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COMPARING LIVING AND WORKING CONDITIONS – GERMANY OUTPERFORMS THE UNITED STATES

Jan Priewe¹,

ABSTRACT

This paper compares living and working conditions in the U.S. and Germany for the year 2022 with a focus on economic, social and environmental standards. Twelve dimensions of comparison are used, split into 15 themes, which are examined with 80 indicators. Subjective indicators based on polls or surveys, such as happiness or quality of life in general, are explicitly avoided. A special emphasis is placed on median values instead of mean values if data allow. Emphasis is also placed on income and wealth inequality. The methodology, which focuses on only two countries in a granular approach, provides much more detailed information than methodologies used in other studies. This paper is, to the knowledge of the author, the only comprehensive comparison of living conditions in the U.S. and Germany. The result of the comparison shows that Germany scores 23 and the U.S. only 6. The framing of the comparison is the analysis of two different types of capitalism. It underlines the limited role of GDP per capita for the living conditions of the majority of the population while highlighting the impact of institutions and the type of the welfare state.

¹ Professor em. from the Hochschule für Technik und Wirtschaft Berlin - University of Applied Sciences, Fellow at the Forum for Macroeconomics and Macroeconomic Policies (FMM) at the Hans Böckler Foundation, and Fellow at the IPE (Institute for International Political Economy at the Berlin School of Economics and Law), email: jan.priewe@posteo.de.

Comparing living and working conditions – Germany outperforms the United States

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Jan Priewe, Professor em. from the Hochschule für Technik und Wirtschaft Berlin - University of Applied Sciences, Fellow at the Forum for Macroeconomics and Macroeconomic Policies (FMM) at the Hans Böckler Foundation, and Fellow at the IPE (Institute for International Political Economy at the Berlin School of Economics and Law)¹

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Abstract:

This paper compares living and working conditions in the U.S. and Germany for the year 2022 with a focus on economic, social and environmental standards. Twelve dimensions of comparison are used, split into 15 themes, which are examined with 80 indicators. Subjective indicators based on polls or surveys, such as happiness or quality of life in general, are explicitly avoided. A special emphasis is placed on median values instead of mean values if data allow. Emphasis is also placed on income and wealth inequality. The methodology, which focuses on only two countries in a granular approach, provides much more detailed information than methodologies used in other studies. This paper is, to the knowledge of the author, the only comprehensive comparison of living conditions in the U.S. and Germany.

The result of the comparison shows that Germany is superior in ten thematic areas out of 15, while the U.S. is superior in four (one is on par). If the 15 measures are supplemented with the strength of superiority in each with only three grades (small, large, very large), Germany scores 23 and the U.S. scores 6. The dimensions are not weighted. Germany's "very strong" relative advantage exists in five areas: the environment, work-life balance, health, security and gender. The U.S. has "strong" superiority in household incomes and consumption per capita. The comparison holds true for the year 2022 despite the fact that Germany's welfare state is fragile and has deteriorated in many dimensions in recent years.

The framing of the comparison is the analysis of two different types of capitalism, beyond a purely quantitative analysis. It underlines the limited role of GDP and its growth for the living conditions of the majority of the population while highlighting the impact of institutions and the type of welfare state. Yet, GDP is not irrelevant. The U.S. is classified as a system with distinct pro-rich growth and a high level of income and wealth inequality, while Germany is classified as a system with moderate pro-rich growth with a much lower level of inequality after redistribution.

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Zusammenfassung:

Diese Studie vergleicht die Lebens- und Arbeitsbedingungen in den USA und Deutschland im Jahr 2022 mit dem Fokus auf ökonomische, soziale und ökologische Standards. Es werden 12 Dimensionen behandelt, aus denen sich 15 Themenbereiche ergeben, die anhand von insgesamt 80 Indikatoren untersucht werden. Subjektive Wahrnehmungen von Wohlfahrt oder Glück werden explizit nicht untersucht, die jedoch in anderen Studien aus Befragungen über Glück oder Lebensqualität im Allgemeinen abgeleitet wurden. Besondere Beachtung finden Medianwerte anstelle von Durchschnittswerten, soweit hierzu statistische Daten vorliegen, sowie die Einkommens- und Vermögensungleichheit. Die verwendete Methodik weicht von anderen Untersuchungen ab, indem nur zwei Länder mit einer größeren Zahl an Indikatoren untersucht werden, um die Besonderheiten der Länder besser zu erfassen. Die Studie ist nach Kenntnis des Autors die Einzige, die in einem breiten, aber fokussierten Themenspektrum die Lebensbedingungen in beiden Ländern untersucht.

Im Ergebnis zeigt sich, dass Deutschland in zehn von 15 Themenbereichen bessere Bedingungen aufweist, die USA in vier. In einem Bereich sind sie gleichwertig. Vertieft man die ordinalen Bewertungen (nur „besser“ oder „schlechter“), mit drei Stufen des Vorsprungs (klein, stark, sehr stark), ergibt sich eine Punktbewertung für Deutschland von 23 zu sechs. Die Dimensionen und Themenbereiche werden nicht gewichtet. Es wird vermieden, eine einzige eindimensionale Bewertungszahl wie etwa beim Bruttoinlandsprodukt je Einwohner zu bilden. Der Vergleich für das Jahr 2022 gilt trotz der Tatsache, dass Deutschlands Sozialstaat an vielen Stellen brüchig geworden ist und sich in den letzten Jahren die Schwächen eher vergrößert haben.

Der Ländervergleich ist Teil einer Analyse von zwei unterschieden Spielarten des Kapitalismus. Er zeigt, dass das Bruttoinlandsprodukt und das Wirtschaftswachstum eine viel geringere, wenngleich nicht irrelevanten Rolle spielen. Institutionelle Unterschiede und die Ausformung des Sozialstaates sind wichtiger. Was das Wirtschaftswachstum betrifft, wird letzteres für die USA als ausgeprägt *pro-rich growth* auf hohem Niveau der Ungleichheit klassifiziert, während Deutschlands Position ebenfalls *pro-rich growth* ist, jedoch moderater ausfällt und auf einem deutlich niedrigeren Niveau der Ungleichheit nach Umverteilung stattfindet.

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Abbreviations

AMECO	Annual Macroeconomic Data of the European Commission
BLS	U.S. Bureau of Labor Statistics
CEA	Council of Economic Advisers
Destatis	Statistisches Bundesamt (Federal Statistical Office of Germany)
FMLA	Family and Medical Leave Act
FRED	Federal Reserve Economic Data
GDP	Gross Domestic Product
GNI	Gross National Income
GPI	Genuine Progress Indicator
HDI	Human Development Index
IAB	Institut für Arbeitsmarkt- und Berufsforschung
ILO	International Labor Organization
ISEW	Index of Sustainable Economic Welfare
NWI	National Welfare Index
OECD	Organization for Economic Cooperation and Development
OWID	Our World in Data
pp	percentage points
p.c.	per capita
PPP	Purchasing Power Parity
SIGI	Social Institutions and Gender Index
UCIG	Uniform Consumer Information Guide
UNDP	United Nations Development Programme
UNODC	United Nations Office of Drugs and Crimes
WDI	World Development Indicators
WHO	World Health Organization

Comparing living and working conditions - Germany outperforms the USA

1. A novel approach

There are many data on living standards and multi-country comparisons, most prominently the OECD “Better Life Index” (OECD 2023), among various other popular comparisons of key data. We have found – surprisingly – no comprehensive analysis of living and working conditions in the U.S. and Germany. Here we follow a new approach for comparison: we focus on only two countries and use not only more indicators but also more granular ones which enables an in-depth analysis; we focus as much as possible on median data rather than averages, hence putting ordinary people in the limelight instead of fictitious mean values which apply to nobody; and we avoid substituting GDP with a single overarching measure that attempts to synthesise many dimensions. In this way, we follow many recommendations of the Stiglitz Commission (Stiglitz, Sen, Fitoussi 2010, in the following Stiglitz et al. 2010) which can be summarised as “going beyond GDP” when measuring the quality of life. We leave out any subjective evaluation based on polls and surveys as in the “Better Life Index” or the “World Happiness Report”.

It is not an easy undertaking to go beyond GDP, as recommended by the Stiglitz Report. Since GDP per capita in the U.S. is 57.7% above the German value, measured in current US\$ (2022), which seems at first glance like an obvious and massive advantage, and 21% in terms of purchasing power parity dollars (see WDI); we devote much space to analysing this issue regarding incomes and other related dimensions in greater detail. Overall, we look at 80 indicators of which 25 are related to incomes, poverty and income distribution.

We distinguish the following twelve dimensions (eventually split into 15 values), use several indicators for each of them and report the scores on happiness from two other analyses as an add-on:

- GDP per capita and wages
- Household incomes
- Personal consumption
- Wealth
- Health
- Environment
- Security
- Housing
- Education and Research
- Gender
- Social provisioning
- Distribution of income and wealth

To mention some key findings upfront: Germany outperforms the U.S. in the majority of dimensions, in some strongly and in others only slightly, while in some dimensions the U.S. is

ahead, or both countries are on equal footing. Germany's advantage is not weak, but surprisingly strong. Our focus is on a static analysis of the year 2022, only including adjacent years when necessary due to a lack of data for 2022. With few exceptions, we don't look at historical data. Yet, we are interested in exploring why a country with much higher GDP per capita does not fare better than one with lower GDP. We find that the level of GDP is much less important for living conditions than one might think at first glance. Of course, this does not mean that GDP and National Accounting are irrelevant or unnecessary.

The analysis not only sheds light on the comparison of the two countries but also helps clarify what the standard of living is and how it should (not) be measured. Furthermore, it contributes to a better understanding of both types of capitalism – including a European welfare state, neither avant-garde nor bottom of the league – by contrasting them. The U.S. represents a brand of liberal capitalism, following the classification from Esping-Anderson (1990), with a welfare system that gives minimal means-tested assistance to the people in need. Germany represents a moderate type of the social democratic welfare state characterised by a universal system of de-commodified social welfare and many public goods. The liberal capitalism of the U.S. is stabilised with a much more active monetary and fiscal policy, while Germany's macroeconomic policy is hardly existing, besides in heavy crises, and monetary policy had been de-nationalised since the advent of the Euro.

We refrain from a dynamic analysis of both capitalisms and don't attempt to offer a complete list of dimensions. Subjective valuations via interviews and polls are avoided except when happiness surveys are reported. They make little sense for country comparisons if familiarity with the home country is predominant and living conditions in the other country are not well-known or filtered by hearsay in which case people may not be aware of massive (dis)advantages relative to the other country.

In order to define and quantify living conditions we need to answer the question: *whose* living conditions? There is no representative average or representative citizen. We opt for the *majority of society* with a focus on the less affluent half but have also an eye on the whole of society. Therefore, we define living conditions as social, economic and environmental conditions in a country that are representative at best for the majority of the population. The majority of the population, defined in this way, includes all citizens below the median and possibly also a significant portion of the middle class above the median.² Not all living conditions can be heeded, so we focus on the dimensions mentioned above. This implies that simple averages can deliver distorted pictures if they differ strongly from median values. Yet, for many dimensions, there are only average data available or median data are not sensible. Whether living conditions are *perceived* as good or bad is important for polls and policymakers, but we refrain from subjective individual views and are cautious about using our own judgement.

This methodology has three important implications: first, as found by many analysts, income and wealth distribution plays a key role since it has a strong impact on many aspects of living conditions (see Wilkinson/Pickett 2010, OECD 2015). Distribution is a catalyst for the misery and prosperity of a large share of the population. Since living conditions differ strongly across people and regions, looking at differences and inequality is a necessary precondition. Second, working conditions and particularly working time, hence the availability of leisure time, is an important ingredient of prosperity. Looking only at output, hence GDP, excludes per se welfare

² It goes without saying that our results change fundamentally and even turn upside down if the upper majority of the population were to be used as a benchmark.

by leisure. Incomes and GDP or Gross National Income (GNI) need to be relativised; working time adjusted income is the proper standard, not income as such. Third, environmental and social externalities of production and consumption have a strong bearing on living conditions, especially in times when natural resources are grossly over-used and have become scarce. This is also relevant for the social sphere, for example, in regard to crime and health. In this analysis, we do not intend to look at everything that is connected to living conditions. We avoid the terms quality of life, wellbeing, happiness or life satisfaction.

In the remainder of this paper, in the second section, we start with the key general features of the two economies and societies. In the main section (third), we disentangle the data on income and wealth in order to assess the seemingly strong disparities and then rush through the other dimensions. Finally, in the fourth and last section, the dimensions are plugged into the overall picture with an analysis of the specific features of the two capitalisms. Aggregation of all indicators to one grand indicator is not our goal although we sum up rough valuations with only three grades for each dimension. We dethrone GDP and GDP per capita as the decisive determinants of living conditions, as these are erstwhile and utility-oriented substitutes in the utilitarian tradition of economics, although not meaningless, and point to the role of institutions as well as income and wealth distribution.

2. A few general features of the U.S. and German economies

The conventional indicator to compare the standard of living between countries is GDP p.c., a measure of output.³ The U.S. GDP p.c. in US\$ stood almost 58% above Germany's in 2022 (table 1, line 1), using the current exchange rate. When GDP is counted in Purchasing Power Parity (PPP) exchange rates rather than the current exchange rate, the U.S. performs only 23% better than Germany (table 1, line 3). However, this disregards differences in annual working time.

In the period since the new millennium, the GDP growth trend between the two countries has differed markedly (1.9 versus 1.1, see table 1, line 4). However, in terms of GDP per capita in PPP, growth rates differ by only 0.2 percentage points (pp)(table 1, line 5). Since 2000, American per capita incomes have grown at a level which is on average 21% above the German level (that means Germany is 17.4% below the U.S.), with strong fluctuations (Figure 1). This U.S. advance occurs despite Germany's chronic trade surplus and the chronic U.S. trade deficit. Part of the fluctuation in Figure 1 is due to the appreciation of the Euro (until 2008) and the subsequent devaluation and stabilisation. The higher U.S. level must be understood in this context.

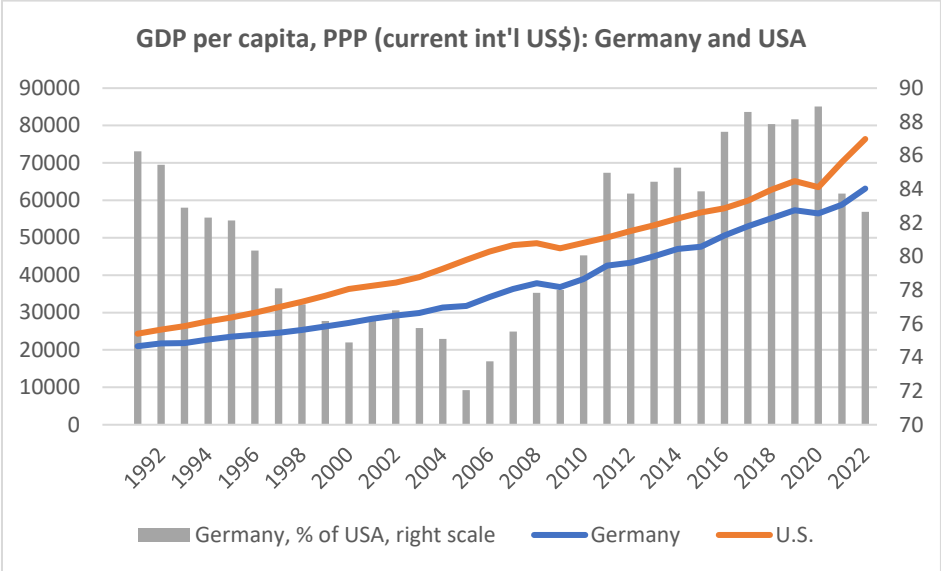
GNI p.c., which includes – in contrast to the GDP – net incomes from abroad, is higher than GDP p.c. in both countries, but the difference is more significant in Germany (table 1, line 2).⁴ In terms of domestic income distribution, *Net National Income* is relevant for comparing incomes; it is calculated by deducting depreciation on fixed capital from GNI. Depreciation is 20.5% of GDP in Germany and only 16.8% in the U.S. (see AMECO, OECD.Stat and WDI), hence 3.7 pp lower in the U.S. The share of fixed investment in GDP is almost the same (in

³ The population figures used here are from the World Bank (WDI) and assess the estimated number of residents as of midyear 2022 (84.080 million for DE and 333.288 million for the U.S.).

⁴ GNI of the U.S. in 2022 was 1.5 pp higher than GDP, while GNI in Germany in 2022 was 3.3 pp higher (hence 1.8 pp for Germany in relative terms), with the wedge between GDP and GNI increasing since the early 2000s.

2022) in both countries. In other words, using Net National Income p.c. rather than GDP or GNI p.c. gives the U.S. an advantage of 1.9 pp against Germany (-1.8 pp for the GNI-GDP gap and +3.7 pp for the depreciation gap).

Figure 1

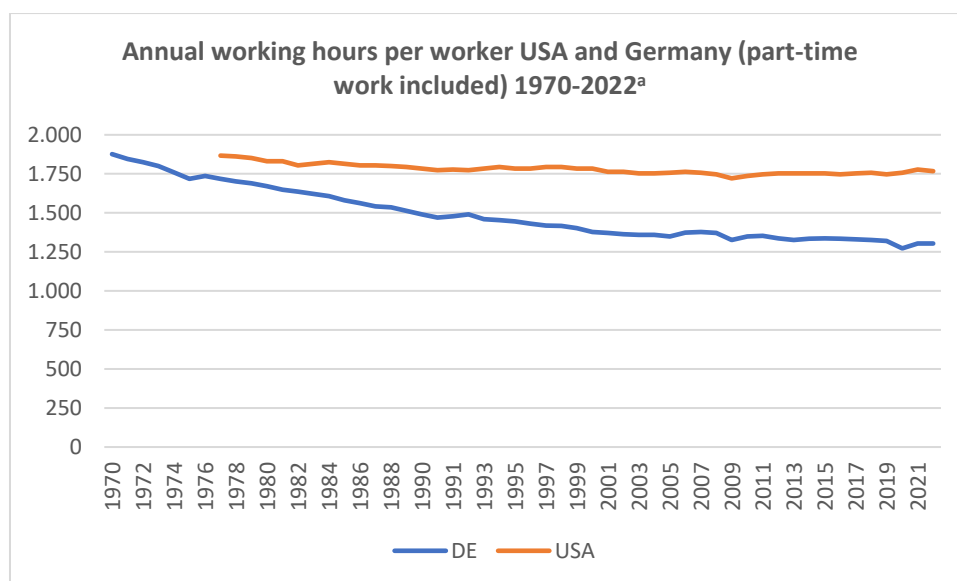


WDI 2023

Regarding demographic trends (table 1, lines 6-10), the fertility rate and the net migration rate (in % of the population) do not differ much between countries. Yet, between 2000 and 2022, the mean population growth rate in the U.S. was almost 0.7 pp higher than in Germany. While natural population growth is slightly negative in Germany (deaths > births), it is 0.43% in the U.S., given the considerable difference in the median age of the population. In 2022, Americans were almost 10 years younger, on average. Population growth seems to have a bearing on GDP growth, but not on the growth rate of GDP p.c.

The size of private households is 2.6 persons in the U.S. and only 2.1 in Germany (2021)(table 1, line 11). A key difference is the high share of single-person households in Germany – 41.0% compared to 27.6% in the U.S. (table 1, line 12). This impacts household income per capita if the equivalisation method is factored in. The OECD statistics use the category *equivalised household income per capita*, counting the first adult with 1.0, persons above 13 years with 0.5, and children below 14 with a weight of only 0.3. Occasionally older equivalence definitions are still used such as the square root of the household size.

Figure 2



^a For the U.S., actual working time for “production and non-supervisory employees” who represent 80% of the workforce (CEA 2023, Table B-30), for DE actual and paid working time of dependent employees (Destatis 2023, FS 18 1.5 table 1.13 based data from IAB; see also IAB 2020). For Germany, there is a break of data in 1991 due to the reunification.

An important feature of the German structure of society, and one that has a strong economic impact, is the low actual annual working time for employees – 1,341 hours compared to 1,811 hours in the U.S. (2022) (table 1, line 13, and figure 2). Note that paid annual work time is higher, especially in Germany (vacations, national holidays, much higher paid sick leave spells, etc.). Germans seem to appreciate leisure time much more relative to work. Yet, in both countries, it is not clear how freely decisions are made in relation to working times. There is no competitive market for working times. Most dependent workers have no choice or can only decide between full-time or part-time. Germany has the lowest annual working time among all OECD countries, 35% less than the U.S. in 2022. This is based both on lower working times for full-time workers and on a much higher share of part-time work (< 30 hours per week, as defined in Germany, and < 35 hours in the U.S.). Almost half of female work is part-time in Germany, incentivised by an income tax tariff with preference for full-time work, normally men, and part-time, normally women. Thus, it must be classified as fiscal patriarchy under the veil of *Ehegattensplitting* (parental split) in the tax law.

In Germany, the share of female labour (dependent and others) in the total labour force counted in persons is 47.5%, and in the volume of labour (hours per year) only 40.0%, following an IAB survey for the year 2019 (IAB 2020, Table 26). The annual working time for women in this year was 25.7% less than for men. Only 5.7% of part-time work is considered involuntary (Destatis 2023f).⁵ There are no comparable data for the U.S.

Inflation was slightly higher in the U.S., while unemployment (measured using the ILO method) was higher in Germany (lines 14 and 15).

⁵ This number may have limited informational value as preferences are conditional on the institutional setting, such as lack of kindergarten facilities, unequal sharing of homework and care work for the elderly, false tax incentives, etc.

A key difference in living conditions comes to the fore when comparing revenues from tax and social security contributions as a share of GDP (2019 for the U.S. and 2020 for Germany), in the latter case exceptionally high due to the pandemic with falling GDP – 32.9% and 54.4% for total revenues (lines 16-18). The space for redistribution and reallocation towards public goods is much vaster in Germany. Defence spending, as a special public good, ranks much higher in the U.S. (line 19). In Germany, total government spending amounts to almost half of GDP in 2022, and about 38% in the U.S. (in both countries this number is elevated due to the aftermath of the COVID-19 pandemic). The U.S. welfare state differs strongly from European welfare states (Esping-Anderson 1990) and has not changed fundamentally over the last decades.

Table 1: Basic data, U.S. and Germany

		USA	DE	Date	Source
1	GDP p.c., current US\$	76,399	48,432	2022	WDI
2	GNI p.c., current US\$	77,527	50,082	2022	WDI
3	GDP p.c., PPP in current int'l US\$	77,463	63,150	2022	WDI
4	Growth rate of GDP (constant 2015 US\$) 2000-2022	1.9	1.1	2000-2022	WDI
5	Growth rate of GDP per capita, PPP (constant 2017 international \$)	1.2	1.0	2000-2024	WDI
6	Fertility rate, total (births per woman)	1.66	1.58	2021	WDI 2023
7	Annual net migration rate (% of population), mean	0.37	0.31	2000-2021	See line 6
8	Population growth, mean rate p.a.	0.80	0.11	2000-2022	See line 6
9	Natural population growth, % 2000-2022	0.43	-0.20		See line 6
10	Age of population, median	38.5	47.8	2020	See line 6
11	Size of households, persons	2.50	2.06	2022	US Census Bureau 2023, Destatis 2023 ^a
12	Share of single-person households, %	27.6	41.0	2020 US, 2022 DE	US Census Bureau 2022, Destatis
13	Annual working time per person in paid work, hours (part-time work included)	1,811	1,341	2022	OECD 2023h
14	Mean unemployment rate, total (% of total labour force) (modelled ILO estimate)	5.9	6.4	2000-2021	WDI 2023
15	Inflation, consumer prices (annual %), mean	2.5	1.7	2000-2022	WDI 2023
16	Revenues from social security contributions, % of GDP	6.3	14.9	2021	OECD.Stat 2023
17	Tax revenues, % of GDP	26.6	39.5	2021	OECD.Stat 2023
18	Government spending, % of GDP	38.4	49.7	2022	AMECO 2023
19	Defence expenditure, % of GDP	3.45	1.39	2022	Statista 2023
20	Gini coefficient for household income, before and after taxation and transfers	0.52/0.375	0.51/0.296	2021 US, 2019 DE	OWID 2023
21	Change of Gini coefficient (after taxation), 1991-2019 (DE), 1991-2021 (U.S.), pp	4.7	9.3		WDI 2023, OWID 2023
22	Top 20% disposable income share over bottom 20% share	8.4	4.6	2019	OECD.Stat 2023

^a Data on household size depend strongly on estimated data of the total population, including migrants and refugees.

The Gini coefficient⁶ wedge regarding household income before and after taxation (and transfers) is 28% in the U.S. and 42% in Germany while the first Gini is almost the same in both countries (table 1, line 20). The Gini coefficient for household income distribution – after taxation and benefits – grew in both countries during the period 2000-2019. In Germany, the coefficient grew even more after starting from a level much lower than in the U.S., but the numbers fluctuate.⁷ This contrast is also shown by the ratio of the top quintile’s income relative to the bottom quintile which is around 80% higher in the U.S. (table 1, line 22). This is mainly due to the high top-incomes in the U.S. and less to stronger pro-poor redistribution in Germany.

The nature and impact of income inequality combined with wealth inequality tends to lead to *pro-rich growth of GDP*, meaning that the income of rich households grows faster than that of the median incomes. The logic is as follows. Think of a small “community nation” with 100 private households. We assume there are only two income classes, the top quintile with \$400,000 annual household income and 80 households with \$100,000 income p.a. average value. National household income would be \$16 million p.a., distributed at par between both classes which receive \$8 million each. A 10% increase in GDP with constant income distribution leads to an additional \$40,000 annual income for upper-class households and only an additional \$10,000 for the rest. The absolute size of the wedge between the rich and the rest of the people increases from \$300,000 to \$330,000. The rich benefit from the growth more than the lower class, in absolute terms, though not in relative. If we now assume that the wealthier quintile has a higher propensity to save than the rest, capital incomes of the rich households will increase more than for the other households. Then incomes of the top quintile rise faster than those of the rest. Also, the wealth wedge will increase. Furthermore, prices on the biggest asset market, the market for real estate, rise faster than target inflation (asset inflation), and rentals come under pressure to rise faster than target inflation. This likely aggravates income distribution and increases poverty levels, even more so if land for houses is scarce. This pattern is what we coin *pro-rich growth*. Growth trickles up, not down; maybe it does also trickle down to some extent, but it will trickle up more than down. In the long run, this tends to divide an economy and its society, and likely leads to hard-to-tackle problems on many fronts with a strong impact on living conditions for the majority of the population. Our little example is exaggerating the degree of inequality in the U.S. As is shown below, the income share of the top quintile is not 50%, but ‘only’ 44% (2019). Germany is not totally different with a 38% share of the top quintile (see figure 3 below).⁸

3. Twelve dimensions of living conditions

The twelve dimensions of living conditions are interconnected. Each influences the others. The income issues have three parts (dealt with in 3.1), namely earnings, household income and poverty, and are closely related to income and wealth inequality. The latter category is added in the summary (section 4) as a separate dimension for judgement on living conditions although it overlaps with the first three. Consumption is a direct consequence of income. Work-life

⁶ The Gini coefficient is a conventional measure for the degree of inequality. The range of the coefficient goes from zero to 1. At zero, all incomes are equal. At 1, the top income takes all.

⁷ Since 1991, the Gini coefficient for equivalised household incomes after tax and benefits grew until 2019 (for DE) and until 2021 (for the U.S.) by 9.3% and 4.7%, respectively. The level of the Gini coefficient in 1991 as well as in 2019 was 31% higher in the U.S., but the differential shrank until 2021 (OWID 2023, WDI 2023).

⁸ Luxembourg, the richest EU country in terms of GDP per capita and the one with the highest inequality of incomes develops in a distinct pro-rich growth pattern: poverty is high and rising.

balance, centred on working and leisure time, is interwoven with incomes and therefore is also dealt with as a dimension for overall judgement separately in the summary section. Health, security, environment and education address essential spheres of living conditions. What we call social provisioning is considered an overarching dimension that deals with a special kind of public goods necessary and basic for public welfare. With a focus on social provisioning and the other 11 dimensions, we have neglected many other aspects of a good life, such as individual rights, the rule of law, democratic rules, civil rights among ethnic groups and others. Our focus is on economic, basic social and environmental aspects, not looking at everything simultaneously. If one asks which of the twelve dimensions is the most important, the question has to remain unanswered in the same sense as the question of which organs are most important to the human body. All are most important.

3.1 Incomes

Now we delve into a much more granular comparison regarding incomes. However, data differ according to different statistical bases as well as different definitions, depend strongly on the exchange rate chosen and must include consideration of work-life balances, i.e. leisure time rather than actual working time and paid time. Here exchange rates are adjusted to Purchasing Power Parity (PPP). The exchange rate and its fluctuations are the greatest barriers to solid comparisons (see table 1). Conversion factors are calculated for each country and currency by the World Bank. They correct market exchange rates to adjust for PPP. For 2022, the conversion factor for Germany is 0.767 (see WDI and OECD). Dividing the market exchange rate (US\$1.053 per € in 2022) by the conversion factor, specific for each year, gives us the PPP of current international US\$ (US\$1.373 per €). The second PPP conversion factor is related to constant 2017 prices. Since not all data are published in current PPP, we use both conversion factors. However, the absolute values are not important here, but the ratio of US/Germany. We choose 2022 as the basic year of comparison. If data are not available, we use adjacent years.

3.1.1 Wages

As mentioned above, U.S. GDP p.c. is 57% higher than in Germany, and in PPP terms it is still 23% higher. However, if we compare GDP per person worked (in PPP), the U.S. exceeds Germany by 25% (table 2, line 1). Counting GDP (in PPP terms) per working hour, Germany stands above the U.S. by 7.5% (table 2, line 2). Of course, this is about productivity, not income. Yet, the U.S. *mean* annual salary exceeds Germany's by 5.3% (table 2, line 3), but American hourly earnings of all dependent workers, in terms of PPP, is 22.4% below the German value (table 2, line 4). While the *annual* earnings of full-time workers in the U.S. exceeds that of their German counterparts by 14.5% (table 2, line 5), their hourly wages are a bit lower than in Germany.⁹

The *median* annual income per full-time worker is 6.5% higher in Germany, and median per hour income exceeds the U.S. by almost 27% (table 2, lines 7 and 8) since the working time of full-time workers is 19% higher in the U.S. than in Germany. If all workers (dependent employees, including part-time workers) are taken, the annual actual working time in the U.S.

⁹ Regarding hourly wages, the comparability of data may suffer from sometimes unclear definitions of annual working time in the U.S. (paid hours or actual hours worked, hence data on paid time off).

exceeds the time in Germany by almost 39% (table 2, line 9). This is because of the high share of part-time jobs in Germany (twice as high in the U.S.), mostly preferred – and to some extent accepted involuntarily – by women.

Table 2: GDP, wages, low pay and working poor

		USA	DE	Ratio	Date	Source
1	GDP per person employed, PPP constant 2017 int'l US\$	130,203	104,280	1.249	2022	WDI 2023
2	GDP per hour worked (total workforce), PPP 2017 constant int'l US\$	71.90	77.76	0.925	2022	WDI 2023, OECD.Stat
3	Mean annual wage/salary, all employees incl. part-time workers	57,927	54,997	1.053	2022	CEA 2023, Table B-30; Destatis 2023a ¹⁰
4	Mean hourly wage, employees incl. part-time workers	32.25	41.01	78.6	2022	U.S.: CEA 2023, Table B-30; DE: see lines 3 and 9
5	Mean annual wage/salary, full-time workers, PPP current int'l US\$	77,463	67,576	1.146	2022	U.S.: OECD 2023h, DE: Destatis ¹¹
6	Mean gross hourly earnings, full-time workers, PPP current 2021 int'l US\$ (per hour of contractual annual work time)	40.94 (n.a.) ¹²	42.55 (34.00)	0.968	2022	Calculated from lines 5 and 9 and footnote 9
7	Median gross earnings, full-time workers, PPP current int'l US\$	54,496	58,028	0.939	2022, Q2	U.S.: BLS 2023, DE: Destatis 2023b, 2023c
8	Median hourly wage/salary, full-time workers, PPP current int'l US\$	28.80	36.54	0.788	2022	Lines 7 and 9 ¹³
9	Annual actual working time of full-time workers, hours ¹⁴ (all workers)	1,892 (1,811)	1,588 (1,341)	1,191 (1.388)	2022	U.S.: ILO 2023; OECD 2023a, DE: Destatis 2023a
10	Gender wage gap, % of median wage, full-time workers (mean earnings)	20.6 (16.0 2021)	9.8 (17.7)	1.24 (0.90)	2022	OECD 2022, Destatis 2022 ¹⁵
11	Part-time work, % of employees ¹⁶	11.7	22.2	0.53	2023	OECD 2023h

¹⁰ Data based on National Accounts, excluding employers' social security contributions.

¹¹ Data for Germany exclude special/additional payments ('Sonderzahlungen'). Destatis 2023b, Q2.

Bruttomonatsverdienste ohne Sonderzahlungen, 2. Vierteljahr 2022. Extra pay amounted to 18.5% above normal pay in 2022.

¹² There are no official statistics on paid time off per year for the U.S. Paid time off differs across states, firms and years of service. Data from Destatis (2023b) for Germany show a gap of 1,987-1,588 hours p.a. between paid and actual working time, which amounts to roughly 50 paid days off for full-time workers in 2022 (see also footnote 11). This includes 10 national holidays, an average of 11.5 days (fluctuating over the years) of paid sick leave (2021) and around six weeks of paid vacations for full-time workers. Federal law requires at least 20 days of paid vacation for workers with a five-day work week and 24 days for a six-day work week.

¹³ Based on the assumption that the German median hourly wage for full-time dependent employees was €21.29 in October 2022 according to Destatis 2023c, Pressemitteilung 211, June 1, 2023, based on Verdienststrukturerhebung in Destatis 2023c. This hourly wage here is based on paid contractual annual working hours, not the actual hours worked. The mean wage per contractual working hour in April 2022 was €24.77, without extra payments (full-time workers).

¹⁴ Actual working hours, excluding vacations, public holidays and days absent. For the U.S., actual work time data from ILO 2023 (no U.S. data available). For Germany, in 2022 factual annual working hours of full-time workers were 1,588, and total paid hours were 1,987 (information of Destatis to the author). For Germany, only dependent workers.

¹⁵ In Germany, the gender pay gap for the mean hourly wage was 18% in 2022 (Destatis, Pressemitteilung 30 January 2023).

¹⁶ Part-time means < 35 hours per week in the U.S., in Germany < 30 hours per week.

12	Labour force participation rate, 25-64 years	78.1	84.2	0.93	2022	See line 11
13	Minimum wages per hour, PPP current US\$ (across states in the USA, unweighted average), Kaitz-Index	12.00 ¹⁷ , 40.0%	16.48 ¹⁸ , 56.4%	0.73	2023	U.S. Department of Labor, BMAS 2023
14	Low-pay sector (< 67% of median wage), % of full-time employment ¹⁹	22.7	19.0	1.195	2022	OECD 2022

Note: BLS stands for the U.S. Bureau of Labor Statistics.

The American gender wage gap is twice as high as in Germany if median wages are compared. Looking at mean wages, the gap is a bit higher in Germany (table 2, line 10).

Despite higher mean annual wages in the U.S., the low-pay sector is larger in the U.S. than in Germany (table 2, line 14), measured at the margin of 2/3 of the median wage. Also, the amount of employees in poverty – threshold < 50% of the median – is larger in the U.S. (see next section). Although the average minimum wage in the USA – across the states – is much lower than the German one if counted in PPP, the prevalence of jobs with the Federal Minimum Wage of \$7.25 seems to be small. Some states have set much higher minimum wages.

The comparison of wages can be summarised as follows. Mean annual wages in the U.S. exceed the German ones, mainly because of higher annual working time. However, the German *median* annual wage exceeds the one in the U.S. despite much lower annual working time in Germany. Even median hourly wages are much higher in Germany (of course all data in PPP US\$). Germany is superior – regarding the median wages – in both money terms as well as in time for leisure. Adjusted to the lower annual working time, the mean annual salaries are also superior in Germany to the U.S. Despite the extended low-pay sector in Germany after the reunification and the post-1998 labour market reforms, even in terms of the size of the low-pay sector and the share of working poor in the strict sense, Germany is better off than the U.S. It goes without saying that this is connected to stronger trade unions in Germany and the system of more centralised bargaining, despite its slowly fading impact. In the U.S. there seems to be no lever or institutional instrument to regulate wages relative to leisure time. There is no market for weekly or annual working time, and the labour market is mute in this respect.

3.1.2 Household incomes

For living conditions, household incomes are more important than wages and salaries but the latter feed into them. U.S. household incomes are higher in general than in Germany (Table 3, lines 1, 2, 4, 5). Unfortunately, data are only available for 2019 for both countries. So abnormal influence from COVID-19 can be avoided. The mean equivalised household disposal income in the U.S. is almost 35% above the German level (table 3, line 1), and the median household income is 21% (2019) higher in PPP dollars – hence below the 35%-differential between the U.S. and Germany in annual working time. For households of elderly people, the mean income is much higher in the U.S. (+54%) but for the median income of elderly ‘only’ 35%.

There are six main reasons for higher household incomes in the U.S.:

¹⁷ The Federal minimum wage is \$7.25.

¹⁸ €12.00 since 1 October 2022.

¹⁹ Part-time work is equivalised by adjusting to full-time equivalents. For Germany, the margin is applied to the hourly wage for all employees (Destatis 2022, Pressemitteilung 496, 25 November 2022).

- The higher annual working time in the U.S. explains the lion's share of higher mean and median household incomes for people of working age, despite lower hourly wages in the U.S. Leisure is sacrificed for the household budget. For the higher mean household incomes in the U.S., beyond the leisure difference, other factors also play a role.
- The prevalence of single-parent households (1 adult, 1 child plus another household with a single adult is 2.3) compared to a family household with two adults and one child (1.8) leads statistically to smaller per-person incomes in the former, given the OECD equivalence methodology (see section 2).
- The higher share of pensioners in Germany (22.6% of the population > 64 compared to 17.1% in the U.S. in 2022) reduces household incomes because of the reduced replacement rate for pensions. Germany is already in a later stage of the demographic transition towards ageing than the U.S. In Germany, the negative side of high leisure with lower working time means less contributions to the pension system, especially for part-time workers and women with interruptions in their career or single-parent households, hence lower pensions.
- Much higher capital incomes due to more financial wealth lift U.S. household incomes, particularly for pensioners. Capital-funded pensions, which prevail in the U.S., enable better pensions for well-to-do-households.
- Mean household incomes in the U.S. benefit from the higher prevalence of rich and very rich persons in the top quintile of incomes mentioned above.
- In Germany, a relevant share of consumption is collective consumption *in kind*, such as free kindergartens, no tuition fees for university students, subsidisation of public transport and culture, toll-free highways, health care, etc. Of course, this goes along with higher taxes and social security contributions. For instance, the European Commission's database AMECO shows Germany's public expenses for individual consumption in kind, valued here in PPP US\$ as \$8,800 per person as compared to \$2,876 in the U.S. (2021) (see also below under the rubric 'consumption').

Table 3: Household income

	Household income	U.S.	DE	Ratio	Year
1	Mean disposable income, equivalised ²⁰ , PPP current international US\$	53,600	39,832	1.346	2019
2	Median disposable income, equivalised, PPP current international US\$	42,800	35,296	1.213	2019
3	Mean disposable income, share of capital income, %	11.3	6.8	1.660	2019
4	Mean disposable income > 65 age households, equivalised, PPP current international US\$	50,910	35,169	1,448	2019
5	Median disposable income > 65 age households, equivalised, PPP current international US\$	38,920	30,640	1.270	2019
6	Poverty, disposable income, equivalised, % of total households, < 50% of median income	15.1	10.9	1.385	2021 USA, 2019 DE
7	Poverty gap ²¹ , disposable income, % of threshold	34.1	25.3	1.348	USA 2021, DE 2019

²⁰ Again, see section 2 (first adult - 1.0, persons above 14 years - 0.5, children up to 14 years - 0.3).

²¹ Differential of earnings to threshold, as a percent of threshold.

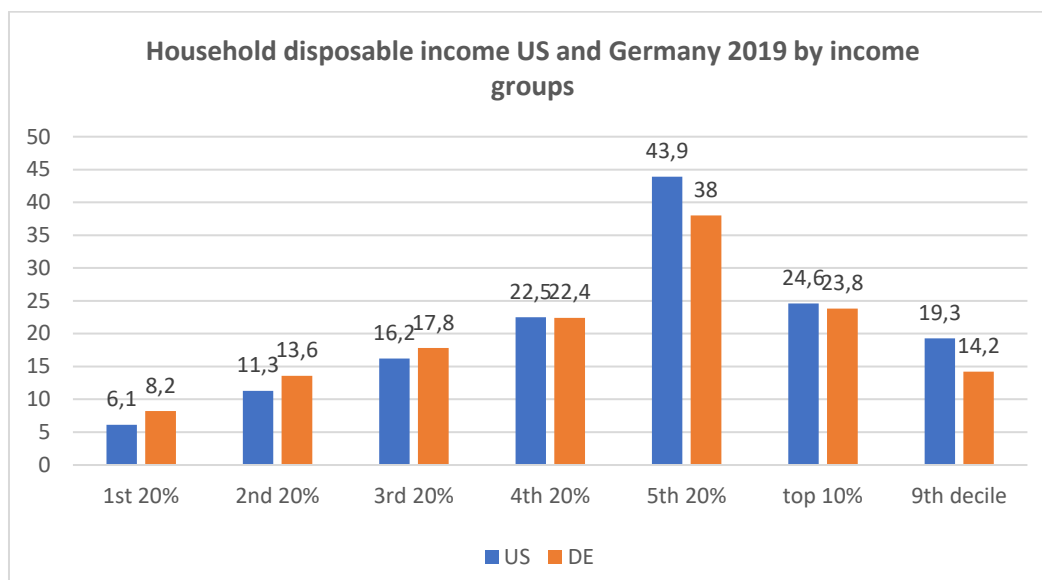
8	Child poverty, share of poor children/all children < 18, margin < 50% of median household incomes	21.0	11.7	1.795	2019
9	Poverty of disposable income > 65 age, %, < 50% of median income	22.8	11.0	2.07	2019
10	Mean disposable income of > 65 age households, share of capital income, %	27.1	11.0	2.1	USA 2021, DE 2019
11	Pension net replacement ratio, average earner, %	50.5	52.9	0.955	2021

Source: OECD 2023b for lines 1-10, OECD 2021 for line 11

Therefore, Germany's comparatively low household income reflects, in part, the specific type of welfare state which is characterised by more public goods produced by government institutions that are subsidised or allocated for free and only partly returned as monetary transfers to households. And again, higher leisure time in Germany trades off with incomes. Hence, comparing living standards by household income can camouflage other forms of income and wellbeing.

The key to understanding the differences between household incomes is income distribution (see Figure 3).

Figure 3: Equivalised household disposable income per capita



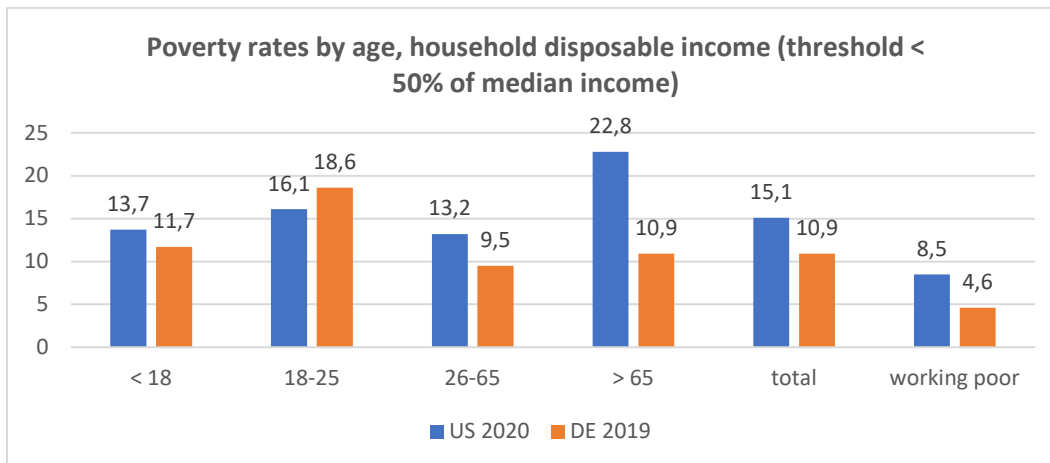
Source: OECD 2023e, 1 June 2023

Income distribution (household disposable income) is conspicuously more unequal in the U.S., especially regarding the top quintile, while in Germany the share of the bottom quintile and the third quintile are higher. The figure shows that the much higher share of income in the top quintile corresponds to the lower shares of income in the first three quintiles. While the share of the top 10% is similar in both countries, in the U.S. the 9th decile exceeds the German share markedly. So, the higher mean household income in the U.S., which cannot be explained by working time differences, stems mainly from the higher 9th decile. It is not the middle class that is much better off, rather it is those with the close-to-top incomes in the U.S.

3.1.3 Incomes and poverty

A comparison of the income poverty rates shows much higher poverty in the U.S. (< 50% of the median), except among young adults who are mainly still in education. The highest poverty rate is among the elderly despite the much higher mean value of pensions in the U.S. compared to Germany. Many of those lacking in wealth incomes tend to fall into poverty. It demonstrates the built-in inequality of the capital-funded pension systems relative to contribution-funding systems which prevail in Germany if incomes are too small to save and invest in asset markets.

Figure 4: Poverty rates



See figure 3

Child poverty is much higher in the U.S. at the margin of < 50% of median incomes; if the margin were chosen at 67% of the median, the U.S. poverty rate would be extreme. Still, in Germany, 20% are recorded below the 67% margin which is an ugly scar on the “social market economy”, as the German type of capitalism and welfare state had been christened.

Our analysis of the (at first glance, much higher) household incomes in the U.S. – in contrast to wages – has revealed that the main explanations for this gap lie in higher leisure welfare in Germany, i.e. in somewhat lower mean annual wages which feed into household incomes. Besides several other explanations, higher household incomes in the U.S. are connected with considerably more income inequality, particularly in terms of poverty at the bottom and super incomes at the top of the pyramid.

Germany’s weak points are poor incomes of one-person households, especially single-parent households aligned with child poverty and low pensions amongst many elderly people. Low annual working times, unevenly distributed across genders, compose a patriarchal income distribution and are at risk of triggering general labour scarcity in a demographic bout of ageing toward a higher share of pensioners.

3.2 Wealth

In common opinion, the U.S. is considered the richest large country in the world. This refers to the net wealth (or worth) of private households, i.e. financial and real assets minus liabilities. If net wealth is measured in prices that correspond to financial statements, such as the balance sheet, it is called financial *worth*. This is not necessarily the same as valuation by market prices. For simplicity, we use the terms here interchangeably.

In 2022, the mean U.S. wealth has reached a value of almost twentyfold of the equivalised mean household income, in Germany the ratio is 7.9-fold. By contrast, as shown in Table 4, the median wealth of U.S. households stands at \$140,800 but is – surprisingly – in Germany (counted in PPP dollars) a bit higher, namely \$146,362. The ratio of the mean to the median is 7.45 in the U.S. and 3.0 for Germany. The lowest decile of households has negative wealth in the U.S. and a minuscule positive value in Germany. The wealth of the 90th percentile is (in PPP dollars) 1.4 million in the U.S. against 1 million in Germany.

The OECD Wealth Distribution Database provides only data for the U.S. from 2019 und for Germany from 2017, both in current US\$ (see bottom part of table 4). In this database, median wealth per household is slightly higher in the U.S. but this can be due the two years difference in time. More informative is the much higher difference between the mean and the median wealth per household in the U.S. Moreover, the concentration of wealth in the pockets of the top 1% of households is more than twice as high as in Germany. Not only is the level of net wealth of the upper classes much higher than in Germany, but also the share of the top households in total wealth is much higher. Hence the wealth distribution between both countries is markedly different.

Table 4: Net wealth per household, US\$

	U.S.	DE	Ratio
mean (U.S. 2020, DE 2021), current US\$ and €	\$1,049,039	€316,500	
mean (U.S. 2020, DE 2021), current PPP US\$	\$1,049,039	434,600	2.41
median (U.S. 2020, DE 2021), current US\$ and €	\$140,800	€106,600	
median (U.S. 2020, DE 2021), current PPP US\$	140,800	146,362	0.96
10 th percentile (U.S. 2020, DE 2021), current PPP US\$	-1,450	1,235.7	
90 th percentile (U.S. 2020, DE 2021), current PPP US\$	1,410,000	996,661	1.42
Gini coefficient household wealth	0.850	0.788	
Following OECD 2023, current US\$, 2019 for U.S., 2017 for DE			
median net wealth per household	97,400	70,780	
mean net wealth per household	684,500	232,811	
share of top 1% of households	40.5	18.6	
share of top 5% of households	67.7	40.8	
share of top 10% of households	69.1	55.4	

Sources: For the U.S. see FRED 2023, Hays/Sullivan 2020, for DE see Deutsche Bundesbank 2023, own calculations. See Credit Suisse 2022, p. 32 for Gini coefficients. OECD 2023e (Wealth Distribution Database). Note: FRED uses the net worth concept which may not be fully identical regarding definitions with the Bundesbank's PHF Study.

The wealth of households is not necessarily an indicator of the standard of living or quality of life. If the distribution is highly skewed, it can have a negative impact on society as it signals potential injustice and disruption between economic merits and financial wealth. Furthermore, a concentration of economic and political power shields the wealthy against too high taxation and the evolution of a genuine welfare state. However, wealth for a large share of the population could, in principle, serve as an indicator of economic wellbeing as a cushion against all sorts of risks or a provision for old-age income.

Hence, a judgement on household wealth in a country cannot be made without a judgement on wealth distribution and the pension system. A capital-funded pension system needs a higher level of assets per household. By contrast, high wealth as a result of a high speed of asset prices can even be a sign of risky asset inflation. Therefore, high mean wealth is an ambiguous advantage for a country, a double-edged sword. In almost all countries high mean wealth per capita is connected to high income and wealth inequality.

3.3 Consumption

The ability of private households to consume is often considered a measure of the affordability of goods and services. It abstracts from working and leisure time as a “good” and ignores income distribution if measured by the mean value. As table 5 shows, individual consumption per capita in the U.S. amounts to US\$ 52,088 in 2022 which is nearly 61% higher than in Germany, measured in PPP current international US\$.

Table 5: Consumption per capita

	U.S.	DE	Ratio
Individual consumption per capita 2022 (PPP current international US\$)	52,088	32,415	1.607
Social transfers in kind (2021) ^a	2,876	8,800	0.323
Total individual consumption per capita 2022 (est.)	54,964	41,215	1.333

Sources: CEA 2022, Destatis 2023a; assumption +2% in 2022 against the previous year. ^a Line UCIG and population data in AMECO.

These data seem to show the supremacy of the U.S., but it is only the echo of higher U.S. household incomes which are due to the reasons mentioned above. To reiterate, it is mainly the 26% lower annual working time in Germany (i.e. 35% higher in the U.S.) with lower annual incomes and higher in-kind income, besides high consumption in the top quintile of the income distribution. Furthermore, German households are used to saving more relative to their income (11.4% of disposable income in 2022 compared to 3.7% in the U.S.²²). Consumer credit is less common. Moreover, Germany has traditionally had a net export surplus while the U.S. has run a net trade deficit; this is a signal of chronically repressed domestic demand whose largest share is private consumption compared to over-consumption in the U.S.

In brief, the working-time adjusted consumption per capita, also adjusted for in-kind consumption and higher rates of saving, is similar between Germany and the U.S.

3.4 Health

Health is naturally one of the most important determinants of living conditions and quality of life and refers to all or the majority of people. Neither mean nor median data are sufficient for assessment. Therefore, we use a number of indicators, some are comprehensive and incorporate many sub-indicators (table 6). What we see in all but one indicator is the stark superiority of Germany. While in Germany health insurance is compulsory, there are still many uninsured in the U.S., despite improvements. Also, fatal occupational injuries are much higher in the U.S. and shrank less than in Germany since the year 2000. U.S. health averages, particularly related to life expectancy at birth (based on assumptions about the future), tell an unambiguous story.

²² Data from CEA 2022, Table B-17.

The lower value in the U.S. also existed before the COVID-19 pandemic. Amazingly, the U.S. spends 30% more than Germany on health, relative to GDP, but the outcome is inferior. This finding is mirrored by two Bloomberg indices: in the Global Health Index, a synthetic aggregate index, the U.S. ranks at #35 in global comparison, and Germany ranks #23. On Bloomberg's Health Security Index, the U.S. is the global number 1, Germany ranks 8th. This index measures health facilities, research and development, etc., and hence seems to correlate with health expenditure (private and public). This feeds the doubt that the U.S. system is more pro-rich than in Germany.

Table 6: Health conditions

	U.S.	DE	Ratio U.S./DE	Year	Source
Life expectancy at birth, age	76	81	0.94	2021	WDI 2023
Health care expenditure, % of GDP	16.6	12.7	1.31	2022	OECD.Stat 2023
Hospital beds per 1,000 population	2.77	7.76	0.36	2021	ditto
Physicians per 1,000 population	2.67	4.53	0.59	2021	ditto
Health-uninsured population, %	12.2 of working age pop. ^a	0.1 of pop. ^a	n.a.	2022	NCHS 2022, Kurz 2022
Fatal occupational injuries per 100,000 workers p.a. (2000)	3.6 (4.3)	0.7 (3.0)	5.14 (1.433)	U.S 2021, DE 2022	ILO 2023
Obesity, % of adult population	37.3	25.7	1.45	2016	Our World in Data 2023
COVID-19, deaths per 100,000 population (per observed cases)	341	203	1.680	2023	Johns Hopkins University 2023
Bloomberg Global Health Index	75 (rank 35)	83.1 (rank 23)	90.3	2019	Bloomberg 2023
Bloomberg Health Security Index (global ranking)	75.9 (1)	65.5 (8)	1.159	2021	Bloomberg 2023a

Notes: ^a Health insurance is compulsory for all in Germany, and since 2014 has been compulsory for the majority of the population in the U.S. For DE and U.S. official data, there may be underreporting of uninsured in Germany, especially among the self-employed, foreigners and homeless people.

It should be mentioned that Germany's health quality is imperfect in many areas, compared to the top European countries. While the U.S. system is mainly private, it is strongly regulated in Germany, with transfers, state-owned institutions, sometimes including elements of direct controls of the incomes of medical doctors, a high degree of bureaucracy, etc. and far off a pure market economy.

A global comparison of countries' health quality and income/wealth inequality shows a strong correlation. The causality is complex, but it seems to run from inequality to poor health conditions and also to a high level of social problems in general (see Wilkinson/Pickett 2010).

3.5 Environment

We use here six sub-indicators which might be representative to some extent (table 7). The last two are taken from the OECD Better Life Index, where they are used as the only environmental indicators. The first two are representative of the countries' contribution to the global greenhouse effect and show a disastrous situation in the U.S., both absolutely and relative to Germany. Regarding CO2 emissions, we use the production-based approach which counts

emissions generated in the country, and the consumption-based effect which is caused by the consumption of goods and services, no matter where produced. In advanced countries, the consumption-based emissions lie above the production-based effect, with the reverse order in emerging and a few developing countries. Germany shows a clear superiority vis à vis the U.S. but is not much better than a country like Poland regarding per capita CO2 emissions. It should be mentioned that both countries are in flux having reached their CO2 peak years ago.

Table 7: Environmental burdens and achievements

	U.S.	DE	Ratio	Year
Greenhouse gas emissions per capita, 2021 in tons	17.6	8.9	1.98	2021
CO2 emissions per capita in tons, production- and consumption-based	14.9-16.0	8.1-9.7	1.84-1.649	2021 and 2020 (consumption-based)
Footprint minus biocapacity = net footprint per capita (global hectares)	8.04-3.45 = 4.59	4.7 – 1.54 = 3.16	1.44	estimation for 2021
Share of renewables in energy production, %	22.2	44.4	0.5	2022
Air pollution: micrograms per cubic metre ^a	7.7	12.0	1.558	2017-2019
Water quality ^b	88	91		2020

Sources: ^a OECD Better Life Index. ^b Subjective evaluation of local water quality of interviewees (Gallop), used by OECD Better Life Index

Our World in Data, Enerdate, OECD Better Life Index Dataset, Global Footprint Network 2023.

The net footprint measure is meant as a comprehensive metric including all environmental damages compared to what is called the “biocapacity” of each country. The metric uses “global hectares” as the unit of measurement which are calculated with a huge amount of data to which complex weights are allocated. Biocapacity depends heavily on population density (population per unit of geographic area). The aggregated footprint correlates strongly with greenhouse gases while the biocapacity can alleviate the impact of the footprint. The footprint metric has become popular but involves many questionable assumptions and is, in the end, rather opaque. Since there are hardly any aggregate environmental indicators available, we use this metric despite the downsides. The OECD approach in the Better Life Index with only two (very special) indicators is unacceptable and everything but representative. It renders the Better Life Index as a whole unusable, given the impact of the environment on the wellbeing of people and mankind in general.

3.6 Security

The state of security in both countries is extremely different. The contrasts are stronger than in any other dimension which we analyse here (see table 8). The frequency of intentional homicides is more than eightfold, the incarceration rate is more than eightfold, the traffic death rate is threefold, etc. The Global Organised Crime Index is a synthetic index comprised of many items; the index is complemented by a resilience index, which is not listed here because it shows a similar differential. All indicators including the perceived corruption index from Transparency International point in the direction of systematic and strong differences between both countries. Several indicators are certainly strongly influenced by drug-related crimes in the U.S., especially the incarceration rate, but also by loose regulations regarding permission for weapons.

The most stunning surprise is the ranking of the U.S. regarding homicides per 100,000 citizens. The U.S. stands at rank 155, one after the Russian Federation, Germany ranks at place 43.

Table 8: Security

	U.S.	DE	Ratio U.S./DE	Year	Source
Homicides (intentional) per 100,000 population and rank in global ranking of 206 countries	6.81 155	0.83 43	8.20	2021	UNODC 2023
Incarceration rate (per 100,000 population)	655	78	8.40	2018	Our World in Data 2023
Estimated traffic death rate, per 100,000	12.7	3.8	3.342	2021	World Health Organisation 2023
Organised Crime Index: criminality score/rank among 193 countries (low score/rank – low crime)	5.67/ 126	5.33/113	1.064/ 1.115	2023	Global Organised Crime Index 2023, online
Corruption perception index (% of best country)/rank (best rank is 1)	69/2 4	79/9	0.873	2022	Transparency International, online

All data was accessed online on October 23, 2023.

3.7 Housing

In the U.S., houses are on average more spacious and are, to a higher degree, owned by the household living in them (table 9). This has to be seen against the backdrop of lower geographic population density in the U.S. Germany's density is 6.9 times the U.S. value. Gross rents (or equivalent costs for owners) including utilities are a bit less expensive than in Germany, but house prices rise faster. Unfortunately, there are no comparable data for median households.

Table 9: Housing in the U.S. and Germany

	U.S.	DE	Ratio
Share of owner-occupied houses (2021)	64.6	35.0	1.846
Number of rooms per household member (2020)	3.2	2.8	1.143
Size, m ² per capita (U.S. 2017, DE 2020)	61.5	46.0	1.337
Homeless persons/population (U.S. 2020, DE 2018)	0.18	0.41	0.439
House price index, 2015=100 (quarter 1 2023)	186	154	120.7

Source: OECD 2023f

Due to geographic differences and different quality standards, comparisons should be considered with caution. In particular, poor energy insulation of houses in the U.S. makes them less energy-efficient than those in Germany.

3.8 Education and Research

Using OECD data, the U.S. spends more on education and research than Germany, taking private and public spending together (table 10). However, the data for Germany do not fully include vocational training in the dual training which is Germany's traditional peculiarity. Roughly 41% of tertiary system students (equivalent to the share of graduates from high school) participate in the vocational training system (2023) which is classified as part of secondary education. The OECD data focus on tertiary education.

The main difference in total spending as a percentage of GDP is due to spending on tertiary education. The latter is larger in the U.S. due to a missing (or small) vocational training system, which is prominent in Germany. The higher U.S. share of public spending for education/total public spending could also be misleading since total public spending, the denominator, is much larger in Germany. Yet, total expenditure in absolute numbers per student is considerably higher in the U.S., again, mainly caused by higher spending in the tertiary sector.

Table 10: Education

	U.S.	DE	Ratio
Total expenditure on education, % of GDP, 2019	6.0	4.4	1.364
Total expenditure per full-time student, PPP US\$, 2019	64,664	44,620	1.44
Public expenditure on education/total public expenditure	11.7	9.2	1.272
Expenditure on research & development, % of GDP	3.45	3.14	1.099
Share of private expenditure on educational institutions	32.0	13.0	2.46
Annual tuition fees charged by public institutions ^a	10,692	74.0	-
Average duration of education, years ^b	17.3	18.2	95.1
PISA score ^b	495	500	0.99
Share of persons who finish secondary education ^b , %	92.0	86.0	1.07

Source: OECD 2023g, OECD 2023; notes: ^a national students, simple mean of BA and MA including PhD. ^b Around 2020, no precise date given in OECD 'Better Life Index'.

Expenditure for R&D is roughly 0.3 pp higher in the U.S., as a share of GDP. Tuition fees at public universities in the U.S. are around 10,000 US\$ p.a. (average of Bachelor, Master and PhD programmes). This is similar to an implicit per head tax, outside the system of progressive taxation. By contrast, tuition is free in Germany.

The duration of high school education in the U.S. is a year shorter than in Germany, whereas the PISA score as an indicator of the quality of degrees is similar.

Comparing the educational systems of both countries is not easy due to the different institutional settings. It seems that the U.S. system performs – particularly in the elite sector of private universities, but also in R&D – better than the German one. This performance is paired with extreme tuition fees that trigger higher salaries after university. A general superiority of the U.S. system is hard to confirm if the German dual system of in-firm training and vocational in-school education is not properly assessed.

3.9 Gender issues

A broad global index for gender inequality, developed by UNDP in the framework of the Human Development Report, synthesises five indicators: maternal mortality ratio, adolescent birth rate, female and male population with at least secondary education, parliamentary representation of women in parliaments and labour force participation rates (table 11). Germany's rank in global

comparison at #19 is much better than the U.S. at #44 (Denmark is ranked #1). Another synthetic index, the Social Institutions and Gender Index (SIGI) has been developed by the OECD which measures institutional gender discrimination in various forms. Again, Germany is ahead of the U.S. Following the OECD data, violence against women in the U.S. is extreme, relative to Germany. Federal entitlements for paid maternal leave do not exist in America, there are only 12 weeks of job protection unless support is provided by state grant support or the employer. Germany has legal entitlements for 14 paid weeks. The gender wage gap is mentioned again in Table 11, related to the median wages of females relative to males. In all indicators measured by manifold OECD publications, Germany by far outperforms the U.S., even though Germany lags behind Scandinavian countries and some other top countries in this respect.

Table 11: Gender inequality

	U.S.	DE	Ratio	Year	Source
Gender Inequality Index/rank (low numbers – low inequality)	0.179/44	0.073/19	2.45//2.3	2021	UNDP, HDR
Violence against women ^c	13.9	2.5	5.56	2023	OECD
Discrimination in family	2.1	0.3	7.0	2023	OECD
Women in parliaments, share in %	27.3	31.5	0.867	2023	OECD
Social Institutions and Gender Index, SIGI (0 is no discrimination)	19.1	12.4	1.54	2023	OECD
Gender wage gap ^a , %	17.0	13.7	1.243	2022	OECD
Child-care costs for dual-income households, % of net income	11.0	1.0	11.0	2021	OECD
Statutory maternal leave, weeks	12 unpaid ^b	14 paid		2023	OECD
Paid parental and homecare leave, mothers	0	44 weeks		2023	OECD

Notes: high numbers mean high inequality/discrimination unless explained differently. ^a Median female wage, % of median male wage ^b Family and Medical Leave; pay contingent on state and employer. ^c The indicator comprises three components: percentage of women who agree that violence by husband or partner could be justified; lifetime experience with physical or sexual violence; legal protection against domestic violence. The second component is listed with a prevalence of 36% for the U.S. and 22% for DE (OECD 2023d).

Source: UNDP (2023), OECD 2023d, OECD (2023 j), OECD (2023k), OECD (2023l)

3.10 Social security provisioning

The U.S. has similar social security insurances as in Germany, but at a lower level, e.g. compulsory social security which includes pensions, health insurance (Medicaid), unemployment insurance (federal guidelines but under the authority of the States), casualty insurance for workers, etc. Yet, the basic philosophy of the U.S. is the self-responsibility of citizens – meaning private social security – with possibly targeted state support of people in need at a low level. Workers’ rights are quite limited compared to Germany, especially regarding dismissal protection. Renters also receive much less protection against eviction. Tenancy laws are under the authority of the states. Hire contracts are mostly fixed-term. Sick leave regulations for workers exist but can be defined by states. There is no parental leave legislation or governmental care insurance for the elderly (except Medicare as health insurance for pensioners and Medicaid for the poor). There is a federal nationwide minimum wage of only \$7.25 and no federal regulation for minimum vacation for employees, and a federal sick leave regulation

exists only for unpaid leave (Family and Medical Leave Act [FMLA]), capped at 40 days during a year. Paid leave regulations are only instituted in 14 States (Williamson 2023).

This is not the place to report the details about the disparity of social security regulations between the U.S. and Germany. It is clear that German citizens have plenty more social entitlements, often not only for needy persons but for all, like a general child benefit. The American analogue is a child tax credit, an allowance for families. The differential impact of the U.S. and German welfare state can be assessed roughly by the strongly reduced Gini coefficient after taxation and transfers in Germany, in relative terms (see table 1 above).

Again, it should be reiterated that the role of the German welfare state is not only about social insurance but also about public goods, with no price or subsidised prices or fees. It is worth mentioning that most transfers and benefits for the poor or those at risk of poverty are precisely conditioned with often low margins while many other transfers and benefits are untargeted so that middle-income households and wealthy people are also beneficiaries.

We conclude that the German system of the welfare state with a broad but hard-to-quantify impact is on all counts superior – despite many shortcomings – to the U.S. and a key pillar of the German type of capitalism with less income and wealth inequality than in the U.S. Of course, the downside is higher taxes and social security contributions, apart from a complex system of legal rules involving bureaucracy.

3.11 Some other indicators - Happiness, Human Development, Genuine Progress Index

The most prominent happiness reports are those from a group of researchers promoted by the United Nations (Helliwell et al. 2022), established in 2012, called the “World Happiness Report” and the OECD “Better Life Index”. The first focuses on polls for many countries asking representative samples about the feeling of life satisfaction on the individual level. In addition, it is held that this implies that people are “pro-social” (meaning beneficent), prosperous and healthy. The interviews, arranged by Gallop, use 14 dimensions with a focus on individual views from 150 countries. In the country ranking, the U.S. stands at rank 15, and Germany has a slightly lower standing at rank 16.

In 2011, the OECD started as a response to the Stiglitz Report (Stiglitz et al. 2010) with a report that included 11 dimensions, mostly objective ones, but also including one subjective life satisfaction dimension. Each dimension is based on up to four sub-indicators. All dimensions are given the same weight, but every user may use his or her own weight online. Both reports shall serve a “beyond growth” approach. In the better-life ranking, unweighted, Germany has a slightly better rank than the U.S.

We do not follow the almost purely subjective methodology of the World Happiness Report nor the mix in the Better Life Report. Both focus too much on averages, not on median values, so that the miseries and downsides of life are all too often levelled out by using averages. Furthermore, the indicators and sub-indicators are far too rough and blunt to allow meaningful and empirically rich views on each country. At times, they are even grossly misleading.²³ In

²³ To mention a few extremes: in the “Better Life Index” the dimension environment is mis-specified by ignoring climate change issues (focus on subjective valuation of local water quality and air pollution in urban centres (fine dust emissions), and health indicators of health spending and facilities are valued highly making the U.S. the top country in health conditions. Wealth and income inequality are not addressed at all, neither are gender issues.

Table 12 we complement the happiness and better life scores with a misery indicator, the number of suicides. The latter are 30% higher in the U.S. than in Germany. This indicator is both subjective and objective.

Table 12: Happiness, Misery and Human Development

	U.S.	DE	Ratio	Year	Source
Index Happiness	6.894 (15)	6.892 (16)	1.00	2023	Helliwell et al. 2022
Life satisfaction	7.2	8.1	0.89	2020 (?)	OECD 2023
Suicide rates per 100,000 population ^a	14.5	9.0	1.61	2019	Destatis 2023e
Human Development Index (1.0 is top)/rank (1 is top)	0.921/21	0.942/9	97.7	2021	UNDP
Discrepancy GNI and HDI: Rank GNI – rank HDI	-14	+6			

^a Destatis data are based on the World Health Organisation (WHO). For Germany, national data show a slightly higher number for 2019 (9,200) which amounts to 9.0 per 100,000 compared to 8.3 by WHO.

We have added another comprehensive indicator, presumably for the level of ‘human development’, published since 1990 by UNDP for all countries. The simple index comprises the life expectancy at birth, an index for education based on expected years of schooling and mean years of schooling p.c., and GNI p.c. which is considered as a representative index for the living standard. The latter is reduced to mean income, excluding any aspect of income and wealth distribution. In this way, the index is old-fashioned and close to GDP or GNI. However, in the aggregation of the three dimensions, GNI is used as a log, reflecting the diminishing importance of income with a higher level of GNI p.c. The HDI for the U.S. and Germany are quite similar, but the ranking in the global context differs markedly. It is interesting to observe the discrepancy in the ranking when comparing the ranks of both countries solely in GNI p.c. and the one for the composite HDI: using the HDI, Germany improves its ranking by six steps while the U.S. falls by 14 steps. It shows that “human development” even in a reduced form differs remarkably from pure income-based ranking. GDP and GNI are dethroned as appropriate measures for the standard of living or wellbeing.

In our paper, we do not seek a comprehensive single-number reduction of complexity but attempt to compare our indicators one by one by an ordinal judgement. Therefore, we do not calculate something like the “*Genuine Progress Indicator*” (GPI) or the “*Index for Sustainable Economic Welfare*” (ISEW) or the “*National Welfare Index*” (see Zieschank/Diefenbacher 2009). These approaches add a few welfare dimensions to the traditional indicators (e.g. leisure time) and deduct “bads” from GNI, i.e. social costs or negative externalities, especially regarding environmental damages. All these exercises show a decoupling of the GNI p.c. and a much lower and more or less stagnant GPI or ISEW indicator since several decades. They are historical and dynamic but mostly national indicators, not really suited for international comparisons. We refrain from commenting on their virtues and downsides and concentrate on a multidimensional country comparison.

4. Summary and conclusions

Now we summarise our analysis and synthesise all eleven dimensions discussed and measured. The 12th dimension, income and wealth distribution, was mentioned in section 2, and in more detail in sections 3.1.2 and 3.2 on household income and the section on wealth. We focus on the Gini coefficients for household income after tax and transfers (distribution of disposable income), and the distribution of wealth. Both types of inequality are much higher in the U.S. We value a more equal income and wealth distribution as basically positive. The reasoning will be provided below. The 12 dimensions are split up into 15 separate themes, giving poverty, work-life balance (leisure) and old-age income separate values.

Since quantification of the scores, indicators and sub-indicators is difficult, we simply compare all dimensions without giving weights. In the first two columns, we qualify the superiorities of the respective country with three degrees 1, 2 and 3 for small, large and very large. In the 3rd and 4th columns, we refrain from valuing the strength of superiority and use only one star for the better country in each dimension. The aggregation is not based on a specific metric, but sums up cases of relative preponderance in the 15 themes, with points or stars. Germany appears to be stronger in the majority of dimensions, in some much stronger, only in very few weaker (table 13).

Table 13: Comparison of living and working conditions in the U.S. and Germany, 2022

		Degree of advantage 1-3		Advantage w/o degree	
		U.S.	DE	U.S.	DE
1	Wages, median		1		*
2	Household income, median	2		*	
3	Poverty (child, working-age)		2		*
4	Old-age income, median	0	0	-	-
5	Work-life balance		3		*
6	Wealth, median		1		*
7	Consumption p.c.	2		*	
8	Environment		3		*
9	Health		3		*
10	Security		3		*
11	Housing	1		*	
12	Education	1		*	
13	Gender issues		3		*
14	Social security network		2		*
15	Inequality of incomes and wealth		2		*
15	Summary	6	23	4*	10*
16	(Happiness)	(1)	(1)	-	-
17	(Human Development Index)		(1)		*

Note: Lines 16 and 17 provide only additional information, outside the scoring.

The ranking follows the methodology explained in the beginning. The median values are more important than the means since they address the majority of the population. It can be assumed that the quintile value above the median is close to the median, at least the lower strata of the 3rd quintile. For most dimensions there is however no median value available, so that means or simple aggregates have to suffice. Furthermore, for a number of dimensions, the relative mean vis à vis the other country is the correct measure, say in health, security and the environment as

well as some others, especially if it can be assumed that the mean and median might not differ much.

The first four lines pertain to the *income* rubrics above, and the *work-life balance* is next since it impacts incomes. Here Germany stands in stark contrast to the U.S. The higher median income for the elderly in the U.S. (Table 13, line 4) is not considered here as a plus since it must be weighed against the high poverty rate among older people in the U.S. Hence both countries are more or less at par in this dimension. Median *wealth* (Table 13, line 6) shows Germany slightly ahead; wealth for a broad part of the population, hence a high median value, is considered positive since it provides some social security and serves as a safeguard against personal imponderabilia, whereas the wealth distribution is considered as negative (Table 13, line 14).

The higher degree of combined *income and wealth inequality* is not considered conducive to the wellbeing of the majority of the American population. Rather, it is one of the reasons for relative poverty and related social issues. Trickle-down effects are more than offset by trickle-up effects. Wealth sparks more wealth and more power and is a bulwark against higher taxes and more social welfare. Excessive wealth tends to disintegrate society and to grow faster than GDP and median incomes. As mentioned in the beginning, it fosters pro-rich growth. High incomes and high wealth grow in tandem. A higher share of income in the fourth and fifth quintiles is enabled by either a lower share of the middle quintile or the bottom quintiles. The most likely ally is to the detriment of the bottom strata. Then higher inequality is the counterpart and driving force of higher relative poverty. In the U.S., the two top quintiles seem to be the main winners of the system, and the two lowest quintiles are the losers. Inequality is a catalyst for impaired living conditions for large parts of the population. This trend is deeply anchored in the roots of society. In Germany, the trend is similar but much less extreme. In this context, classifying inequality as negative is not a moral or ethical statement or a bias of the author. It is rather rooted in the economics of inequality.

Health conditions are significantly better in Germany on all counts, except the Bloomberg Health Security Index. Health facilities are without doubt excellent in the U.S., but this obviously does not dissipate to the health of the majority of the population. In housing and education, we see a small advantage in the U.S., although the quality of houses (energy efficiency) seems to be poor in many cases and German education would look better if dual vocational training were properly evaluated.

The entire *net of social security* in Germany with all its complexity attempts to provide broad provisioning but has many shortcomings. It is linked to bureaucracy and occasionally disincentives and high costs. Yet, it is highly beneficial for large parts of society and considered by many as just and fair; in this way, it contrasts the U.S. thoroughly.

In our approach to living conditions from a comparative perspective, subjective and mostly vague valuations are not helpful and can clash with objective data. *Happiness* is not an economic category. Interviewees have seldom solid knowledge about another country and sticking to their home country is often an attitude related to the identity of the population. A question like “Are you happy with the water quality in your region?” (one of the two environment-related indicators in the “Better Life Index” of the OECD) might be an index of ignorance; furthermore, a combination of such data with objective ones could be misleading. Therefore, we did not use the overall happiness index of the two reports mentioned which gives Germany a tiny disadvantage and a clear advantage, respectively.

In the aggregation, Germany reaches ten stars and the U.S. four: 10:4. If the *degree* of superiority is added, Germany outperforms the U.S. amazingly by 23:6. The comparison would change if dimensions were not weighted equally. Anyway, the comparison, to the surprise of the author, is not about the head-to-head competition of systems but rather a smashing and unambiguous result. In five fields Germany shows very large superiority: work-life-balance, environment, health, security and gender, honoured with three points each. The advantages of the U.S. in education and research as well as in housing are razor-thin; better data are needed for a sound judgement. The strong U.S. advantages in household incomes and consumption rely predominantly on less leisure (where the U.S. stands far behind Germany and where Germany received three points). There is also a trade-off between consumption and the state of the environment. Hence, our evaluation hinges to some extent on the valuation of leisure against consumption and the latter against environmental goals.

It goes without saying that our comparison is not more than a snapshot for the years +/- 2022. The methodology (like all others) depends strongly on the assumption of a stable PPP-adjusted exchange rate. A real depreciation in PPP terms would lower German incomes valued in US\$. Germany's strength – low annual working time – could fade if labour scarcity intensifies or if pensions slide downwards in the course of ageing, if inflation pops up due to scarcity of labour or geopolitical conflicts, let alone failures in climate change policy or in the case of further external shocks such as rising energy prices. In both countries, challenges moving forward abound. It is more likely than not that both types of capitalism are not really stable or sustainable in a broad sense. The key is the ability to change and improve simultaneously.

The biggest challenges for Germany are the tasks of stabilising and reinvigorating the system of shared prosperity. Key issues include the disadvantages faced by those in the bottom quintile, dealing with single-parent households, child poverty and too many working poor, tackling the pending ageing problems when baby boomers leave the labour market, and importantly, the green transition. It is a cold comfort that other countries stand in the same line. Germany had lost its former standing regarding inequality due to the rise of poverty after the re-unification. Also, the new issue of single-parent-households adds to the problem of poverty. If Germany would further develop in the direction of liberal capitalism, it has a lot to lose of its advance vis à vis the U.S.

In recent years, Germany's economic and social standing has deteriorated in a number of important areas, such as the size of the low wage sector, the outreach of the collective wage bargaining system, weaknesses in the health care system, lack of affordable housing, a gap in public infrastructure, shortcomings in the child care and the tax system which are a barrier for full labour market integration of women, an overly contractionary fiscal policy due to the dysfunctional constitutional “debt brake”, among others. There is a widespread backlog of reforms that undermine Germany's comparative stance. Nevertheless, the comparison to the U.S. for the year 2022 – which is not an exceptional year – holds.

One overarching question remains which we have only touched on, but not analysed in depth: why is the discrepancy between living and working conditions and GDP per capita so strong, and why does the U.S. perform so disappointingly in most areas analysed? The tentative answer is, apart from historical reasons (initial societal conditions) – it's income and wealth distribution, stupid!

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