUEFfVGFibGVfTGlzdCIsIjUiXSxbIkZpcnN0X1llYXIiLCIyMDA3Il0sWyJMYXN0X1llYXIiLCIyMDExIl0sWyJTY2FsZSIsIi02Il0sWyJTZXJpZXMiLCJRIl1dfQ==

Liabilities and assets of households (households), domestic financial sector, non-financial

corporate business, government (federal government, state and local government): Board of Governors of the Federal Reserve System (US) // https://fred.stlouisfed.org/series/TABSNNCB

External Sector Assets and Liabilities: BEA. Table 1.2. US Net International Investment Position at the End of the Period, Expanded Detail // https://apps.bea.gov/iTable/?reqid=62&step=5&isuri=1&product=5&_gl=1*a7255o*_ga*NDY4OTc5MTI5LjE3MTI4NjA1OTU.*_ga_J4698JNNFT*MTcxMjg2MDU5NC4xLjEuMTcxMjg2MDc5MC42MC4wLjA.#eyJhcHBpZCI6NjIsInN0ZXBzIjpbMSw1LDYsNl0sImRhdGEiOltbInByb2R1Y3QiLCI1Il0sWyJUYWJsZUxpc3QiLCIxNDQiXSxbIkZpbHRlcl8jMSIsWyIwIl1dLFsiRmlsdGVyXyMyIixbIjEiXV0sWyJGaWx0ZXJfIzMiLFsiMCJdXSxbIkZpbHRlcl8jNCIsWyIwIl1dLFsiRmlsdGVyXyM1IixbIjAiXV1dfQ==

American statistics provide a valuable foundation for analyzing the core parameters of its financial system in relation to the broader global context. The ensuing discourse will focus on a comparison of the major financial parameters—assets and liabilities—of the sectors at the conclusion of 2010 and 2023 (refer to Table 3 on p. 16). While some of the highlighted parameters may be considered evident, their values and dynamics are noteworthy.

It is evident that families, albeit indirectly via the financial sector, constitute the primary lender to industry, agriculture, commerce (non-financial sector) and the state. Despite the significant borrowing of households from banks and other financial institutions, pension, insurance and investment funds, bank deposits remain the primary centers of savings concentration and source of credit. The total excess of assets of the household sector over its liabilities amounted to approximately $40 trillion in 2010 and approximately $95 trillion at the end of 2023.

The government's debt reached $9.3 trillion in 2010 and increased by $15 trillion to $24 trillion by the end of 2023. Consequently, the non-financial sector, which encompasses the production of goods and services, has accumulated an additional $14 trillion in debt since 2010, resulting in a total debt of $28.7 trillion by 2023. The government's liabilities increased by $18.9 trillion (32.7 - 13.8) and the non-financial sector's liabilities by $14.3 trillion (28.7 - 14.3), for a total of $33.3 trillion over these 13 years. However, it is crucial to examine which sectors provided these resources, as external and population funds clearly played a significant role in this process. The subsequent section of the balance sheet, spanning a 13-year period, is replete with noteworthy developments, which are meticulously delineated in the article [Medzhidova 2024]. The global net investment in the US economy amounted to a mere $2.5 trillion ($24.3 - 21.8) in 2010, and by 2023 it had escalated to an impressive $19.9 trillion ($54.3 - 34.4), representing approximately 70% of GDP.

This phenomenon, characterized by a remarkable degree of global generosity, can be attributed to several factors. Primarily, the United States experienced an excess growth rate during this period, which set it apart from Europe. Additionally, financial risks remained relatively stable, and there was a high demand for financial resources while maintaining a relatively low risk after the financial crisis. It is noteworthy that a significant portion of these funds flowed from various countries worldwide, with Europe contributing the most [Medzhidova 2024]. The policy of quantitative easing, which entailed substantial fiscal injections in 2020, served as a catalyst for the surge in direct investment and credit resources from the EU to the US. In the context of the global search

for funds to support the implementation of the Sustainable Development Goals (SDGs) in developing countries and the efforts to combat climate change, a significant portion of global savings is allocated to the US, a nation that lacks domestic savings to support growth and financing of government expenditures. This phenomenon, as Marxists would have theorized in the past, can be attributed to two main factors: global instability and the EU's economic policy missteps. It is noteworthy that certain theorems concerning the regularities of capital flows appear to be inapplicable in this particular instance, even in their most basic forms. The influx of capital from Europe and other regions to the United States, as evidenced by the Ministry of Finance and the Federal Reserve System's anti-crisis injections, has contributed to an increase in capital flight. In the 2020s, direct and portfolio investments began to shift from high-risk regions to the US, despite the US having only half a point to a point higher interest rates on long-term bonds than Europe.

Table 4. Macroeconomic parameters, 2000–2023.

Country	Exports (in % of GDP)			Imports (in % of GDP)			Consumer price index prices (100=2010)			Unemployment (% of labor force)		
	2000	2010	2023	2000	2010	2023	2000	2010	2023	2000	2010	2023
US	10.7	12.3	11.1	14.4	15.9	13.9	79	100	139.7	3.99	9.63	3.63
UK	25.7	28.9	32.2	26.9	30.4	33.4	81.5	100	142.7	5.56	7.79	4.05
Germany	30.8	42.6	47.1	30.7	37.3	43	85.7	100	131.9	7.92	6.97	3.04
France	28.6	26.8	32.7	27.3	28.1	34.9	84.4	100	124	10.22	9.28	7.32
Japan	10.5	14.9	17	9.1	13.6	24	103	100	111.4	4.75	5.1	2.58
EU	35.7	40.3	52.7	34.9	38.7	49	-	100	130	9.8	9.9	6.0
Russia	44.1	29.2	23.1	24	21.1	18.7	30.8	100	-	10.6	7.4	3.3
China	20.9	27.2	19.7	18.5	23.5	17.6	81	100	132.2	3.26	4.53	4.67
Brazil	10.2	10.9	18.1	12.5	11.9	15.7	52.5	100	213.9	10.9	8.4	8
India	13	22.4	21.9	13.9	26.9	24	54.3	100	216.9	7.9	8.3	4.2
Indonesia	41	24.3	21.7	30.5	22.4	19.6	44	100	169.1	6.1	5.6	3.4
South Africa	24.4	25.8	33	21.8	24.6	32.7	59.9	100	194.8	19.8	23.2	28
Argentina	11	18.9	12.9	11.6	16	14.1	-	100	124	15	7.7	6.2
Egypt	16.2	21.3	19.1	22.8	26.6	21.3	45.1	100	486.3	8.98	8.76	7.31
Saudi Arabia	43.4	49.6	34.7	24.8	33	27.4	76.7	100	132.4	4.57	5.55	4.88

Source: compiled by the author on the basis of the World Bank's World Development Indicators.

The substantial inflow of financial resources into the US over the past thirteen years coincided with an influx of migrants, while maintaining a high level of R&D expenditures. These expenditures ensured an increase in the efficiency of capital investments. The housing cycle, subsequent to the 2001–2005 boom, plays an autonomous and pivotal role. Approximately 2% of GDP is allocated to intellectual capital assets, ensuring that the modest rate of accumulation (less than 20%) contributes to GDP growth. This is a salient autonomous factor in augmenting the share of personal consumption, though a more profound examination is warranted.

The elevated values of the negative trade balance warrant elucidation. As illustrated in Table 4 (p. 18), these figures amount to 3–4% of GDP annually, representing the "commodity contribution" of the global economy to the welfare of the US and the sustenance of a high level of personal consumption.

As demonstrated in Table 4, the United States is characterized by relatively moderate inflation and unemployment rates, with the exception of the years during the crisis. Consequently, the country's substantial market holds greater appeal due to its increased stability compared to that of its primary partners. This enhanced appeal is further bolstered by the presence of critical factors conducive to foreign investment inflows, including the long-term reliability of the legal environment and the absence of stringent climate policies [Esayan 2024]. As expected, 79% of foreign direct investment in 2022 originated from Canada and European developed countries, and 65% of US FDI outflows were directed to these regions [ERP 2024. P. 189]. The US predominantly offers at an acceptable level and the majority of macro-parameters. The dynamics of foreign trade, particularly the exchange rate of the US currency, is of particular significance [Flores 2024].

Consequently, a notable equilibrium has emerged in the global commodity and financial markets, wherein the most developed nation worldwide receives a substantial influx of financial resources while maintaining an unusually high share of personal consumption in GDP. It is noteworthy that the scientific community has adopted a relatively indifferent stance in the face of this phenomenon, yet they have demonstrated unwavering commitment to identifying strategies to address issues such as poverty, climate change, and the financing of sustainable development. It is evident that the substantial influx of funds between major regions, rather than being invested in developing countries, serves as a mechanism that exacerbates inequality. The proposal by Mario Draghi to allocate nearly a trillion dollars to the EU competitiveness program appears to be a desperate attempt to focus on the apparent benefits rather than the underlying issues [Draghi 2024].

3. Challenges for the US economy in the medium term

The United States' economy has historically enjoyed the benefits of scientific and technological progress, a substantial accumulation of economic potential, considerable economic and military strength, and specific features of its financial sector. However, the period from 2020 to 2024 presented significant challenges. In comparison to the European Union, which has maintained its dominant position in the global economy, the United States has fared considerably better. However, the nation is grappling with a series of intricate challenges, the resolution of which often necessitates substantial financial investments or is impractical within the confines of a single or two presidential terms. This article does not aspire to comprehensively address the intricacies of the US economy or to compile extensive lists of issues. Instead, it will direct its focus to a select number of critical concerns that are likely to be prioritized by the incoming president. In light of the geopolitical turbulence, domestic and international conflicts, pandemics, and natural disasters that have engendered a downward spiral in recent years, it would be prudent

for a major economic power to allocate its financial resources toward the restoration of peace and global institutional order, the resolution of private conflicts, and the provision of aid to victims. However, this is a distant prospect, and it is unlikely that politicians will seek counsel from social scientists on these matters.

The discussion of the socio-economic challenges confronting the nation can be initiated with a focus on infrastructure. The period of mass construction of roads, bridges, and dams in the United States, which began in the 1960s and continued through the 1970s, is nearing the end of its useful life. For all types of infrastructure, the actual life spans (40–50 for structures and 20–30 for highways and railroads) are nearing their end, while dams and highways are already overbuilt. Renewing these infrastructure elements is estimated to require an investment of approximately one trillion dollars, with no imminent commercial return anticipated [Zhao et al. 2019]. The dam failure incident in New Orleans is a salient example that is often disregarded in discourse. The Infrastructure Investment and Jobs Act (IIJA) was enacted on November 5, 2021, garnering bipartisan support. While the legislation is expected to stimulate investment in this sector, the allocated funds are considered inadequate. The annual funding required is estimated at approximately 2.4% of GDP, yet the Act itself stipulates a budget of $65 billion.[1] Recent hurricanes along the Atlantic coast, the escalating frequency of typhoons, droughts, and floods, attributable to climate change, are anticipated to result in future adaptation expenditures. Mitigating climate change is a challenging prospect, and the US climate program itself remains modest in scale [Esayan 2024]. A similar situation is observed in the energy sector, where the need for development and restructuring is evident. However, the United States has successfully addressed another challenge by achieving self-sufficiency in shale oil and gas. The United States has achieved energy independence, with its energy balance consisting of 80.5% hydrocarbons [Kheifets 2024].

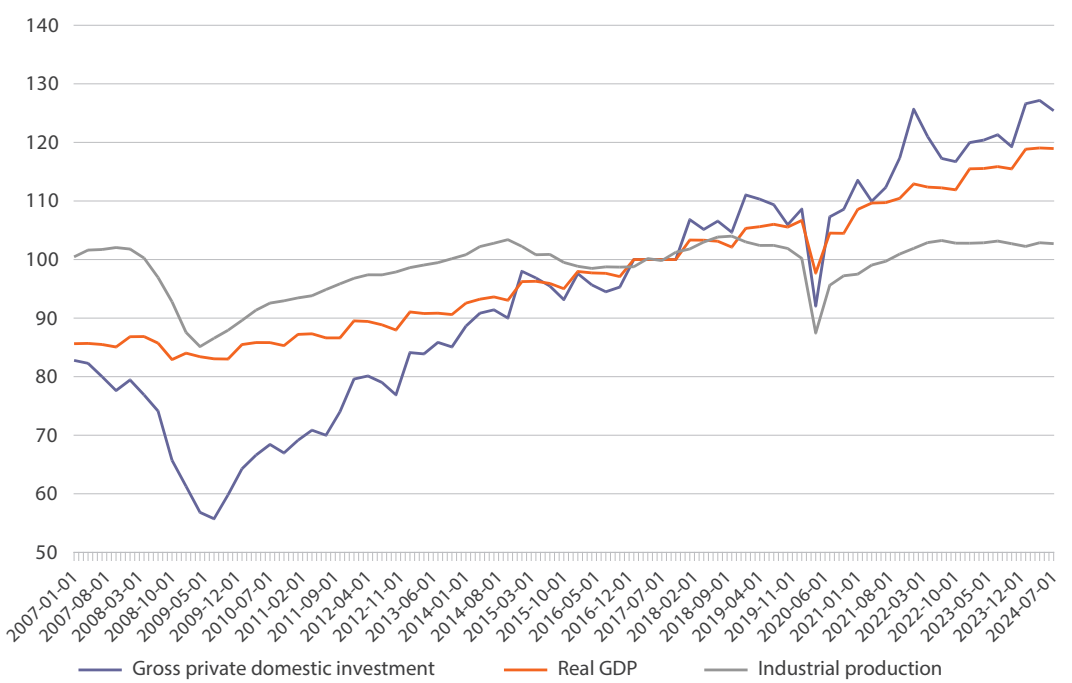
The defense of a highly liberalized economy by US policymakers is readily reconcilable with a persistent industrial policy. This commitment is evidenced by the subsidization of research in the domain of shale hydrocarbons, as well as legislation such as the CHIPS Act, the Infrastructure Investment and Jobs Act (IIJA), and the Inflation Reduction Act (IRA) [Galbraith 2024].

Notably, the Inflation Reduction Act allocates substantial subsidies for the production of electric vehicles, in conjunction with the imposition of 100% duties on imports of Chinese electric vehicles, as approved in May. These measures, when viewed through the lens of international trade liberalization, appear controversial. Moreover, the surge in tariffs on all imports, a proposal that emerged during D. Trump's election campaign, poses significant risks. This is particularly concerning when we draw parallels with the 1930 Smoot-Hawley Act, which led to the collapse of international trade and further exacerbated the domestic crisis in America, ultimately contributing to the onset of the global Great Depression. While the likelihood of such an outcome is low in the current economic climate, a systematic escalation in the cost of imports, which play a substantial role in domestic consumption, will undoubtedly have a detrimental effect on consumers and businesses.

[1] https://www.whitehouse.gov/wp-content/uploads/2022/05/BUILDING-A-BETTER-AMERICA-V2.pdf#page=385

The issue of industrial policy extends beyond customs tariffs and subsidies in select economic sectors. The primary challenge confronting developed and medium-developed countries is manufacturing. For numerous nations, it proves to be a formidable challenge to transform their revenues from natural resource exports into the acquisition of goods from their own industry, with the objective of enhancing its efficiency and competitiveness. Instead, these revenues often find their way into the markets of consumer goods exporting countries, thereby satisfying the domestic demand of commodity exporters (a circumstance exemplified by Russia and Brazil). Paradoxically, the elevated cost of labor and the accessibility of inexpensive imports have engendered a comparable outcome for the US, manifesting in the form of a substantial trade deficit. Figure 2 (p. 21) demonstrates that the nation's industrial sector has exhibited relatively modest growth in comparison to its GDP over the past twenty-five years, particularly in the context of the expansion of hydrocarbon production.

Figure 2. Dynamics of real GDP, gross capital investment, and industrial production in the United States from 2007 to Q2 2024, quarterly data, 2017=100.



Source: compiled by the author on the basis of FRED data.

One of the country's problems, around which many academic and political lances have been broken, is the problem of reindustrialization, which the US has de facto embarked on, and which has to do with the future of employment, technology, and exports. An incoming president can both gain the support of many economists for industrial policy for the sake of creating jobs and supporting the middle class, future technological leadership, and maintaining competitiveness, and face criticism of

specific plans. Hence the characteristic titles of recent articles by prominent American intellectuals: "America has no alternatives to industrial policy" [DeLong 2024]; "Industrial policy is a good idea, but so far we don't have one" [Galbraith 2024]. These approaches are in line with the positions of many representatives of business and political elite. But the question is to what extent such a policy can be developed and harmonized taking into account the macroeconomic processes.

Table 5. Parameters of the state budget, R&D expenditures and inequalities

Country	Public expenditures as % of GDP			State revenues as % of GDP			R&D expenditures as % of GDP			Share of 10th decile as % of GDP			Military expenditures as % of GDP		
	2000	2010	2020	2000	2010	2020	2000	2010	2020	2000	2010	2020	2000	2010	2020
US	33	39.8	37	35	28.8	32.7	2.6	2.7	3.5	30.3	29.3	30.2	3.1	4.9	3.5
UK	34	44.7	44.4	35.3	35.5	39.7	1.6	1.6	2.8	31.1	26.4	24.6	2.4	2.6	2.2
Germany	47.8	48.1	49.5	46.2	43.8	47	2.4	2.7	3.1	22.9	24.0	25.0	1.4	1.3	1.4
France	51.7	56.9	58.3	50.3	50	53.5	2.1	2.2	2.2	25.4	27.1	24.9	2.1	2.0	1.9
Japan	35	38	42	28.7	28.7	37.6	2.9	3.1	3.7	-	25.7	-	0.9	0.9	1.1
EU	47.1	51	50	46.1	39	41	1.8	2.0	2.3	-	-	-	1.7	1.5	1.6
Russia	30.7	35.5	35.5	33.8	32.3	34.2	1	1.1	0.9	27.6	30.6	-	3.3	3.6	4.1
China	16.3	25.1	33.5	13.4	24.7	26	0.9	1.7	2.6	29.4	32.6	28.2	1.8	1.7	1.6
Brazil	34	42.2	45.6	31	39.1	42.6	1.1	1.2	-	46.5	41.7	41.0	1.7	1.5	1.1
India	26	28	29	18	19	20	0.8	0.8	0.7	28.3	29.9	25.0	2.9	2.9	2.4
Indonesia	15.3	16.9	17.4	13.4	15.6	15.2	0.1	0.1	0.2	25.0	29.5	30.7	0.7	0.6	0.7
South Africa	22.7	28.3	32	21.3	23.8	27.7	0.6	0.7	0.9	44.9	51.3	-	1.4	1.0	0.7
Argentina	25.3	33.4	37.8	21.8	32	34	0.4	0.6	0.5	37.7	31.8	29.8	1.1	0.8	0.4
Egypt	26	31.4	24.7	27.3	23.9	18.9	0.2	0.4	1	26.4	27.0	27.5	2.6	2.0	1.1
Saudi Arabia	33.1	33	28.3	36.3	37.4	30.7	0.1	0.9	0.5	-	-	-	10.5	8.6	7.4

Source: calculated by the author according to IMF and World Bank data.

A comparative analysis of the US budget deficit reveals that, in percentage terms, it does not appear to be as dramatic as that of other countries. It is important to note, however, that many countries worldwide have substantial regular deficits. Nevertheless, when assessed in absolute terms, the US deficit stands as the most significant, resulting in a considerable debt. This deficit necessitates substantial savings to purchase additional bond issues from the Treasury Department and significant revenues to service it. The rising interest rates anticipated in 2024, as previously mentioned, position the servicing of the US national debt on par with military spending. The United States' military spending is significantly higher than that of other countries, yet the country's R&D spending, particularly by businesses, is also high. The intricate dynamics of financial flows in the US make it challenging to ascertain the allocation of capital inflows from external sources, whether for technical or military expenditures or personal consumption.

The perennial issue of servicing the national debt and setting the national debt ceiling is a point of interparty contention in the United States, although it is often characterized by observers as less significant than it truly is. However, the favorable state of the country's economy has noticeably weakened the role of this topic in the electoral struggle, giving way to concerns about the return of inflation. This shift in focus is evidenced by the abandonment of the debt ceiling discussion by both parties, a strategic move aimed at avoiding any potential voter backlash against the prospect of a government shutdown. The anticipated global economic downturn in 2023 failed to materialize. The future state of macroeconomic indicators, finance, and industrial policy will be contingent on the evolution of the geopolitical landscape, oil prices, and the business cycle, as well as the realization of a set of political election promises that will translate into government spending [Grigoryev 2024].

The growth of debt is projected to continue, accompanied by a robust discourse surrounding the definition of debt and the threshold of excessive debt. The low interest rates on government bonds serve to minimize the significance of the debt's size. Conversely, a successful macroeconomic policy aimed at maintaining inflation control could potentially enable the Federal Reserve to assist the Ministry of Finance in further augmenting government spending and debt. Projections of debt service prospects in the ensuing years do not appear to be cause for alarm (see Appendix on p. 26). The International Monetary Fund (IMF) generally regards the US fiscal situation as relatively stable, a stance that contrasts with the historical reality [IMF 2024]. However, as Barry Eichengreen asserts, "America's debt is both sustainable and a problem" [Eichengreen 2024].

Finally, social challenges and impediments to development persist. Table 5 (p. 22) demonstrates that social inequality in the US is "persistent"—the 10th decile's share of national income exceeds that of most developed countries and shows no decline. The nature of the Anglo-Saxon type of inequality, characterized by higher rates of inequality compared to those observed in continental Europe, is attributed in part to the presence of strong vertical elevators. The pursuit of personal success motivates individuals to work, leading to a perception that inequality is both persistent and mild over time. For many immigrants, the term "poverty in America" signifies living conditions that are noticeably better than the level of prosperity in their home countries. The continuous influx of Hispanic individuals contributes to a steady influx of low-wage labor, which is comparatively lower than that of "traditional Whites." However, it should be noted that they do pose a substantial competition to the African labor market.

The persistent disparity in per capita incomes among various ethnic groups (Asians, Whites, Hispanics, and African Americans) is a distinctive American phenomenon that has persisted for decades, despite the overall growth in income. In 2023, the Asian community demonstrated remarkable success, with a median income that surpassed the national average of $95,000 per year per household by a substantial margin of 21%. This represents a significant improvement from the 19% excess observed in 2002, when the median income was $70,000. By 2023, median incomes for Whites remained below the average, though the difference was minimal, at 6%. However, the situation for Hispanic families has seen a marked deterioration, with a shift from -21% to -31% of the overall

median (from $55,000 to $65,500). The position of African-American families on this indicator also underwent a deterioration, from -33% to -41% (from $47,000 to $56,000) [Petrovskaya 2024]. While the overall level of well-being has shown improvement, the relative inequality has deteriorated significantly.

The state has allocated substantial resources to equalizing conditions for children, education, and other channels to reduce inequality, yielding results, but not enough to meaningfully improve the situation. But, as observed in [Grigoryev, Grigoryeva 2021], the persistent disparities between ethnic groups, which are a component of social inequality, are increasingly impacting the socio-political environment and electoral processes. The growing demographic of Latinos and the Asian population will inevitably bring about changes to these processes. Nevertheless, it is imperative to recognize that the resolution of this issue cannot be solely attributed to an increase in budgetary expenditures. This is a profound societal transformation, the nature of which remains opaque.

Conclusion: Impact on the world

The United States' distinctive position in the global economy is rooted in its historical isolation from European and Asian conflicts, as well as the influx of labor, talent, and financial resources over two centuries. In the context of an anticipated slowdown in growth during the 2020s [Kose, Ohnsorge 2023], the ability of the United States to maintain its current growth rate and the manner in which it does so will be a pivotal factor. The economic turbulence and financial shocks of recent decades have not negated the advantages of the dollar system, nor have they impeded the influx of migrants and foreign capital seeking safe haven. This US specificity has catalyzed economic growth and augmented the country's prosperity, as well as enabled a divergence from countries lacking such opportunities. However, the concomitant problems are also entrenched to a degree that cannot be resolved within the conventional swings of bipartisan politics and short electoral cycles. These challenges encompass the persistent economic disadvantage experienced by significant segments of the population, particularly those of African descent; the evolving ethnic composition of the population, influenced by migration patterns; the deteriorating infrastructure; and the reliance on substantial migration and external financial injections to fuel economic growth. The systemic support for Anglo-Saxon-type inequality within the nation's institutions underscores the enduring presence of these issues and their potential to persist as significant social challenges in the United States in the coming years.

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Appendix: US forecast through 2029 (June 2024, %)

	2022	2023	2024	2025	2026	2027	2028	2029
Real GDP (annual growth)	1.9	2.5	2.6	1.9	2.0	2.1	2.1	2.1
Unemployment rate (q4 average)	3.6	3.7	4.2	4.3	4.3	4.2	4.0	3.9
Current account balance (% of GDP)	-3.8	-3.0	-2.9	-2.8	-2.5	-2.2	-1.9	-1.6
Federal funds rate (end of period)	4.4	5.4	5.1	4.1	3.1	2.9	2.9	2.9
Ten-year government bond rate (q4 avg.)	3.8	4.4	4.1	3.5	3.3	3.2	3.2	3.2
PCE inflation (q4/q4)	5.9	2.8	2.4	1.8	1.9	1.9	1.9	1.9
Federal government fiscal balance (% of GDP)	-5.4	-6.3	-6.8	-6.6	-6.1	-5.4	-5.6	-5.3
Federal government debt held by the public (% of GDP)	95.8	97.3	99.2	102.1	104.7	106.3	108.1	109.5
General government fiscal balance (% of GDP)	-4.1	-7.6	-7.8	-7.6	-7.2	-6.7	-6.7	-6.5
General government gross debt (% of GDP)	119.8	120.7	123.2	126.7	129.6	131.8	134.0	135.9

Source: BEA; BLS; Haver Analytics; and IMF staff estimates.

Replacing the Dollar in International Payments: A Preliminary Assessment

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Abstract

This paper examines the different issues and limits involved in the process of replacing the US dollar in a sizeable share of international transactions. One specific transaction, the payment of trade in goods, receives special attention. It also dwells on other important currency flows, discussing likely evolutions and pointing out the scarcity of data for effective evaluations of most cases. After outlining the complex array of changes involved in the overall replacement, a preliminary quantitative assessment of the prospects for the trade in goods payments is made. Results signal the possibility of attaining replacement shares of 40 and 35%, for total export and import flows, respectively. Other complementary measures and questions regarding international reserves, global clearing systems, and plastic or similar means for individual across-the-border settlements are addressed. The importance of a coherent and significant group of pro-replacement countries is highlighted, BRICS standing as the main candidate. The whole movement is a geopolitical decision: its limits, uncertainties, and purpose must always be kept in mind.

1. Introduction

Modern economic life cannot be dissociated from the monetary vehicle that not only eases the multiple transactions involved but also makes things come true. Adoption of a national currency as such an international vehicle is not a simple process. It poses questions similar, though not identical, to those that have led to the use of a single, government-controlled currency by each nation.

In the one-country case, power has played a role as important as credibility. Since the Middle Ages, ruling elites have realized that considerable gains could be extracted if an official currency would be imposed in their domains.

The *valor impositus* principle, which stated that the governmental act, made visible by the official stamp on the coins, added value and trust to the currency, was widely invoked by kings and rulers in general, despite having mixed success, to impose equal values on coins with different (usually lower) quantities of their underlying metal [Mann 1971].

In international transactions, since at least the 19th century, the currency of the hegemon has functioned as a standard, if not a means, to guide and perform the great majority of operations that were required. The currency of the British Empire, the pound, fulfilled this role practically unchallenged during the Pax Britannica century, from 1815 to 1914. After World War II, with the Bretton Woods framework solidly established, the US dollar progressively replaced the British pound. This dollar was attached to a gold standard, keeping, to some extent, the key tradition as well as the argument for a powerful, stable, internationally accepted currency: the equivalence between the banknotes in circulation and the state reserves—US ones in this case—of the precious metal.

When in 1973 the US left the gold standard (Britain had left in 1931), the US dollar became, beyond any doubt, the international currency *tout court*.

How did the dollar sustain its credibility and efficacy without the support of gold is still open to interpretation. Unquestionably, the uncontested power of the US—at the time and for decades to come—with armed forces and aircraft deployed in bases covering nearly every important point of the non-Soviet world, together with a superior navy patrolling the seven seas, was a major factor.

The possibility of replacements or currency competition, an idea also nurtured within a given country [Tullock 1975], seemed sometimes to come true.

Already in 1970–74, the IMF (International Monetary Fund), partially due to the efforts of the Belgian-American economist Robert Triffin, tried to transform the SDRs (Special Drawing Rights) into a universal currency. Something that still aired from time to time [Flor 2019], did not yet gain the support it needed.

There were hopes that the Japanese yen and, once created in January 1999, the Euro could, if not replace, at least grab a reasonable share of world transactions. Despite the outstanding Japanese banking sector, the limited scope and absent international clout of Japan did not help the yen; while the imperfect monetary union implicit in the Euro, a fragile symbolic currency, did the same for the European construct. Though figuring in several countries' international reserves, they cannot be considered as replacements for the dollar, and both are far behind the hegemon in terms of military capabilities.

The fall of the Soviet Union in December 1991, a few years before the creation of the Euro, gave the false impression that the unbridled US dollar would rule for good.

However, two issues became progressively relevant.

The first is the continuous deterioration of the US deficit, that slowly but steadily erodes the credibility of its currency. The second is increasing international insecurity, which has risen steadily since the beginning of this century. Insecurity has unfolded into a series of local conflicts, involving directly or indirectly the US, the hegemon, and thus fueling more insecurity and expensive pre-emptive measures, many out of partially irrational fear. Concomitant use of financial and economic sanctions, including the freezing of sovereign assets of countries on "opposing sides," spreads uncertainty among most who counted on the dollar as a reliable reserve currency.

All this has contributed to the idea of the Global South, pooling together the majority of the countries outside the hegemon and its clear proxy, the European Union (EU); an informal alliance united by the desire to peacefully look for greater independence from both, notably the former. The dollar, if it is still in many ways an anchor currency, has lost its crucial intrinsic asset: credibility. Efforts aiming at its substitution have entered the agenda.

This paper is a preliminary examination of the process of replacing the US dollar in a sizeable share of international transactions. Even if restricted to one specific function, such movement involves a complex array of changes and replacements that may go down to a micro level of decisions, together with bold macroeconomic steps. Absence of detailed data is a major deterrent for better-grounded analyses in most cases. Indeed, with the exception of trade in goods, where a comprehensive and fairly reliable United Nations-managed database exists, for other instances of international currency flows, the lack of data is a problem.

Section 2 outlines the network of operations and procedures associated with a universal currency. Section 3 addresses, quantitatively, the prospects of a major first step: the payment for international trade in goods. Section 4 probes other functions and their possible assessments, within the limits of the insufficient information available.

Section 5 concludes with a view on the tasks ahead.

2. The currency of the hegemon: How far it goes

Replacing the US dollar as the money to pay for imports or to receive for one's exports, goes beyond the strict limits of the transaction alone. Ancillary services, such as insurance and logistics, for instance, require payments that, depending on the provider, are requested in US dollars. Firms and exports producers, especially if of a transnational character, may have their internal accounts in dollars and vary from reluctant to resistant in terms of accepting payments in other currencies; something that may turn out as an unnecessary nuisance for them.

A single currency eases comparisons among different international suppliers or buyers, particularly as regards the key issue of costs. Domestically, small exporters want to be able to schedule production and export revenues according to expected receipts. If these are to be accounted in a currency that is not universal and likely more

volatile, they may shed the corresponding destinations. Broadly, planning is inherent to all decisions involved in the trade realm, and plans (ideally) need solid, well defined and widely accepted monetary units.

Considerations may be enlarged, adding several instances that act as further arguments against a replacement. These may be more or less sound, depending on how the alternatives are fashioned. Their impact, or resilience, will be attenuated if the alternatives have a business or profit scale that encourages acceptance. Acceptance can even become tacit if the goods are essential, or supplied in quantities that no other competitor could cover.

The above suggests that replacement is more feasible if: a) a minimal group of *significant traders*, such as the BRICS countries, gives its support to dollar replacement; b) within this minimal group, together with other countries close to it, replacement is largely adopted.

Supposing that both conditions are met, the question of the currencies used in the transactions remains open.

Will each country pay in its own money and conversions among a group of currencies become a common and reliable practice, or will one of the currencies—again due to its scale—progressively reveal itself to be more convenient? This is a debate that brings back old discussions, usually in a domestic context, which have been held since the early 20th century *Freigeld* ideas [Gesell 1958], continuing to developments on the multiplicity of currencies [Klein 1975], and reaching the aforementioned arguments for the SDR, particularly as regards lower volatility and global stability [Tosolini 2016].

It is hard to forecast, at this moment, how things will evolve, but inclusion of a key trader like China in the pro-replacement group introduces a bias towards the renminbi (RMB). Nevertheless, transactions within a given geographical area may take place in Russian rubles or Brazilian reais. Secondary competitors, such as the euro and the yen, may also profit from the changes and increase—at least temporarily—their participation. The same applies to gold.

A further point is that countries may accept replacement with certain partners, while practicing the US dollar standard with others. In fact, given the combined size of the US and EU markets, this will be the prevailing situation in a first stage for nearly all members of the replacement group. In the second stage, some may become more assertive and use alternative currencies for the majority of their transactions.

Beyond the universe of trade transactions, the currency of the hegemon naturally arises as a favorite choice for a country's international reserves. US Treasure Bonds, though not without problems, remain as the (financial theory's) world riskless asset, and figure prominently in all national baskets of monetary reserves. The International Financial System (IFS) remains heavily anchored to and coordinated by its US core, a far from negligible point.

Practical consequences, as control of international payments and bank transfer systems, are strategic and give added support to the hegemon's currency. The exchange rate market provides daily hefty receipts to all those involved in its operations, which eventually accrue substantial sovereignty rents to the US dollar, besides the exorbitant privilege already enjoyed by it.

Moreover, the reserve currency is also used as a reference to many international prices or moneys that are therefore pegged to it.

All this supports the belief that the least problematic path to starting partial de-dollarization seems indeed to be through trade payments. A core starting group can be, as mentioned, the original BRICS countries, possible other adherents being those strongly associated with them and the five new members. The core group must have a few goods for which they play a major role in world trade, as well as significant links among them and the Global South in general.

It is important to measure the progress of the replacement. Basic statistics are, for each pro-replacement active country, the amount and share of trade in other currencies and those in US dollars. Their shares in terms of world trade are also relevant. Information on payment for ancillary services and, in the case of logistics, on the transportation modes used is also relevant, though less easily available.

The same applies to other instances of sovereignty, another indicator could be the composition of national reserves. Individual measures, like the creation of alternative means of payment, novel credit card banners, or international transfers' platforms and new bilateral currency swaps, play an important role and must be individually assessed within the limits of the market at stake.

3. Quantifying possibilities in the trade flows

Table 1 (p. 32) shows, for 2022, global trade in goods flows—in value, Table 1a, and in shares, Table 1b—according to (the five original) BRICS members and three other world regions. Two will in principle stick to the dollar, the US and the European Union (EU), and the Rest of the World (RoW); together with the BRICS, they make for a four-region division of the world.

The message from the Table is nuanced.

As regards BRICS countries, those with a strong link with China seem more comfortable to switch a sizeable part of payments and receipts. Brazil is an emblematic case, since 30% of its exports go to the BRICS, and 28% of its imports come from them. A member like India presents a mixed situation, with a low share of exports (8%) but a significant one of imports (24%). Taking the BRICS as a whole, 34% of their exports go to the US and EU, while 18% of their imports come from them; *figures that should be taken as lower limits for no-replacement flows*.

Another important point is the key role of the RoW. It presents imports and exports shares nearly always above 40%, reaching, in the case of Chinese imports, the unavoidable figure of 75%. For the replacement movement to gain momentum, it is mandatory to move outside the BRICS-EU-US nexus.

However, there is a rather diversified group of countries that needs well-designed policies. It ranges from brand new BRICS members to the diversity of Asia, even without China and India, plus Africa and the whole of Latin America except Brazil, together with a complex zone like the Middle East and a more isolated one like Eurasia, with the old Silk Road countries. More pro-dollar countries, like Australia or Canada, are also part of it.

Identification of replacement candidates needs different strategies and deepens the question of multiple alternative currencies: while many may be comfortable using the RMB. others may prefer the ruble or feel at ease with different options.

Table 1. Trade flows – BRICS countries and a four-region division of the world. 2022
1a. Exports and Imports intra and extra BRICS (in billion US$)

	Brazil	**India**	**Russia**	**China**	**S. Africa**	**BRICS**	**US**	**EU**	**RoW**
Brazil		9.7	8.6	62.0	0.7	81.0	46.4	44.3	120.3
India	6.3		40.6	118.5	8.2	173.7	45.1	49.7	464.1
Russia	2.0	2.9		76.1	0.3	81.3	1.5	57.7	53.1
China	89.7	15.1	114.2		22.1	241.1	156.4	239.7	1956.0
S. Africa	1.7	8.3	0.6	24.2		34.7	6.9	27.6	42.1
BRICS	99.8	36.0	164.0	280.8	31.3	611.8	256.3	419.0	2582.5
US	38.2	80.2	15.1	582.8	12.6	728.8		527.5	2116.6
EU	52.4	71.1	195.6	657.7	27.6	1004.4	372.4		1780.6
RoW	144.2	265.4	197.4	2072.4	49.6	2728.9	1115.2	1761.8	
Total	334.5	452.7	572.0	3593.1	121.1	5073.9	1743.8	2708.2	6532.7

Total exports are along the columns, and imports run along the rows[1]

1b. Shares* of exports and *imports*** between BRICS countries and four world regions

	Brazil	**India**	**Russia**	**China**	**S. Africa**	**BRICS**	**US**	**EU**	**RoW**
Brazil						*0.28*	*0.16*	*0.15*	*0.41*
India						*0.24*	*0.06*	*0.07*	*0.63*
Russia						*0.42*	*0.01*	*0.30*	*0.27*
China						*0.09*	*0.06*	*0.09*	*0.75*
S. Africa						*0.31*	*0.06*	*0.25*	*0.38*
BRICS	0.30	0.08	0.29	0.08	0.26	0.12 *0.16*	*0.07*	*0.11*	*0.67*
US	0.11	0.18	0.03	0.16	0.10	0.14			
EU	0.16	0.16	0.34	0.18	0.23	0.20			
RoW	0.43	0.59	0.35	0.58	0.41	0.54			

* Due to rounding up, shares may add up to 0.99 or 1.01; ** in italics.

Source: UN Comtrade. Exports' shares are in the columns; imports' shares in the rows; the latter are in italics.

[1] See the Appendix on the reliability of the trade figures.

In order to highlight a basic view on the dollar dependence by BRICS members, Table 2 (p. 33) displays the combined US-EU imports and exports shares for them. In terms of exports, all are clearly dependent on the standard Western market, with Brazil the least dependent with 27%. In overall terms, India and China—naturally, given their size as trade actors—are less dependent than the other three. Dependence is, however, nuanced; while for China it is roughly balanced between the two submarkets, for Russia there is much less trade with the US, as previously shown in Table 1b.

Table 2. BRICS members, combined US-EU shares of their imports and exports, 2022

	Brazil	India	Russia	China	S. Africa	BRICS
Imports	0.31	0.13	0.31	0,15	0.31	0.18
Exports	0.27	0.34	0.37	0,34	0.33	0.34

Source: Table 1b.

Table 3 (p. 34)—to be read the same way as Table 1a—provides a glimpse into the diversity of the RoW, with a few select partners in non-African countries. To put the figures in perspective, their exports and imports to the US and the EU are also shown, together with—from the BRICS—the Chinese flows.

Again, a mixed picture appears, with important players like Saudi Arabia, Vietnam or Japan, standing next to more modest ones. Geopolitics plays a major role, as whether or how far Japan and Saudi Arabia, for instance, will engage in the replacement remains an open question at the moment.

All countries in the table, China excepted, import more from the BRICS than from the combined US-EU market; while for the Asian countries, Indonesia excepted, the combined Western market is a key destination for their exports.

As regards African countries, values are lower and a diversified situation, deserving careful analysis, is apparent. Angola, Ghana, Mozambique, Nigeria, and Senegal, for instance, import more from the BRICS than to the combined US-EU market, but only Angola, Mozambique, and Senegal export more to the BRICS rather than to the US-EU market. Angola and Nigeria are emblematic examples. The former exports $28 billion to the BRICS in contrast to $15.4 billion to the Western bloc, while for the latter the values are $12.1 billion and $33 billion, respectively. As for imports, BRICS again (slightly) dominate in Angola, with $5.9 billion against $5.1 billion from the US-EU, while Nigeria now stands as a kind of (African) champion, with $29.6 billion of BRICS imports, against $22.6 billion from the other bloc.

The above cases illustrate the complexity of the African case, where replacement will often be a balanced reality, strongly influenced by geopolitical decisions. In the figures in the previous paragraph, three points lie behind any explanation: the importance of one commodity, oil, common to many African nations; the sizeable flows to and from China; and the EU as, still, a key partner for many countries on the continent.[2]

[2] To give an example, for Nigeria, out of the $33 million exports to the West, $28.6 million went to the EU, and of the $22.6 million imported from the same bloc, $19.4 million came from there.

Table 3. Trade in goods flows – BRICS members and select countries, 2022: Exports and imports, non-African countries (in billion US$)

	China	BRICS	Argentina	Iran*	Saudi Arabia	Indonesia	Vietnam	Japan	US	EU
China		241.1	7.9	6355.1	78.0	65.9	72.8	144.5	133.8	239.7
BRICS	280.8		26.1	7162.4	134.2	93.6	86.1	169.7	256.3	419.0
Argentina	12.8	29.7		1.4	1.1	0.4	1.0	0.9	11.0	10.5
Iran	9.4	15.6	0.7		NA	0.2	Н.д.	0.0	0.0	4.3
Saudi Arabia	38.0	51.5	1.2	NA		2.0	0.7	5.1	10.8	32.8
Indonesia	71.3	87.0	2.1	14.6	5.5		4.5	15.1	9.6	9.4
Vietnam	147.0	158.6	3.2	NA	1.9	8.3		19.0	9.5	13.2
Japan	172.9	208.6	0.8	35.2	42.4	24.8	24.2		72.3	73.0
US	582.8	728.8	6.7	11.2	24.1	32.8	135.9	139.8		527.5
EU	658.6	1004.4	11.2	1112.0	46.4	24.8	53.8	73.3	372.4	

* Exceptionally, in million US$.

Source: UN Comtrade.

Pushing the reasoning in this section further, the lower limits established in Table 2 can signal a way to construct an educated guess on the possibilities of replacement, taking into account global world trade flows.

In order to achieve such figures, all the countries present in the Comtrade file were considered, with their 2022 trade flows—the last year for which there is information available on all them. The EU, the US and the UK were taken as a bloc, a single unit for which the six bilateral exchanges between them were disregarded, as well as the import and export flows within the EU. Only the total imports of the bloc, coming from the outside, as well as its total exports to the same outside, are computed.

Two key figures emerge: the ratio between the total exports of the bloc and the grand total of world exports (the bloc naturally included); the ratio between the total imports of the bloc and the grand total of world imports (the bloc included). These are, respectively, 0.16 for exports and 0.25 for imports.

This allows us to make two sorts of statements. Lower limits for the dollar non-replacement shares are 0.16 for world exports and 0.25 for imports. Open zones of 0.84 for exports and 0.75 for imports remain as possibilities for replacement. In these zones are the BRICS+ flows and those with their closer partners, together with all the possibilities discussed in Tables 1, 3 and on Africa.

It seems reasonable to suppose from the above that half of the latter flows may move to replacement currencies. *This produces the educated guess of, in the midterm, around 40% of world exports and 35% of imports moving away from being settled in US dollars.*

4. Other dimensions and agents

This section deals with other instances of international payments, in order to give an overview of what lies ahead. The process started with the trade flows will inevitably spread to other dimensions of the International Monetary system, something that poses manifold questions to be addressed as soon as possible. The approach here is preliminary, to raise issues and identify progress already in motion. No attempt at modeling the various competitive processes is made, though, at a later stage, simple though sophisticated models like those of Farhi and Maggiori (2018) may provide additional insights.

International reserves

The universal international currency besides dominating flows is top also as regards stocks. It anchors the basket of financial assets that make up the international reserves of most countries.

Table 4 (p. 35) shows the total composition of the reserves' basket, in value and shares, for all IMF reporting members, for three points in time, 2002, 2012 and 2022.

Table 4. Foreign exchange reserves, all IMF members, at three points in time

	2002	2012	2022
According to the main currencies used, in billion US$			
Total Foreign Exchange Reserves	2408.9	10 948.4	11 917.8
Allocated Reserves	1795.8	6084.7	11 040.0
Claims in US dollars	1194.2	3741.9	6460.2
Claims in euro	424.7	1464.7	2252.1
Claims in Chinese renminbi			287.8
Claims in Japanese yen	88.7	248.8	608.2
Claims in pounds sterling	52.5	246.0	543.1
Claims in other currencies	35.7	383.3	383.6
Unallocated Reserves	613.1	4863.7	877.8
According to the main currencies used, in percentages			
Allocated Reserves	100	100	100
Claims in US dollars	67	61	59
Claims in euro	24	24	20
Claims in Chinese renminbi	0	0	3
Claims in Japanese yen	5	4	6
Claims in pounds sterling	3	4	5
Claims in other currencies	2	6	7

Source: IMF (International Monetary Fund).

Considering the euro also as a core currency—something debatable—its joint share together with the US dollar, in all baskets, fell from 91% to 79% in 20 years, with a greater drop for the latter. The yen and the British pound experienced a slight increase, while "other (non-defined) currencies" remained stable in the two last points. The novelty is the Chinese renminbi appearing with a 3% figure in 2022. Excluding the four mainstream currencies, during the time interval shown, *new stock options* moved from 2% to 10% of all reserves, with the appearance of the RMB. Perhaps a significant start, heralding greater changes.

If the replacement in the trade in goods flows comes true in a five-year horizon, approximately, this dynamic is due to accelerate.

Unfortunately, the IMF does not publish a disaggregated composition for all its members. Brazil is the exception, in 2022, among the original BRICS. Table 5 (p. 36) shows what is available for them, India excluded, in two points in time. It is worth noticing that, in 2022, China had more than 10% of the composition of their currency reserves in moneys outside the SDR basket, while Brazil had already around 5% of its reserves in RMB—though with 74.4% still in US dollars.

Table 5. Foreign Exchange Reserves – currency composition of reserves (available disaggregation), for four BRICS members, in billion US$; two time points

	2022	2012	2022	2012	2022	2012	2022
	China	Brazil		South Africa		Russia	
Currency composition of reserves (by groups of currencies)	3306.5	373.1	324.7	50.7	60.6	537.6	582.0
currencies in SDR basket*	2974.1	333.3	318.9	50.7	57.5	520.9	
Currency Composition of Reserves, Denominated in Chinese Renminbi	NA	NA	16.1	NA	NA	NA	NA
Currency Composition of Reserves, Denominated in Euros			14.5				
Currency Composition of Reserves, Denominated in Japanese Yen			5.6				
Currency Composition of Reserves, Denominated in UK Pound Sterling			9.7				
Currency Composition of Reserves, Denominated in US Dollars			241.6				
currencies not in SDR basket	332.5	39.8	5.8	0.1	3.1	16.7	

* Special Drawing Rights basket, made up of the five currencies displayed below in the Table.

Source: IMF (International Monetary Fund).

International payments systems

For payments to take place around the globe they must change hands at a distance, something performed by the world network of banks and associated (electronic) transfer platforms. Both play a crucial role in easing any given transaction and actually making it functional. If one excludes the incipient cryptocurrencies market, standard[3] bank

[3] In terms of widely accepted and used.

transfer systems are just a few, inevitably linked to the corridors of power, directly or indirectly controlled by the hegemon. The better known and widely used is SWIFT—the Society for Worldwide Interbank Financial Telecommunication—an entity under Belgian law linking more than 11,000 financial institutions in over 200 countries.[4] The interaction between the banks and the system is close and complex; exclusion of one country or bank from the SWIFT may seriously damage its international financial life [Caytas 2017].

Side systems—often using offshore financial facilities, or bilateral currency swaps—and direct, customized bank to bank payments may provide alternatives, whose meaning and efficiency will be highly dependent on the volume of transactions at stake. More details follow below, for two key actors. The issue of properly quantifying changes in this area remains open.

Chinese and Russian banks

Two BRICS countries—actually three, as India's is also quite closed—display a relatively well-developed internal banking system, less connected to the IFS: Russia and China. The former has suffered manifold sanctions by the US and the EU, which triggered a series of measures to switch, as smoothly as possible, from mechanisms ultimately controlled by the leading Western power, without cutting the country's international connections. A Russian SWIFT has been created, also operating domestically, as well as a national payment system anchored in the Mir card.

China, meanwhile, launched, in 2015, CIPS, the Cross-border Interbank Payment System, which in principle allows any established bank in the world to operate RMB transactions with Chinese banks. CIPS, which is connected to SWIFT, has transferred 45 trillion RMB in 2020, and nearly 80 trillion in 2021. Though these figures are still lower than the volume of transactions in RMB taking place through the offshore network, there are prospects for the system to become increasingly relevant.

Individuals' international payments

Another important dimension is that of international means of payment for the global citizen himself or herself. The (international) credit card, though not the single option, still seems to be the prevailing means available. Reminding us that the IFS is a unified nexus, it is no wonder that the credit card business deeply interacts with the previous dimensions and agents and, eventually, remains under the hegemon's umbrella.

Table 6 (p. 38) shows, for the four main credit cards, the share of purchase transactions. Union Pay, a Chinese payment system, enjoys a significant position, outnumbering MasterCard.

Union Pay's performance is somewhat confirmed in Table 7 (p. 38) , where, for the same banners, the yearly number of (purchasing) transactions—credit or debit—cards in the hands of the public and total value of transactions are showed. This monetary mass though accounted, measured and transiting via the main currency, the US dollar, also

[4] For a fairly detailed history of SWIFT, see Scott and Zachariadis (2014).

takes place in RMB, thanks to the Chinese banner. The figures below must be regarded with care, as they also involve domestic transactions.

Table 6. Yearly shares (over 100.0) of purchase transactions for the four main credit cards

Year	Visa	MasterCard	Union Pay	American Express
2020	40.2	24.1	32.3	NA
2021	38.9	24.1	34.1	NA
2022	38.7	24.0	34.1	1.6

Source: Statista.

Table 7. The four main cards: selected yearly indicators

Year	Visa	MasterCard	Union Pay	American Express
5a. Total number of transactions (credit or debit), in billions				
2020	188	113	151	NA
2021	226	140	198	NA
2022	242	150	213	10
5b. Total number of cards in the hands of the public, in billions				
2020	4.6	3.8	NA	NA
2021	4.7	4.0	NA	NA
2022	4.9	4.2	NA	NA
5c. Total volume of payments, in US dollars, in trillions				
2020	4.4	2.7	NA	NA
2021	5.2	3.3	NA	NA
2022	5.9	3.7	NA	NA

Source: Statista

Since 2022, Visa, MasterCard and American Express cards issued abroad do not work in Russia. This is an additional step in the direction of lower financial integration and another incentive for the creation of alternatives to the US-dollar dominated system.

A note on cryptocurrencies

Parallel developments may also change trajectories and targets. One refers to blockchain-based currencies, which have nowadays a market of their own. Worried with their acquired niche, central banks have been pursuing the idea of the CBDCs—Central Bank Digital Currencies, as not exactly a competitor to them but rather a way to occupying (regulated) space in this new market. Individual central banks share different views on this new product, with China leading in experiments and implementations, since the e-CNY, started in 2014 and considered the first CBDC to be tested. The views in Roubini

(2022) should not be disregarded,[5] and digital currencies still pose major energy and speed-of-transactions problems, meaning they cannot be seen as an encompassing solution. They are left here outside the replacement discussion.

5. Conclusions

Replacing the dollar in international payments is often confused, deliberately or not, with the debate on whether US dominance is coming to an end or not. Though related, the two issues can and should be tackled independently.

This text is a preliminary attempt to probe the possibility of partially replacing the dollar in international transactions, notably as regards trade flows. For other instances in international transactions, the approach has been broader, though the process will inevitably affect them, perhaps sooner than expected.

The evidence gathered suggests that replacement in the trade flows payments is not only feasible: it can be significant. Moreover, as is informally known, the process has already been gaining momentum.

A natural outcome is the creation of an area—in fact, a group of countries—where use of the US dollar would be significantly reduced. A strong candidate seems to be the BRICS, or rather BRICS+ and the set of nations closer to them. This does not imply that members of the area, like Brazil, China, or India, would completely abandon the dollar, especially because the combined US-EU market is important for all of them.

Notwithstanding this, the initial step within the trade in goods realm may then spread to other domains, encompassing other kinds of international payments and reinforcing ancillary important measures, like the use of new credit cards. Eventually, the replacement dynamics will overflow the trade realm and issues like transfer payments platforms or international plastic money should be fully and seriously tackled.

Substitution of the dollar leads to two major questions: by which currency? How to manage a transition period, with, most probably, different currencies in use?

Though transactions may take place in Russian rubles or Brazilian reais, the present dynamics points towards the RMB assuming a larger proportion of the function of the US dollar. Studies on its ability to become a reserve currency start to abound, Eichengreen et al. (2022) being a cogent example. On the other hand, SDR adepts, for instance, continue to be active, and a period of several alternative main currencies might be expected. Elaboration on this point goes beyond the scope of the present exercise and deserves deeper consideration.

Management of a period with several currencies in use is not necessarily a novelty for the IFS. There are pros and cons to this situation and it must also be the subject of a separate work.

The very dynamics addressed here is highly affected by geopolitical decisions and the persistent will, by a core of key countries, to push forward a replacement. There is no signal that such a trend will be reverted, but in the present volatile world, surprises

[5] Specifically, in chapter six.

may take place, accelerating or hindering developments. It is advisable to incorporate this, both in the planning of future steps and in the measurement of progress achieved.

Identifying key feasible policies and ways to continuously measure their results is mandatory. Progress measurement in a systematic way, to gauge the successive achievements and keep track of alternative solutions, will require specialized staff.

The list of things that must be done is extensive. A sharper, more focused and detailed analysis of the trade flows nexus is a vital next step. The important educated guess of 40-35%, for exports and imports, must be refined and carefully assessed on a periodic basis. Better statistics must be obtained on the other possible transactions, to support creative, novel alternative products and systems.

The number of tasks ahead is great, but we must never lose sight of their geopolitical dimension and their wider meaning as a peaceful effort to change things for the better, in a world that is under threat.

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Appendix: A note on trade statistics

Trade data

When one departs from "standard" Western countries, trade data may become less reliable. Even the source used here, UN Comtrade, perhaps the best one available, demands careful attention. South Africa, for instance, presents discrepancies in its reported flows with Brazil, China, India, and the US, the latter showing incongruences with (again) South Africa, China, and India. Discrepancies usually refer to large differences between an FOB-export reported by country A to country B, and the corresponding CIF-imported value reported by country B, differences that may amount to 90% of the smaller value.

The table below gives an idea of the discrepancies in 2022:

Export-Import Discrepancies (values in millions, US dollars)			
	Export FOB	**Import CIF**	**(CIF-FOB)/FOB %**
S.Africa → Brazil	499	952	91
S.Africa → India	5.217	11.166	114
S.Africa → China	11.685	32.543	179
S.Africa → US	10.590	14.657	38
US → India	38.351	51.772	35
US → China	133.825	178.957	34
US → S.Africa	5.521	8.204	49

Source: UN Comtrade.

For the tables in the text, a discrepancy was considered when the relative difference (the third column in the above table) was higher than 25%. In this case, the average between the two values was used.

Problems may also be due to missing data. They occur with Russia and the RoW, as well as with Iran, Saudi Arabia, Indonesia, Vietnam, and, again, Russia (it also applies to African countries, including those with significant trade volumes like Angola, Ghana, or Nigeria). Many may be due to delays in reporting the 2022 data, while the 2021 information is available.

This implies that, for some countries, the corresponding column values are not their declared exports but the CIF-imports declared by the country-line; a general rule in all rows related to the European Union.

Other sources

IMF data may be improved and combined with individual, country-based sources; an effort that can be demanding.

For other products, like credit cards, the amount of noise in the data is unknown. More work is needed regarding most alternative sources.

The International Investment Position of the United States in the Twenty-First Century

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Abstract

The accumulation process in the United States is contingent upon the substantial opportunities presented by domestic corporations, encompassing amortization and retained earnings, in addition to both internal and external sources of financing. The present study is dedicated to the analysis of the evolution of the international investment position of the United States since the beginning of the 21st century. The objective of the present study is to identify changes in the structure of US liabilities and assets during three key periods: 2000–2007, 2007–2019, 2019–2023 in the context of global processes and the country's monetary policy. During the period spanning from 2000 to 2023, net investment inflows amounted to nearly $20 trillion at "moderate market prices," discounted for stability and security. Concurrently, financial investment in the US economy is predominantly concentrated in the forms of equity, investment funds, and long-term debt. An analysis of the geographical distribution of US portfolio investments reveals the stability of the nation's primary partners, with developed countries and offshore financial centers predominating. However, during the period under review, there were changes in financial flows between the US and developing countries, primarily the BRICS countries.

US international investment position

The evolution of the US financial system, its enormous size and wide international presence of US companies and financial institutions, as well as the specificity of the dollar position, make it a huge platform for financial intermediation. Financial institutions in the United States, including banks and funds, facilitate a vast array of transactions and contracts of varying durations and volumes. These financial intermediaries play a pivotal role in facilitating the transfer of savings from domestic economic agents (i.e., families, firms, and various levels of government) to international capital flows, i.e., integration into the global economy. Capital movement constitutes the most significant component of globalization processes. The nature of international intermediation is contingent upon the specifics of a nation's developmental stage and the state of the financial market.

The International Investment Position (IIP) serves as an integral indicator, capturing the cumulative outcome of decades of cross-border capital movements involving the United States. The significance of this indicator stems from its role in globalization within the financial sector. Concurrently, it underscores the interplay between the persistent US trade deficit and countervailing factors within the financial balance. In the context of the United States, as the largest developed economy, this indicator functions as an accumulated index, unveiling the dynamics of financial interdependency among nations and the instruments employed in these transactions. The necessity for the formulation of an IIP theory is largely obviated by the existence of a robust body of traditional theories that adequately address the dynamics of exports and imports of capital in various forms, instruments, and geographies. However, the combination of factors over time is a more complex matter, as it can involve numerous variants. It is crucial to acknowledge that for any nation, particularly the US, the

The net international investment position (IIP) is defined as the value of accumulated US financial assets held by foreign residents, minus US liabilities held by foreign residents. Specifically, assets signify investments made by US residents in foreign markets, while liabilities denote investments made by foreign residents in the US economy.

A negative IIP signifies net financial inflows through direct and portfolio investment in the US economy.

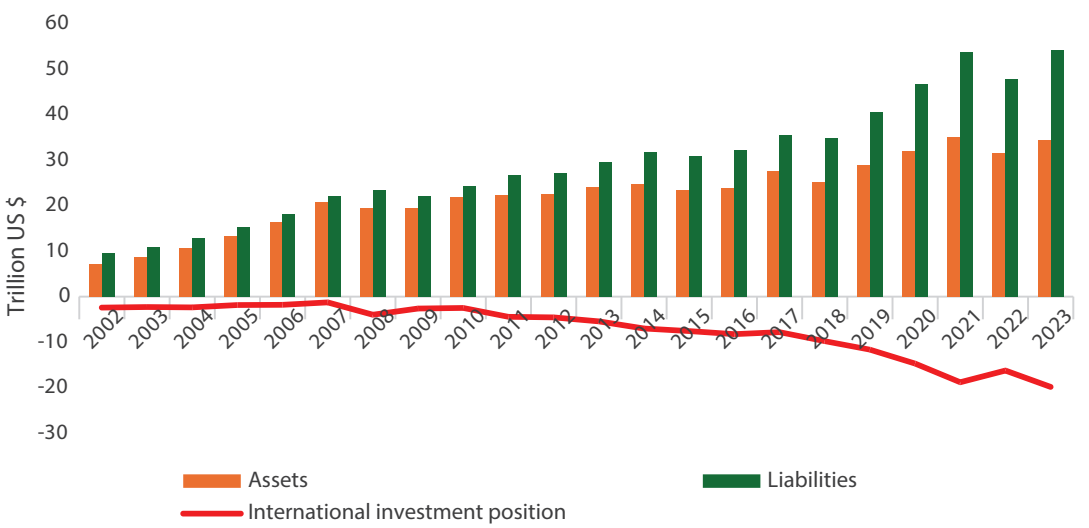
It is imperative to note that both direct and portfolio investments are encompassed within each category. Direct investment entails a substantial degree of participation (or control) by residents of one country in an enterprise or company in another country. In contrast, portfolio investments do not entail substantial ownership or control.

Portfolio investments encompass a broad spectrum of financial instruments, including debt instruments such as US Treasury securities, which are classified as liabilities, as well as equity and investment funds. Direct investments encompass investments in equity and debt instruments.

combination of factors is distinct for both exports and imports. A comprehensive analysis of the United States' development and monetary policy is inherently incomplete without considering capital flows and the nation's international investment position.

The overall tendency of the US IIP is evident, marked by an expansion of the disparity between assets and liabilities, with the latter exhibiting an upward trend. Consequently, by the close of 2023, the nation's international investment position had reached $19.8 trillion. This figure signifies a substantial increase of nearly $17.5 trillion when compared to the 2002 levels (refer to Figure 1 on p. 44). It is important to note that this trend was not linear; for instance, following a substantial increase in 2008, the deficit experienced a slight contraction in 2009–2010, yet it failed to revert to its pre-crisis level. A more substantial reduction in the disparity between assets and liabilities was observed in 2022. Consequently, the United States maintains its status as a "safe haven," ensuring the security and protection of investments for its global investors.

Figure 1. US international investment position, year-end assets and liabilities, US$ trillion



Source: compiled by the author on the basis of data from the US Bureau of Economic Analysis.

The international investment position of the United States has historically been indicative of the accumulation of external assets in developing countries (primarily in China and oil-exporting countries) and the parallel investment of these savings in the US economy [Summers 2006]. Data analysis lends support to this thesis. The increase in capital inflows (liabilities', as defined in the IIP framework) throughout the period (2000–2023) was driven by direct and portfolio investments in private business assets, as well as portfolio investments in debt securities, primarily long-term (debt bonds of the US Department of the Treasury and other securities).

J. Perelstein emphasizes that the deficit of the balance of payments and foreign trade emerged as a contributing factor to the global financial crisis, thereby establishing

the preconditions for the growth of income in developing countries. This, in turn, prompted investors to seek "risk-free" assets to invest in the US economy [Perelstein 2009]. Bernanke and colleagues propose the concept of "global excess savings," which they theorize as the primary catalyst for capital outflows from developing countries to developed countries in the pre-crisis period. This phenomenon is described as having contributed to the decline in long-term interest rates within the United States [Bernanke et al. 2011]. O. Blanchard's work focuses on "global imbalances" within the financial system, which were exacerbated by the global financial crisis. These imbalances encompass the US's current account deficit, the substantial demand for US assets, and the significant savings in China and oil-exporting countries. The factors determining the imbalances of the global financial system are in a state of constant flux, as is the geography of capital flows [Blanchard, Milesi-Ferretti 2009]. For the period spanning from 2000 to 2023, the United States' accumulated net savings amounted to approximately $8 trillion.[1] In contrast, capital inflows during the same period exceeded $18 trillion, a figure that surpasses the accumulated defense expenditure of $17 trillion [Blanchard, Milesi-Ferretti 2009].

Notably, the disparity between assets and liabilities has increased in favor of the latter, both in absolute values and in the ratio to real GDP. Figure 2 (p. 46) illustrates the annual fluctuations (in percentage of GDP) of several pivotal indicators. The annual increase in public debt, which peaked at 14.6% of GDP in 2021, is indicative of a growing financial burden. The trade account balance has been consistently negative between 2000 and 2023, ranging from -2.5% to -5.5% of GDP. The IIP shows pronounced volatility, with negative spikes during the crisis years such as 2008 and 2021 (despite a GDP gain in 2021) and positive peaks in 2009 and 2022 (followed by declines).

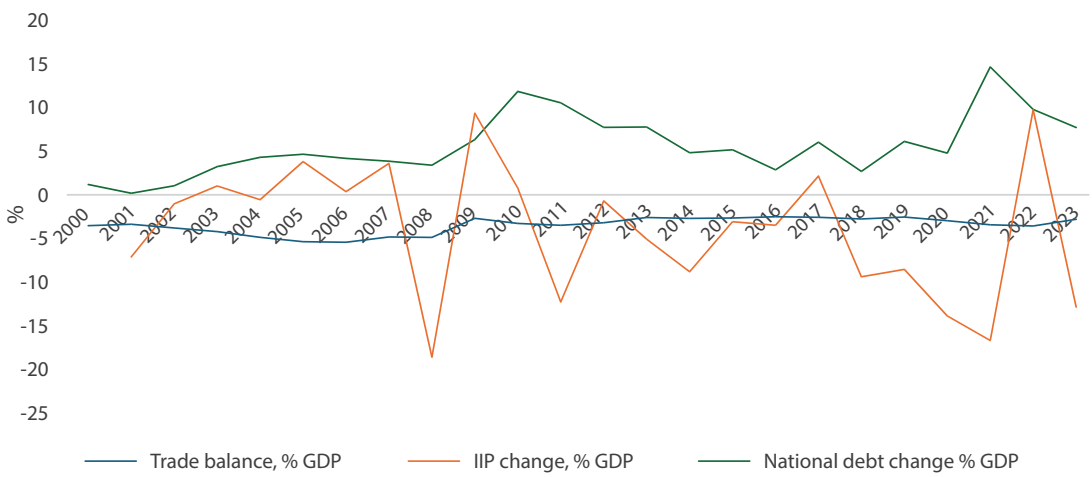
The historical development of the US IIP during the 21st century is clearly shown in Figure 2. The analysis reveals a consistent trend of stronger growth in foreign investments in the United States compared to foreign assets of American economic agents, with only two significant interruptions (2009 and 2022) that led to a substantial decrease in "capital immigration" to the country. The negative trade balance was naturally covered by capital inflows, especially given the stable dollar. The growth of public debt also played a significant role in absorbing global excess savings, particularly from developed countries, China, and oil exporters, although available statistics obscure the sources of funds (for example, the Cayman Islands account for approximately one-fifth of portfolio investments).

Rooted in profit maximization and business expansion, the American entrepreneurial tradition, manifested in the relocation of businesses to Europe, Latin America, and the rest of the world in the post-World War II era. In accordance with this phenomenon, the hypothesis that has been substantiated by empirical evidence suggests the exportation of financial resources in the form of capital. This exportation

[1] According to BEA: https://apps.bea.gov/iTable/?reqid=19&step=2&isuri=1&categories=survey&_gl=1*1wtuv3e*_ga*MTM4NDI4NzkyNy4xNzI0MTk5NzA1*_ga_J4698JNNNFT*MTcyNDIwMjYwMy4yLjEuMTcyNDIwMjYxOS40NC4wLjA.#eyJhcHBpZCI6MTksInNN0ZXBzIjpbMSwyLDMsM10sImRhdGEiOltbImNhdGVnb3JpZXMiLCJTdXJ2ZXkiXSxbIk5JUEFfVGFibGVfTGlzdCIsIsIjEzNyJdLFsiRmlyc3RfWWVhciIsIsIjIwMDAiXSxbIkxhc3RfWWVhciIsIsIjIwMjMiXSxbIlNjYWxlIiwiLTkiXSxbIlNlcmllcyIsIkEiXV19

confers a degree of direct control over operations, thereby elevating the stock prices of parent companies and generating dividends. The increase in US assets abroad can be attributed, to a significant extent, to the growth in direct capital investment (see Table 1 on p. 47). In 2023, equity investments constituted approximately two-thirds of US assets. The study utilizes current prices, as they more accurately reflect the market value of assets and liabilities, including price fluctuations in financial markets and changes in exchange rates. However, it is crucial to note that during the specified period, assets rose from 0.07% of GDP (at current prices) in 2000 to 0.13% of GDP in 2023, while liabilities grew from 0.09% of GDP to 0.2% of GDP, and IIP increased from 0.01% of GDP to 0.07% of GDP.

Figure 2. Annual change in the balance of foreign trade, public debt and US IIP,[2] 2000–2023, in % of nominal GDP



Source: compiled by the author on the basis of BEA and FRED data.

The volume of capital investments has also increased in IIP liabilities, but the total share of direct and portfolio investments is smaller, at 51%. Although the volume of investments in US debt instruments shifted, the composition of liabilities has remained broadly stable: in 2000, debt instruments constituted 33% ($3 trillion), while in 2023, this share stands at 29% ($15.7 trillion). Investing in US government, municipal, and corporate bonds can be strongly associated with the safety of holding capital, and in this sense, low risks can draw relatively cheap debt financing into the country over the long term. The sustained inflow of investment in US debt instruments reflects their favourable risk-return profile, the prevalence of global excess savings (fast-growing developing countries, Gulf countries), a well-developed financial system, and the stability of the US economy [Jackson 2013].

[2] IIP here = ratio of growth in IIP assets minus growth in IIP liabilities to current GDP (minus means greater growth in capital imports).

Table 1. Critical items in the US international investment position, year-end assets and liabilities, trillion dollars, 2000–2023

	2000	2007	2010	2019	2023	The difference, 2000-2023
Assets (of US agents abroad)	**7.6**	**20.7**	**21.8**	**28.8**	**34.4**	**+26.8**
Direct investment in equity	2.5	5.1	4.6	7.5	9.3	6.7
Portfolio investments in equity and investment funds	1.9	5.2	4.9	9.5	11.5	9.6
Direct investments in debt instruments	0.4	0.8	0.9	1.2	1.3	0.9
Portfolio investments in debt securities. including:	0.7	2.0	2.3	3.6	3.9	3.1
Short-term	0.1	0.4	0.5	0.5	0.4	0.3
Long-term	0.6	1.6	1.8	3.1	3.4	2.8
Liabilities (foreign assets in the US)	**9.2**	**22.0**	**24.3**	**40.5**	**54.3**	**+45.1**
Direct investment in equity	2.4	3.1	2.9	8.8	13.0	10.5
Portfolio investments in equity and investment funds	1.6	3.2	3.5	9.3	14.7	13.1
Direct investments in debt instruments	0.6	1.0	1.2	1.7	1.8	1.3
Portfolio investments in debt securities, including:	2.4	7.1	8.3	12.5	13.9	11.5
Short-term	0.3	0.8	0.9	0.9	1.3	1.0
Long-term	2.0	6.3	7.4	11.5	12.6	10.5
Assets-liabilities, difference	**-1.5**	**-1.3**	**-2.5**	**-11.7**	**-19.9**	**-18.3**[3]
Direct investment in capital	0.1	2.0	1.7	-1.3	-3.7	-3.8
Portfolio investments in equity and investment funds	0.2	2.0	1.4	0.2	-3.3	-3.5
Direct investments in debt instruments	-0.2	-0.3	-0.3	-0.5	-0.5	-0.3
Portfolio investments in debt securities, including:	-1.7	-5.1	-6.1	-8.8	-10.0	-8.4
Short-term	-0.2	-0.4	-0.4	-0.4	-0.9	-0.7
Long-term	-1.5	-4.7	-5.6	-8.4	-9.2	-7.7

Source: US Bureau of Economic Analysis.

The transportation infrastructure of the United States was developed with European financial assistance during the nineteenth century [Grigoryev and Morozkina 2021]. However, during the twentieth century—particularly in the context of the First and Second World Wars—the United States assumed the role of a creditor to the rest of the world [Lipsey 1977]. The American economy transitioned from a role as a "world creditor" to a "world borrower" as early as in the 1990s. The impetus for this shift stemmed from the heightened demand from international investors for US debt bonds and assets.

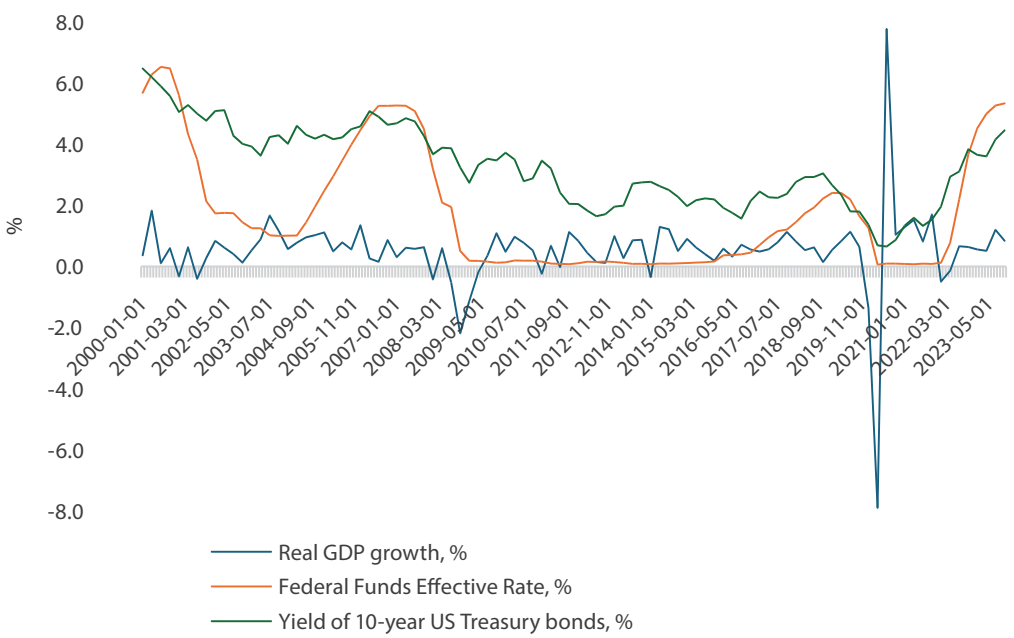
[3] Estimated value, may not be the same as the US investment position.

These assets were secured by the United States' reliability, safety, and high returns, a factor that was previously discussed. This was facilitated by the development of the financial market [Aliber 2020]. Concurrently, a notable characteristic of the United States' international investment position, in comparison to that of other developed countries, was the substantial presence of debt bonds within its liabilities [Swiston 2005].

This study focuses on three significant periods to analyze shifts in the US investment position: 2000–2007, 2007–2019, and 2019–2023. To this end, we will consider several categories of financial instruments: direct investment in equity, portfolio investment in equity and investment funds, and direct and portfolio investment in debt instruments (short-term and long-term).

Figure 3 (p. 48) provides a timeline of the US economy from 2000 to 2023, taking into account the three recessions that have occurred: (1) a small recession in 2001 associated with the dot-com crisis, (2) the 2007–2009 recession associated with the mortgage and subsequently global financial crisis, and (3) the recession associated with the 2020 pandemic-induced crisis.

Figure 3. Real GDP growth, %, Federal Funds Effective Rate, %, Yield of 10-year US Treasury bonds, %, quarters, 2000–2023



Source: compiled by the author according to FRED data.

In the **first period** analyzed, the US international investment position improved, with the difference between assets and liabilities narrowing by $0.3 trillion.

Assets. The share of direct equity investments in assets declined, while portfolio investments in equity and investment funds increased. A similar trend was observed in US direct investment in debt instruments, which experienced a decline, while portfolio investment in long-term financial instruments witnessed an increase. Asset reallocation

was primarily driven by dollar appreciation and the subsequent reevaluation of US investors' foreign holdings [Higgins, Klitgaard, and Tille 2006].

Liabilities. Direct investments in capital also underwent a substantial decline in the structure of liabilities, while the share of debt securities increased by a comparable amount, becoming the most prominent financial instrument in US liabilities. The predominant factor propelling this shift was the advantageous macroeconomic environment. Despite the repercussions of the dot-com crisis, the economy exhibited sustained growth, inflation remained manageable, and the Federal Reserve maintained a relatively high key rate. This configuration fostered high returns on long-term US bonds, relative to other periods, thereby stimulating capital inflows into debt securities.

Notably, the 2001 crisis did not impede the economic growth, as evidenced by the sustained average annual GDP growth of 2.5% during this period. During this period, the US economy benefited significantly from globalization and the development of financial markets, as evidenced by the substantial growth in derivatives, the volume of investments in which returned to the level of 2000 already after the financial crisis. During the period from 2000 to 2007, the United States experienced a significant imbalance in its trade balances with China, leading to substantial flows of funds from oil exporters. Concurrently, a substantial "flight to American assets" occurred, accompanied by the export of capital, particularly direct and portfolio equity. It is noteworthy that the growth of US assets during the period 2000–2007 is comparable to that of the subsequent period (2007–2023), with respective values of $13.1 trillion and $13.7 trillion. Concurrently, the growth of investments in the US economy (liabilities) exhibited a comparable trajectory.

During the **second period** (2007–2019), structural shifts in assets continued: a gradual decrease in the share of direct investments in equity against the background of an increase in the share of portfolio investments in long-term debt securities. In addition, the share of portfolio investments in short-term debt financial instruments increased.

The liability structure mirrored earlier patterns observed in 2000, with an increase in the proportion of portfolio investments in equity and investment funds (although this dynamic was not stable, as the proportion decreased even after 2010), and a slight decrease in the share of long-term debt securities. Concurrently, direct capital investments in the US exhibited an uptick. However, the gap between liabilities and assets widened, reaching $11.7 trillion by 2019, although it had narrowed three times over the period—in 2007, 2010, and 2017.

Changes in the composition of US assets and liabilities were largely shaped by the prevailing macroeconomic conditions both domestically and globally. For instance, following the global financial crisis, it took several years to restore investor confidence in equities, which contributed to the growth of investments in debt instruments and investment funds. Concurrently, although the global financial crisis originated in the United States, its global nature compelled investors to seek the safest harbor, thereby increasing investment in the US economy. In addition, the Fed Funds rate remained at a low level throughout the period and only began to rise at the end of 2014 and the beginning of 2015, reaching a level of 2.4% in 2019. This development also influenced investors' preference for higher-yielding investments over US Treasury securities.

Notwithstanding the crisis, GDP growth amounted to 1.7%, yet in 2010–2019 it approached the pre-crisis rate of 2.4%. The sustained growth of the American economy, in conjunction with a balanced monetary policy amidst the debt crisis and the economic slowdown in Europe, has precipitated capital inflows to the United States. Illustrative of this phenomenon is the observation that, while in 2007 liabilities exceeded IIP assets by a mere $1.3 trillion, by 2019 this figure had escalated to an alarming $11.7 trillion.

The third period under review was marked by exceptional circumstances, dominated by the COVID-19 crisis, huge fiscal injections, and a difficult economic recovery in its aftermath. Between 2019 and 2023, the gap between US investment abroad and foreign capital inflows into the US economy *(assets—liabilities)* continued to widen, reaching the $19.9 trillion mark in 2023.

As was the case in the preceding period, there were only minor changes in the asset structure. Specifically, there was an increase in the shares of direct and portfolio investments in equity and investment funds. Conversely, the liability structure experienced a notable increase in portfolio investments in equity and investment funds, along with a decrease in the share of long-term debt securities under the influence of changes related to the financial crisis and the Fed's policy. The observed preference for direct investments over portfolio investments, both in terms of liabilities and assets, likely reflects investor risk aversion amid global economic instability, as well as of a diversification of investment portfolios.

The United States economy entered the crisis amid the Federal Reserve's rate cut from 2.4% in the second quarter to 1.6% in the fourth quarter of 2019, and already in 2020 the rate was reduced to almost zero, remaining at this level until 2022, when the Federal Reserve began a sharp rate hike to curb inflation, as a result of which the rate reached the level of 5.3% in 2023 [Grigoryev et al. 2024]. During the period spanning 2019 to 2021, there was an increase in both liabilities and assets, with liabilities exhibiting a faster rate of growth, attributable to equity investments. Investments in US debt instruments experienced a slower growth rate compared to other instruments. In other words, prior to the Fed's rate hike, investors favored equities, with foreign investors more interested in investing in the US than US investors were in investing abroad. Conversely, in 2022, a marked shift occurred, with both assets and liabilities experiencing a decline, culminating in a $2.6 trillion enhancement to the IIP. However, in 2023, the asset-liability gap (ALI) once again surpassed the 2021 level by $1.1 trillion, owing to heightened outflows from the US into equity and robust growth in investment in US debt instruments.

As previously mentioned, changes in the IIP were influenced by the weakening and strengthening of the dollar (and, consequently, revaluation of assets), growth and fall of prices in financial markets (and, consequently, increase in US liabilities). Consequently, in 2022, there was a substantial decline in assets and liabilities due to these very factors: falling prices in financial markets following the Federal Reserve's interest rate increase, as well as the strengthening of the dollar and the revaluation (downward) of US agents' assets.

Efforts to curb inflation and recover from the repercussions of the COVID-19 crisis have been complicated by the multifaceted policies of the Fed and the US Department of the Treasury. The Fed's decision to augment the key rate has been accompanied by a sharp

surge in short-term issuance, reaching for 70% of total issuance in 2023, well above the standard range of 15–20%. The consequences of the proactive policy of the Ministry of Finance for the economy bear a striking resemblance to the consequences of quantitative easing: lower bond yields and higher asset prices stimulate economic growth [Miran, Roubini 2024].

A summary of the results highlights several important aspects. The composition of liabilities (investments in the US economy) changed significantly in 2007 (the outlined trends continued after the financial crisis): in the pre-crisis period, there was a dominance of long-term debt securities due to high interest rates and a decline in direct equity investments.[4] However, by 2023, the structure of liabilities approached the 2000 structure, with direct and portfolio investments in equity and investment funds becoming predominant. This shift was facilitated by several factors, including the restoration of confidence in financial markets, the growth of profitability, the rapid development of new industries (primarily the information technology sector), and a more favorable macroeconomic situation in the United States compared to European countries. The asset structure experienced a more gradual shift, with a declining share of direct investments in capital, accompanied by a concomitant rise in the share of portfolio investments and long-term debt securities.

It is important to acknowledge that, at times, substantial fluctuations in the dollar exchange rate have exerted an influence on US investments in foreign countries. However, this impact is less evident in comparison to that observed in developing countries, given the greater stability of the US dollar in relation to the currencies of developing nations. The sustained period of dollar appreciation that occurred in the second decade of the twenty-first century contributed to the revaluation of US IIP and the widening of the asset-liability gap in favor of the latter. A study by Avdjiev et al. found limited exchange rate effects on investment flows [Avdjiev et al. 2019]. However, there are specific features of the mutual influence of the exchange rate and investment flows: Grossman and Simpson's work posit a noteworthy hypothesis concerning the coexistence of two multidirectional trends. They argue that a weakening dollar tends to reduce capital flows into developed countries while stimulating investment into emerging markets [Grossman, Simpson, and Brown 2009]. A notable distinction in investor behavior during the Coronacrisis period was evident in a shift in investment strategy, with investors exhibiting a preference for equity over government debt. This inclination may be associated with an escalation in fiscal risks (an increase in government spending without adequate financing can lead to substantial budget deficits and heightened risk for bondholders) and elevated levels of debt [Gómez-Cram, Kung, Lustig 2024].

Between 2018 and 2023, the conventional US stance on the IIP shifted to a "short debt, long equity" approach, signifying an investment strategy where equity investments in assets surpass debt investments in liabilities (refer to Table 2 on p. 52). In other words, as articulated by Lane and Milesi-Ferretti, the United States' financial posture after 2018 deviated from that of a typical "hedge fund," as foreign investors found debt instruments to be equally appealing as returns on equity investments [Lane, Milesi-Ferretti 2006].

[4] The share of investments in derivatives, which dominated the asset mix but is not included in our analysis, peaked in 2008. A more detailed structure is available in Appendix A.

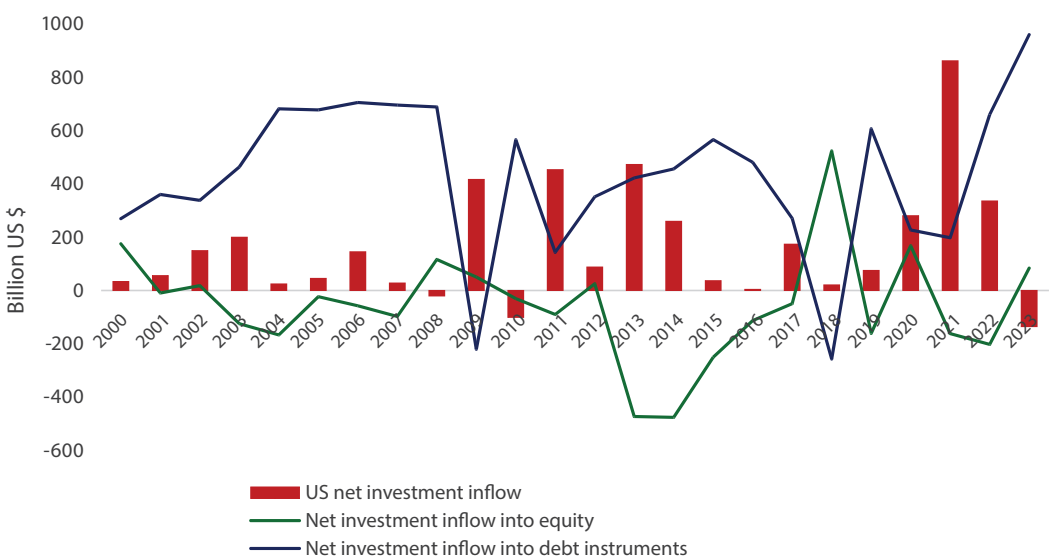
Table 2. Net investment in debt and equity, 2000–2023, trillion dollars[5]

	2000	2007	2010	2019	2023
Net investment in debt (Net debt)	-1.7	-5.1	-5.9	-8.8	-9.8
Net investment in equity (Net equity)	0.3	4.0	3.0	-1.1	-6.9

Source: author's calculations based on BEA data.

The IIP trajectory aligns with Gourinchas and Rey's theory that portrays the US as a "global venture capitalist," issuing short-term and fixed-income bonds while primarily investing in capital abroad [Gourinchas and Rey 2007]. This dynamic gives rise to a set of discernible privileges and responsibilities for the United States. The former pertain to the fact that, in a period of stable global economic development, the US receives a higher income from its foreign investments compared to its own payments on liabilities. Conversely, during periods of global economic downturn, the United States' role shifts, with its financial resources exceeding its outflows, thereby assuming a role akin to a global financial "supply" center.

Figure 4. Net foreign investment inflows to the United States (equity and debt investments), $ billion, 2000–2023



Source: compiled by the author on the basis of data from the US Bureau of Economic Analysis.

The dynamics of net investment inflow to the US show an outflow during crisis periods, such as 2008, as well as 2010 (due to the reaction of investors and foreign governments to the crisis, as well as the swap lines opened by the Fed). By contrast,

[5] Net investment in debt is the sum of debt instruments in assets and official reserves less debt instruments in liabilities, net investment in equity is the sum of portfolio and direct investment in equity in assets less portfolio and direct investment in equity in liabilities.

the 2020 pandemic triggered a surge in capital inflows, while outflows (the largest on record since 2000) did not occur until 2023, with inflows into debt instruments exceeding outflows into equity throughout the period (see Figure 4 on p. 52). In the aftermath of the COVID-19 crisis, the Federal Reserve implemented a swift and substantial rise in the key rate, a measure undertaken with the objective of curbing inflation. This rise in the key rate consequently led to an increase in the yield of long-term US debt securities. Concurrently, there was a decline in investment in debt instruments of other countries. Consequently, the net inflow of investments in debt instruments (the difference between investments from outside the US economy and investments of US agents abroad) increased to $960 billion in 2023. As previously mentioned, this substantial increase is concomitant with a notable rise in investments in long-term debt instruments within the liabilities of IIPs. This phenomenon can be attributed, in large part, to the stability of US debt instruments, the monetary policy of the Federal Reserve, and the growth of yields on US Treasury securities during specific periods.

Investment strategies of the US, UK, and Germany

Historically, investments in stock markets have proven to be more profitable (see Table 3 on p. 54). However, during periods of economic downturn, long-term government bonds have emerged as a more reliable investment option for investors. A comparison of the average annual index returns before and after the global financial crisis reveals that stock market indices of all selected countries exhibited significantly faster growth compared to long-term government bonds, with the US500 demonstrating the most substantial growth. Despite a slight downturn in 2020 (compared to the average annual growth between 2010 and 2019) due to the pandemic, the US500 demonstrated accelerated growth between 2021 and 2023. While Germany and the UK have exhibited a similar trend since the financial crisis, the disparity between the returns of stock market indices and long-term government bond indices remains comparatively narrower than in the US. In the UK, the stock market index (GB100) experienced a substantial decline in 2020, leading to a negative difference between the indexes.

The investment strategy employed by the United States does not exhibit significant disparities when compared to the investment strategies employed by developed countries in general. Historically, developed countries have consistently attracted substantial foreign direct investment (FDI), functioning as stabilizing forces during periods of economic turbulence. It is noteworthy that investment in Germany exhibits the least volatility, while investment in the US demonstrates the most volatility. The most significant decline in FDI in the US in 2018 can be attributed to the repatriation of earnings by US companies, leading to negative profits that were reinvested.[6] In the year 2020, which was characterized by a global financial crisis, the United States experienced inflows amounting to $148 billion, representing 12.4% of the global total. In contrast, Germany and the United Kingdom experienced outflows. Despite the volatility, over a long period (2007–2014, net of the global financial crisis), FDI inflows to the US were higher than in Germany and the UK.

[6] OECD, 2018. FDI. Available at: https://www.oecd.org/investment/investment-policy/FDI-in-Figures-July-2018.pdf

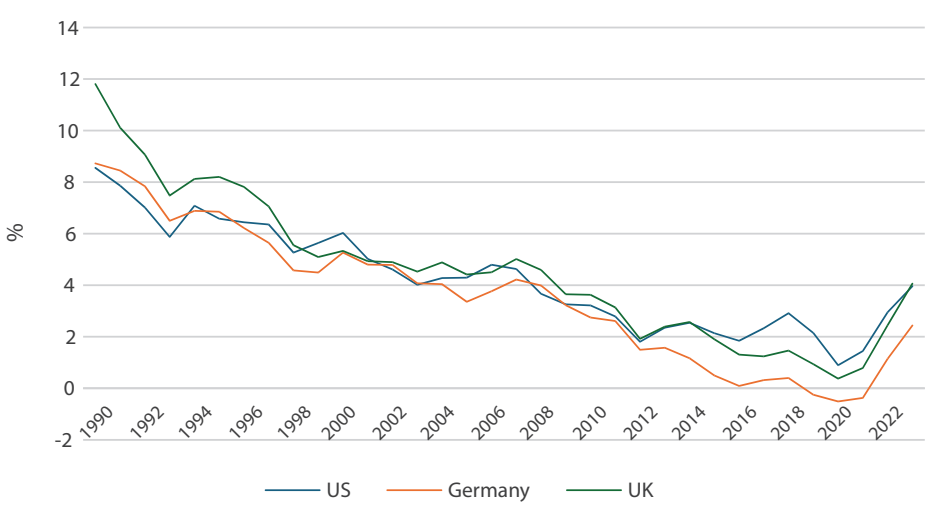
Table 3. Long-term bond yields and dynamics of stock exchange indices, 2000–2023, %

	Stock markets			Long-term government bonds		
	US500	**DE40**	**GB100**	**US**	**Germany**	**UK**
2000–2007	1.3	3.5	0.9	4.7	4.3	4.8
2008	-17.3	-19.8	-18.8	3.7	4.0	4.6
2009	-22.5	-15.9	-10.3	3.3	3.2	3.6
2010–2019	12.1	9.5	4.7	2.4	1.1	2.0
2020	10.5	2.9	-11.7	0.9	-0.5	0.4
2021–2023	11.0	9.2	6.2	2.8	1.1	2.4
Difference, %%						
2000–2007	-3.4	-0.8	-3.9			
2008	-21	-23.8	-23.4			
2009	-25.8	-19.1	-13.9			
2010–2019	9.7	8.4	2.7			
2020	9.6	3.4	-12.1			
2021–2023	8.2	8.1	3.8			

Source: compiled by the author according to Trading Economics.

Changes in long-term government bond yields were observed in all three countries (see Figure 5 on p. 54). It is noteworthy that the 1990s generally exhibited higher values compared to the subsequent decade. Conversely, German government bond yields exhibited a consistent decline following the global financial crisis, reaching negative levels during the pandemic. The post-crisis recovery has had a positive impact on bonds in all three countries, but the sharpest rise was seen in the UK.

Figure 5. Yields on long-term (10-year) government bonds of the United States, Germany, and the United Kingdom, 1990–2023 (annual averages)



Source: compiled by the author according to FRED data.

In practice, the market for long-term US government bonds has served as the primary source of securities supply, yield, and reliability. The corporate sector received substantial injections of capital, yet it also demonstrated a high level of exchange, particularly from 2020 to 2023, and generated record-breaking dividends of $602.1 billion in 2023, a stark contrast to the patterns observed in previous crises [Janus Henderson 2024].

The study by Janus Henderson reveals an uneven distribution of dividend payments across different regions. For instance, dividend payments to the US accounted for 36.4% of the global total, which is twice the amount paid to Europeans ($300 billion), excluding the UK. Concurrently, the volume of dividend payments in the US tripled over a 13-year period, exhibiting a growth rate that was twice that of the rest of the world [Janus Henderson 2022].

Prior to the global financial crisis, the returns on long-term bonds in the three countries significantly exceeded the growth of stock market indices. However, following the advent of a protracted period of diminished interest rates from 2010 to 2019, a paradigm shift ensued, presenting investors with a dichotomy: the pursuit of elevated returns in financial markets or the dependability of long-term debt instruments. In the final section of this paper, we undertake an examination of the shifts in the geographic composition of portfolio investments in the United States and other regions by US agents. The data reveal that in 2023, the share of portfolio investment in assets and liabilities stood at 56% and 78%, respectively, marking a consistent upward trend since the year 2000.

Geographic structure of US IIP portfolio investments

The structure of US portfolio investment holders has exhibited notable stability throughout the period under consideration, with developed countries maintaining a dominant presence. However, it is noteworthy that following the 2007 financial crisis, there was a decline in the share of developed countries, although in 2023, this share rebounded to 81.8%, as illustrated in Table 4 (p. 59). While developed countries' portfolio investments primarily comprised debt instruments during the period between the two crises, post-pandemic investments exhibited a notable shift toward equity investments, surpassing debt financing. Conversely, developing countries exhibited a propensity for debt instruments, though with a gradual shift in their investment patterns. Federal Reserve Bank of New York (2024) reports indicate that investors from developed countries allocate a significant portion of their investments to private debt, while investors from developing countries primarily invest in public debt.

Over the entire period under consideration (2000–2023), the largest countries holding US securities are the United Kingdom (even excluding the Cayman Islands[7]) and Japan, with the United Kingdom investing mainly in equity and Japan in debt securities. A notable shift in the composition of portfolio investment is evident, marked by a decline in China's share. Furthermore, investment has been declining in absolute terms since 2010. Consequently, the share of BRICS countries has experienced a substantial decline,[8] from 19.8% in 2010 (almost equivalent to the EU level of 21.5%) to 8.2% in 2023. Additionally,

[7] It should be taken into account that the Cayman Islands is an offshore financial center and is used by investors from other countries.

[8] Brazil, Russia, India, China, South Africa, Iran, UAE, Saudi Arabia, Ethiopia, and Egypt.

the share of Russian investments, which primarily took the form of debt instruments, experienced a substantial decline, from $11 billion in 2019 to $1 billion in 2023. Moreover, Brazilian investments also underwent a decline in absolute values following the pandemic, while investments from India and South Asia exhibited an increase.

During **the first period** (2000–2007), the growth of investments was provided by both "traditional donors"—Japan, Great Britain, European countries and "developing countries"—the main increase was in China. In **the second period** (2007–2019), developed countries (Cayman Islands, Japan, Luxembourg) again came to the fore, with Russia being the largest country that reduced its investments in the US economy. In **the third period** (2019–2023), developing countries (mainly the BRICS countries—China, Brazil, Egypt, Russia) also significantly reduced their investment volume, while the inflow was again provided by developed countries, mainly the UK. The inflow of investment from the UK alone was almost four times greater than the reduction in investment by the four developing economies mentioned above. The observed decline in investment by BRICS countries in the US economy reflects growing global economic fragmentation, as well as the existing legal restrictions on the free movement of capital.

Despite a significant inflow of capital from the UK after the Coronacrisis, the country's share in the structure of portfolio investment in the US declines from 15% in 2000 to 9.8% in 2023, with debt and equity investments distributed in a balanced way over the period–roughly equally. Concurrently, the investment portfolio of the Gulf Cooperation Council (GCC) countries, comprising Saudi Arabia, the United Arab Emirates, Iraq, Kuwait, and Qatar, exhibited a modest rise, reaching 3.7% in 2023. It is noteworthy that this figure represents a decline of 0.2 percentage points during the period 2019 to 2023. The composition of investments by financial instruments within this group of countries has undergone significant alterations. In 2000, capital instruments constituted 61% of the total, while debt instruments accounted for 39%. However, in the aftermath of the global financial crisis, there was a shift in favor of debt instruments, with equity instruments experiencing a decline. However, subsequent to the pandemic, the investment structure exhibited a resurgence of a similar pattern to that of 2000, with a renewed preference for equity over debt. In contrast, the investment structure of European countries has remained relatively stable over the 23-year period. EU countries have demonstrated a consistent preference for debt instruments, prioritizing security and stability over potentially high returns. A similar rationale can be postulated for Chinese investors, who have demonstrated a consistent inclination to invest in debt instruments.

In 2023, the total value of foreign portfolio investments in the United States amounted to approximately $27 trillion, which is equivalent to the value of US non-financial business assets ($29.5 trillion) and is almost 4.5 times less than the value of US household assets. However, it exceeds the value of household liabilities, which totaled $20 trillion in 2023. The total assets of the financial account (flow of funds) amount to $327 trillion, while liabilities total $249 trillion.[9]

An examination of the asset side reveals a relatively stable pattern of ownership of securities from other countries by US agents between 2001 and 2022 (see Table 5 on p. 60).

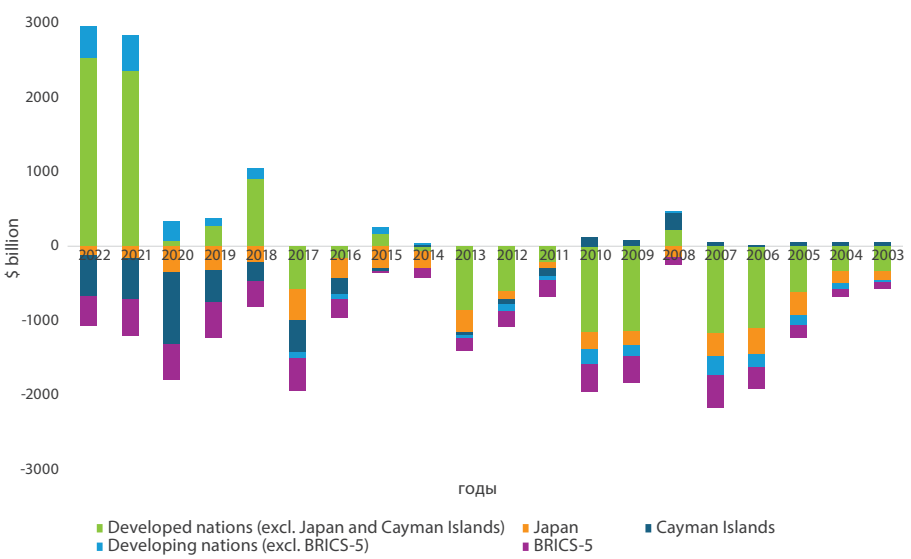
[9] Author's calculations based on US Federal Reserve data.

Developed country securities dominate, accounting for 87% in 2022, with over 74% of these investments allocated to equity. Following 2010, there was a decline in investment in BRICS countries. While there was growth recorded in absolute terms before the pandemic, by 2022, a decline in volumes was observed.

A substantial discrepancy was observed in the investment patterns of the United States across both developed and developing countries in 2022. The analysis revealed that US portfolio investment in these two categories significantly exceeded the investment levels observed in all financial instruments within the United States.[10] However, between the two crises, US investment in equity exceeded investment in equity by both developed and developing countries. Conversely, in terms of debt instruments, US investment in the US economy was much higher than US investment in other countries throughout the period.

A more detailed breakdown of the structure (2022, 2019, 2007, and 2000/2001) presents the following picture. Initially, while the inflow of US capital into other countries is less than the outflow of capital from those countries into the US in 2022, the reverse is observed for Japan, the Cayman Islands, and the BRICS countries. Figure 6 illustrates the disparity between foreign investment in capital in the US and US investment in capital abroad. Since the onset of the Coronacrisis, the disparity between foreign and US capital investment has widened considerably for both developed and developing countries. However, the aforementioned countries and the BRICS-5 group constitute exceptions to this trend. The United States has invested more in these countries than these countries have invested in the United States.

Figure 6. Net capital investment inflows to the United States (difference between foreign capital investment in the United States and US investment abroad), $ billion, 2003–2022



Source: compiled by the author on the basis of data from the US Department of the Treasury.

Secondly, among the most significant partners, Canada was the sole nation exhibiting a surplus of US investment over capital flows to America. This phenomenon was evident as

[10] Since information for 2023 on US investment in other countries is not available, we use the latest available year, 2022.

early as 2019, when a positive difference was observed solely in the context of investment in debt securities. This dynamic persisted in 2022. Thirdly, even if US equity investment exceeds reverse investment, the financing differential for debt instruments (in favor of US investment) is so substantial that capital inflows from other countries still exceed capital outflows from the United States. Fourthly, it is noteworthy to observe the considerable surge in capital flows between the United States and the Cayman Islands following 2002, a notable offshore financial center that has established its distinctive position within the global financial architecture through the advancement of its banking sector [Roberts 1995]. The Cayman Islands serve as an attractive hub not only for US hedge funds but also for foreign investors, primarily from Japan and Hong Kong, who utilize the financial center to invest in US equity and debt instruments [Fichtner 2011]. Consequently, the financial center functions as a global hub for portfolio investors. A notable observation is that the EU's share is comparable in both US agents' and non-US agents' holdings of US assets and other countries' holdings of US assets. However, it is crucial to note the difference in volumes. For instance, from 2019 to 2022, capital inflows into the US in the form of portfolio investment amounted to $1.34 trillion (with the UK at $3.1 trillion), while capital outflows from the US into European portfolio investment totaled $0.28 trillion (with the UK at $1.8 trillion). This indicates that capital flows are imbalanced.

Conclusions

The US international investment position has evolved substantially since the beginning of the 21st century, reflecting shifting global financial system and the distinct characteristics of the country's monetary policy. Notably, a persistent trend has been observed of an escalating disparity between US assets and liabilities, which by 2023 attained a level of USD 20 trillion.

This study examined the evolution of capital flows from 2000 to 2007, 2007 to 2019, and 2019 to 2023. The analysis revealed a transition from the traditional "long equity, short debt" investment strategy for developed countries to a new paradigm where the United States now attracts debt and investment from the rest of the world. Although the US economy faced three crises of different nature between 2000 and 2023, by the end of the period the liability structure approached the 2000 structure, which was dominated by equity investment. It is noteworthy that the asset structure exhibited a gradual increase in the share of portfolio investments. In the aftermath of the global financial crisis, the IIP "recovered," marked by a decline in the share of derivatives. The US economy maintained its appeal for investments from across the globe, driven by assurances of safety and security. The global financial crisis of 2020 led to an influx of additional capital into the United States, resulting in a surge of more than $4.1 trillion in equity and debt instruments. This occurred in the context of a substantial post-crisis increase in the key rate of the US Federal Reserve System and price growth in financial markets. Concurrently, the composition of liabilities underwent a shift, with investments in equities outperforming those in US government debt. This suggests that foreign investors may have prioritized higher-yielding and riskier assets in anticipation of the US economic recovery from the pandemic. This shift may also indicate a diminished confidence in government debt, possibly attributable to heightened fiscal risks and substantial debt levels.

Table 4. Structure of Foreign Holders of US Securities, 2000–2023, %[11]

	2023			2019			2010			2007			2000		
	Securities, Total	**Capital**	**Debt**	**Securities, Total**	**Capital**	**Debt**	**Securities, Total**	**Capital**	**Debt**	**Securities, Total**	**Capital**	**Debt**	**Securities, Total**	**Capital**	**Debt**
EU	27.5	27.9	27.1	26.3	26.0	26.5	21.5	25.1	20.2	26.1	29.1	24.7	23.4	29.0	18.2
BRICS[12]	8.2	3.7	12.8	11.0	3.6	16.3	19.8	6.2	24.7	13.3	2.7	18.3	4.2	1.9	6.4
UK	9.8	10.6	8.9	8.6	11.6	6.5	7.5	11.5	6.0	9.4	13.5	7.5	15.0	18.8	11.5
Canada	7.6	10.6	4.5	6.1	11.1	2.6	4.0	10.6	1.6	4.9	11.1	1.9	5.9	10.2	1.9
Japan	9.3	6.1	12.6	11.1	6.9	14.1	13.0	8.0	14.8	12.2	7.0	14.7	12.1	8.5	15.5
China	5.3	2.3	8.5	7.5	2.2	11.4	15.1	4.5	18.8	9.4	0.9	13.5	2.6	0.1	4.9
Amount	67.7	61.2	74.4	70.6	61.4	77.4	80.9	65.9	86.1	75.3	64.3	80.6	63.2	68.5	58.4
Cayman Islands	8.8	11.5	6.0	9.1	12.6	6.7	7.0	10.3	5.8	7.6	8.9	6.9	3.6	2.6	4.4
The others	28.8	29.6	28.0	27.7	28.3	27.3	27.3	28.3	26.9	26.5	27.8	25.9	35.8	29.0	42.1
Developed countries[13]	81.8	88.5	74.9	78.7	87.7	72.2	67.4	83.7	61.5	73.3	86.1	67.4	73.5	83.5	64.3
Developing countries	17.8	11.5	24.4	21.0	12.3	27.4	31.4	16.2	36.8	24.5	13.9	29.4	17.5	14.3	20.5

- Fractions of the amounts are deferred % by column.
- Equity and debt in total equal "securities."

Source: compiled by the author on the basis of data from the US Department of the Treasury.

[11] The structure is presented excluding investments of international and regional organizations.

[12] Brazil, Russia, India. China, South Africa, Iran, UAE, Saudi Arabia, Ethiopia, and Egypt.

[13] According to BIS classification.

Table 5. Structure of US assets in other countries, %

	2022			2019			2010			2007			2000		
	Securities, Total	**Capital**	**Debt**	**Securities, Total**	**Capital**	**Debt**	**Securities, Total**	**Capital**	**Debt**	**Securities, Total**	**Capital**	**Debt**	**Securities, Total**	**Capital**	**Debt**
EU	23.4	24.5	20.4	22.9	23.2	22.0	21.4	19.3	26.1	23.7	22.8	26.4	26.3	26.4	26.2
BRICS[14]	5.9	7.1	2.3	6.3	7.5	3.2	8.7	11.0	3.5	7.3	9.2	2.0	2.7	2.7	2.9
UK	10.1	9.5	11.7	11.7	10.7	14.4	14.9	13.5	18.2	15.9	13.6	22.0	22.3	21.7	23.6
Canada	9.0	7.1	14.2	8.5	6.3	14.4	10.4	8.8	13.9	8.2	7.2	10.7	9.2	5.6	17.6
Japan	7.9	8.2	6.8	8.8	9.8	6.3	7.7	9.7	3.3	8.3	10.1	3.3	9.1	10.6	5.5
China	1.8	2.2	0.5	1.7	2.2	0.5	1.5	2.2	0.1	1.4	1.8	0.1	0.1	0.2	0.1
Amount	56.2	56.5	55.5	58.2	57.4	60.3	63.1	62.3	65.0	63.3	62.9	64.4	69.6	66.9	75.8
Cayman Islands	19.2	18.7	20.4	15.4	15.8	14.2	5.5	3.6	9.7	7.6	4.4	16.1	3.1	2.2	4.4
The others	24.6	24.8	24.1	26.4	26.8	25.5	31.4	34.1	25.3	29.1	32.7	19.5	27.4	30.9	42.1
Developed countries[15]	86.6	86.6	86.5	85.1	85.4	84.0	81.1	78.4	87.4	82.6	79.3	91.4	86.2	85.7	87.5
Developing countries	13.4	13.4	13.5	15.0	14.6	16.0	18.9	21.6	12.6	17.4	20.7	8.6	13.8	14.3	12.5

- Fractions of the amounts are deferred % by column.
- Equity and debt in total equal "securities."

Source: compiled by the author on the basis of data from the US Department of the Treasury.

[14] Brazil, Russia, India. China, South Africa, Iran, UAE, Saudi Arabia, Ethiopia, and Egypt.

[15] According to BIS classification.

The geographic structure of US portfolio investments and investments of other countries in the US remains relatively stable. The primary partners are developed countries (e.g., the EU, UK, Canada, and Japan) and offshore financial centers (e.g., the Cayman Islands) that function as intermediaries for investors and hedge funds. Concurrently, capital flows to major developing countries, including the BRICS nations, have declined since the outbreak of the COVID-19 crisis.

Despite the relatively modest size of the IIP in relation to the assets held by US households, its share of GDP has exhibited an upward trend over the past two decades. A substantial increase in the financing of the US economy by the rest of the world has been observed, notably from European countries.

In the near future, several factors are likely to continue shaping the US IIP. The influence of high government debt and fiscal risks on the preferences of foreign investors is expected to persist. The attractiveness of US risk assets is likely to remain in place due to the robust performance of the corporate sector and the nation's innovative economy. Concurrently, potential shifts in monetary policy and global economic trends may precipitate capital reallocation and modifications in the composition of the US IIP.

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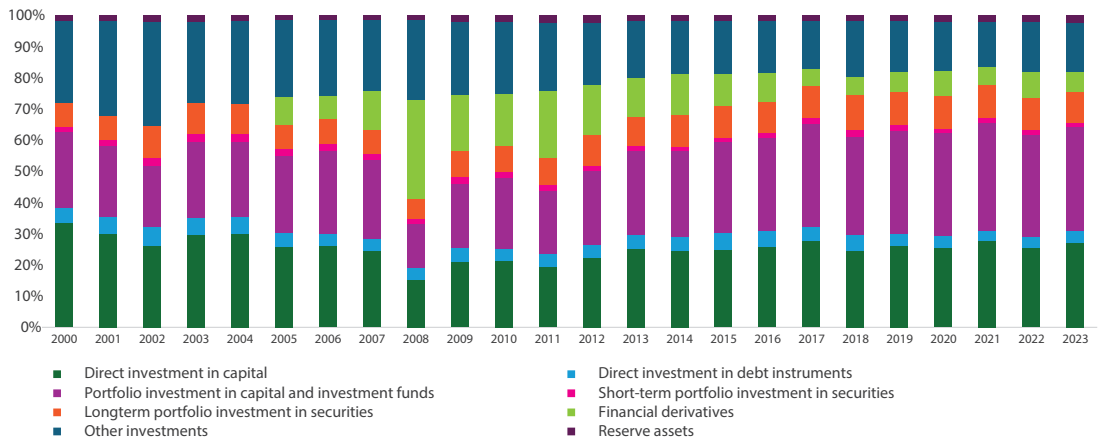
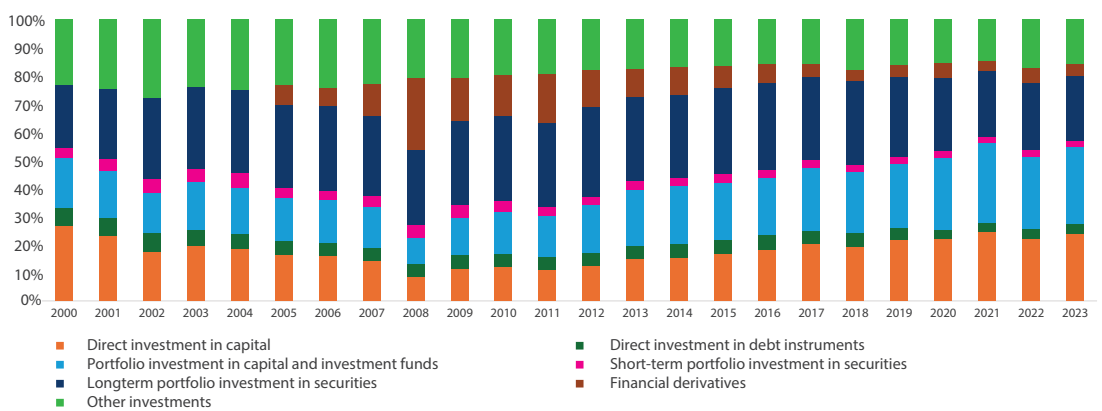
Appendix A

Figure A1. US Asset Structure, 2000–2023, %



Source: compiled by the author on the basis of data from the US Bureau of Economic Analysis.

Figure A2. US liabilities, 2000–2023, %



Source: compiled by the author on the basis of data from the US Bureau of Economic Analysis.

Transformation of the Ethnic Structure of the US Electorate

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Abstract

The article analyzes the changes in the ethnic structure of the US electorate in the 21st century, which have significantly transformed the political landscape of the country. The study identifies major demographic trends, including the increasing share of Hispanic, African American, and Asian populations, and their impact on electoral preferences and election results. The analysis places particular emphasis on the racial-ethnic composition of swing states and its correlation with income levels.

The study notes that Donald Trump won a landslide victory in the 2024 presidential election, including winning all of the swing states. While the Hispanic population as a whole tends to align more closely with the Democratic Party, Trump was able to garner significant support from Hispanic males in 2024. This shift was attributed to Trump's campaign strategy, which placed significant emphasis on economic issues, including reducing the cost of living, creating employment opportunities, and addressing inflation. The efficacy of Trump's economic agenda, which included pledges to enhance economic stability and generate employment opportunities, proved to be a pivotal factor in his victory. These campaign promises resonated strongly with working-class voters and those grappling with the challenges of high housing and commodity costs. Furthermore, Trump garnered support from conservative African American and Hispanic voters, who align with his stance on traditional family values, religious issues, and immigration policy. This diverse coalition, comprising both the established

Republican base and new voter demographics, proved instrumental in his electoral success.

The author employs analytical, historical, and comparative methodologies to assess the dynamics of political activity among diverse ethnic groups. The article underscores the importance of incorporating ethnic diversity into electoral strategies and its potential impact on shaping the future of the US political landscape. The article's conclusions underscore the imperative to adapt conventional political approaches to the evolving demographic landscape and the shifting preferences of the electorate.

Introduction

The world today is characterized by an accelerated pace of change that affects all aspects of society, including its demographic and social structure. A significant example of this influence is the change in the ethnic composition of the US population, especially the wave of immigration from Latin America. In the 21st century, the transformation of the ethnic structure of the US electorate has become a particularly relevant issue, as it is directly related to the political, economic, and social life of the country. The subject of ethnic changes in the United States is not a novel one; however, its pertinence is increasing annually as immigration, birth, and death rates among diverse ethnic groups rise.

The objective of this article is to undertake a comprehensive analysis and comprehension of the processes that are unfolding within the ethnic composition of the US electorate in the 21st century.

US population structure

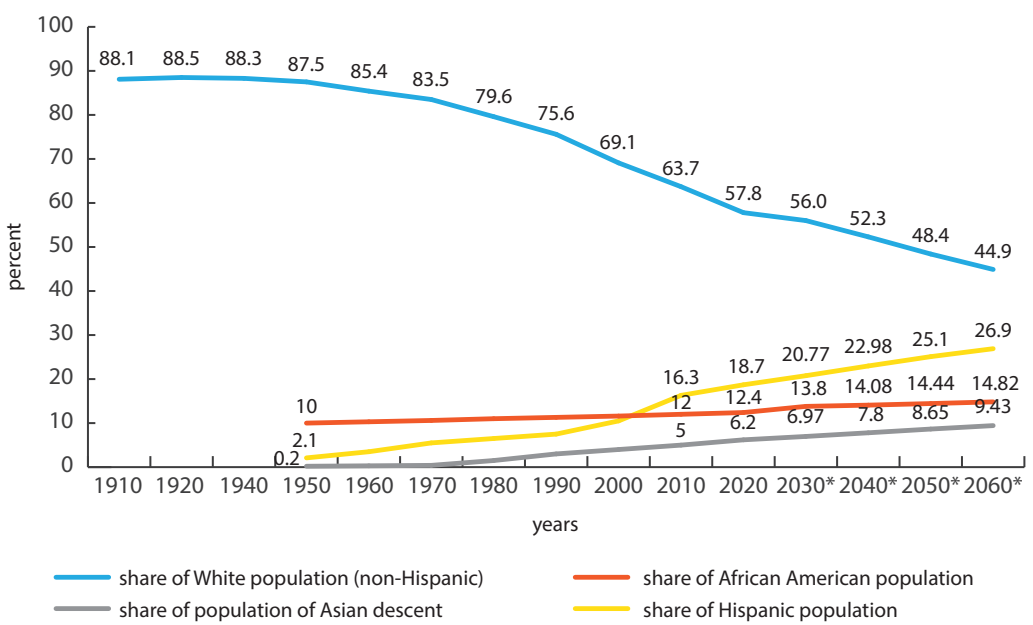
The population structure of the United States is a complex phenomenon shaped by many factors, including natural increase, migration, and death. As of August 2024, the US population stood at approximately 337 million. The population is in a state of constant flux, with a birth occurring every eight seconds and a death every 11 seconds, and an international migrant arriving every 28 seconds [US Census Bureau 2024c]. The birth rate stands at 1.6 children per woman, exhibiting a downward trend. Concurrently, the mortality rate remains stable, yet the aging population is increasing the proportion of elderly individuals. Concurrently, the proportion of the population that is able-bodied is decreasing.

Immigration has been and continues to be one of the most significant factors affecting the population structure of the United States. A large percentage of the population consists of immigrants or their descendants. The United States welcomes a substantial number of new migrants annually, contributing to the evolution of its racial and ethnic composition. European descendants, the White population, have established the foundations of modern American society and have served as the primary driving force in the nation's civilizational and cultural development for over two centuries. According to official projections, as early as 2050, the White population will become the largest

minority group, "with all the consequences for the cultural and political code of America, for the political system, and for the economic situation of White Americans" [Travkina 2018] (see Figure 1 on p. 66).

The demographic shifts in the United States carry profound cultural and political ramifications. The transition of a society in which Whites will no longer be the majority is expected to result in shifts in the political system, changing social contexts and economic dynamics. White Americans, who have historically occupied central positions of power, culture, and economy, will be compelled to adapt to a new reality marked by the increased influence and participation of other ethnic groups. This transformation may result in alterations to the nation's political trajectory, reallocation of economic priorities, and shifts in cultural identity. As the demographic landscape evolves, the voice of ethnic minorities is poised to assume a more prominent role in shaping economic direction. This transformation may necessitate a recalibration of existing equity policies, a redistribution of resources, and adjustments to the prevailing dynamics within labor and capital markets. These markets will be characterized by the emergence of new actors representing a diverse array of ethnic and cultural groups.

Figure 1. Transformation of the racial and ethnic composition of the US population over 150 years (projected to 2060) (in percent)



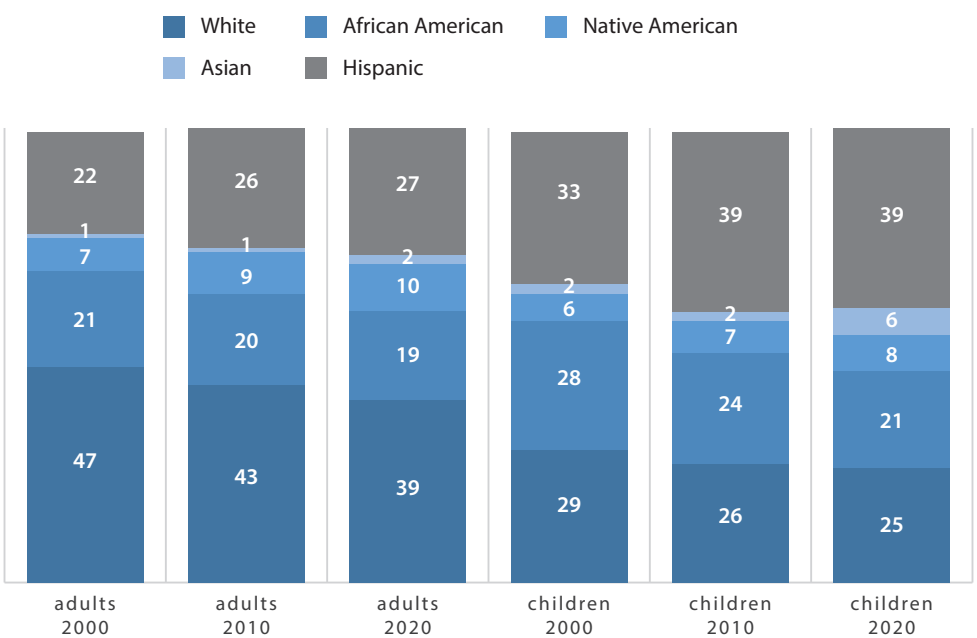
Source: [US Census Bureau 2023].

Historically, waves of immigration have resulted in a diverse composition of Europeans, a relatively stable proportion of immigrants of African descent, and a small share of Asians. In the mid-twentieth century, the proportion of non-Hispanic and non-Latino Whites constituted 87.5 percent of the total. The recent migratory patterns from southern regions represent a significant departure from the demographic composition that has

been observed since the mid-twentieth century. By the beginning of the 21st century, the proportion of European Whites had already decreased to 69.1%, and in 2010, it further declined to 63.7%. In 2020, the figure further dropped to 57.8%. Concurrently, the Hispanic population has exhibited a consistent upward trajectory, increasing from 50.5 million (16.3% of the US population) in 2010 to 62.1 million (18.7%) in 2020, marking an increase of 23% [US Census Bureau 2021]. The projected future scenario is depicted in Figure 1 (p. 66).

The 2020 census revealed that more than half of children under the age of 18 identified as non-White. This phenomenon is particularly pronounced in major metropolitan areas. This phenomenon stands in contrast to the results observed in 2000. In 2000, 29% of children identified as White, whereas in 2020, this proportion decreased to 25%. A similar trend is observed among the adult population. At the beginning of the 21st century, 47% of the population of the 50 largest US cities were White; two decades later, only 39% were White (see Figure 2 on p. 67).

Figure 2. Ethnic diversity of the 50 largest US cities in 2000, 2010, and 2020.



Source: [Brookings 2021a].

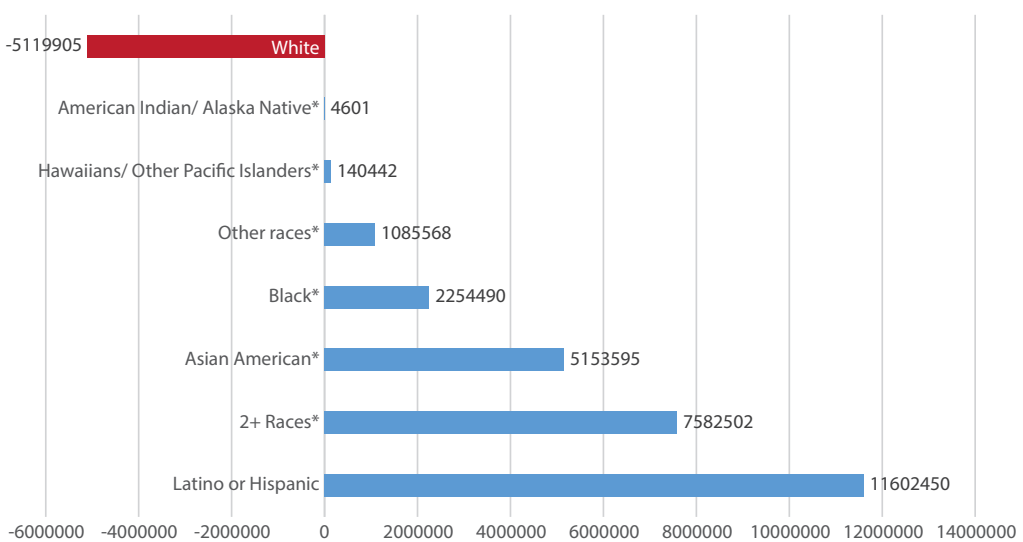
In recent history, major US cities have functioned as epicenters of social and economic development, exhibiting an increase in racial and ethnic diversity. Historically, urbanized areas have been predominantly populated by White and African American communities, largely due to income inequality (and cost of houses), de facto racial discrimination in housing, and the prevention of African American migration to the suburbs. However, recent decades have witnessed a notable shift in demographic trends. The growth of Latin American, Hispanic American, Asian American, and multiracial populations has become the predominant factor driving the transformation of urban populations. A key aspect of this transformation is the notable

increase in ethnic and racial diversity among young people. This phenomenon is concomitant with the emergence of novel challenges for urban educational institutions and family-serving organizations, which will be required to adapt to the multicultural characteristics of the incoming generation of Americans.

According to projections by the US Census Bureau, the non-White population is projected to increase, particularly due to an increase in Hispanic and Asian groups. The projected racial and ethnic profile of the US in 2060 is expected to be as follows: Whites will comprise less than 45%, Hispanics 27%, African Americans 15%, Asians 9%, and 6% will identify as two or more races [US Census Bureau 2023]. These profound changes in the racial and ethnic composition of US voters will have long-term implications for the country's political system.

The decline in the proportion of the White population is attributed to lower birth rates within this demographic group and increasing immigration from other ethnic groups. Furthermore, the aging population is another contributing factor to the decline in the White population. Conversely, the Latin American population is experiencing the most rapid growth. This growth can be attributed to both migration patterns and high birth rates. Figure 3 (p. 68) illustrates that over the past decade, the Hispanic and Latino communities have contributed the most to the growth of the US population, with an increase of 11.6 million individuals. Furthermore, individuals identifying as two or more races, as well as Asian Americans, have contributed substantially to the overall population growth.

Figure 3. Population change by race and ethnicity between 2010 and 2020



*non-Latino or Hispanic members of racial group

Source: [Brookings 2021b].

The United States, on average, attracts approximately 1 million legal migrants per year, with more than 40% of these individuals originating from Latin America, approximately

39% from Asia, 11% from Africa, and less than 10% from Europe. Historically, the primary countries of origin at the beginning of the 20th century included Austria-Hungary, Italy, Russia, and the United Kingdom. However, by the end of the 20th century, this landscape underwent a significant transformation, with the Philippines, Mexico, the Caribbean, Central America, and South America emerging as the predominant source regions. While over 90% of migrants originated from European countries at the turn of the 20th century, by the second decade of the 21st century, over 90% were from Asia, Latin America, and Africa [Petrovskaya 2022].

In the 21st century, the proportion of immigrants and their role have not only increased, but also undergone significant transformation in numerous ways. While the foreign-born population constituted 11% of the total in the year 2000, it increased to 13% in 2010. Projections indicate an ongoing intensification of this trend. According to experts at the Center for Immigration Studies, in 2022, the number of migrants reached approximately 47 million, along with more than 17 million children born in the US. This combined figure constitutes 20% of the US population [Center for Immigration Studies 2022].

According to the latest data from the US Census Bureau, the Hispanic population has experienced the most significant population growth, with an increase of over 70% [US Census Bureau 2024b]. In 2023 alone, the US Hispanic population grew by 1.64 million people due to natural increase. Additionally, international migration contributed to this growth, with approximately 440,000 migrants arriving in the US in 2023. Consequently, the Hispanic population has emerged as the second largest ethnic group in the country, as illustrated in Figure 2 on p. 67.

Table 1. Number of newborns in the United States in 2016–2022, thousand people

Years	Total births	White (non-Hispanic)	Hispanics	African Americans	Asian	Of Native descent	Natives of the Pacific Islands and Hawaii
2016	3 945	2 056	918	558	254	31	9
2017	3 855	1 992	898	560	249	29	9
2018	3 791	1 956	886	552	240	29	9
2019	3 747	1 915	886	548	238	28	9
2020	3 613	1 843	866	529	219	26	9
2021	3 664	1 887	885	517	213	26	9
2022	3 667	1 840	937	500	218	25	10

Source: [NVSS].

By 2022, the number of newborns to "Whites" is approaching parity with the sum of newborns to other ethnic groups (see Table 1 on p. 69). With the exception of Hispanics, all racial groups are experiencing a decline in newborns annually. However, some Hispanics may opt to reclassify themselves as "White" in the future, particularly through mixed marriages. A more in-depth examination is necessary to understand how these groups perceive American values and the nation's social and other challenges, particularly in

light of the media's ongoing discourse on the emergence of "swing" Hispanic groups during elections.

The dynamic growth of the Hispanic population is exerting a substantial influence on the socio-economic landscape of the United States. The group's high natural increase, in contrast to the declining birth rates observed among other racial groups, signifies its increasing role in shaping the demographic composition of the nation's future. This phenomenon is poised to exert a substantial influence on various sectors, including education, the labor market, and the consumer sector, as a growing proportion of Hispanic youth becomes an economic catalyst.

It is important to acknowledge the existence of illegal immigration in the United States. According to estimates by the Migration Policy Institute (MPI), the number of individuals involved in this phenomenon is approximately 11 million. The majority of these individuals enter the United States from Latin American countries, particularly Mexico. However, there has been a notable increase in the number of individuals arriving from Central American countries, such as El Salvador, Guatemala, and Honduras, as well as from Asia [MPI 2020]. More than half of undocumented immigrants have lived in the US for more than 14 years. Furthermore, approximately 15% of undocumented immigrants are married to US citizens, while an additional 6% are in committed relationships with individuals who hold lawful permanent residence (LPR). The demographic composition of the United States is further influenced by the presence of children who have at least one undocumented immigrant parent, accounting for 5.2 million individuals under the age of 17, which constitutes 7% of the total US child population of 73.8 million.

Table 2. Number of people registered and voted in presidential elections in 1980–2020, million people

A presidential election year	US population aged 18 and older	US citizens		
		Total	Registered to vote	Voted in the election
1980	0.157	0.145	0.105	0.093
1984	0.170	0.157	0.116	0.102
1988	0.178	0.165	0.118	0.102
1992	0.186	0.168	0.127	0.114
1996	0.194	0.180	0.128	0.105
2000	0.203	0.186	0.130	0.111
2004	0.216	0.197	0.142	0.126
2008	0.226	0.206	0.146	0.131
2012	0.235	0.215	0.153	0.133
2016	0.246	0.224	0.158	0.138
2020	0.252	0.232	0.168	0.155

Source: [US Census Bureau 2022].

As of 2023, the racial demographics of the United States include 195 million Whites, 65 million Hispanics, 42 million African Americans, approximately 21 million Asians, 2.5 million Native Americans, and more than 8 million Americans who identify as two or more races [US Census Bureau 2024b]. Concurrently, the total population and electoral participation of the nation are increasing (see Table 2 on p. 70). The majority of this growth (approximately three-quarters) can be attributed to the children of migrants who reached the age of 18, as well as naturalized migrants. The demographic shift is further accentuated by the notable increase in the Hispanic population, which has contributed significantly to the augmented electoral participation.

Recent decades have witnessed an absolute increase in the well-being of American workers, but relative inequality has persisted and, in some cases, worsened. Despite economic growth and rising living standards, there has been no significant change in the distribution of income across various ethnic and social groups. Whites continue to demonstrate higher incomes, better education, and quality health care, while African Americans and Latinos, despite overall growth in their numbers and improvements in some indicators, remain less privileged.

Table 3 (p. 71) provides a comprehensive overview of median weekly earnings by race and ethnicity. The data presented in Table 3 reveal a shifting ratio of workers across racial groups. Over the past two decades, the most significant increase in the workforce has been among Hispanic workers. While their proportion was approximately 13% at the beginning of the century, it has already reached 20% in 2024.

Table 3. Trends in the number of workers and their median weekly earnings by racial-ethnic group during presidential election years in the 21st century

Years	Number of employees, thousand people					Average weekly earnings, $/week				
	Total	White	African Americans	Asian	Hispanics	For all groups	White	African Americans	Asian	Hispanics
2000	101,210	83,228	12,410	4,598	12,761	576	590	474	615	399
2004	101,224	82,324	12,032	4,457	14,061	638	657	525	708	456
2008	106,648	86,022	12,821	5,266	15,807	722	742	589	861	529
2012	102,749	81,779	12,230	5,790	16,302	768	792	621	920	568
2016	111,091	86,474	13,963	7,030	18,950	832	862	678	1,021	624
2020	110,387	85,142	14,044	7,353	19,558	984	1,003	794	1,310	758
2024	119,937	90,152	16,570	8,581	23,649	1,143	1,167	941	1,500	903

Source: [BLS 2024].

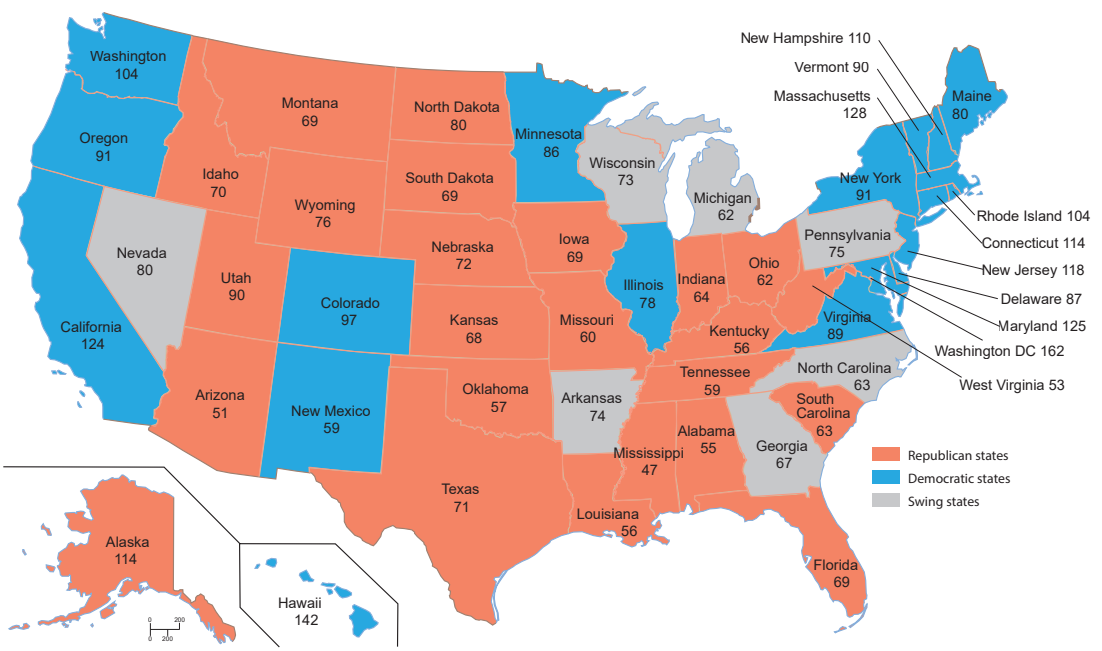
It is noteworthy that historically, Asian Americans have consistently demonstrated the highest levels of earnings. Their weekly earnings have increased from $615 to $1,500 since the beginning of the 21st century. Conversely, the weekly earnings of white workers have increased from $590 to $1,167. In 2000, the median weekly earnings for African Americans were $474, while for Hispanics they were $399. Nearly a quarter century later, African Americans' weekly earnings in full-time employment stand at $941, while

Hispanics' earnings are $903. Furthermore, disparities in earnings between men and women are evident. Specifically, Hispanic men receive an average weekly salary of $963, while their female counterparts receive $831. However, Hispanic families exhibit higher earnings than African American families, a discrepancy that is likely attributable to the number of workers in the family and/or the actual hours worked[1] (see Table 4 on p. 74).

The fastest growing Hispanic population is beginning to play an increasingly important role in the US labor market and economy. Nevertheless, the earnings of Latinos remain lower than those of White Americans, and they encounter obstacles when attempting to access career and professional education opportunities.

This phenomenon is beginning to exert a considerable influence on political processes. As the demographic of Latinos within the United States continues to expand, their political influence concomitantly increases. As Grigoryev and Grigoryeva (2021) note, "the structure of inequality by race has a direct relation to the configuration of electoral coalitions, the formation of the agenda and election slogans of both parties" [Grigoryev, Grigoryeva 2021. P. 107]. Issues pertinent to the Latin American community, such as access to healthcare, education, labor rights, and migrant rights, have begun to occupy a central position in political discourse. Issues concerning Latin Americans are becoming increasingly salient for politicians seeking their support. This phenomenon is poised to influence not only the electoral outcomes but also the evolution of policies toward more inclusive solutions aimed at mitigating inequality.

Figure 4. Median income by state in 2024, thousand dollars / capita



[1] https://www.census.gov/data/tables/2022/demo/families/cps-2022.html; https://www.bls.gov/cps/cpsaat22.htm

"The socio-economic situation in the United States is traditionally of great importance for the outcome of elections" [Grigoryev, Grigoryeva 2021. P. 108]. Figure 4 (p. 72) presents a distribution analysis of median income across US states, categorized by their respective party affiliations, along with a review of seven swing states that voted in the 2024 elections. It is evident that the distribution of states by income level remains quite far from equal. The median per capita income in 2023 was recorded at $80,600 [US Census Bureau 2024a] with a range from $47,000 in Mississippi to $124,000 in California and $162,000 in the District of Columbia. The southern states of Alabama ($55,000), Tennessee ($59,000), and Louisiana ($56,000) exhibit comparatively lower incomes and less favorable living standards in the southern region of the country. Conversely, high-income states are predominantly located in the Northeast and along the West Coast, including Massachusetts ($128,000), New York (104), Alaska (114), and California (124). Table 4 (p. 74) presents a comparative analysis of the distribution of US household income at the beginning of the 21st century and in 2023. The data reveal a general upward trend in income among all ethnic groups. However, significant disparities persist, particularly among African Americans and Hispanics. The data effectively highlight the disparities between ethnic groups. Specifically, the median incomes of White Americans (excluding Hispanics) were found to be lower than those of Asian Americans ($89,000 and $113,000, respectively) but significantly higher than those of African Americans ($56,000) and Hispanics ($65,500). The lower median incomes observed among African Americans and Hispanics highlight the prevalence of economic inequality.

A notable finding is the rise in the proportion of high-income households. Consequently, the proportion of households with incomes exceeding $100,000 has experienced a substantial increase, growing from 22.7% in 2000 to 40.9% in 2023. A particularly important growth trend is evident in the proportion of households with incomes over $200,000, which has increased from 4.3% in 2000 to 14.4% in 2023.

Concurrently, the proportion of households with low income has decreased, suggesting a decline in poverty levels. For instance, the proportion of households with incomes below $35,000 decreased from 31.9% to 21% across all population groups. However, this decline was less pronounced among African Americans and Hispanics. Notably, disparities in income growth persist among racial-ethnic groups. Asian incomes have exhibited the most significant growth, particularly among the upper segments. These trends have implications for voter preferences and the selection of candidates in electoral processes, including presidential elections.

Voting structure

The voting patterns exhibited in the United States are influenced by a multitude of key factors, including geography, demographics, history, and current political events. As the United States experiences an increase in ethnic diversity, the influence of ethnic and gender voting patterns becomes more significant. De facto ethnic groups exhibit different compositions of socio-political attitudes and preferences, which affect electoral outcomes. As demonstrated in Table 5 on p. 75, there has been a notable shift in the composition of the US electorate over the past four decades.

Table 4. Distribution of US households by income in 2000 and 2023

	The entire population		African Americans		Asian		Hispanics		White Americans (non-Hispanic)	
	2000	2023	2000	2023	2000	2023	2000	2023	2000	2023
Number of households, thousand	106,418	132,200	13,470	18,040	3,917	7,655	9,663	19,860	80,530	84,440
Average income, thousand dollars	57	114.5	64	81	113	158	73	91	102	123
Median income, thousand dollars	**70**	**95**	**47**	**56**	**85**	**113**	**55**	**65,5**	**76**	**89**
Distribution of total cash income by 20% population groups, in %			100	100	100	100	100	100	100	100
Bottom 20% of the population (lowest income)			31.3	30.8	n/a	14.5	24.6	23.1	17.6	17.4
Second group			22.3	23.7	n/a	14.1	25.1	24.8	19.2	18.5
Third group			21.3	20.2	n/a	16.5	22.7	21.1	19.6	20.0
Fourth group			15.0	15.2	n/a	20.9	17.6	18.3	21.0	21.4
Fifth group (with the highest incomes)			10	10.1	n/a	34.0	10.0	12.3	22.5	22.7
Top 5% of wealthiest households			1.9	2.2	n/a	11.6	1.9	2.5	5.8	5.6
Below 15,000	11.1	7.4	16.7	13.9	7.4	5.8	9.3	8.5	6.3	5.9
15,000 – 24,999	10.6	6.7	12.3	9.8	5.8	4.6	9.9	7.5	7.8	6.0
25,000 – 34,999	10.2	6.9	10.2	8.5	6.5	4.7	11.4	8.3	7.5	6.5
Total 0-34,999	**31.9**	**21.0**	**39.2**	**32.2**	**19.7**	**15.1**	**30.6**	**24.3**	**21.6**	**18.4**
35,000 – 49,999	14.1	10.3	14.2	12.6	10.1	7.5	14.1	12.7	11.0	9.4
50,000 – 74,999	16.3	15.7	17.3	17.1	11.5	11.4	20.3	18.5	16.7	15.0
75,000 – 99,999	13.0	12.1	10.3	12.1	13.6	10.0	12.9	12.5	13.3	12.2
Total 35,000- 99,999	**43.4**	**38.1**	**41.8**	**41.0**	**35.2**	**28.9**	**47.3**	**43.7**	**41.0**	**36.6**
100,000 – 149,999	13.2	17,0	11.3	13.2	17.5	17.3	14.0	15.7	18.7	18.1
150,000 – 199,999	5.2	9,5	4.4	5.5	11.2	11.7	4.4	7.8	8.9	10.5
200,000 and up	4.3	14,4	3.3	7.3	13.3	26.9	3.7	8.3	9.8	16.3
Total 100,000 and up	**22.7**	**40.9**	**19.0**	**26.0**	**42**	**55.9**	**22.1**	**31.8**	**37.4**	**44.9**
Population share	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: https://www2.census.gov/programs-surveys/cps/tables/hinc-06/2001/new07_000.txt
https://www.census.gov/data/tables/time-series/demo/income-poverty/cps-hinc/hinc-06.html
https://www.census.gov/data/tables/time-series/demo/income-poverty/cps-hinc/hinc-05.html
https://www2.census.gov/library/publications/2024/demo/p60-282.pdf

Table 5. Racial and ethnic composition of voters in US presidential elections in 1980–2020, %

	White (non-Hispanic)	African Americans	Asian	Hispanics	Others (non-Hispanic)
1980	87.6	8.9	0	2.6	1
1984	85.5	10	0	3	1.4
1988	84.9	9.8	0	3.6	1.7
1992	84.6	9.9	0	3.7	1.7
1996	82.5	10.3	0	4.7	2.2
2000	80.7	11.5	0	5.4	2.4
2004	79.2	11	2.2	6	1.6
2008	76.3	12.1	2.5	7.4	1.7
2012	73.7	12.9	2.8	8.4	2.1
2016	73.3	11.9	3.6	9.2	2
2020	71.0	11.7	4.3	10.6	2.4

Source: [US Census Bureau 2022].

As demonstrated by the data presented, the proportion of White voters has decreased to 71%, while the proportion of minority voters has increased. If in 1980 minorities constituted 12.5% of the electorate, in 2000 they accounted for 19.3%, and in the 2020 elections their share increased to 26.6%. It is noteworthy that these figures are drawn from official US statistics reported by the US Census Bureau. However, the Pew Research Center, based on its research, speaks of higher shares. The Hispanic electorate has expanded by nearly 22 million individuals over the span of twenty-five years. Consequently, their electoral participation has increased accordingly. While the Hispanic electorate constituted 7.4% of the electorate at the beginning of the century according to Pew and 5.4% according to the Census, it rose to 14.7% in 2024 (Pew). By their calculations, in 2024, African Americans constitute 14% of the electorate, while Asian Americans account for 6.1%.[2] Historically, voters with higher income and education levels have consistently participated more actively in elections compared to those with lower incomes. Education level is often associated with income, and citizens with higher levels of education tend to be more informed about the impact of politics on the economy and their personal finances, which motivates them to vote. The election outcomes can be influenced by the disproportionate participation of affluent citizens, while the share of low-income voters may remain underestimated, leading to a distorted view of the real interests of all groups. In 2024, Trump's campaign strategies focused on mobilizing non-traditional voters, particularly those less inclined to participate in elections.

In the 2020 election, voter turnout reached 66.6%, marking a record at the time. In 2024, the United States' voter registration stood at 244 million, with preliminary data indicating a turnout of approximately 65%. In certain states, voter turnout in 2024

[2] The analysis is based on data from the US Census Bureau's 2022, 2020, 2016, 2012, and 2008 American Community Surveys and the 2000 US Decennial Census provided through the University of Minnesota's Integrated Public Use Microdata Series (IPUMS) (https://usa.ipums.org/usa/).

exceeded that of 2020, setting a new record that had persisted for the past 44 years. For instance, Oregon (75%), Wisconsin (76.1%), Michigan (73.8%), Pennsylvania (70.2%), and Georgia (67.6%) have all witnessed a surge in voter participation. On average, voter turnout increased by 1% in these states [The Washington Post 2024a].

Since the year 2000, the total number of voters in the US has increased from 186.4 million to 246 million, reflecting the growth in the US population eligible to vote (see Table 6 on p. 76). A notable increase in voter participation has been observed across all racial-ethnic groups. Notably, approximately 1.4 million Hispanics in the US attain voting eligibility annually. The Pew Research Center estimates that 36.2 million Hispanics are eligible to vote in 2024, representing a substantial increase from 32.3 million in 2020 and 14.3 million at the beginning of the century.

A similar trend is observed in the African American electorate, which has grown from 23.3 million in 2000 to an estimated 34.4 million in 2024. While the growth rate of the African American electorate is not as rapid as that of the Hispanic population, African Americans continue to be a significant voting bloc.

Conversely, the Asian electorate has experienced the most rapid growth, with a nearly tripled increase from 5.4 million in 2000 to 15 million in 2024. This growth is indicative of the increasing influence of the Asian electorate within the US political system.

Concurrently, while White voters continue to represent the largest demographic group, their relative share of the total electorate is exhibiting a decline. The shifting demographic landscape, marked by changes in the number of racial-ethnic groups, signifies a transformation in the American electorate and an escalating influence of minority groups on political processes within the nation.

Table 6. Number of Americans eligible to vote, by racial-ethnic group, million people

Years	Hispanics	African Americans	Asians	Whites	Total
2000	14.3	23.3	5.4	143.4	186.4
2004	n/a	n/a	n/a	n/a	197.0
2008	19.3	26.7	7.8	152.3	206.1
2012	23.6	29.1	9.6	152.8	215.1
2016	27.3	31.0	11.3	154.5	224.1
2020	32.3	32.2	13.0	154.1	231.6
2024	36.2	34.4	15.0	160.3	246

Source: compiled by the author on the basis of Pew Research Center materials: https://www.pewresearch.org/short-reads/2024/01/10/key-facts-about-hispanic-eligible-voters-in-2024/, https://www.pewresearch.org/short-reads/2024/01/10/key-facts-about-black-eligible-voters-in-2024/

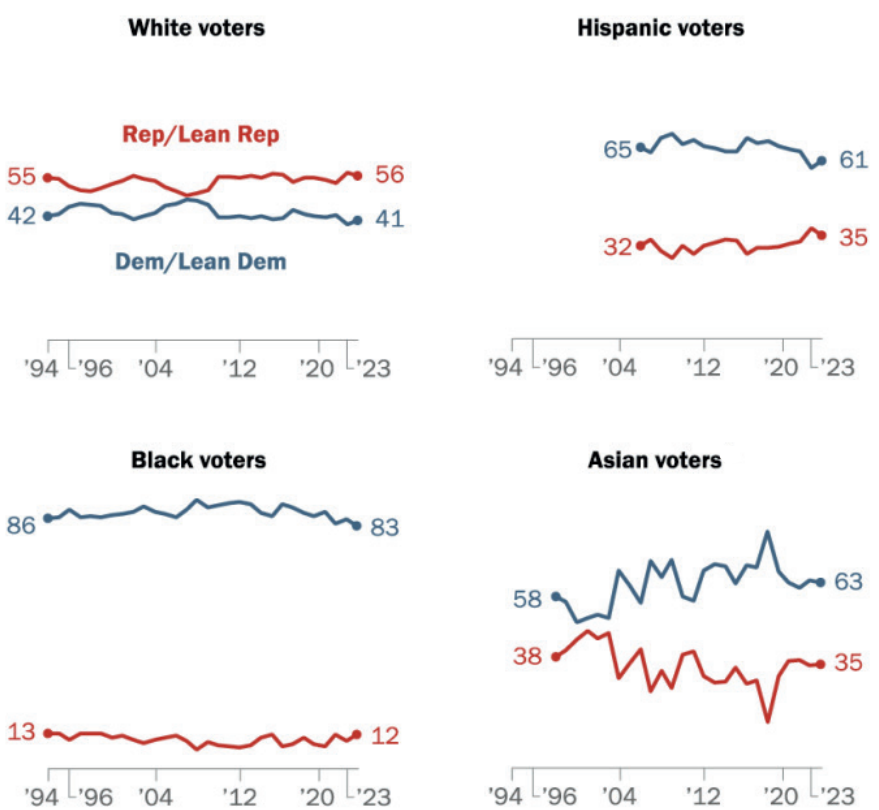
The state of California is home to 25% of all eligible Hispanic voters. Texas, Florida, New York, and Arizona are the next largest states in terms of the number of Hispanics eligible to vote [Pew Research Center 2024b]. A significant proportion of these voters, more than half in fact, are under the age of 40, and the vast majority were born in the United States. The support that these voters express for particular politicians, platforms, and parties is

determined by their own value systems. However, identifying the ideological orientation of minority representatives poses significant challenges [Kuvaldina 2012].

Minority communities often place significant emphasis on familial values, exhibit opposition to same-sex marriage, and demonstrate reluctance in supporting the legalization of abortion. Religion exerts a significant influence on the lives of African Americans and Hispanics. This ideological inclination often aligns them with the positions of the Republican Party. Noteworthy is the fact that for Hispanics, the most salient issues are immigration policy and bilingual education.

Conversely, the Republican Party's platform asserts the primacy of English as "the only official state language, a unifying force necessary for the further development of immigrant communities and the nation as a whole" [Travkina 2018].

Figure 5. Transformation of the American electorate by racial-ethnic groups



Source: https://www.pewresearch.org/politics/2024/04/09/partisanship-by-race-ethnicity-and-education/pp_2024-4-9_partisan-coalitions_2-01-png/

Figure 5 (p. 77) illustrates the dynamics of support for the two primary political parties in the United States—the Republican and Democratic parties—among racial-ethnic groups within the American electorate. White voters have demonstrated consistent allegiance to the Republican Party. Conversely, Hispanic (Latino) voters, while still predominantly aligning with the Democratic Party, are exhibiting a gradual shift in their

preferences toward the Republican Party. Among Asian Americans, there is a discernible trend of increasing support for the Republican Party, although the Democratic Party maintains its dominance. Notably, African Americans continue to be the Democratic Party's most loyal electoral group. These data reflect gradual yet significant changes in the political orientation of various racial and ethnic groups in American society. This phenomenon is indicative of a more broadly observed strengthening of minority positions in the 2024–2028 electoral cycle, observed in the work of Leonid Grigoryev, who published his findings over a decade ago [Grigoryev 2013].

According to the Gallup Institute, the Democratic Party's partisan advantage among Black and Hispanic voters reached a new low in February 2024. The study also found that Democrats maintained a smaller advantage among young adults. These shifts in party affiliation among key subgroups have led to a transition in the overall partisan landscape, characterized by a narrowing of the Democratic advantage over Republicans from substantial margins observed between 2012 and 2021 to modest deficits in 2022 and 2023 [Gallup 2024].

For young people, elections represent a significant opportunity to exercise their democratic rights, articulate their political voice, and shape the future of the nation. In the 2024 elections, while young people demonstrated a preference for Kamala Harris, as indicated by a 6% margin, this preference was significantly less pronounced in comparison to the 2020 elections, where the margin stood at 25 percentage points. This indicates a substantial shift in party preferences among both young men and women over the past four years, suggesting either a notable change in the attitudes of these demographic groups or the presence of significantly different segments of the youth electorate in 2020 and 2024 [Circle 2024].

Figure 6. Political profile of Hispanic voters (estimate before the 2024 election)

DEMOCRATS	REPUBLICANS
• Americans with roots in Mexico, the Dominican Republic, Puerto Rico, and other Latin American countries; • Americans from nations with democratic governments and capitalism as the basis of their socioeconomic and socio-political system; • Americans from nations in which a significant percentage of the population is Catholic; • born outside the United States, i.e., first-generation Americans; • living in the West, Midwest, and Northeast; • urban; • elderly; • women; • college-educated; • preserving their culture and language; • liberal and moderate; • Catholics, moderately religious	• Americans with roots in Cuba, Colombia, El Salvador, Guatemala, Nicaragua, Honduras, and Venezuela; • Americans from states with authoritarian rule or socialism as the basis of socio-economic and socio-political order; • Americans from countries with large Protestant populations; • born in the US, particularly the second generation; • the "Tejanos" group; • those living in the South and Northeast of the US; • those living in suburban and rural areas; • Americans in the 45-64 age group; • men; • those with a high school education; • those who speak mostly English; • those who are fairly well integrated into society; • those with conservative views; • Protestants.

Source: Chernykh, M.A., 2023. Trends of Hispanic Voters: A Shift towards the Republican Party? USA & Canada: Economics, Politics, Culture, No 9. P. 74–86.

Republicans and Democrats in the 21st century are experiencing great changes. This transformation is primarily attributable to shifting demographics and the evolution of their established ideological tenets [Travkina 2018].

Table 7 (p. 79) shows the results of the distribution of electoral votes since 2000.

Table 7. Distribution of votes between Republicans and Democrats in presidential elections since 2000

	Republican	Democrat	Electoral votes		Number of people who voted, mln		Share of those who voted, %	
			R	D	R	D	R	D
2000	**George W. Bush**	Albert Gore	271	266	50.45	50.99	47.9	48.4
2004	**George W. Bush**	John Kerry	286	251	62.02	59.02	50.7	48.3
2008	John McCain	**Barack Obama**	173	365	59.93	69.45	45.7	52.9
2012	Mitt Romney	**Barack Obama**	206	332	60.58	65.44	47.1	50.9
2016	**Donald Trump**	Hillary Clinton	304	227	65.84	62.97	48.1	46.0
2020	Donald Trump	**Joseph Biden**	232	306	74.21	81.26	46.9	51.3
2024	**Donald Trump**	Kamala Harris	226	312	74.7	70.1	50.5	48.0

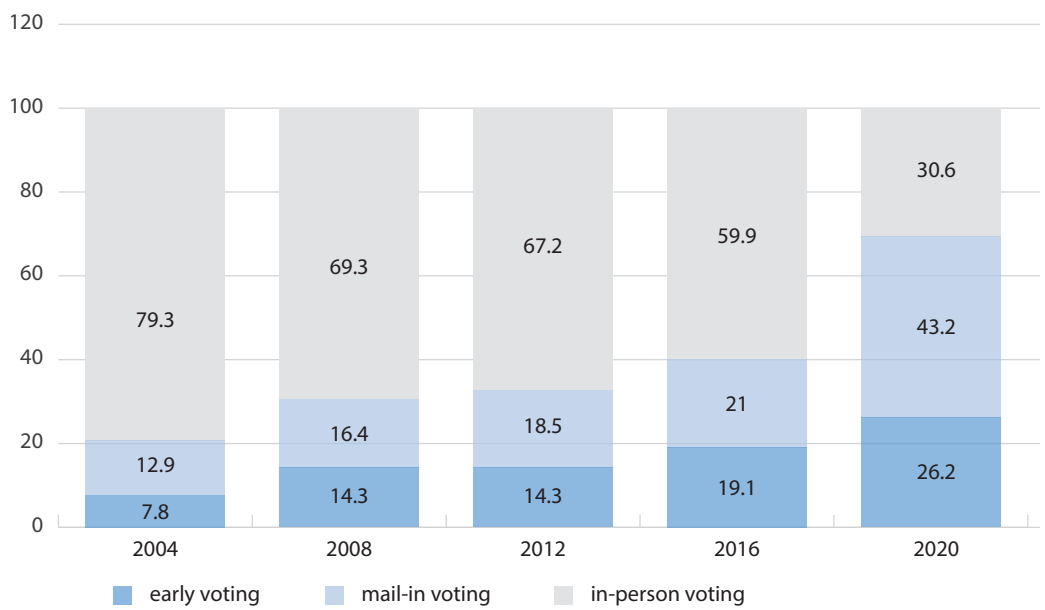
Source: [Britannica 2024].

The 2000 presidential election was won by Republican George W. Bush. The election was characterized by a tight margin, leading to legal disputes concerning alleged irregularities in the state of Florida. In 2004, George W. Bush. secured a second term, triumphing over the Democratic nominee, John Kerry. In 2008, Barack Obama, the Democratic nominee, became the first African American to be elected president. In 2012, Obama secured a second term, once again defeating Republican Mitt Romney. In 2016, Hillary Clinton, the Democratic nominee, faced Donald Trump, the Republican nominee, in the election. Donald Trump (Republican) defeated Hillary Clinton, becoming the first president without prior experience in politics. In the 2020 election, Joseph Biden, the Democratic nominee, secured a victory over Donald Trump, thereby becoming the 46th President of the United States. A central theme of Biden's campaign was the ongoing COVID-19 pandemic, with Biden actively criticizing the Trump administration's response to it. He pledged to manage the epidemic more effectively and to facilitate economic recovery in the aftermath of the pandemic. The selection of Kamala Harris as his vice-presidential candidate enabled Biden to appeal to young people, women, and ethnic minorities, thereby strengthening his position among these demographic groups [BBC 2020].

The 2020 presidential election witnessed the highest voter turnout in the 21st century, marking a significant increase from previous presidential elections. While numerous states maintained conventional voting procedures, the advent of the pandemic spurred other states to adopt early voting practices, including the automatic mailing of ballots to all

registered voters, which could be returned by mail. Consequently, voting by non-traditional methods has undergone a substantial increase (see Figure 7 on p. 80; dramatic increase in voting by mail). This phenomenon has led to the emergence of a "postal democracy 2020," where the number of votes cast by mail exceeded the number of voters who cast their ballots at polling stations on Election Day. This figure has doubled compared to the 2016 election results. This development has introduced greater complexity in the prediction of voter behavior, particularly in light of the substantial increase in voting by mail among minority groups, a phenomenon that often marks their inaugural experience with this method of voting. Consequently, the accuracy of election forecasts, particularly those based on exit polls conducted on Election Day, was significantly diminished, as these polls covered only approximately two-fifths of the total voting population in 2020.

Figure 7. Methods of voting in presidential elections in the period 2004–2020, %



Source: [US Census Bureau 2022].

The 2024 election

In November 2024, the anniversary 60th US presidential election took place. The contest was traditionally between the Republican and Democratic parties, with independents from the Kennedy clan withdrawing their candidacy in swing states in favor of Trump. Each presidential election is characterized by its unique set of circumstances, including the personal attributes of the candidates, the state of the economy, and historical events such as a global pandemic. The shifting racial and ethnic composition of the electorate is a critical factor in understanding the evolution of political trends over time [Pew Research Center 2024a]. It is imperative to acknowledge that the US electoral system is structured on a two-tiered framework, wherein the primary voting takes place at the state level, and

the results of these elections subsequently inform the electoral votes that determine the president.

It is imperative to recognize that the requisite number of electoral votes to secure victory is 270. The pivotal contest unfolded for 77 electoral votes in the so-called swing states, where, on the eve of the election, the popularity of candidates from both major parties was approximately equal (see Figure 4 on p. 72). It is important to note that the list of swing states is subject to change from one election to another. A general rule posits that the greater the number of independent voters—that is, voters who are not strictly party affiliated and vote differently from election to election—in a state, the greater the probability that the state will be classified as a swing state. In the 2024 presidential election, the states that exhibited this characteristic were Arizona, Georgia, Michigan, Nevada, Pennsylvania, Wisconsin, and North Carolina [Axios 2024].

Since the beginning of the 21st century, the demographic structure of swing states has changed (see Tables 8 and 9 on p. 81–82)

Table 8. Racial and ethnic composition of the US electorate in swing states

	US	Arizona	Georgia	Michigan	Nevada	North Carolina	Pennsylvania	Wisconsin
Population (mln people)	336	7.2	10.7	10.1	3.1	10.5	13	5.9
White (non-Hispanic), %								
2000	76	75	68	82	76	75	87	91
2010	72	69	63	80	66	72	84	88
2018	67	63	58	79	58	69	81	86
Hispanic, %								
2000	7	15	2	2	10	2	2	2
2010	10	19	3	3	15	3	4	3
2018	13	24	5	3	20	4	5	4
African American population, %								
2000	12	3	27	13	7	20	9	5
2010	12	4	31	14	8	21	10	5
2018	13	5	32	13	9	22	10	6
Asian origin, %								
2000	2	1	1	1	3	1	1	1
2010	4	2	2	1	6	1	2	1
2018	4	3	3	2	8	2	2	2
Others, %								
2000	2	6	1	2	4	2	1	1
2010	2	6	1	2	4	2	1	2
2018	3	6	2	2	5	3	2	2

Source: Pew Research Center.

The mean of the three groups across the United States is 30%. Only two swing states have minority populations (excluding others) noticeably above 30% (Georgia 40%, Nevada 37%). Conversely, four states are notable for their substantial Hispanic or African American populations, which collectively account for over 20% of the state's population and exceed the national average. It is evident that the outcome of the presidential election is influenced by both the White population, which is divided into two parties, and these substantial demographic groups.

Table 9. Demographic composition of swing states based on data in 2022

	Arizona	Georgia	Michigan	Nevada	North Carolina	Pennsylvania	Wisconsin
Population (mln people)	7.17	10.7	10.1	3.1	10.5	13.0	5.88
White (non-Hispanic), %	53	50.8	73.5	46.4	61.7	74.5	79.9
Hispanics, %	32 (2.3 million people)	10.1 (1.08 million people)	5.47 (550 thousand people)	29.6 (919 thousand people)	10 (1.05 million people)	8.12 (1.06 million people)	7.33 (431 thousand people)
African American population, %	4.3	31.1	13.4	9.0	20.6	10.4	6.1
Two or more races (non-Hispanic), %	3.45	3.14	3.68	4.95	3.27	2.98	2.99
Asian origin, %	3.26	4.3	3.24	8.27	3.08	3.6	2.85
Others, %	4	0.56	0.71	1.8	1.35	0.4	0.88
Average age (years)	38.4	37.2	39.9	38.5	39.1	40.8	39.9
Median income (thousand dollars)	72.6	71.4	68.5	71.6	66.2	73.2	72.5
Poverty rate, %	13.1	13.5	13.1	12.7	13.3	11.8	10.7

Source: compiled by the author based on Data USA (https://datausa.io) data for the respective states.

Swing states are undergoing transformations, accompanied by shifts in their electorate. Interestingly, both median age and median income and poverty rates are generally quite close—none of the seven are the poorest or richest states in the US. A comprehensive understanding of the shifts in racial and ethnic demographics within these key states can offer insights into the potential evolution of political trends over time.

In the 2020 election, urban, educated voters in major cities in California, New England, and the South demonstrated a clear preference for the Democratic challenger, although his primary margin was with minority groups. This suggests a particular challenge for non-White educated individuals, as their preferences were predominantly aligned with Biden, including Asian Americans, who have historically demonstrated higher incomes compared to Whites [Grigoryev, Grigoryeva 2021. P. 114]. The shift in votes from Trump to Biden was predominantly attributed to the voting patterns of African American women who opted for mail-in voting.

Table 10 (p. 83) illustrates the shift in voting patterns in swing states during the initial quarter of the 21st century. In the 2024 election, all swing states cast their votes in favor of the Republican Party.

Table 10. Voting outcomes in swing states since the beginning of the 21st century, %

Election Year		Arizona	Georgia	Michigan	Nevada	North Carolina	Pennsylvania	Wisconsin
Number of electors		11	16	15	6	16	19	10
2000	R.	51	55	46.1	49.5	56	46.4	47.6
	D.	44.7	43.2	51.3	45.9	43.1	50.6	47.8
2004	R.	54.9	58	47.8	50.5	56	48.4	49.3
	D.	44.4	41.4	51.2	47.9	43.6	50.9	49.7
2008	R.	53.6	52.2	41	42.7	49.4	44.2	42.3
	D.	45.1	47	57.4	55.1	49.7	54.5	56.2
2012	R.	53.7	53.3	44.7	45.7	50.4	46	45.9
	D.	44.6	45.5	54.2	52.4	48.4	52.1	52.8
2016	R.	48.7	50.8	47.5	45.5	49.8	48.6	47.2
	D.	45.1	45.6	47.3	47.9	46.2	47.9	46.5
2020	R.	49.1	49.2	47.8	47.7	49.9	48.8	48.8
	D.	49.4	49.5	50.6	50.1	48.6	50	49.4
2024	R.	52.3	50.7	49.7	50.6	51.1	50.5	49.7
	D.	46.7	48.5	48.4	47.5	47.7	48.5	48.8

Source: compiled by the author.

The victory of Trump in the 2024 election in swing states can be attributed to a number of factors. Primarily, his campaign focused on economic and cultural issues that resonated with diverse segments of the electorate. During the campaign, Trump articulated his MAGA (Make America Great Again) economic program with notable clarity to voters. Among the Latino electorate, the economy was identified as the paramount concern, with 93% of respondents citing it as a pivotal factor in their electoral decision, alongside considerations such as crime and immigration. For a considerable segment of the Latino electorate, economic concerns, particularly the high cost of housing and goods, served as the predominant motivation for selecting a candidate. Prioritizing economic stability and maintaining security emerged as a pivotal factor in sustaining support among Hispanic men during the election [Pew Research Center 2024a].

White voters have exhibited a modest but persistent inclination toward Republican candidates over the past four decades. Historically, racial minorities have been observed to cast their votes predominantly for Democratic candidates. It is crucial to acknowledge that racial-ethnic groups do not constitute homogenous entities. There is a great diversity of views and preferences within them. Table 11 (p. 84) provides a synopsis of data from

2000, illustrating that African Americans, Hispanics, and Asians exhibit a pronounced tendency to cast their votes for Democratic candidates. Historically, African Americans have voted for Democratic candidates at a rate of approximately 90 percent. During the 2008 presidential election, 95% of African Americans voted for Obama.

Table 11. Voting patterns by racial-ethnic group from 2000 to 2024, % (Exit polls)

Election year and candidates	White		African Americans		Hispanics		Asian		Others	
	R.	D.	R.	D.	R.	D.	R.	D.	R.	D.
2000 **George W. Bush (Republican)** and Al Gore (Democrat)	54	42	9	90	35	62	41	55	39	55
2004 **George W. Bush (Republican)** and John Kerry (Democrat)	58	41	11	88	44	53	44	56	40	54
2008 John McCain (Republican) and **Barack Obama (Democrat)**	55	43	4	95	31	67	35	62	31	66
2012 Mitt Romney (Republican) and **Barack Obama (Democrat)**	59	39	6	93	27	71	26	73	38	58
2016 **Donald Trump (Republican)** and Hillary Clinton (Democrat)	58	37	8	88	29	65	29	65	37	56
2020 Donald Trump (Republican) and **Joseph Biden (Democrat)**	58	41	12	87	32	65	34	61	41	55
2024 **Donald Trump (Republican)** and Kamala Harris (Democrat)	57	41	13	85	46	52	39	54	42	54

Source: [The New York Times 2020, The Washington Post 2024b].

The proportion of Hispanic votes has increased from 53% to 71%, reflecting the heterogeneity of the Hispanic electorate. For instance, Americans of Mexican, Puerto Rican, and Dominican descent tend to align with the Democratic Party, while Cuban and Colombian Americans demonstrate a stronger inclination toward Republican support. A notable instance is the 2004 election, when 44% of Hispanic voters cast their ballots for Republican Candidate George W. Bush. A closer look at the geographic distribution of the Hispanic population reveals that those residing in the western United States, particularly in California, tend to align more closely with the Democratic Party. Historically, Hispanic Americans who are eligible to vote have exhibited lower rates of voter turnout compared to other demographic groups. This phenomenon has been attributed to the historical tendency of immigrants to adopt a neutral stance, neither aligning fully with their country of origin nor fully with the United States. Engaging in political activities necessitates the cultivation and/or fortification of robust connections. Immigrants, on the other hand, have demonstrated a preference for maintaining a neutral stance, opting not

to align with either country's political landscape. However, this detachment is gradually being replaced by increased political engagement, albeit less active than in other racial-ethnic groups, among the second and third generations of Hispanics who have established their lives in the United States [Espino, Leal, and Meier 2007].

A key difference between the Hispanic and African American communities is the absence of a perceived unified political identity among the former. While there are numerous similarities that characterize all Latino groups, they lack a common agenda. This absence of a cohesive agenda can be partially attributed to the historical experience of Hispanic communities, which have not endured the same degree of racial or cultural oppression as African Americans. The challenges confronting the Hispanic community are predominantly attributed to their socio-economic circumstances, which, akin to the issue of immigration, has the potential to serve as a unifying, if not a consolidating, factor for the cohesion of its members [Kuvaldina 2012].

With regard to the Asian minority vote, the results are contingent, in part, on the ethnicity of the electorate. It is widely accepted that Americans of Chinese and Indian origin are more inclined to align with Democratic Party policies, while those of Vietnamese origin are more likely to support Republican Party candidates. The historical context of immigration patterns and contemporary foreign policy dynamics with their respective countries of origin play a significant role in shaping these voting preferences.

Furthermore, racial and ethnic group differences in voter turnout rates are pronounced. Historically, White voters have consistently demonstrated high rates of voter turnout. African Americans also exhibit relatively high rates of voter turnout, though they are generally lower than those observed among Whites. However, there were notable exceptions observed in the 2008 and 2012 votes. In 2020, a significant proportion of African American women cast their votes by mail, a development that significantly altered the electoral outcome, predominantly favoring the Democratic Party.

Historical analysis indicates that while a politician may garner the support of a substantial segment of the electorate on a national scale, this alone is not necessarily sufficient to secure the presidency. This phenomenon was exemplified by Hillary Clinton in 2016 and her fellow party member Al Gore in 2000 [Zabrodin 2024].

Since 2000, there have been notable differences in voting behavior among different racial-ethnic groups in US presidential elections. These variances in voting patterns are indicative of the social, economic, and political realities experienced by each group, as well as their responses to the candidates and their respective agendas.

African American voters have historically demonstrated a strong affinity for the Democratic Party. This pattern reached a notable high in 2008 and 2012, coinciding with the election of Obama. For instance, in 2008, approximately 95% of African American voters cast their ballots for Obama. In subsequent years, support for the Democratic Party among African Americans remained high, although in 2020 there was a slight increase in votes for Republican candidate Trump (approximately 12%), although this was not sufficient to impact the overall electoral outcome.

The Hispanic population, meanwhile, has emerged as a growing demographic with a diverse array of political preferences. Historically, the Hispanic community

has exhibited a tendency to align with the Democratic Party, though this demographic does not exhibit the same level of cohesion in their political preferences as the African American community. In the 2000s, approximately 60% of Latinos cast their votes for the Democratic Party. However, in 2016 and 2020, a notable segment of the Latino electorate in certain states, such as Florida, expressed support for Donald Trump, particularly Cuban Americans and natives of Venezuela.

Asian voters have also demonstrated a historical tendency to support the Democratic Party, though their voting patterns exhibited greater diversity until the 2000s. Their support for the Democratic Party has been growing over the past decade. This trend is exemplified by the substantial proportion of Asian voters who cast their ballots for Biden in the 2020 presidential election, amounting to approximately 63%. The Asian community is characterized by significant internal diversity, with political preferences exhibiting variation based on factors such as nationality, age, and education level.

Among the White electorate, which constitutes the largest demographic, there is greater heterogeneity in political preferences. White voters, constituting the largest demographic, exhibit a greater propensity to align with the Republican Party, a tendency that is particularly pronounced among Protestant voters [Sokolschik 2021]. For instance, Trump received approximately 57% of the White vote in 2016. Conversely, support for the Democrats is more prevalent among college-educated Whites and in urban areas.

In the 2008 and 2012 presidential election, African Americans demonstrated overwhelming support for Obama, and a notable proportion of Latino and Asian voters also expressed similar preferences. Conversely, White voters exhibited a more fragmented support base, with Republicans receiving the majority of their votes.

In the 2020 election, Biden garnered substantial support from African Americans, Latinos, and Asians, while Trump once again succeeded in mobilizing White working-class voters.

The electoral preferences of racial-ethnic groups have become an increasingly important factor in presidential elections, and these differences continue to shape the US political landscape.

In 2024, Trump and Biden were initially vying for the presidency. Biden announced on July 21 that he was withdrawing his candidacy,[3] and the Federal Election Commission received notice of the nomination of the country's vice president, Kamala Harris, for the presidency. The racial and ethnic roots of Harris, which include Jamaican and Indian ancestry, have enabled political strategists to position her as both "Black" and "Asian" — two dynamic voting groups within the American electorate. Her gender and ethnicity are symbolic of progress on equality and may appeal to voters seeking inclusiveness. Harris's advocacy for women's rights, including reproductive rights, and pay equity, positions her as a proponent of social justice. Her work on these issues may appeal to an electorate concerned about social justice. Additionally, Harris'is affiliated with the Alpha Kappa Alpha Sorority, Inc., widely regarded as the nation's oldest African American sorority [UlysMedia 2024].

[3] In doing so Biden became the first president not to seek re-election since Lyndon B. Johnson in 1968.

A notable aspect of her political stance is her support for women's right to abortion, a position that is at odds with the Catholic Church's stance on the matter. Following the September debate, Pope Francis criticized both candidates, urging 52 million Catholics to vote and choose "the lesser of two evils" [BBC 2024].

Researchers in Russia have found that the ongoing influx of illegal immigrants from Latin America has a significant impact on the political process in the United States. They have concluded that this crisis and the resulting socio-economic challenges will lead to an escalation in political polarization within the country, thereby strengthening the position of the Republican Party candidate in the 2024 elections [Sokolshchik, Sakaev, and Galimullin 2023].

In the 2024 election, there was a significant decline in Latino support for the Democratic Party, which was also observed among some Black and Hispanic groups nationwide and in individual states. Noteworthy shifts have also emerged within specific demographic categories across various racial groups. The most significant shift, however, is evident among Hispanic males, who have undergone a notable transition between 2020 and 2024. These individuals have demonstrated a notable inclination toward Trump. In contrast, Hispanic women favored Harris, although their numbers declined compared to 2020 [Brookings 2024].

This shift in policy preferences among racial-ethnic groups may have been part of a nationwide reaction to the high prices of food, housing, and other necessities that accompanied the once-in-a-century pandemic [Brookings 2024].

In any event, as the demographic composition of the electorate evolves to include a greater proportion of non-White voters, these individuals are poised to wield increased political influence. The demographic shifts occurring within the United States necessitate that political parties acknowledge the interests and necessities of these groups to maintain electoral competitiveness.

The traditional demographic composition of the electorate affiliated with the Democratic and Republican parties has undergone significant shifts. The electoral dynamics of the Trump–Harris election race are indicative of the shifting electoral preferences of several social groups. The following social groups expressed their support for Trump: men (55%), Whites (57%), White men (60%), White women (53%), Hispanic men (55%), individuals across all age groups over 40, those with no education (63%), and college-educated individuals (51%). Trump garnered the support from individuals with incomes between $30,000 and $50,000 annually (53%), those with incomes between $50,000 and $100,000 (51%), Protestants (63%), Catholics (58%), families with children (53%), married (56%), and those who have served in the US military (65%), first-time voters (56%), individuals who perceive the economy to be in a state of decline (87%), those who believe their family's financial situation has deteriorated in the past 4 years (81%), those for whom inflation over the past year has been a significant challenge (74%). Additionally, those for whom inflation has caused moderate hardship (51%), individuals for whom migration issues were most important (90%), those for whom the economy was most important (80%), and those for whom foreign policy issues were most important (57%) [NBS 2024].

Conclusion

The transformation of the ethnic structure of the US electorate in the 21st century is the result of the interaction of various factors, including migration, the political influence of interest groups, socio-economic dynamics, and media processes. These processes give rise to a distinctive political landscape, wherein diverse ethnic groups assume a pivotal role in shaping national politics and public opinion.

Immigration remains a pivotal factor in altering the demographic composition of the electorate. New waves of immigrants, who are becoming citizens and gaining the right to vote, contribute to the electorate's diversity, thereby altering the balance of political power at both the local and national levels. Despite the rising demographic of non-White voters, concerns regarding their integration and political representation persist as relevant issues.

The evolving racial and ethnic composition of the electorate in the United States is a protracted and intricate process that exerts a substantial influence on the nation's politics, social development, and economy. To address these changes, a multifaceted approach is necessary, encompassing policy reforms, social programs, and economic measures. Such measures are essential for maintaining stability and prosperity across all demographic groups.

The US presidential election of 2024 reflected significant changes in voter preferences among racial and ethnic groups, which was an important factor in Trump's victory over Harris. In the context of mounting ethnic and racial shifts within the electorate, the Republican Party successfully augmented its appeal among minority groups that had historically favored the Democrats. Trump's campaign was particularly focused on garnering the votes of African American and Latino men by highlighting issues that were of concern to these demographic groups, such as employment and immigration. Concurrently, a significant segment of White voters and economically disadvantaged populations, particularly those residing in industrial regions that historically aligned with the Democrats, expressed support for Trump, citing concerns regarding the ramifications of prevailing economic policies.

The 2024 election revealed a deepening divide in American society, where issues of race, ethnicity, and economic inequality influenced voter preferences and biased the outcome in favor of the Republican Party.

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Trends in the Development of the US Energy Sector

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Abstract

The paper examines the historical prerequisites of the formation of the US fuel and energy sector. Over the past century, the United States has experienced numerous large-scale economic and energy market shocks, which have led to the prioritization of achieving energy security at the national level. The article considers geographical structure of oil and gas trade, as well as domestic sectoral demand. The study assesses the potential ramifications of a novel industrial policy on domestic energy demand and undertakes a comprehensive analysis of the investment cycle of oil and gas companies, which exhibits a notable sensitivity of capital investments to price dynamics. The study also noted the insignificant impact of the climate lobby on emission levels and demand for fossil fuels.

Introduction

The global energy market is once again undergoing a period of major transformation, driven by geopolitical uncertainty, technological developments, and climate regulation. The United States is a major consumer and producer of energy on the global market. The assumption of office by President Donald Trump is anticipated to result in a substantial realignment of US energy policy, thereby transforming global commodity market. Predictable consequences of this shift include the following: a reduction in barriers for

US oil and gas producers, a significant weakening of climate regulation, and a reduction in subsidies for electric vehicles and renewable energy production.

Despite the pledges made by various nations to curtail their consumption of fossil fuels, OPEC anticipates an escalation in global consumption of both oil—up to 102.1 Mboe in 2030 (+11% by 2023)—and gas—up to 75.9 Mboe in 2030 (+9.8% by 2023), but mainly driven by developing countries [OPEC 2024]. The escalating prices of oil and gas on a global scale, the prevailing state of geopolitical turbulence, and the increased demand from the EU amid attempts to replace Russian energy resources signify the likelihood of an augmentation in domestic oil and gas production within the US. The recently implemented industrial policy under the administration of President Joseph Biden serves to invigorate domestic demand. In this regard, it is imperative to take into account the historical background and prevailing conditions of the US energy market, as well as its role as a pivotal supplier and consumer of fuel.

History of the US energy sector transformation

The modern approach to the study of the global energy sector identifies four stages of market formation [Grigoryev, Kheifets 2022]:

1. 1868—1915: the period is characterized by low dependence of the world economy on oil, low cost of energy production, Standard Oil monopoly.

During this period, coal constituted the primary source of energy in the US amid the ongoing industrialization. Coal played a pivotal role in the production of steel, the generation of electricity, and the creation of employment opportunities. The primary coal mining regions were Pennsylvania, West Virginia, Illinois, and Kentucky. Coal mining in Pennsylvania commenced in the mid-1700s to supply the colonial steel industry. By the early 1800s, the coal from Pennsylvania had contributed to industrial growth throughout the country and had become the primary fuel for the growing steel industry in western Pennsylvania. The advent of the railway network in the early 20th century further facilitated the extraction of the abundant coal deposits found in the Appalachian region, which spanned West Virginia, Kentucky, and Virginia. Since the onset of this period, the aforementioned states have collectively contributed to half (54%) of the nation's total coal production. Presently, Pennsylvania alone accounts for 20% of the nation's coal production. In the late 19th century, commercial coal mining operations expanded westward beyond the Mississippi River, with significant activity observed in Texas, Montana, Colorado, Utah, North Dakota, New Mexico, and Wyoming. In the contemporary times, Wyoming has emerged as the leading producer of coal in the United States.

Following the end of the Civil War in the US, the demand for kerosene escalated, thereby augmenting the share of oil in the nation's energy balance. The discovery of the Spindletop field in 1900 signaled the beginning of the boom in the US oil industry. The industry's primary catalyst was Standard Oil, which, through strategic agreements aimed at reducing the cost of railroad transportation, established a monopoly in the country's oil market for over 40 years. However, in 1911, under the Sherman Antitrust Act of 1890 Standard Oil's monopoly was dissolved through the establishment of 34 new companies,

including Standard Oil of New Jersey (later Exxon), Standard Oil of New York (later Mobil), Standard Oil of California (later Chevron), and Standard Oil of Ohio (which in 1987 was acquired by British Petroleum, which in 1988 also purchased Standard Oil of Indiana). These companies subsequently became members of the later emerged Seven Sisters. During this period, the US was one of the largest exporters of oil. Prior to World War I, the US accounted for 60% of global oil production, the Russian Empire accounted for 20% (during the period 1889–1901, it was the world's largest oil producer), along with that Mexico, the Dutch East Indies, and British India accounted for 2% to 5% of global oil production [Rubio-Varas 2006].

2. 1915–1972: the period is characterized by low import prices for energy resources, the monopoly of the Seven Sisters, with coal still occupying a key place in the US energy balance (during this period the US is also the world's largest coal producer), since the 1950s oil has become the most consumed fuel in the country.

The war underscored the significance of ensuring the nations' energy security. Large coal producers were in a strategic advantage over the rest of the world, and the development of domestic coal deposits became a high priority for many governments. With the growing demand for oil during World War I, the US began importing oil from Mexico for the first time. By 1920, the price of oil had reached to US$ 3/bbl (compared to US$0.67/bbl in 1914).

In response to the challenges associated with meeting the escalating oil demand, Congress enacted the Mineral Leasing Act in 1920. This legislation established the framework for the leasing of federal lands for the purpose of oil exploration. This legislative response was underpinned by concerns regarding the protectionist policies of Britain and France concerning their Middle Eastern oil interests. The act included a provision that prohibited foreign companies, whose governments did not grant similar rights to US firms, from accessing US mineral rights. Concurrently, US oil companies initiated a campaign to secure concessional oil production in Latin America.

The year 1928 is considered as the year of formation of the Seven Sisters (the world's largest oil producers, which included Exxon, Mobil, Chevron, Texaco, British Petroleum, Gulf Oil, and Royal Dutch Shell), resulted from the signing of the Red Line Agreement, which provided for joint oil production activities in the Persian Gulf. In 1933, the United States (Standard Oil Company of California, or Chevron) also signed a concessional agreement with Saudi Arabia, creating the California Arabian Standard Oil Company (later Saudi Aramco). It should be noted that the cartel constituted the foundation for the contemporary global energy infrastructure. Until 1973, it met the substantial oil demand of Western nations at a relatively affordable cost.

Subsequent to World War II, oil replaced coal as the predominant source of energy in the majority of industrialized nations, including the US. Despite the United States' increasing oil exports prior to World War II, by the early 1950s the country became a net importer due to rising motor fuel consumption and supply disruptions in several states. A notable aspect of this transition is the role of Mexico, which emerges as a pivotal trade partner for the US in this energy transition.

3. 1973–2010: the period is characterized by prevailing role of OPEC, oil supply shocks (before 2000, demand shocks prevail since the early 2000s), formation of the oil futures market.

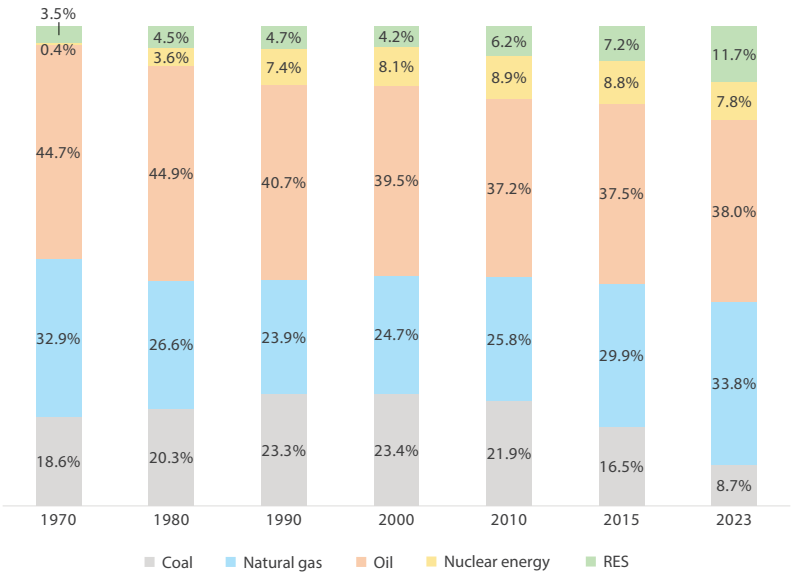
During this period, US dependence on oil imports also increased, although governments made attempts to increase domestic production.

4. 2010–current period: the period is characterized by the growing importance of climate regulations, the shale revolution in the US, the growth of renewables consumption, and from 2022, the redominant role of geopolitical interests on energy markets. Mexico and Canada remain among the key US energy trading partners.

The energy crisis of 1973 signaled the commencement of a period in which the US endeavored to ensure its energy security. In the spring of 1973, the administration of President Richard Nixon unveiled a novel energy strategy, one that was aimed at increasing domestic production in order to reduce the country's import dependence, as well as to address the nationwide fuel shortage. In response to the oil embargo imposed by the Organization of Arab Petroleum Exporting Countries (OAPEC) and the subsequent threefold increase in oil prices, the US Congress enacted a series of legislative acts designed to safeguard the domestic market. These acts included the Emergency Petroleum Allocation Act in 1973, the Energy Supply and Environmental Coordination Act in 1974, and the Energy Policy and Conservation Act in 1975. Notably, the latter act stipulated the establishment of a strategic petroleum reserve. Despite the initial intention of these laws to stabilize oil prices through direct regulation, they resulted in a decline of domestic production, consequently leading to a shortage in the market. Between 1974 and 1978, there was a substantial increase in crude oil imports, with a nearly twofold rise in imports and a 30% surge in domestic consumption. This period was characterized by significant price escalation, particularly against the backdrops of events in Iran, which indicates the ineffectiveness of the implemented measures.

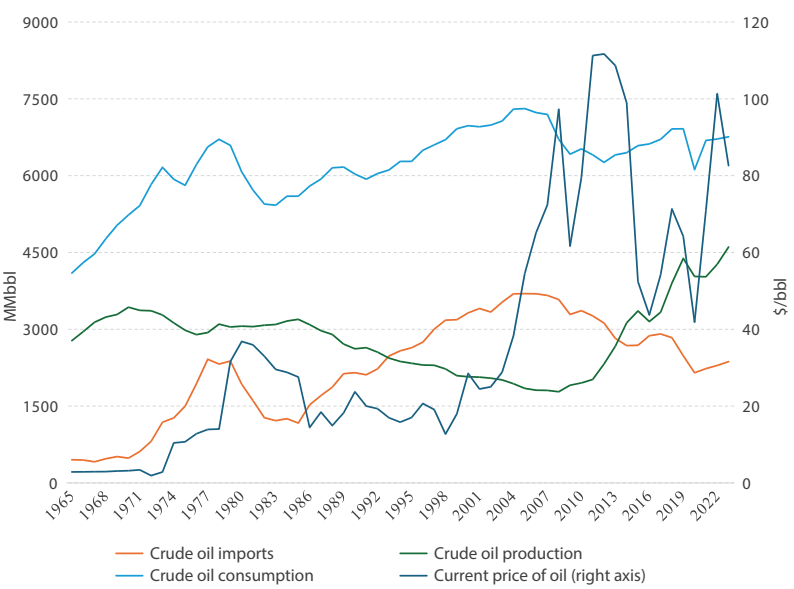
The assumption of office by Jimmy Carter and the subsequent adoption of his National Energy Act in 1978 marked the onset of a substantial restructuring of the entire industry. This transformation was precipitated by the continued rise in the cost of imported oil due to geopolitical dynamics in the Middle East. The Act placed significant emphasis on reducing energy consumption, establishing reserves, and developing alternative energy sources. In 1978, a series of five legislative acts were passed, including the National Energy Conservation Policy Act, the Power Plant and Industrial Fuel Use Act, the Public Utility Regulatory Policies Act, the Energy Tax Act, and the Natural Gas Policy Act. The latter Act marked the initial phase of deregulating gas pricing. The combination of domestic shortages and high oil prices led to accelerated growth in oil company revenues. Consequently, in 1980, an excess profits tax on crude oil sales was imposed until 1988, with the aim of offsetting the effects of deregulated oil prices. However, this measure merely served to exacerbate the nation's reliance on imported oil, a consequence of the escalating marginal costs experienced by domestic producers, the decline in global oil prices, and the reduction of costs of upstream technologies internationally.

Figure 1. US energy balance, %, 1970–2023



Source: Author's calculations based on data from US Energy Information Administration (1970–2022), Energy Institute Statistical Review of World Energy (2023).

Figure 2. US crude oil imports, production and consumption trends, current price trends



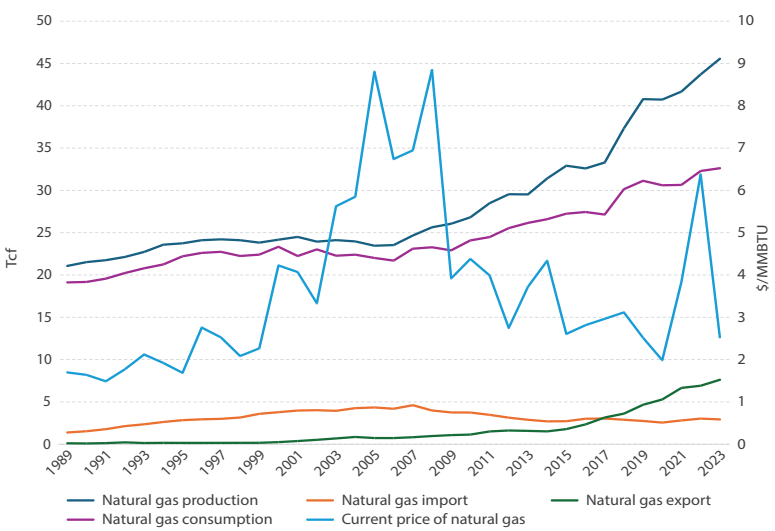
Note: Prices in the period 1965–1972 are presented for the US average; in the period 1972–1976, for Arabian Light (Ras Tanura) crude oil; in the period 1976–2023, for Brent crude oil.

Source: Author's calculations based on data from the US Energy Information Administration, Energy Institute Statistical Review of World Energy.

The 1990s was characterized by a persistent decline in prices and domestic oil production. Notably, the year 1992 witnessed a pivotal shift with the deregulation of natural gas pipeline transportation, which entailed the unbundling of transportation, storage, and sales services. This unbundling facilitated direct contracting of supplies to buyers from the fields. In addition, for the first time, the problem of growing GHG emissions were discussed internationally. The Kyoto Protocol had been established, although it was not ratified by the US. In fact, the prerequisites for the current conflict of interest between oil and gas companies and supporters of decarbonization were starting to form.

The 21st century for the US energy sector is marked primarily by the development of offshore production technologies and, as a result, growth in upstream investment, the increasing role of climate regulation, and supply shocks in the global market. Fracking technologies have made it possible to achieve record levels of oil and gas production.

Figure 3. Imports, exports, production, consumption and current prices of natural gas in the US



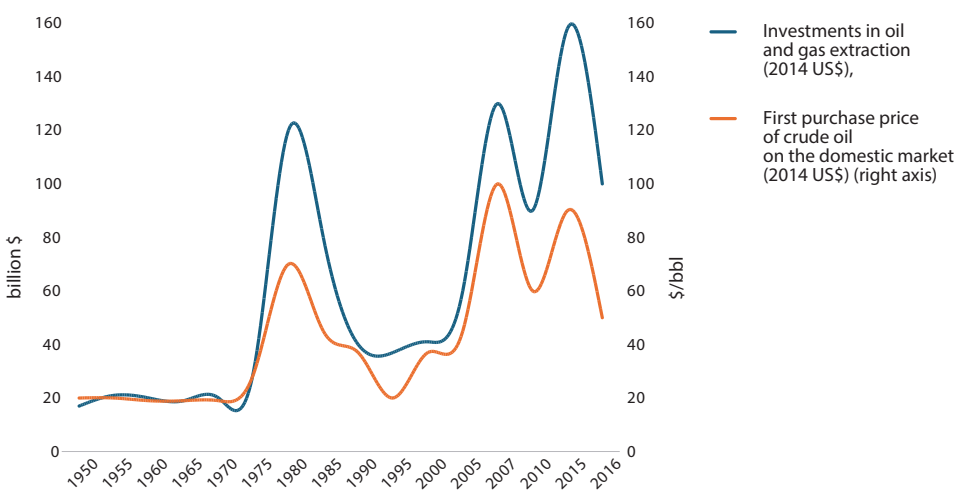
Source: Author's calculations based on data from the US Energy Information Administration, Energy Institute Statistical Review of World Energy.

US oil upstream investments in the US until 2020 were characterized by a higher sensitivity to oil prices (see Figure 4 on p. 97) [EIA 2015]. The price of oil was a reflection of the current market situation, and accordingly, price increases often indicated the need to increase supply and, as a result, led to increased investment in the upstream segment. From 2003 to 2014, upstream investment tripled, reflecting not only rising oil prices but also increasing global demand and the country's objective of achieving energy security.

Given the high price sensitivity during this period, the drop in investment in 2014 can be primarily attributed to the fall in oil prices in the second half of the year in response to the increase in shale oil production in the United States and the general slowdown in global economic activity in 2015–2016 [Stocker et al. 2018]. Investment cycles in the oil market through 2014 also provide insight into the response of upstream investment to changes in energy prices.

It should be noted that the shale revolution has resulted in a substantial reduction in the payback period of investment projects, thereby exacerbating the correlation between investments and price fluctuations. In 2024, Rystad Energy estimates the average payback period for tight oil projects at an average price of $70/bbl to be two years, while for other supply segments the payback period is closer to 10 years. The transition to "short-term" projects has also resulted in a shift of industry risks to financial market players, as projects can deliver supplies to the market almost immediately upon launch. The ramifications of this transition will become more evident after 2020, when the recovery of oil prices and demand, and consequently, the substantial increase in cash flows of oil and gas producers following the lifting of lockdown restrictions, did not result in a significant growth of upstream investments. This was attributed to the prevailing high degree of uncertainty in the market and the anticipation of oil and gas companies of elevated rates of energy transition, which consequently led to the redistribution of profits to renewable energy (RES) projects, paying out dividends, or debt repayment [Grigoryev, Kheifets 2022], accumulated since the start of the shale revolution [Fattouh, Sen 2013].

Figure 4. Upstream investment and crude oil prices, 1950–2015.



Source: US Energy Information Administration.

In 2018, investment in the upstream sector remained 40% below the 2014 level [Hacquard et al. 2019]. This decline can be attributed to several factors. Oil producers anticipated lower prices due to increasing shale oil supply, which exerted pressure on the share prices of publicly traded oil and gas companies. Consequently, companies directed their resources toward dividend payments or buybacks, while reducing upstream investments. Moreover, the proactive promotion of green energy transition policies has prompted a reallocation of capital investments by large Western oil and gas companies (e.g., BP, Total, Equinor, and Royal Dutch Shell, etc.) into renewables, along with a reduction in financing of high-risk oil and gas projects by banks. The overall slowdown in investment was also affected by the fragmentation of global trade, which led to the expectation of a slowdown in global economic growth. This has resulted in a

decline in capital expenditures on exploration and maintenance of investments, with a focus on enhancing production efficiency in existing fields.

In 2020, lockdowns and the disruption of supply chains resulted in a substantial decline in oil demand, thereby precipitating a decline in investment within the industry (capital investment reached its 2006 minimum) [Grigoryev, Kheifets 2022]. According to estimates by the IEA, the decrease in investments by oil producers amounted to approximately 25% compared to the initially announced plans for 2020 [IEA 2021]. The primary factor contributing to this decline in investment expenditures was the reduction in oil industry revenues due to falling oil prices and demand, caused, among other things, by the high degree of uncertainty associated with the further spread of COVID-19. The most substantial decline in investment was observed among companies engaged in shale oil production in the US, attributable to diminished profitability (S&P estimates that only half of the wells remain profitable at $40/barrel) [S&P Global 2020] and elevated creditworthiness.

However, as of the end of 2021, investments in the industry showed signs of a recovery. OPEC+ cuts, as well as the recovery of economic activity and, as a result, oil demand, led to an increase in energy prices. In response, upstream investments in the US have increased again, although they have not returned to prepandemic levels.

Figure 5. Levels of cash flow and capital expenditures of selected 36 US publicly traded oil and gas companies, 2019–2024, $ billion (in US$ 2024)

Source: US Energy Information Administration.

In the period 2022–2023, upstream investments exhibited growth, albeit at a relatively "flat" rate. Rising commodity prices, consequent to escalating geopolitical tensions, precipitated a surge in capital investment in the US, albeit with a limited temporal scope, restricted to the third quarter of 2022. Subsequent growth decelerated, attributable to elevated operating costs for enterprises (due to escalating labor costs and supply chain disruptions) and heightened tax collections. It is noteworthy that the escalation

of conflicts in the Middle East in 2023–2024, while resulting in an increase in oil prices, did not contribute to the geopolitical price premium. Consequently, the impetus for increasing upstream investments in the US oil industry will not be geopolitical tensions (this will be facilitated more by regulatory relaxations of the new administration), which allows to conclude that the sensitivity of investments to prices will further decrease.

Structure of the US energy balance

The structure of the US energy balance has demonstrated relative stability over the past 50 years, with an increasing share of gas after 2014. Despite the active climate agenda both in the world and the US, especially with the President Biden administration, the share of oil and gas in the country's energy mix still exceeds 70%.

Table 1. Trends in production, consumption, exports and imports of major energy sources in the US, 2019–2023

	2019	2020	2021	2022	2023	Growth 2022-2023, %	CAGR 2019-2023, %	Growth 2019-2023, %
Oil (MMbbl/d)								
Production	17.1	16.5	16.7	17.8	19.4	**8%**	**3%**	**13%**
Consumption	19.4	17.2	18.8	18.9	19.0	**1%**	**-1%**	**-2%**
Exports	8.0	8.1	8.0	8.5	9.1	**7%**	**3%**	**14%**
Import	9.1	7.9	8.5	8.3	8.5	**2%**	**-2%**	**-7%**
Gas (Bcm)								
Production	928.1	924.8	944.5	993.4	1035.3	**4%**	**3%**	**12%**
Consumption	851.0	834.5	836.4	879.6	886.5	**1%**	**1%**	**4%**
Exports	124.8	140.2	178.8	187.3	203.4	**9%**	**13%**	**63%**
Import	74.7	69.5	76.5	82.8	79.5	**-4%**	**2%**	**6%**
Coal (EJ)								
Production	14.3	107	11.6	12.1	11.8	**-2%**	**-5%**	**-17%**
Consumption	11.3	9.2	10.6	9.9	8.2	**-17%**	**-8%**	**-28%**
Exports	2.2	1.7	2.2	2.2	2.5	**11%**	**3%**	**12%**
Import	0.2	0.6	0.1	0.2	0.1	**-35%**	**-10%**	**-36%**
Renewables (quadrillion BTU)								
Production	7.8	7.5	7.8	8.3	8.4	**1%**	**2%**	**9%**
Consumption	7.6	7.3	7.6	8.1	8.2	**2%**	**2%**	**9%**
Nuclear Power (EJ)								
Production	3.1	3.0	3.0	2.9	2.9	**1%**	**-1%**	**-4%**
Consumption[1]	7.8	7.5	7.4	7.3	7.3	**0.1%**	**-1%**	**-6%**

Source: Energy Institute Statistical Review of World Energy, US Energy Information Administration.

[1] Calculation based on gross generation excluding cross-border electricity supply. Energy volume is calculated on a cost-equivalent basis.

The advent of hydraulic fracturing and horizontal drilling technologies has precipitated a paradigm shift in the global oil and gas market, resulting in substantial growth in US oil and gas production. In 2023, the United States accounted for 20% of global oil production and 25.5% of global gas production. In 2020, the US became a net exporter of oil (key export destinations are Canada, Mexico, China, and the EU), which was facilitated by both the growth of shale production and, consequently, an increase in light oil supplies to the market, as well as the lifting of the ban on oil exports in the country in 2015. However, it should be noted that the composition of US production is predominantly characterized by low-sulfur fuels. While heavy oil consumption is primarily met by stable imports from Canada and production in California, this fact does not negate the discussion of energy security within the context of novel industrial policies and multiple shocks.

Achieving energy security has been a priority for the United States since the mid-20th century, when the country became a net importer of energy. Despite the persistent endeavor to increase domestic production, US imports showed steady growth, reaching a peak only in 2006. Over the past 50 years, the structure of US imports has also been significantly transformed. Thus, the share of OPEC countries, which accounted for almost half of all US imports in the last century (47% in 1973), decreased to 16% in 2023. Today, Canada, Mexico, Saudi Arabia and Nigeria traditionally stand out among the key oil suppliers to the US (see Table 2 on p. 100).

Table 2. Geographic structure of oil imports to the United States, 1973–2023, MMbbl/d

	1973	2000	2010	2015	2019	2022	2023
Non-OPEC	**3.3**	**6.3**	**6.9**	**6.6**	**7.5**	**7.1**	**7.2**
Canada	3.0	1.8	2.5	3.8	4.4	4.4	4.4
Mexico	0.0	1.4	1.3	0.8	0.7	0.8	0.9
Russia	0.0	0.0	0.6	0.4	0.5	0.1	0
OPEC	**3.0**	**5.2**	**4.9**	**2.9**	**1.6**	**1.3**	**1.3**
Saudi Arabia	0.5	1.8	1.1	1.1	0.5	0.6	0.4
Nigeria	0.5	0.9	1.0	0.1	0.2	0.1	0.2
Iraq	0.0	0.6	0.4	0.2	0.3	0.3	0.3
Venezuela	1.3	1.5	1.0	0.8	0.1	-	0.1
Total	**6.3**	**11.5**	**11.8**	**9.4**	**9.1**	**8.3**	**8.5**

Source: US Energy Information Administration.

In addition to a significant change in the composition of US oil imports in 2022, it should be noted that the rebalancing of exports, which was influenced by numerous factors: bilateral economic sanctions against Russia, an increased demand for oil in China after lockdowns, and OPEC+ cuts. The imposed sanctions against Russia resulted in a substantial price surge in 2022 and a profound restructuring of the entire market. The imposed oil price caps have necessitated the EU to look for new energy suppliers, primarily in the Middle East and the US (Table 3 on p. 101). Consequently, exports of crude

oil and petroleum products from the US to the EU (including the UK) have increased by more than 60% in 2023 compared to pre-2019 levels.

Table 3. Geographic structure of US oil exports, 2000–2023, MMbbl/d

	2000	2010	2015	2019	2022	2023
Canada	0.1	0.2	1.0	1.0	0.8	0.9
Mexico	0.4	0.4	0.7	1.2	1.2	1.2
China	0.0	0.1	0.2	0.2	0.6	1.0
European Union, including UK	0.2	0.4	0.7	1.5	2.2	2.6
Republic of Korea	0.0	0.0	0.1	0.6	0.6	0.6
Japan	0.1	0.1	0.2	0.6	0.5	0.6
India	0.0	0.0	0.1	0.5	0.5	0.4
Singapore	0.0	0.1	0.1	0.1	0.4	0.4
Total	**1.0**	**2.4**	**4.7**	**8.5**	**9.5**	**10.2**

Source: US Energy Information Administration.

As with oil, US natural gas production has increased significantly over the past decade (see Table 4 on p. 101). The country is now a net exporter due to the development of LNG terminals. It is anticipated that LNG exports will continue to expand, driven by increased global demand and Donald Trump's initiatives to enhance the nation's presence in the global LNG market and launch new terminals.

Table 4. Geographic structure of gas exports from the US, 2000–2023, Bcm

	2000	2010	2015	2019	2022	2023
Canada	0.0	0.0	0.5	51.5	109.5	123.0
Mexico	0.0	0.0	0.5	51.5	109.4	123.0
Argentina	0.0	0.0	0.0	3.3	16.2	14.0
Bangladesh	1.9	0.9	0.2	5.7	5.9	8.8
China	0.0	0.0	0.0	0.2	2.7	4.9
India	0.0	0.0	0.0	0.1	2.2	1.6
European Union, including UK	0.0	0.0	0.0	13.7	24.4	22.4
LNG	**5.0**	**30.4**	**49.7**	**80.4**	**86.1**	**92.5**
Pipeline gas	**1.9**	**1.8**	**0.8**	**51.5**	**109.5**	**123.0**
Total	**6.9**	**32.2**	**50.5**	**131.9**	**195.6**	**215.5**

Source: US Energy Information Administration.

According to the International Gas Union, the US overtook Australia and Qatar to become the world's leading LNG producer in 2023. The US Energy Information Administration has reported that the US also set a record in 2023, exporting 10% more natural gas than it did in 2022, reaching 20.9 Bcf/d. LNG exports accounted for more than

half of the total, while the remainder was supplied via pipelines to Canada and Mexico. In 2023, the US accounted for nearly half of Europe's LNG imports, inter alia in response to the imposed sanctions against Russia. The other primary supply destinations were Mexico and the Asia-Pacific region, led by South Korea and Japan.

Table 5. Geographic structure of US gas imports, 1973–2023, Tcf

	1973	2000	2010	2015	2019	2022	2023
Canada	29.1	100.4	92.9	74.3	76.1	84.9	82.4
Trinidad and Tobago	0.0	2.8	5.4	2.0	1.3	0.7	0.3
LNG	**0.0**	**6.4**	**12.2**	**2.6**	**1.5**	**0.7**	**0.4**
Pipeline gas	**0.0**	**100.7**	**93.7**	**74.4**	**76.1**	**84.9**	**82.5**
Total	**29.2**	**107.1**	**105.9**	**77.0**	**77.6**	**85.6**	**82.9**

Source: US Energy Information Administration.

Impact of the new energy policy on the US energy sector

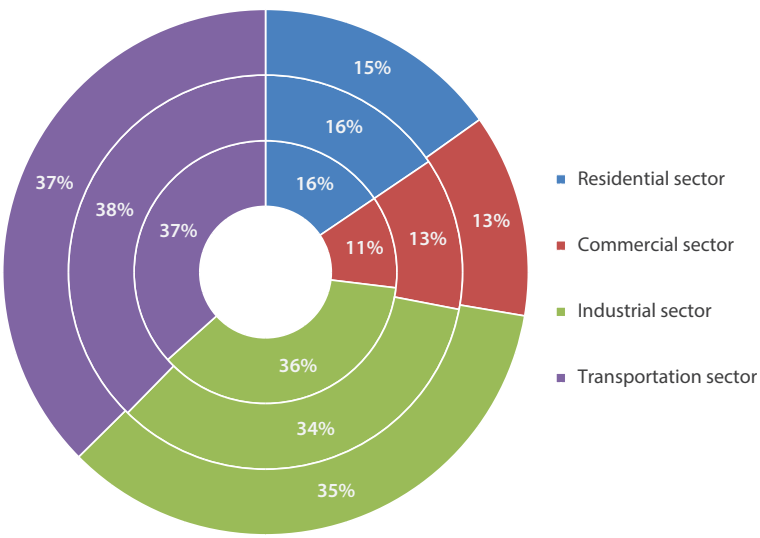
The demand for primary energy in the United States is projected to undergo significant sectoral changes in the coming decades, largely influenced by several key trends. These include the reorganization of industrial production both domestically and globally, expanded investment and data centers load growth (according to Goldman Sachs, the share of data centers in total energy consumption will increase from 3% in 2022 to 8% in 2030 [Goldman Sachs 2024]) as well as large-scale electrification.

According to Deloitte, the demand for electricity in the US is projected to nearly triple over the coming decades, driven by the electrification of transport, residential, and industrial sectors [Deloitte 2023]. Through the year 2030, electrification of heating and transportation will be a significant driver of demand growth, especially in the northeastern and western states. In regard to electric vehicles, the anticipated growth in sales is a key factor, complemented by the gradual decline in their cost relative to internal combustion engine vehicles, which is expected to stimulate demand for electricity. Conversely, the demand for gasoline may witness a decline, though the impact of electrification in this regard is expected to be less pronounced.

The US government is currently implementing financial incentives for energy transition development that are considered to be historic. These incentives are part of a series of bills, including the Bipartisan Infrastructure Act (BIL), the Inflation Reduction Act (IRA), and the Chips and Science Act. The IEA estimates that by 2030, the IRA and BIL will significantly reduce GHG emissions by 40%, meeting the country's climate goals while also significantly lowering net oil imports and producing significant reductions in electricity costs [IEA 2024]. In the energy sector, the United States has pledged to producing 100% carbon-free electricity by 2035. In the industrial sector, the country aims to reduce CO_2 emissions by 15% from 2015 levels, which account for 30% of total energy-related CO_2 emissions, according to the 2030 Industrial Decarbonization Plan. In the transportation industry, the United States has implemented strong fuel economy rules

and is encouraging investment in a variety of green vehicles. The federal government aims to achieve zero emissions in 50% of new passenger car and light truck sales by 2030. In the construction sector, the decarbonization strategy for buildings intends to reduce emissions by 65% by 2035 and 90% by 2050 as compared to 2005 levels. The BIL program has budgeted $550 billion to the development of renewable energy and infrastructure, while the IRA has invested approximately $370 billion to increase energy security and tackle climate change.

Figure 6. US primary energy consumption by sector, %,
inner circle is 2000, middle circle is 2015, outer circle is 2023

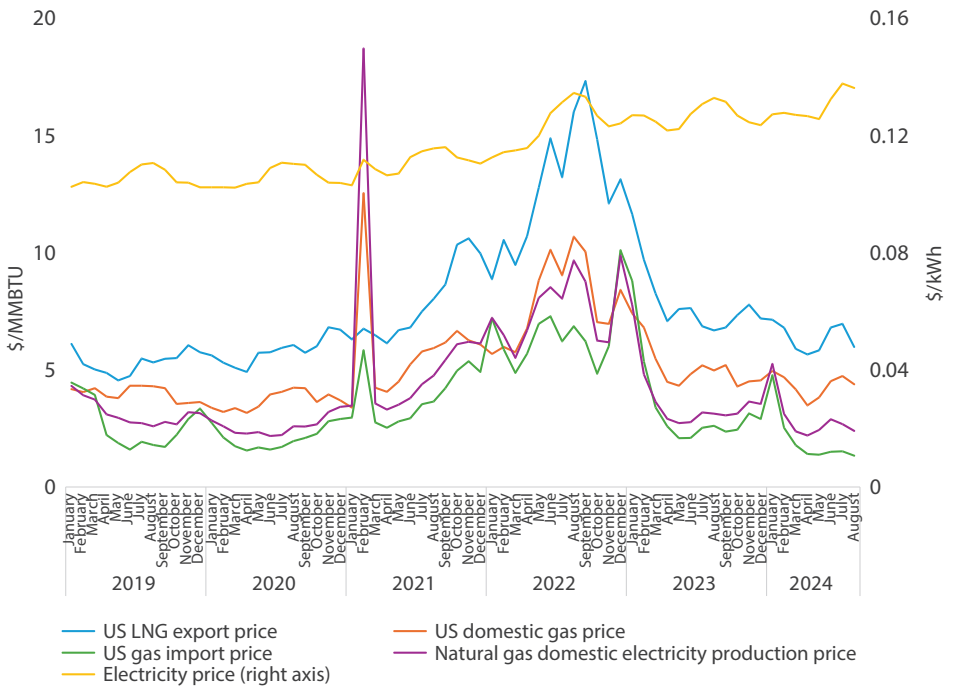


Source: US Energy Information Administration.

Contrary to the IEA's estimates, the United States Energy Information Administration has given less optimistic forecasts for transportation electrification and decarbonization. The most recent EIA Annual Energy Outlook 2023 predicts a 25–38% reduction in emissions by 2030 compared to 2005 levels. The agency predicts an increase in electric car sales due to preferential credits under IRA but claims that these vehicles will not significantly reduce the market share of other motor vehicle manufacturers. It is crucial to emphasize that while the United States has showed progress in decreasing emissions in recent years, this progress has been limited [Esayan 2024], complicating the projection of the achievement of ambitious IRA targets.

For the past three decades, coal and gas have been the predominant sources of electricity generation in the United States. Over the past decade, domestic electricity prices have remained relatively stable (at 10 cents per kWh), reflecting progress in both energy self-sufficiency and energy efficiency. However, the historically robust electricity generation market, and more specifically, domestic consumption prices, are currently under pressure due to a number of factors: high expectations of near-term demand growth, aging generation and transmission infrastructure coupled with stagnant nuclear generation and volatility in gas markets.

Figure 7. Dynamics of natural gas and electricity prices, 2019–2024



Source: US Energy Information Administration.

It is worth mentioning that the rise in gas prices in 2022 resulted in an increase, but not in the anchoring of high domestic electricity prices. Unlike the EU, where anti-Russian sanctions resulted in a considerable increase in domestic gas and energy prices, the United States profited from lower economic costs and incentives to relocate businesses from Europe. In contrast, domestic retail and wholesale gas prices in the EU in 2023 were three to five times higher than those in the US (prices in the EU exceeded US prices "only" two to three times prior to the sanctions), and electricity prices in the EU were two to three times higher than those in China and the US (prices in the EU were on par with China prior to the sanctions and exceeded the US by 80%) [Draghi 2024].

In the case of the US, it would be more accurate to say that the root cause of electricity price growth will be the expansion of domestic demand under existing infrastructure constraints, rather than external shocks in the global gas market. According to Goldman Sachs, the anticipated surge in US electricity demand, in conjunction with the scheduled decommissioning of coal-fired power plants, will necessitate an investment of $665 billion by the year 2030. This substantial investment is projected to extend through the year 2030 [Goldman Sachs 2024]. Moreover, the electrification process necessitates an expansion in investment in gas infrastructure for domestic consumption.

The US domestic gas market has undergone a substantial transformation since the beginning of the 21st century. The increase in shale production has led to a significant drop in domestic prices, as the market's growing needs have been met by

its own capacity. In the near future, the planned expansion of LNG export capacity is expected to be a primary factor influencing the dynamics of domestic gas prices in the US. The EIA anticipates that US LNG export capacity will double by 2028 compared to the 2024 figure [EIA 2024]. The resumption of pipeline infrastructure projects, several of which were terminated during the previous administration, is anticipated to occur in 2025 under the current administration. Geopolitical dynamics, such as the escalation of tensions in the Middle East and the impending expiration of the agreement for the transit of Russian gas to Europe at the end of 2024, are also likely to exert significant influence.

It is also noteworthy that in 2024, the energy sector emerged as one of the most productive in the entire US economy [Bloomberg 2024]. The past decade and a half have seen a significant surge in the US oil and gas industry, with notable ramifications. First, it has contributed to the nation's outpacing economic growth, accompanied by substantial investment spillovers from Europe, affordable labor, and noteworthy R&D expenditures [Grigoryev 2024]. Second, it has contributed to a cumulative increase in the economy's productivity, thereby sustaining high labor demand, following a protracted period of slow growth due to the necessity to identify more efficient solutions to augment revenues in the face of declining oil prices. Third, declining energy production costs has enabled stable electricity prices for major consumers, thereby supporting the new industrial policy. The evident success in enhancing efficiency, notably through the integration of AI, has led to a substantial growth in oil and gas majors' earnings. The return of investors to the industry, driven by rising dividend payments during the post-pandemic price recovery, has further contributed to this growth. Additionally, significant progress has been made in enhancing energy security. Consequently, it appears implausible to conclude that the United States' climate ambitions can be achieved.

Conclusion

The past century of development in the US energy sector has been marked by significant changes, both in terms of fuel consumption patterns and the nation's position in the global energy market. The government was compelled to assume the primary responsibility of ensuring energy security due to supply disruptions in the 20th century oil market. After a series of laws intended to protect the domestic market that met with limited success, a technological advancement in shale production in the 21st century led to the realization of this objective.

The US energy policy is based primarily on ensuring the interests of companies, which, obviously, has led in the last decade to the conclusion that it is necessary to maintain a delicate balance between the climate lobby (and its promises of energy transition, which is becoming less achievable every year) and the revenues of the oil and gas sector. As a result, the picture of the US energy sector in 2024 is one of relatively weak emissions reductions, flat growth in upstream investments, and rising corporate revenues, which have been driven by a geopolitical premium in energy and logistics prices and increased productivity over the past two years.

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US Emissions and Climate Policy: National and State Trends

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Abstract

Despite the United States' active involvement in the global climate agenda, the country remains the second-largest greenhouse gas emitter globally, as well as the second-largest producer and consumer of energy. The nation's climate policies are characterized by instability and variation due to alternating presidential administrations with different political affiliations. In this context, it becomes relevant to explore the regional aspects of the US decarbonization, as well as the influence of regional features on overall GHG emissions. The distinctive characteristics of the United States' territory are fundamental in assessing the success of decarbonization efforts, which can only be achieved through a well-balanced and evenly distributed approach.

While significant progress has been made toward adopting RES, the speed and nature of this transition vary significantly across different states, resulting in a fragmented national landscape. Regional disparities in economic priorities and access to energy resources often outweigh the influence of political alignment, with neither economic growth nor party affiliation having a decisive impact on reducing emissions. This reflects a historical trend in which emissions reductions are driven more by natural resources and power and industrial technologies rather than by climate policies. Thus, the overall challenge remains: the slow and unambitious approach taken by the nation and its states in their climate actions.

Introduction

Over the past several decades, US policy has evolved from a focus on general environmental protection to a more specific emphasis on climate change mitigation. In the early stages, environmental policies primarily encompassed regulations aimed at protecting natural resources, ecosystems, and public health. However, with the increase in relevance of the climate agenda, climate policies have emerged as a distinct area of policymaking, aimed at mitigating climate change by reducing emissions, transitioning to renewable energy sources, and promoting energy efficiency.

In the context of the significant shifts in US climate policy, including the withdrawal from the Paris Agreement and subsequent re-entry, changes in the political parties in power, and various institutional transformations at the state level, it is important to examine the milestones of US participation in climate governance and the formation of intrastate legislations. Exploring the regional features that influence this process, from economic interests to political affiliations, will provide valuable insights into the challenges and opportunities associated with achieving successful and equitable decarbonization.

Therefore, the purpose of this article is to conduct a comprehensive analysis of decarbonization strategies and greenhouse gas emission trends in the United States, both at the national and state levels. Given the decentralized nature of the US governance structure, where individual states have significant autonomy in shaping their own climate and environmental policies, we assume that the effectiveness of national decarbonization efforts will depend heavily on state-level actions. Consequently, the work raises the question of whether state-level greenhouse gas emissions patterns are primarily shaped by the cumulative effects of natural economic and energy trends, rather than being driven by political party affiliation or short-term policy decisions. The findings from this study will offer valuable insights into the trajectory of federal efforts, illustrating how national strategies might adapt to the diverse landscape of state-level actions.

This work describes the key components of US climate and energy policies and greenhouse gas emission trends, structured into two main sections. The first part examines the national climate policy framework, tracing its evolution from early recognition of climate issues through various presidential administrations up to the current policies under President Biden. This section highlights the interplay between political shifts and the continuity or disruption of climate initiatives, demonstrating how federal policies have shaped the nation's approach to decarbonization and the adoption of renewable energy sources. The second section focuses on state-level emission patterns, analyzing the impact of regional characteristics, such as energy profiles, economic structures, and local policies and political ideologies, on decarbonization efforts. This part emphasizes the role of states in driving progress in terms of national decarbonization, given the decentralized nature of US governance.

1. Evolution of the United States' federal approach to climate policy

The energy transition in the US represents a pivotal shift from traditional nonrenewable resources towards renewable alternatives, a process that has implications for

environmental conservation, community development, and economic sustainability. One of the main difficulties in establishing a sustainable climate policy is the frequent changes in the governing parties, since the US climate policies are characterized by instability and variation due to alternating presidential administrations with different political affiliations.

Generally, the Democratic Party advocates for comprehensive action on climate change, emphasizing the need for RES, the reduction of GHG emissions, and the implementation of policies aimed at mitigating climate impacts. Conversely, the Republican Party often prioritizes economic growth and energy independence, expressing concerns that aggressive climate policies might hinder economic performance or lead to job losses in traditional energy sectors like coal, oil, and natural gas.

Table 1 (p. 110) presents key stages in the development of US climate policy, highlighting a complex and often inconsistent approach shaped by shifting political and economic priorities. Overall, the pre-Obama era of US climate policy reveals a pattern of incremental progress overshadowed by economic and political constraints, with limited long-term commitment to comprehensive emissions reductions.

Table 1. US climate policy prior to the Obama administration

Stage	Major Events
1960s: awareness of climate change	1965: President Lyndon B. Johnson acknowledges the danger of increasing CO_2 emissions [The White House 1965]
1970s: early legislative foundations	1978: President Carter enacts the National Climate Program Act, focusing on climate control but lacking specific emission reduction measures. Bipartisan consensus on addressing rising air temperatures.
1980s: skepticism and shifts	1981: President Reagan reduces funding for atmospheric CO_2 research, focusing on overcoming the energy crisis and inflation [Waxman 2019]; no specific emissions reduction efforts but business-driven market solutions were supported.
1990s: global agreements and domestic challenges	1993: President Clinton proposes a BTU tax to reduce emissions [Royden 2002. P. 415–416]. 1997: The US signs the Kyoto Protocol but does not ratify it due to the Byrd-Hagel Resolution, opposing commitments that excluded developing nations [Biniaz 2018. P. 2–3]. Clinton initiates voluntary climate programs and the $6.3 billion Climate Change Technology Initiative (CCTI) to promote energy-efficient technologies. However, the US fails to meet its voluntary UNFCCC targets [Royden 2002. P. 416–417].
2000s: retreat and minimal action	2001: President George W. Bush rejects the Kyoto Protocol, arguing it would hurt the US economy [Borger 2001]. Bush's administration aimed to lower the GHG intensity of the economy by 18% from 2002 to 2012, a target criticized for being in line with historical trends [Dawson 2003]. Bush's plan included supporting oil exploration in federally protected areas, subsidies for coal and nuclear power, and weakening environmental regulations.

Source: Author's analysis.

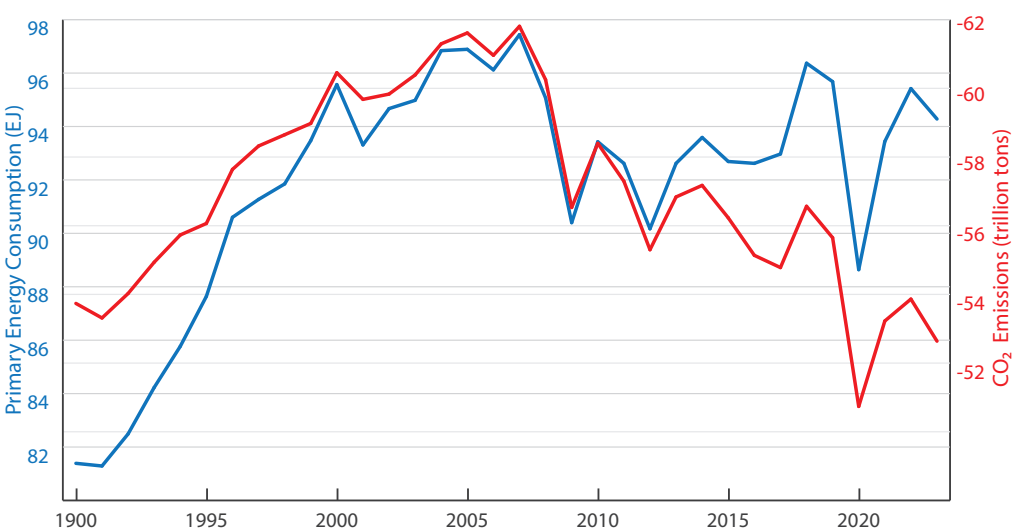
The election of President Barack Obama marked an important shift in the United States' approach to climate policy. In 2009, the Obama administration introduced regulations that would, for the first time, set nationwide restrictions on transport GHG emissions. These rules required an approximate 40% growth in fuel economy for

cars and light trucks in the US market by 2016 [Broder 2009]. Also under Obama, the country joined the Paris Agreement in 2015. A central component of Obama's domestic climate policy was the Clean Power Plan, an initiative designed to reduce CO_2 emissions from the power sector by 32% by 2030 compared to 2005 levels [General White House Bibliography 2015].

However, in a cyclical turn of political tides, President Donald Trump supported the ideas of George W. Bush and cancelled the majority of President Obama's executive orders. One of the most significant rollbacks was the withdrawal from the Paris Agreement, as Trump's administration argued that the agreement created an excessive burden on the American economy and workers. Another key initiative that faced reversal was the Clean Power Plan, which was replaced with the Affordable Clean Energy rule, providing states with more authority and fewer guidelines for regulating power plant emissions [Aldy 2017. P. 1–2]. The Trump administration also revised the Corporate Average Fuel Economy standards [Shepardson 2020].

President Trump restructured the Environmental Protection Agency (EPA), leading to the dismissal of a significant number of its staff. Consequently, new leaders like Scott Pruitt and former coal lobbyist Andrew R. Wheeler, who were climate change skeptics, transformed the EPA into a tool for the president's economic policy [Kovalev 2022. P. 30]. For instance, in September 2017, the Agency published a strategic plan for 2018–2022 that omitted any mention of global climate change and revoked California's authority to set its own emissions standards. In response to the administration's clear commitment to climate deregulation, hundreds of litigants turned to the judicial system [Silverman-Roati 2021. P. 27].

Figure 1. Primary Energy Consumption and CO_2 Equivalent Emissions from Energy, Process Emissions, Methane, and Flaring from 1965 to 2023, EJ and trillion tons of carbon dioxide equivalent



Source: Author's calculations based on the Energy Institute Statistical Review of World Energy, 2024. Available at: https://www.energyinst.org/statistical-review

In the first two years of Trump's presidency, primary energy consumption in the United States (see Figure 1 on p. 111) showed a trend of stability with a slight increase until 2020, when the COVID-19 pandemic caused a significant drop in both total and per capita energy use. Notably, there was an overall upward trajectory in primary energy consumption while CO_2 emissions experienced a significant decline, mirroring the country's economic development, industrialization, and population increase [Energy Institute 2024]. Moreover, during the last few years, the United States has witnessed a consistent decrease in energy intensity[1] due to the integration of innovative energy-efficient technologies, a major shift from coal to natural gas in electricity generation after the shale revolution, and the optimization of energy consumption across various economic sectors.

The Democratic Party criticized the decision to withdraw from the Paris Agreement, calling it a political decision with grave ramifications for the safety of the planet. In the international arena, the response was similarly disapproving. For this reason, one of Biden's first actions after taking office was to return the US to the Paris Climate Agreement in 2021. In April of the same year, the US published a nationally determined contribution (NDC) [UNFCCC 2021], establishing a goal of limiting the global average temperature increase to below 2°C above pre-industrial levels by reducing its net GHG emissions by 50–52% below 2005 levels in 2030.

Firstly, the US NDC reveals ways of minimizing emissions in the electric power industry, as currently fossil fuels are the largest source of electricity generation. In 2010, coal was the dominant source of electricity generation, contributing significantly more than any other source. However, by 2023, coal's role had diminished drastically, and it is expected to decrease more over time, as the US has formed a strategy to achieve 100% carbon pollution-free electricity by 2035.[2] Secondly, SUVs, pickup trucks, followed by heavy trucks, airplanes, railways and ships are the primary emitters in the American transportation sector. This is mostly attributed to the car-centric lifestyle in the US: in 2019, the US was ranked as a top-tier country for vehicles in use, and heavy reliance on petroleum-based fuels accounted for 90% [NationMaster 2019]. Policies that can contribute to emissions reduction include incentives for zero-emission personal vehicles, public charging, and investment in a wider array of transportation infrastructure [UNFCCC 2021].

Emissions in almost all sectors peaked in the early 2000s and experienced subsequent declines or stabilization, indicating a shift towards more sustainable and efficient energy use. The transformation of the US energy sector, as presented in Figure 2 (p. 113), with a decrease in coal-based power generation and consumption and an increase in natural gas and renewable energy sources, has been a key driver of this shift.[3] Under the Biden administration, efforts were made to accelerate electric vehicle (EV) adoption

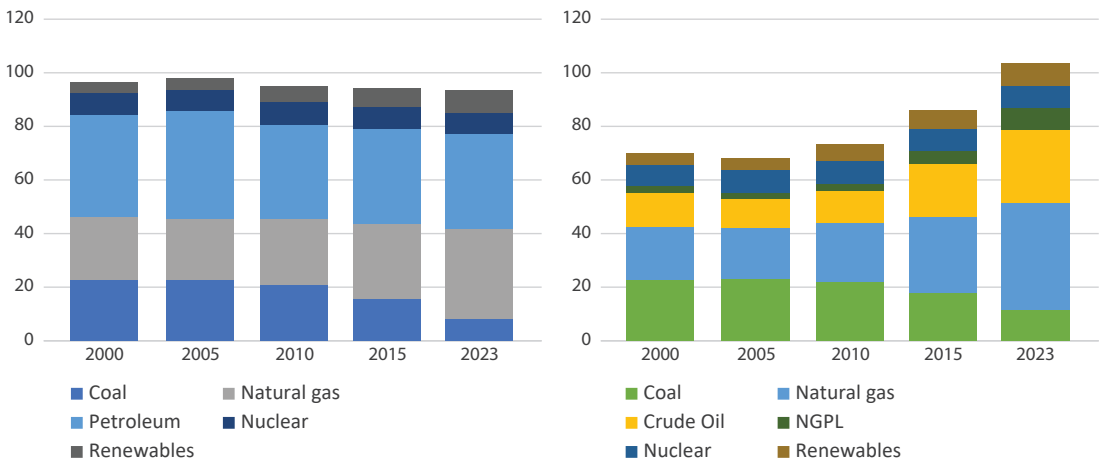
[1] Author's calculations based on the Energy Institute's Statistical Review of World Energy, 2024. Available at: https://www.energyinst.org/statistical-review

[2] Author's calculations based on EIA Net electricity generation in the United States from 1990 to 2023, by energy source (in terawatt-hours). In Statista, 2024: https://www.statista.com/statistics/220174/total-us-electricity-net-generation-by-fuel/

[3] EIA, Carbon intensity of US power generation continues to fall but varies widely by state, 2022. Available at: https://www.eia.gov/todayinenergy/detail.php?id=53819

and infrastructure development with significant overall investments supporting clean energy and transportation. In February 2023, the White House announced plans for a nationwide EV charging network, aiming for 500,000 chargers and 50% of new car sales to be electric by 2030.[4]

Figure 2. US primary energy consumption and production by source, 2000–2023, Quadrillion BTUs



Source: Author's calculations based on US Energy Information Administration, Monthly Energy Review, Table 1.3, April 2023 and US Energy Information Administration, Monthly Energy Review, Table 1.2, April 2023 (https://www.eia.gov/energyexplained/us-energy-facts/)

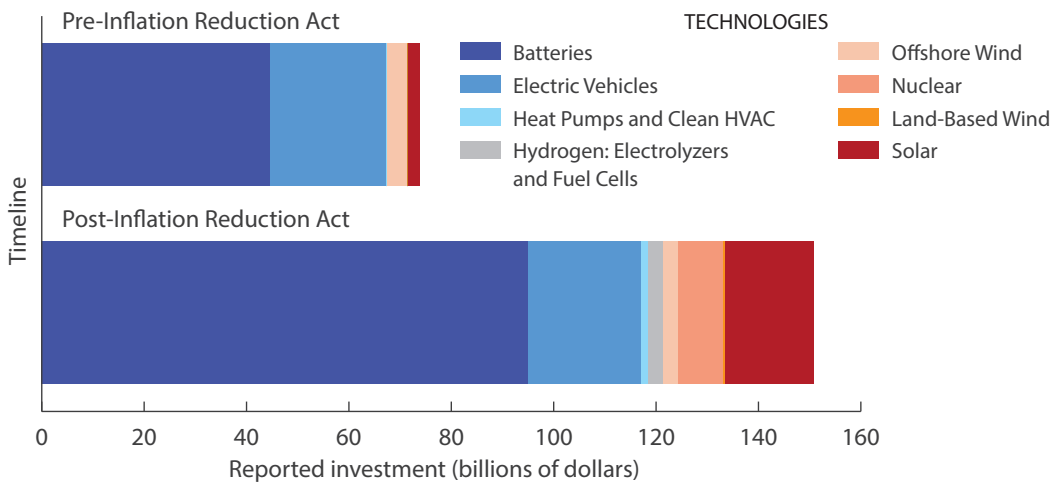
One of Congress's most significant and ambitious actions on clean energy investment is the Inflation Reduction Act (IRA). This act makes a historic down payment on budget deficit reduction to lower inflation rates, invest in domestic energy production and manufacturing and reduce CO_2 emissions by approximately 40% by 2030 – $369 billion for the FY2022 Budget Reconciliation over the next 10 years [Senate Democrats 2022]. The IRA includes several tax provisions, grants, and loans to support the deployment of innovative clean energy programs. The renewables industry is expected to see over 170 GW of new solar, wind and storage capacity unlocked by the Act [Rystad 2023].

Figure 3 (p. 114) gives a clear illustration of investment trends in sustainable technologies, segmented into two distinct periods: before (2021–2022) and after (2022–2023) the enactment of the IRA. One of the key observations is the substantial increase in investments across all technologies following the act, particularly noticeable in the batteries and EV sectors. In the pre-act period, while investments were notable, they were considerably lower than those made post-act. Offshore wind and solar technologies also

[3] The White House, Fact Sheet: Biden-Harris Administration Announces New Standards and Major Progress for a Made-in-America National Network of Electric Vehicle Chargers, 2023. Available at: https://www.whitehouse.gov/briefing-room/statements-releases/2023/02/15/fact-sheet-biden-harris-administration-announces-new-standards-and-major-progress-for-a-made-in-america-national-network-of-electric-vehicle-chargers/

received considerable investments, reflecting a broader trend towards RES as companies take steps to benefit from available tax credits.

Figure 3. Reported investments in green technologies under Biden Administration, pre- (2021–2022) and post-Inflation Reduction Act (2022–2023), billion USD



Source: Author's calculations based on US Department of Energy Investment Announced Under Biden Administration, 2023 (https://www.energy.gov/invest).

Lastly, the trajectory of the US energy system under the Biden administration is indeed set towards decarbonization. Bipartisan cooperation could be the key to addressing the impacts of climate change and improving energy efficiency. However, significant disagreements remain and there has been little research into whether the parties could really cooperate or not. We therefore believe that discussion of this topic remains open, and that the country still has a lot to do in order to ensure and stabilize its sustainable development.

2. State-level divergence in decarbonization: One goal but different priorities

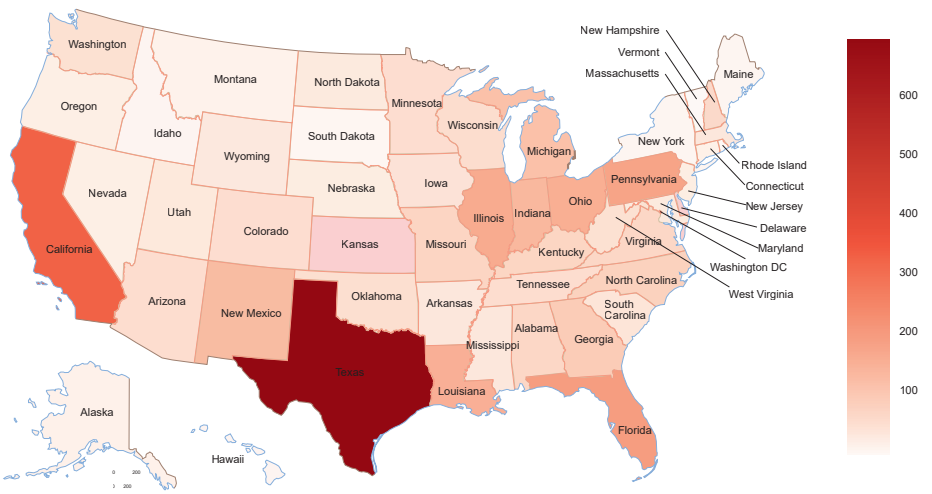
2.1. The impact of regional features on state-level emission patterns

One of the distinctive features of the American legal framework is its organization on a federal basis. States possess extensive authority in various areas; thus, they play a central role in achieving carbon neutrality in the US due to their significant contribution to policymaking and strategy planning.

Numerous US states have made significant strides toward reducing greenhouse gas emissions and adopting cleaner energy sources. However, others continue to rely heavily on high-emission energy practices, struggling to transition from historical patterns of fossil fuel dependence. Overall, the EIA indicates clear progress in reducing carbon emissions in the US energy sector in the past two decades. The largest emissions (see

Figure 4 on p. 115) are observed in Texas (683 million metric tons, 13.5% of US emissions), California (358 million metric tons, 6.6% of the US emissions), Florida (234 million metric tons, 4.6% of US emissions), Pennsylvania (214 million metric tons, 4.3% of US emissions), and Ohio (195 million metric tons, 4% of US emissions).

Figure 4. Energy-related carbon dioxide emissions in US states, 2021, million metric tons



Source: Author's calculations based on EIA State energy-related carbon dioxide emissions by year, 2023 (https://www.eia.gov/environment/emissions/state/).

Texas has demonstrated an increase in CO_2 emissions due to its significant power generation and industrial activities. Texas is a major hub, hosting 30% of US refining capacity and 70% of its petrochemical production, which contribute to about 58% of total industrial energy consumption. Nevertheless, electricity generation has experienced a notable shift away from coal, which accounted for 60% of CO_2 emissions in 2016, due to the rise of natural gas – a key outcome of the US shale revolution. This transition has been influenced by increased natural gas availability and the economic advantages it offers. Texas has also implemented favorable tax policies that encourage the development of renewables, and has significantly capitalized on its vast land and favorable weather conditions, expanding its solar energy capabilities and becoming a leader in wind energy production in the US. These incentives have stimulated investments in wind and solar power projects, contributing to the reduction in electricity production costs [Rudolph et al. 2023. P. 17–18].

California launched North America's first large-scale cap-and-trade program, achieving a 5.3% emissions reduction from 2013 to 2017, though separating the effects of this program from other state efforts is complex. The industry and transportation sectors, however, continue to favor fossil fuels due to the high costs of alternatives like green hydrogen and EVs. The state has approximately 30 million registered vehicles, more than any other state in the US, followed by Florida with 18 million registered cars.[5]

[5] Daly, L., 2024. How Many Cars Are in the US? Car Ownership Statistics 2024. Motley Fool Money. Available at: https://www.fool.com/the-ascent/research/car-ownership-statistics/

Despite having broad climate goals, California saw emissions from large-scale facilities increase in 2021. To address this, new laws require companies with over $1 billion in revenue to disclose direct and indirect ("Scope 3") emissions, and those with over $500 million to report climate-related financial risks by 2026 [Noor 2023]. This state-level push could inform future federal regulations, as the SEC considers similar mandates for publicly traded companies.

The key states in terms of per capita emissions are Wyoming, North Carolina, Alaska, West Virginia, and Louisiana. Wyoming, with the smallest population among the states and a low density only surpassed by Alaska, stands as the second-largest net energy supplier in the US, following Texas, due to its significant energy production, exceeding consumption twelvefold. It leads in coal production and holds numerous oil and gas leases on federal lands [EIA (7)]. West Virginia ranks as the second-largest coal producer, contributing substantially to the national output and reserves [EIA (6)]. Louisiana, third in natural gas production, possesses significant refining capacity, contributing significantly to the nation's liquefied natural gas and coal exports [EIA (3)].

The factors that impact CO_2 emissions at the state level in the US are primarily shaped by regional features. For instance, while the US lacks a federal carbon price, various states effectively implement carbon pricing strategies that include cap-and-trade systems and regulatory measures.[6]

Similar to energy intensity, regions with higher carbon intensity in their energy mix also tend to have higher per capita emissions [EIA (1). P. 5]. Notably, the states with the highest carbon intensity in their energy supply are West Virginia, Wyoming, Kentucky, Missouri, and Utah.[7] In these states, coal is the main source of emissions. In contrast, states with lower carbon intensity often have a significant contribution from non-carbon sources such as nuclear or hydroelectric power, including Vermont, South Dakota, Washington, and Oregon.[8]

Moreover, national investments in renewables and sustainable practices profoundly affect carbon emission reduction. X. Ren with co-authors [Ren et al. 2020] demonstrated that increasing investments in green credit, green securities, green insurance, and green investment, along with expanding RES, significantly reduce carbon emissions. Similarly, Raghutla et al. (2021) identified capital investment factors as critical in promoting the adoption of renewables, underscoring their pivotal role in mitigating carbon emissions [Raghutla et al. 2021].

As mentioned in the previous section, democrats tend to emphasize climate change mitigation, while Republicans focus on economic benefits, energy independence, and lower energy costs. However, whether these federal policy shifts are translated similarly at the state level remains a topic of considerable debate. To begin with, the installation of renewable energy capacity tends to increase more under Democratic governors

[6] Aldy, J.E., Burtraw, D., Fischer, C., Fowlie, M., Williams, R.C., Cropper, M.L., 2022. How is the US Pricing Carbon? How Could We Price Carbon? *Journal of Benefit-Cost Analysis*. 13(3): p. 1. Available at: https://scholar.harvard.edu/files/jaldy/files/aldy_et_al_jbca_2022.pdf

[7] U. S. Energy information Administration (EIA) Table 7. Carbon intensity of the economy by state, 2023. Available at: https://www.eia.gov/environment/emissions/state/

[8] Ibid.

compared to their Republican counterparts. However, the impact of party affiliation on renewable power generation and CO_2 emissions is not uniform across states and is significantly affected by the specific context in which governors operate.

The study by Paolo Bonnet and Alessandro Olper (2024) suggests that in states where the manufacturing industry is significant, Democratic governors do not differ from Republicans in renewable energy achievements, while Democratic state leaders are more successful in promoting renewables in states rich in those energy resources [Bonnet et al. 2024]. This indicates that robust economic incentives linked to energy-intensive industries can hinder the progress of renewable energy adoption, influencing the decisions of politicians who typically support green initiatives.

A notable example is the prominence of Republican-leaning states in wind power production. As of 2022, the top five states generating the largest share of wind power are all Republican: Iowa, South Dakota, Kansas, Oklahoma, and North Dakota. Yet blue states exhibit a stronger preference for solar power and lead in the adoption of solar photovoltaic technology, significantly contributing to national solar power output [Ritchie 2024].

While the adoption of renewables in red states is primarily driven by economic incentives rather than environmental concerns, this represents a significant shift. The financial benefits of renewable energy, especially wind energy in the "wind belt" states, provide substantial returns for landowners and stable income streams for communities. Red states have also shown flexibility in their regulatory frameworks and benefited greatly from federal incentives through recent legislative initiatives [Ritchie 2024].

Economic growth has been traditionally associated with increased energy consumption, which in turn leads to higher CO_2 emissions, particularly in states with energy-intensive industries. However, recent trends suggest that this relationship may be evolving, raising a question whether or not economic prosperity can be achieved with lower carbon outputs.

The economic contributions of the top five US states – California, Texas, New York, Florida, and Illinois – are significant, together accounting for approximately 41.5% of the nation's GDP. Each state's GDP is driven by its unique industry structure, reflecting the diverse economic landscape of the United States. The California's economic strength is primarily derived from its real estate sector, alongside the professional, scientific, and technical services industries, which are central to Silicon Valley's global tech dominance. Texas, the second-largest contributor, owes much of its economic output to the energy sector. The state's vast oil and gas reserves have historically been the backbone of its economy, but manufacturing and real estate also play substantial roles, reflecting a more diversified economic base than in previous decades. The New York economy is heavily influenced by the finance and insurance industries, while Florida benefits significantly from tourism and real estate.

In fact, New York, the state with the largest per capita GDP, has introduced an initiative to decarbonize, which is anchored in the 2019 Climate Act. This law outlines a comprehensive strategy for mitigating climate change, transitioning to a clean energy economy and addressing environmental justice issues. The primary objective is to reduce GHG emissions across all sectors of the state's economy, achieving a 40% reduction

by 2030 and an 85% reduction by 2050, based on 1990 levels, with a target of net-zero emissions by mid-century [New York State Climate Action Council 2022].

New York's proposed "cap-and-invest" program, a key component of its broader climate initiative, aims to place a statewide limit on greenhouse gas emissions, aligning with the reduction targets established by the Climate Act. Similar to cap-and-trade systems in other regions, such as California, the program will require fuel wholesalers and other high-emission entities to purchase a gradually decreasing number of allowances to emit carbon. The revenues generated through the sale of these emissions allowances, expected to total billions of dollars, will be directed towards funding clean energy incentives, grants, and other investments in green infrastructure [French 2022].

Figure 5 (p. 119) reveals distinct trends in economic disparities between different regions based on their population. Overall, western and northern states generally tend to enjoy higher economic prosperity compared to their southern and some eastern counterparts except states like New York and Massachusetts. California and New York, despite being the most populous states with over 39 million and 19 million residents respectively, showcased a high GDP per capita of $80,372 and $86,855. In contrast, Wyoming, with a population of only 580,000, had a GDP per capita of $63,721, primarily due to its energy production sector.[9]

States such as California, Texas, and Washington experienced some of the highest real GDP per capita growth from 2010 to 2021, with GDP per capita increases of 39%, 36% and 21% respectively. However, states with diversified economies like Colorado and Utah also performed well, with GDP per capita growth of 27% and 30% respectively. Conversely, certain states, particularly those heavily reliant on specific industries, experienced stagnation or even contraction in economic growth. Alaska and Wyoming witnessed a decline in GDP per capita by 8%, while Louisiana saw an even steeper drop of 9%, largely due to the inherent volatility of the oil and gas sectors.

At the same time, the majority of states showed notable reductions of per capita CO_2 emissions, while only a few experienced slight increases. Even states with historically high emissions, such as Wyoming and North Dakota, managed to lower their CO_2 output by 19% and 7% respectively. However, despite these reductions, they continue to rank among the highest emitters in the nation, highlighting both the progress and the persistent challenges faced by regions with entrenched carbon-intensive industries.

In contrast, states like Alaska and Idaho saw increases in per capita emissions, with Alaska rising by 1.7% and Idaho by 4.1%. Alaska's increase is linked to its reliance on energy-intensive industries, such as oil extraction, while Idaho's per capita emissions is unlikely to significantly impact the broader national emissions goals due to the minimum share of 0.4% of total emissions.

It is evident that states with larger economies, such as California, Texas, and New York, consistently exhibit the highest overall CO_2 emissions (see Figure 5 on p. 119). The

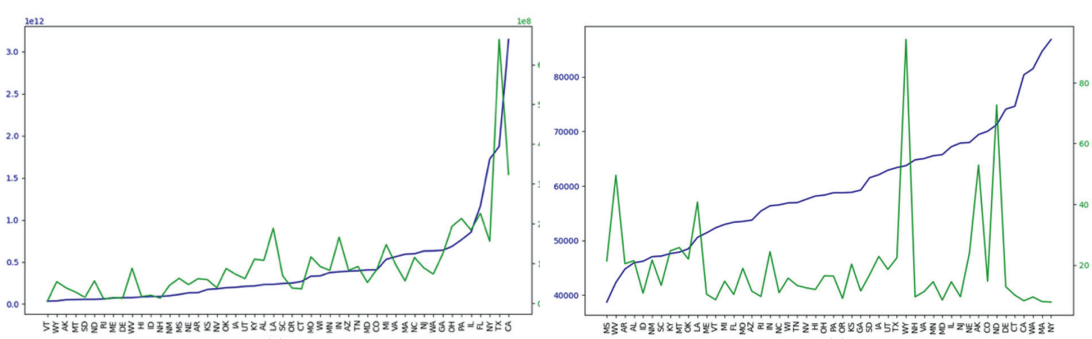
[9] Jansen, D.W., Sinha, S.G., 2024. *Top US States by Real GDP and Per Capita Real GDP*. Texas A&M University Private Enterprise Research Center. Available at: https://perc.tamu.edu/blog/2024/02/gdp-vs-per-capita-gdp.html

correlation between economic output and carbon emissions, approximately 0.75, suggests that states with greater economic productivity tend to generate higher levels of CO_2.

On a per capita basis, the nexus between economic prosperity and environmental impact becomes more complex as states with higher GDP per capita are not necessarily the ones with the highest CO_2 emissions per capita (correlation is -0.08). Economic growth does not always lead to higher emissions per person, as some states have managed to decouple economic prosperity from environmental impact, which could be due to cleaner energy sources, more efficient energy use, or stronger environmental regulations. On the other hand, some states with lower GDP per capita exhibit much higher CO_2 emissions per person, likely reflecting greater reliance on fossil fuels and less developed sustainable infrastructure.

In the graphs presented here, there are several notable aspects of Texas due to the imbalance between its high total economic output and its environmental impact. While Texas is the second state in terms of total GDP, its carbon emissions, both in total and on a per capita basis, are disproportionately high compared to other states with a similar economic output. This discrepancy points to the central role of energy and industrial production in the Texan economy and highlights the state's ongoing challenges in managing its environmental footprint. The future trajectory of Texas's economy and its approach to sustainability will likely depend on the state's ability to transition to cleaner energy sources while maintaining its economic growth.

Figure 5. Left to right real GDP increase and total CO_2 and left to right GDP per capita increase and CO_2 emissions per capita across US states, 2021



Source: Author's calculations based on EIA Population, GDP, and degree days, State Energy Data System (SEDS): 1960-2022 (complete), 2024 (https://www.eia.gov/state/seds/seds-data-complete.php?sid=US); EIA State energy-related carbon dioxide emissions by year, 2024 (https://www.eia.gov/environment/emissions/state/).

Sustainable prosperity requires economic growth that protects natural resources and ensures the well-being of future generations. Across the US, the pursuit of this balance has taken on increasing importance, as states strive to meet both national goals and international commitments, such as the United Nations' Sustainable Development Goals (SDGs), established in 2015.

The SDGs are 17 global objectives aimed at tackling poverty, inequality, climate change, and injustice, while promoting peace, prosperity, and sustainable growth [UN DESA]. Many US states are not on track to meet the SDGs by 2030, especially in areas like environmental protection, inequality, and public health. Key indicators – energy-related CO_2 emissions (Goal 13) and CO_2 intensity of electricity (Goal 7) – show slow progress toward the 1.7 tons per capita CO_2 target by 2050. Despite some advances, average state improvement is only 1.25 points per year, with minimal or no change in some cases, and Alaska has seen a decline in its SDG score since 2015 [Lynch et al. 2021. P. 7–8, 14, 17].

The correlation between a state's GDP per capita and its SDG index score also reveals a critical trend: states with higher GDP per capita often demonstrate stronger performance on the SDG index. This relationship suggests that wealthier states possess the resources and infrastructure necessary to advance sustainable development more effectively. However, economic growth alone is not enough to ensure sustainability; deliberate policies are required to balance prosperity with environmental stewardship and social equity.

Twenty-three states, along with the District of Columbia and Puerto Rico, have set targets to achieve 100% clean energy or carbon-free electricity by 2050. Together, these regions account for approximately 41% of the nation's total CO_2 emissions. However, the varying timelines and energy mixes proposed by each state, coupled with the existing reliance on fossil fuels, suggest that achieving these goals within the proposed timeframes, as presented in Table 2 (p. 121), is unlikely.

The table shows a general trend where states with higher SDG scores, indicating a stronger commitment to sustainable development, tend to have lower per capita CO_2 emissions. States from Massachusetts to Colorado, all with SDG scores above 53, have some of the lowest emissions, averaging at 10.3 metric tons per capita. In contrast, states with lower SDG scores, from New Jersey to Louisiana, exhibit notably higher emissions with an average of 16.5 metric tons. For example, Louisiana, with an SDG score of 31.2, has the highest per capita CO_2 emissions at 40.8 tons, reflecting its heavy reliance on fossil fuel industries. The largest discrepancy between SDG score and per capita emissions is observed in Nebraska, which has a moderately ambitious emissions target but one of the highest per capita emissions due to its agricultural sector and fossil fuel combustion. Similarly, Colorado and Minnesota show a significant gap between their mid-level SDG scores and higher emissions because of the transportation and electric power sector.

Projections by EIA suggest that to meet even 45% of energy demand, renewable energy production would need to triple, underscoring the scale of transformation needed. Challenges include inconsistent policies, governance issues, and a lack of stakeholder engagement, making decarbonization goals difficult to achieve within set timelines [Cefaratti-Bertin 2024]. Furthermore, research by Garrett and McManaway indicates that, even under the best-case scenario, cities will cover only 35–65% of energy needs from renewables over the next 20–30 years, highlighting the need for substantial investment in grid management and energy storage infrastructure [Cefaratti-Bertin 2024].

Table 2. Clean Energy Goals of the states, SDG score and per capita CO_2 emissions, 2021

State	The Goal	SDG score	Per capita CO_2 emissions
Massachusetts	Net-zero GHG emissions by 2050	58.8	8.0
Washington	100% zero-emissions electricity by 2045	58.2	9.5
Minnesota	100% carbon-free electricity by 2040	57.1	14.6
Maine	100% clean energy by 2050	56.2	10.5
Oregon	GHG emissions reduced 100% below baseline emissions by 2040	55.5	9.1
Hawaii	100% renewable energy by 2045 through the RPS	54.5	12.0
Maryland	Net-zero GHG emissions by 2045	54.3	8.5
California	100% carbon-free electricity by 2045	54.1	8.3
New York	100% carbon-free electricity by 2040	53.9	7.9
Connecticut	100% carbon-free electricity by 2040	53.8	10.1
Colorado	100% carbon-free electricity by 2050 for Xcel Energy	53.6	14.7
New Jersey	100% carbon-free electricity by 2035	52.4	9.6
Rhode Island	100% renewable energy electricity by 2033	52.3	9.7
Wisconsin	100% carbon-free electricity by 2050	51.2	15.7
Delaware	100% reduction in GHG emissions	48.4	12.9
Michigan	100% carbon-free electricity by 2040	48.3	14.7
Virginia	100% carbon-free electricity by 2045 for Dominion Energy and 2050 for Appalachian Power Company	48.2	11.3
Nebraska	Net-zero carbon emissions from generation resources by 2040-2050	47.4	24.0
Illinois	100% clean energy by 2050	46.2	14.5
Nevada	100% carbon-free electricity by 2050	44.7	12.5
North Carolina	Carbon neutrality in the electricity sector by 2050	40.4	10.9
New Mexico	100% carbon-free electricity by 2045	37.7	21.7
Louisiana	Net zero GHG emissions by 2050	31.2	40.8

Source: Author's calculations based on the Clean Energy States Alliance Table of 100% Clean Energy States (https://www.cesa.org/projects/100-clean-energy-collaborative/guide/table-of-100-clean-energy-states/); Lynch, A., Sachs, J., 2021. The United States Sustainable Development Report 2021. New York: SDSN, p. 9 (https://s3.amazonaws.com/sustainabledevelopment.report/2021/United+States+Sustainable+Development+Report+2021.pdf); EIA, Energy-Related CO_2 Emission Data Tables, Summary tables, Table 4. Per capita energy-related carbon dioxide emissions by state, 2024 (https://www.eia.gov/environment/emissions/state/).

Overall, the diversity in economic structures and energy profiles among US states underscores the need for tailored approaches to decarbonization, especially in energy-intensive states like Texas and Louisiana. States with more diversified economies, such as California and New York, have shown that economic prosperity and environmental sustainability are not mutually exclusive, leveraging advanced technology and cleaner energy systems to achieve growth while mitigating emissions. As the US aims for

ambitious national decarbonization goals, the paths taken by individual states will play a crucial role in determining the success of balancing economic development with the reduction of CO_2 emissions.

2.2. Sustainability prospects through the lens of party affiliation at the state level

As discussed earlier, the implementation of federal climate policies in the United States is not always influenced by the party in power. However, the direct link between a state's political ideology and emission levels as well as economic growth remains uncertain. We conducted a quantitative analysis using the ANOVA method to explore the relationship between political party affiliation (Democratic, Divided, Republican) [National Conference of State Legislatures 2023] and CO_2 growth from 2010 to 2021,[10] GDP growth from 2010 to 2021 [EIA (5)], per capita CO_2 emissions[11] and SDG score [Lynch et al. 2021].

To begin with, the data was normalized to ensure consistency across the different variables. Each political party was then assigned a numerical code for analysis purposes: the Democratic party was coded as 1, states with divided governance as 2, and the Republican party as 3. More detailed ANOVA results are presented in Appendix 1.

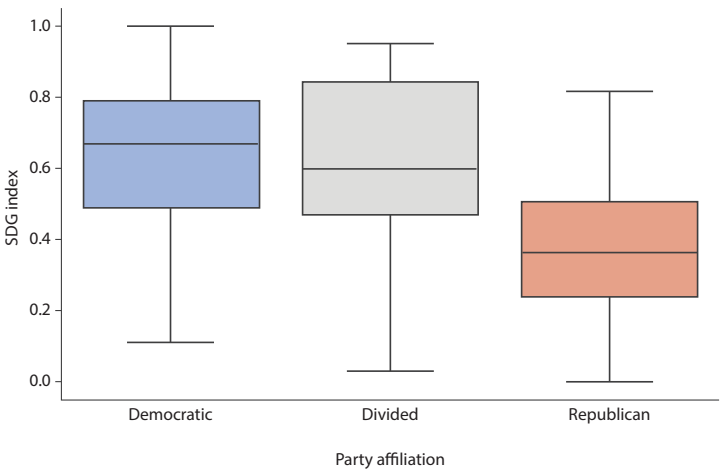
The main objective of the analysis was to test several hypotheses. The first hypothesis examined whether there were any statistically significant differences in CO_2 growth between the political parties. The findings showed no significant differences (p-value 0.8), indicating that party affiliation did not appear to influence CO_2 growth. This result implies that a state's industrial composition, reliance on certain energy sources, and historical emissions levels may have a stronger role than party control in determining emissions growth. The second hypothesis considered GDP growth among different parties; similarly, no significant differences were found. This suggests that political party affiliation operates independently and has no substantial effect on GDP growth rates.

In contrast, the analysis of the SDG index reveals more profound results. The hypothesis that the average SDG index is the same across all political parties is rejected, with the ANOVA showing significant differences between the parties (p-value of 0.0005), which was confirmed by Turkey's test (Appendix 2). Specifically, the Democratic and Divided states showed no significant differences in their SDG indices, suggesting that their performance on sustainable development goals is similar. However, as presented in Figure 6 (p. 123), the analysis revealed significant differences between Democratic and Republican states, as well as between Divided and Republican states, with republican-controlled states having lower SDG index values and indicating a poorer performance in terms of sustainable development.

[10] EIA, State energy-related carbon dioxide emissions by year, 2024. Available at: https://www.eia.gov/environment/emissions/state/

[11] EIA, State energy-related carbon dioxide emissions by year, 2024. Available at: https://www.eia.gov/environment/emissions/state/

Figure 6. SDG index distribution by political parties (Democratic, Divided, Republican)



Source: Author's calculations.

The findings from our analysis align with the previous discussion, reinforcing the conclusion that political party affiliation has a minimal impact on climate mitigation. Divided states, where political power is shared between Democratic and Republican parties, tend to have SDG index scores similar to the states controlled by Democrats. This means that broader structural and economic factors, rather than party affiliation alone, influence a state's progress towards sustainable development. Understanding this can foster collaborative efforts to achieve climate targets, focusing on common goals rather than divisive partisan divides. Research by R. Gurney with co-authors [Gurney et al. 2021] also suggests that state political affiliation had no significant impact on local climate adaptation efforts in any instance, underscoring the importance of the distinct political dynamics within individual cities and their economic conditions.

In conclusion, emissions and decarbonization policies are a reflection of the cumulative and complex nature of the US states' economies. While federal efforts provide a framework, it is the states themselves that play a crucial role in shaping their environmental destinies through factors such as geography, politics, and economic interests. States that have already embarked on the path of decarbonization serve as precedents for others, demonstrating how regional economies can take the lead in addressing global environmental challenges, even when federal policies may be slower to evolve. Their progress not only provides a model for other states, but also highlights the potential for decentralized climate action to have a wider national, and even global, impact.

Discussion and conclusion

While national policy and global trends set the overall direction, the specifics of the energy shift are greatly influenced by local geographic, economic, cultural, and technological conditions. In each region, these conditions combine in specific ways to create distinct paths toward a more sustainable energy future: from the resource-rich heartlands of Texas to the technological hubs of California – the United States

encompasses a remarkable diversity of energy assets and cultural dynamics that influence the trajectory of decarbonization. The diversity in state-level responses to climate change reflects the complexities of balancing economic growth, energy independence, and environmental sustainability.

The results of modeling found no statistically significant differences in CO_2 growth or GDP growth based on party affiliation, confirming that state-level greenhouse gas emissions patterns are largely shaped by the cumulative effects of long-term economic and energy trends rather than by political party affiliation or short-term policy changes. The overall analysis shows that structural economic factors, local industry composition, and regional energy resources play a more significant role in determining emissions outcomes than the political landscape. This suggests that while political decisions can influence the pace of policy implementation, they do not fundamentally alter the underlying trajectory of state-level decarbonization efforts.

Therefore, it is the states themselves, with their distinct regional characteristics, that shape the progress of energy transformation and determine whether it will take place in the country at all. Geography mostly dictates the availability and potential of different RES, guiding the states in terms of which sources they can rely on. The socioeconomic characteristics of each region also have a profound impact. In regions historically reliant on fossil fuel industries, there is often resistance to change due to economic dependency and cultural identity. This resistance can slow or even obstruct the adoption of RES, highlighting how economic interests and historical legacies can impede transformation. In contrast, regions with strong tech industries and innovation hubs, such as California, benefit from a culture of innovation that drives investment in renewable technologies, energy storage, and EVs. On the contrary, the agricultural midwest, with its vast corn and soybean fields, has embraced biofuels in addition to wind energy.

In the near term, there is a significant opportunity to accelerate the adoption of energy efficiency technologies, provided that institutional challenges are addressed. These energy efficiency measures are already cost-effective, relatively easy to implement, and do not require significant technical advancements. Focusing on the electric power and transportation sectors is particularly promising, as it offers more potential to save considerably more energy and reduce GHG emissions than implementing end-use technologies in buildings and vehicles.

Our research also suggests that the instability of federal climate policy, caused by changes in the governing party, complicates the development of consistent national strategies. For example, under the Trump administration, many climate policies implemented during the Obama administration were reversed, and support for the fossil fuel industry was increased. This lack of consistency makes it difficult to establish a stable national approach to addressing climate change.

However, another important aspect that remains to be explored is the interaction between states. Although investments in decarbonization are growing, driven by legislation such as the Inflation Reduction Act, the balance between state competition for economic growth and the need for regional cooperation has not been fully investigated. Future research could examine whether states see decarbonization as a zero-sum game, or if they recognize the potential for greater achievement through collaboration.

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Appendix

Appendix 1. ANOVA results

```
ANOVA results for CO2_growth:
                       sum_sq    df        F    PR(>F)
C(Party_affiliation)  0.028037   2.0  0.28004  0.757005
Residual              2.352756  47.0      NaN       NaN


ANOVA results for GDP_growth:
                       sum_sq    df         F    PR(>F)
C(Party_affiliation)  0.012115   2.0  0.139245  0.870372
Residual              2.044561  47.0       NaN       NaN


ANOVA results for CO2_2021_per_capita:
                       sum_sq    df         F    PR(>F)
C(Party_affiliation)  0.178017   2.0  2.644977  0.081559
Residual              1.581638  47.0       NaN       NaN


ANOVA results for SDG_index:
                       sum_sq    df         F    PR(>F)
C(Party_affiliation)  0.719090   2.0  5.868068  0.005309
Residual              2.879757  47.0       NaN       NaN
```

Source: Author's calculations.

Appendix 2. Turkey's test

```
Multiple Comparison of Means - Tukey HSD, FWER=0.05
===================================================
group1 group2 meandiff p-adj   lower   upper  reject
---------------------------------------------------
     1      2  -0.0105 0.9934 -0.2412  0.2203  False
     1      3  -0.2455 0.0143 -0.4486 -0.0425   True
     2      3  -0.2351 0.0233 -0.4429 -0.0272   True
---------------------------------------------------
```

Source: Author's calculations.

Overview of the Seminar "Fundamental Socio-Economic and Demographic Shifts in the United States: Effects for Policy"

On May 31, 2024, the Faculty of World Economy and International Affairs of the HSE University held a scientific seminar "Fundamental Socio-Economic and Demographic Shifts in the United States: Effects for Policy." The speakers of the seminar were Igor Istomin, acting head of the Department of Applied International Political Analysis, MGIMO University, Konstantin Sukhoverkhov, RIAC program manager, and Vasil Sakaev, associate professor, Russian State Agrarian University – Moscow Timiryazev Agricultural Academy. The seminar was moderated by Dmitry Suslov, deputy director of the Centre for Comprehensive European and International Studies of the HSE University. The experts discussed the acute internal political crisis in the United States, the growth of inequality and stagnation of middle class incomes in the country, the impact of demographic and socio-economic factors on US politics and a number of other issues.

* * *

Dmitry Suslov, opening the seminar, noted that since the 1960s, the United States has been facing a serious domestic political crisis. Polarization between conservatives and liberals, as well as Republicans and Democrats, is increasing due to demographic and socio-economic changes. The racial composition is changing. The US is shifting towards a non-white majority, and the traditional American dream is weakening as inequality rises and the middle class stagnates. This has led to a desire for fundamental change, even among young people, who prefer Trump to Biden because they see him as a chance for more radical change. The moderator noted that the status quo does not suit a growing part of American society, and this cannot but affect the domestic and foreign policy of the United States, and then invited the speakers to the discussion.

The first speaker, **Igor Istomin**, noted the relevance of the topic under discussion, emphasizing that it is important not to underestimate the United States as an adversary, despite its domestic problems. The American political system is built on polarization, but this is its peculiarity rather than its weakness. The US remains an influential power with a strong demographic potential, which is quite high due to migration and natural population growth. Political polarization is expressed not only in ideological differences, but also in the "affective divide," where dislike for opponents is more important than for their ideas. An important factor in the increased competition between Republicans and Democrats is the growing participation of Latin Americans in politics. All these processes, however, do not weaken the US so much as to consider its internal problems as factors significantly weakening the US role in the world. In the speaker's opinion, the US

foreign policy strategy is aimed at shifting the burden on European allies and increasing their dependence on the United States.

Istomin's speech was followed by a discussion, during which Suslov noted that the US is going through a crisis and transformation, but this will not lead to its collapse or weakening. Polarization in the country is significant but manageable, and support for key foreign policy directions remains. US allies, despite their discontent, are forced to support US initiatives, which is especially noticeable in the issues of assistance to Ukraine and countering China. Istomin added to Suslov's opinion that the consolidation of allies around the US continues despite difficult conditions. The US flexibly uses international structures, creating coalitions for specific tasks. An important part of the US strategy remains concern about the US reputation and containment of China in Taiwan and Asia in general through support for Ukraine. Both experts agree that polarization, social inequality, and global economic challenges are significant but will not lead to system collapse. The US continues to adapt, maintaining leadership through flexibility and consolidation of allies.

Konstantin Sukhoverkhov's report was entitled "Dissatisfaction of the US population with the socio-economic situation in the country and its impact on Washington's foreign policy." Based on statistical data, the expert analyzed the changes in public opinion regarding the US foreign and domestic policy since 2008. During the administration of George W. Bush Jr. active foreign policy remained popular amid the memory of the September 11 terrorist attacks and military operations. Toward the end of his term, however, approval declined due to the unpopular war in Iraq and the financial crisis. Dissatisfaction with foreign policy increased under the Obama administration. Polls showed that Americans wanted more attention to domestic issues. The trend of declining support for a proactive foreign policy increased with each election. The number of Democratic voters calling themselves liberals increased, while the right-wing, including the Tea Party movement, increased criticism over reform and migration. By 2016, society had become more polarized. Republicans and Democrats had different views of how the country had changed over the past 50 years, with Republicans believing that life had gotten worse. The issues of migration and economic stability were key for Republicans, while Democrats emphasized multiculturalism and social movements such as Black Lives Matter (BLM) and MeToo. Sukhoverkhov concluded his presentation by emphasizing that the American population is increasingly tired of spending on foreign policy, turning its focus to domestic issues. The US political and academic community is now rethinking the country's role in the world, and even among Democrats there is a growing opinion that maintaining US global dominance at any cost is not a priority.

The experts' discussion after the second presentation revolved around the issue of reindustrialization in the United States as a means of combating socio-economic polarization and inequality. Suslov mentioned that both Democrats and Republicans support reindustrialization through policies aimed at restoring the country's production potential, with the growth of the military-industrial sector being an important tool. Sukhoverkhov opined that reindustrialization is definitely happening, but in specific areas such as microchip manufacturing and high technology. These industries will not

create many jobs and will not affect inequality. The shrinking middle class is mainly due to global economic factors. The speaker emphasized that protectionism is necessary to preserve the US economy, citing the example of the Japanese auto industry that crushed the US and European auto industry in the 1970s, and questioned whether the growth of the military-industrial sector is a panacea.

The final report of the seminar was presented by **Vasil Sakaev** and was devoted to the influence of demographic processes on political events and polarization in the United States. The expert noted that demographic changes have a long-term effect on political processes, although current polarization is supported by various social and political events, such as the BLM movement and the storming of the Capitol. The report focuses on data from the 24th US Census (2020), which reveals key trends: increasing racial and ethnic diversity, a shrinking white population, and an aging society. It is noted that the growing number of retirees and demographic pressures will require significant social and economic reforms. The young population is predominantly represented by minorities, but migration does not compensate for the aging process. In addition, the rapporteur noted the growth of multiracial categories and minority representatives in the census, which reflects new social trends and cultural preferences.

Sakaev presented a quantitative forecast of changes in the composition of the US electorate. The share of Whites without higher education, which is now 46% of the total number of voters, will decrease to 37% by 2036. This group, which tends to support Republicans and often ignores elections, plays an important role if it mobilizes. At the same time, the share of Hispanics and Latinos is growing and could account for as much as 20% of the electorate by 2036, although their influence is now limited to concentrations in certain states. The share of voters over age 65 is also expected to grow and the number of young people is expected to decline. Whites remain the largest but heterogeneous group, and their influence will diminish by 2036. African Americans make up about 13% of voters and traditionally support Democrats, but support for Republicans is growing among young people. Hispanic voters are ethnically diverse and their preferences are also changing, with support for Republicans increasing among them. Younger people (Millennials and Zoomers) support Democrats more than previous generations, but the question remains whether they will retain their views as they age. Overall, Republicans are looking to retain support of Whites, but need to attract minorities and a third force. Democrats need to strengthen their position among ethnic minorities and educated white youth, but risk losing support from other groups. The paradox, according to the speaker, is that under the influence of demographic trends, Republicans will need to formulate social demands, while Democrats will need to lean toward a conservative agenda, which contradicts their traditional ideologies.

Based on the results of Sakaev's presentation, the seminar participants discussed several issues. First, whether the two-party balance in the US will be maintained despite the changes, or whether the system may disintegrate and a third force may emerge. Second, whether the geographic distribution of parties will change, given the growing number of Hispanic voters in the South. Also raised was the issue of Californians migrating to Texas: whether they retain Democratic views or switch to

the Republican side. Sakaev noted that no party will have a guaranteed victory;[1] the balance is delicate. Demographic trends may strengthen the Democrats' position, but there are factors that make predictions difficult, such as the rise in support for Republicans among Hispanics and Blacks. The emergence of a third force is possible, but historically such parties are short-lived in the United States. A change in electoral geography is inevitable: southern states may become more pro-Democratic, and cities will play a key role in this.

The following AI technologies were used in the preparation of this material: ChatGPT, NeuralWriter, YandexGPT.

[1] The event took place before the presidential election. – *Editor's note.*

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