



Introduction: Private Wealth and Public Debt

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*Was ist das Schwerste von allem? Was dir das Leichteste dünket
Mit den Augen zu sehen, was vor den Augen dir liegt*
J. W. Goethe, *Zahme Xenien*

*The difficulty lies, not in the new ideas, but in escaping from the
old ones, which ramify, for those brought up as most of us have
been, into every corner of our minds*
J. M. Keynes, Preface to *The General Theory*; last sentence

Abstract

In the economic area comprising the OECD countries plus China, almost half of private wealth consists of net public debt. Private wealth is nearly twice the size of private real assets. Due to the continuing rise in life expectancy, the share of public debt in private wealth is growing. As long as public debt does not become too great, real interest rates can be low, but positive in the twenty-first century. The main reason for this is private retirement planning in light of high life expectancy. Investment cannot keep up with increasing private saving. In the twenty-first century, public debt is a macroeconomic steering instrument. Fiscal policy uses it to ensure that a positive, but low real interest rate level continues to prevail.

1.1 Overture

People are getting older and older. But the opposite is true for machines: They are being replaced faster and faster. The capital market reacts with interest rates that are falling lower and lower.

Carl Christian von Weizsäcker's nephew Jakob von Weizsäcker, who is likewise an economist, composed the following haiku on the subject:

*Humans live longer
Machines retire faster
Capital abounds*

This book is about these findings and their consequences for economic policy. We have assembled and analyzed empirical data that has been obtained by others: Above all, by public agencies. The nation states belonging to the OECD represent the geographical scope of our investigation. We have also grouped China together with them. For the purpose of our calculations, we can, as a first approximation, take the balance of the capital flows between this area and the rest of the world and set this balance to zero. Further details are provided in Sect. 3.11. Hence, for the OECD plus China region, the following equation must roughly hold:

$$S = I$$

“Saving = Investment”

The savings that are accumulated over time correspond to the growth in total wealth in this area. The accumulated net investment represents the area's stock of real capital. The value of land has to be added to the latter, such that real assets are comprised of real capital and land.

We divide this area theoretically into a private and a public sector. Private wealth is comprised, then, of the real assets in private hands plus the balance of claims and liabilities vis-à-vis the state.

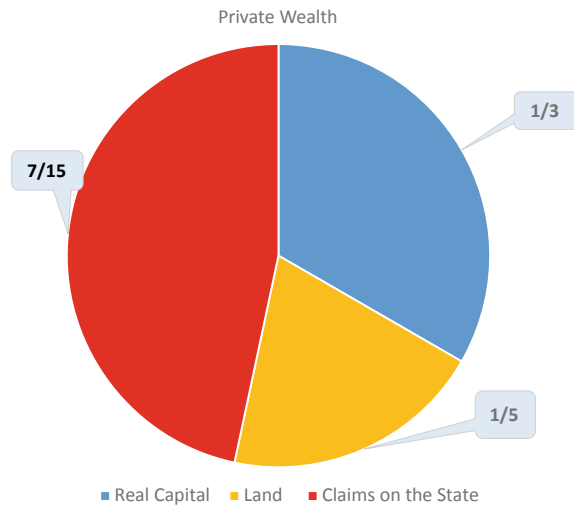
Figure 1.1 shows our estimate of the current composition of the private wealth of the population in the OECD plus China region.

Nearly half of private wealth (or, to be more precise, 7/15 of the latter) consists of the balance of claims vis-à-vis the state. 5/15 or one-third of total private wealth is real capital and 3/15 or one-fifth is the value of land.

This is a rough estimate. But we do not need a more precise measurement. Consider that even the owner of an owner-occupied, single-family house or a condominium unit does not know the exact market value of his or her property. What is of significance for us is the following finding:

Private wealth is nearly twice private real assets. Almost half of private wealth consists of net public debt.

Fig. 1.1 Three forms of private wealth and their relative shares. *Source* Authors' own presentation



Our estimate refers to the present. Nonetheless, we also assert that there is a trend: *The relative share of net claims of the private sector on the state is undergoing a secular increase.* It was smaller in the past. And in the future, it will be larger than it is today. Hence, supposing we have somewhat overestimated the share of net claims of the private sector on the state as concerns the present, then the composition of private wealth depicted in the graph will hold at some point in the 2020s or 2030s.

The first part of this book is devoted to demonstrating the thesis that we have just formulated. This part is theoretically and empirically oriented. The second part of the book deals with economic policy. What are the consequences that follow for government action from the findings of the first part? The following main topics are covered: 1. the relative size of the public sector and the requirement of price stability. 2. reforming the rules of international trade. 3. Europe, the euro and the problem of German demographics. 4. Friedrich List and developing countries. In a concluding chapter, we will address how the required reforms can be implemented in an intelligent way.

1.2 The Welfare State and the Concept of Private Wealth

Both the public debate on government debt and the discussion among economists focus on the *explicit* debt presented in the official statistics. But this only represents the lesser part of the totality of the state's obligations vis-à-vis its citizens. The explicit public debt is just the tip of the iceberg. The *implicit* public debt is much larger than the explicit. It consists in particular, but not only, of the retirement benefits accorded to citizens in the context of social security and the retirement

benefits accorded to public sector employees and civil servants. If the state were, like private businesses, an institution that has to prepare a balance sheet, then this implicit public debt would be explicit. A private business forms provisions for promised retirement benefits on the liabilities side of its balance sheet. Because the state is not required to prepare a balance sheet, the capital equivalent of these future obligations is not entered into the books as an explicit obligation.

Nonetheless, for citizens, the claim to these future retirement benefits and pensions is undoubtedly a form of wealth. Their life-planning and, in particular, their present consumption behavior are geared toward these expected future payments. On average, the voluntary savings of eligible citizens in all the OECD countries would be far from adequate for them to be able to consume in their old age as they are accustomed. Citizens with claims to retirement benefits that will later be paid by the state behave as if these claims were part of their wealth.

Hence, from an economic point of view, these claims must also be regarded as wealth. But the rules of balance sheet accounting demand then that the party required to make the payment also enters the present value of these future retirement benefits in the balance sheet as a liability. Anything else would be sophistry.

Since 1980, the jurisprudence of Germany's constitutional court, the *Bundesverfassungsgericht*, has persistently recognized that claims to retirement benefits deriving from the public retirement plan enjoy the protection of property guaranteed by Article 14 of Germany's constitution or "Basic Law." Hence, they are also wealth from this constitutional point of view (BVerfGE 53, 257). In the cited ruling, moreover, the *Bundesverfassungsgericht* also emphasizes the way in which the claim to retirement benefits contributes to the beneficiary's freedom, just as other forms of property procure freedom for the owner.

1.3 The Ambiguous Image of Public Debt

"Public debt is a burden for future generations." This is the negative view of the phenomenon of public debt. "Thanks to public debt, the private wealth of the individual citizen is on average twice average private real assets." This is the positive view of public debt.

The phenomenon of ambiguous images is well known. An example is provided in Fig. 1.2. Is this the head of a duck or the head of a rabbit?

Public debt is similarly confounding for citizens. Should they have pity on the next generations of their children and grandchildren? Or should they be happy that the state owes them and their neighbors—and later also their children and grandchildren—so much?

The economist has a clear answer here: "It depends!" There is an indicator available for which of the two views is the correct one. This indicator is the equilibrium, inflation-adjusted and risk-free rate of interest corresponding to full employment. It is also known as the real rate of interest.

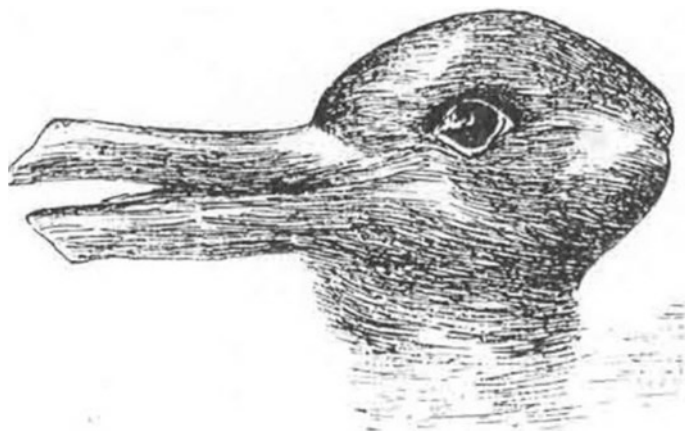


Fig. 1.2 Ambiguous image: duck or rabbit? *Source* Jastrow (1899)

The higher the real rate of interest, the more justified is the pessimistic point of view. The greater the interest that the state has to pay on its debt, the greater the burden that this interest represents for future generations. When the interest rate is very low, the optimistic view of public debt is the correct one. The interest rate is the price signal that tells economic policy how to deal with public debt.

This idea will be a recurrent theme throughout the entire analysis that we develop in this book. The factors that influence this equilibrium rate of interest will be a particular focus.

1.4 The Secular Growth of Prosperity

Those who are living in desperate poverty will behave, whether they like it or not, in the way that Jesus described in the Sermon on the Mount: “Behold the fowls of the air: for they sow not, neither do they reap, nor gather into barns; yet your heavenly Father feedeth them. Are ye not much better than they?” At the subsistence minimum, we think, above all, of the *here and now*. We are not able to make provision for the distant future by amassing wealth.

In the “modern” period, i.e., in the last two and a half centuries, prosperity has considerably increased. And with it, so too has average life expectancy. And so too the “third stage of life,” in which people continue to consume, but no longer work for money. The welfare state, which exists in all OECD countries, creates a powerful system of provision for old age and free access to healthcare services that prolong life. Modern, democratic, market-based society enables virtually everyone to make provision for their own futures over decades. And by way of its laws, the state obligates its citizens to make such provision. The state thus mandates that

practically all of its citizens must dispose of considerable wealth corresponding to their high life expectancy.

Beyond this observation, it is also clear that the trend of growing prosperity will continue. No matter how we measure economic growth or how we should measure it (cf. Harberger 1998 or, for example, Meadows et al. 1972), it is indisputable that life expectancy will continue to rise in the future. As consequence, the third stage of life will likewise continue to get longer. Therefore, the wealth amassed for retirement will also constantly continue to grow in comparison to current consumption per year.

This can also be expressed as follows: The saving rate (voluntary and mandatory combined) of persons in the active work force will continue to rise as life expectancy rises. And life expectancy is not only rising in the OECD countries. It is rising in poorer countries even faster than in rich countries. The global south is catching up. Hence, we can also expect there to be rising saving rates in the developing countries in the future.

In the global history of modernity, human behavior exhibits something like a Law of Increasing Future-Directedness. For the details, see Chap. 3 titled “Wealth and Desired Wealth”.

1.5 The Limits of Complexity: The Capital Coefficient Has Remained Constant for the Last One Hundred Years

Kaldor’s famous stylized facts (Kaldor 1961) include the finding that the capital coefficient or capital–output ratio, as he puts it, has no upward trend. This finding still remains valid today. The capital coefficient is the ratio between the value of real capital stock and annual value output. Leaving aside cyclical fluctuations, it undergoes virtually no change at all. This provides an interesting contrast to the previously discussed secular increase in the private wealth amassed for the purpose of retirement planning. How can this difference be explained?

The explanation is the institution of money: Money is the great simplifier. As aspiring economists already learn in the first semester of studies, money allows the transaction costs of exchange to be reduced by orders of magnitude. It is precisely this simplifier that makes the great complexity of modern economic life manageable. Böhm-Bawerk’s principle of the “greater productivity of more roundabout production” could only be truly exploited in the modern period, because it was only thanks to money that the division of labor could be fully developed. The division of labor is, however, the main source of prosperity—at any rate, according to Adam Smith (Smith 1776; Böhm-Bawerk 1891 [1889]).

But the future-directedness of savers and the future-directedness of investors run along entirely different lines. If a currency with stable purchasing power is given, savers can at least—if they so desire—avoid risks to the value of their financial assets. They can even eliminate certain life-risks that go beyond these risks to the value of their assets. They can, for instance, take out a policy with an insurance

company that assures them a life annuity. And social security even provides such insurance for practically everyone. As the need for safeguarding one's future increases, the risks incurred by individual savers need not increase as well. Thus, under certain institutional conditions, the constantly increasing need for future-directedness can be made manageable. What is crucial in this connection is that savers do not have to decide today *which* goods they will purchase with their savings in the future. In a market economy, the goods required for satisfying your needs are practically always available, so long as you are willing to pay the market price for them. General purchasing power in the form of money and financial assets has a considerable option value, precisely because you do not have to determine in advance which goods you will buy later. You can save to buy goods later that do not even exist yet today.

Matters look entirely different in the case of investors. Investment in real capital is always by its very nature tied to value risks. As an investor, you invest in a *concrete* object, not in *abstract* purchasing power, as savers do. The concrete objects of investment are deprived of the option value of money. The value risk may be greater or smaller. It is not without interest that the example chosen by Adam Smith to illustrate the functioning of the "invisible hand" concerns precisely this difference in risk. "As every individual, therefore, endeavours as much as he can both to employ his capital in the support of domestic industry, and so to direct the industry that its produce may be of the greatest value; every individual necessarily labours to render the annual revenue of the society as great as he can. He generally, indeed, neither intends to promote the public interest, nor knows how much he is promoting it. *By preferring the support of domestic to that of foreign industry, he intends only his own security*; and by directing that industry in such a manner as its produce may be of the greatest value, he intends only his own gain, and he is in this, as in many other cases, led by an invisible hand to promote an end which was no part of his intention" (Smith 1776, Iv.ii.9; authors' emphasis).

You have always to take care of a piece of real capital in a specific way. Its profitability crucially depends on the owner attending to the building, the fleet of vehicles, the machines and the inventories and attempting to ward off dangers. There is, so to say, a constant struggle against decay, against the Second Law of Thermodynamics: the law of increasing disorder. But even an investment object that is well looked-after is not immune to changes in its environment or changes in the market.

Not even diversification can eliminate such risks. Entrepreneurs have to attend to *their* business. If they were involved in many businesses, in order to spread out their risk, then considerable principal-agent problems would arise, entailing further risks and costs in turn. Experience teaches that focusing on your own business generates better results than dividing yourself up among numerous engagements.

A decisive point for our analysis is that the risks of real capital ownership increase with increasing future-directedness. Even if a building or a production facility is well maintained, its value is exposed to less risk, the faster it is recouped. This gives rise to all sorts of rules of thumb in economic practice. Many investments are only made if the expected payback period does not exceed a generally

established threshold. Other proposed investments have to generate an expected return that is well above the financing costs.

But the requirement of high returns means that the future-directedness of investors is limited, even when there are very low, risk-free real interest rates. It is only when there are very negative real interest rates—or, in other words, when there is considerable inflation—that the calculation of risk is reversed, inasmuch as the desire to preserve value triggers a “flight to tangible assets.” But from the point of view of the economy, this “flight” is unproductive, since the marginal yield of such investments is typically negative.

In a dynamic, growth-oriented economy, there is no guarantee that the return on investment for the investor will correspond to the overall return for the economy as a whole. Nonetheless, there is also a sound economic reason why it would not make sense for the capital coefficient always to continue to rise. The keyword is “complexity.”

The capital coefficient has the dimension of “time.” As shown in Weizsäcker (2021), it roughly corresponds to the average period of production, a concept developed by Böhm-Bawerk. The latter represents the average time lag between labor inputs and the availability of the consumer goods to which, by way of roundabout production, these labor inputs ultimately give rise. Roundaboutness of production signifies the “complexity” of the social production process as a whole. The greater the time lag between labor and the availability of consumer goods—the longer, in other words, the average period of production—the more complicated is the social production process as a whole. But complexity is tied to complexity costs. Many of these complexity costs can be placed under the rubric of the “transaction costs” that have become a focus of interest in economic theory thanks to Coase’s work (Coase 1937, 1960).

Hence, the basic principle of the greater productivity of more roundabout production must be weighed against the added costs of increased complexity. The difference between increased productivity and complexity costs can be expected to reach a maximum value with a certain period of production. At this point, it is not economically rational to extend the period of production beyond this maximum. We discuss this question in greater detail in Chap. 4 on real capital.

1.6 Digitalization

The public, politicians and academic specialists have made questions concerning digitalization a focus of their interest. Despite intensive debate, it is difficult to predict the social path that digitalization will take. The only point on which everyone agrees is that artificial intelligence and other variants of digitalization will fundamentally change society and especially the economic spheres of society. Many expect accelerated technical “progress” as a result. We place “progress” in quotes, because some people do not regard this transformation as progress.

But, regardless of whether one wants to speak of digitalization as progress or not, an acceleration of technical change undoubtedly signifies faster obsolescence of the different forms taken by real capital. If, however, real capital is replaced more quickly due to faster obsolescence, then the apparatus of production is able to tie up less economic value as measured against its annual productive output. This suggests that digitalization contributes to a fall in the capital coefficient, rather than to its increase.

Economic policy has, in any case, to be prepared for the possibility that the capital requirements of the production sector will decline relative to the total product.

1.7 The Consequence: Low Interest Rates, Today and Tomorrow

If, with rising life expectancy and rising prosperity, people want to increase their wealth faster than their annual consumption; if, however, on the other hand, the system of production balks at increased complexity and increased roundaboutness of production; then capital supply puts more and more pressure on prices. Over-supply makes prices fall. The price of capital, however, is the interest rate. If there were not a countervailing force, it would have to become negative under conditions of full employment. This countervailing force is the state: more precisely, public action to offset the growing capital supply. The state has to develop a *negative capital supply* by increasing public debt just enough so that, despite the private savings glut, full employment is preserved at a non-negative real rate of interest.

Public debt is thus the macroeconomic steering instrument with whose help interest rates are prevented from becoming negative.

This is easier said than done. For, even if one has a positive view of public debt, the latter is not so easy to manage in both political and economic terms. In the past, public debt has been abused again and again.

The positive view of the ambiguous image of public debt depends on interest rates remaining low. Excessive public debt can be recognized by rising interest rates, by threats to price stability, by the government ultimately resorting to emergency measures, like price controls, that suspend the mechanism of market regulation via prices. The state and hence policymakers are thus themselves responsible for ensuring that the condition for a positive view of public debt is preserved in the form of low interest rates. In Chap. 13, the concluding chapter of our book, we will return to this political task.

1.8 “Secular Stagnation”

Since 2010, Carl Christian von Weizsäcker has been defending the thesis that there is a structural oversupply of private savings (Weizsäcker 2010; Weizsäcker 2014). This thesis has often been described as a variant of the “secular stagnation” thesis.

The term was coined by Alvin Hansen in 1939 (Hansen 1939). Hansen explained what he called “secular stagnation” by other causes than we do in this book, however. Since Larry Summers’ intervention in 2013 (Summers 2013), “secular stagnation” is again being discussed internationally by economists: for example, in a recent article by Rachel and Summers (Rachel and Summers 2019), which contains a detailed econometric analysis of the evolution of the “neutral” interest rate. The connection between low interest rates and public debt is also the subject of Olivier Blanchard’s 2019 Presidential Address to the American Economic Association (Blanchard 2019). In Chap. 7, we deal with both the original and the more recent discussion of secular stagnation in detail.

The phenomenon described in our book is compatible with the findings described by Summers, Rachel, Blanchard and others. But the term “secular stagnation” is misleading. For the oversupply of private savings can be seen as the result of gratifying progress in prosperity and life expectancy. And, so long as the “private savings glut” is offset by net public debt in a way that is reasonable and not excessive, it by no means has to lead to stagnation. In a certain way, we thus come closer to realizing a capitalist variant of the Communist utopia formulated by Marx and Engels in 1846 (Marx and Engels 1970 [1846]). A more precise analysis is provided in our “utopian” Chap. 12.

1.9 “Dynamic Inefficiency” and the Concern for Future Generations

As stated above, it is crucial for the positive view of public debt that the state can take on debt at low interest rates. As Blanchard has noted for recent decades in the USA, the real yield on public debt has, far more often than not, been lower than the growth rate (Blanchard 2019). Hence, this low interest rate is not a brand-new phenomenon. Now, at the same time, we have to bear in mind that during this period, the USA, also far more often than not, imported on balance considerably more capital than it exported. But this reflects the fact that the effective, risk-free real yields in the rest of the world have also been low. For this is the only way to explain the massive net inflow of capital into the USA.

If the risk-adjusted real interest rate is for the most part lower than the system’s growth rate, then there is good reason to conclude that a condition of “dynamic inefficiency” exists: The economy in question could consume more today without having to forego future consumption. This could only be otherwise if the state is able to take on debt at a risk-free interest rate that is lower than the marginal productivity of capital. We will return to this last point in Sect. 2.10. For the purpose of the following argument, we assume that the yield on the public debt of countries like Germany and the USA represents a correct price signal for the marginal productivity of capital (In Sect. 2.2, we show that this is not an arbitrary assumption. See also Weizsäcker 2021, Chap. 2, Sect. 12).

Moreover, if the real rate of interest is so low that dynamic inefficiency exists, then it can no longer be said that public debt is a burden for future generations. For the consequence of current and future foregoing of this public debt would be that there is insufficient demand for savings at the given interest rate. This would have as consequence in turn that the interest rate would have to fall even further and possibly become negative. This would certainly not help future generations. On the contrary, the resulting disadvantages for the current generation would in all likelihood affect the children as well. There would be fewer consumer goods to distribute both today and in the future.

The precise investigation of questions of intergenerational distribution requires a steady-state analysis, such as that carried out by Carl Christian von Weizsäcker in Weizsäcker (2021). This analysis confirms the conclusion that we just drew: At low, real equilibrium rates of interest, public debt is *not* a burden for future generations.

1.10 A Brief Overview of the Following Chapters

In the next chapter, Chap. 2, we introduce the concept of the “natural” rate of interest. We define it as the hypothetical real rate at full employment corresponding to zero net public debt. Within the framework of a steady-state analysis, we then discuss the implications of public debt for prosperity. This chapter is an abridged version of Weizsäcker (2021).

Chapter 3 is about people’s desired wealth. It deals with the thesis, for which there is strong empirical support, that with rising prosperity and hence rising life expectancy, desired wealth rises faster than current consumption.

There then follow three chapters on the three different forms of private wealth that we distinguish: 1. real capital, 2. land and 3. net claims on the state. In each of Chaps. 4, 5 and 6, there is a theoretical part and an empirical part on the respective form of wealth. The analysis always concerns the OECD plus China region.

Chapter 7 provides a flow-variable-based analysis of the Great Divergence between saving and investment from a Keynesian perspective.

Chapter 8 concludes the theoretical–empirical part of our book.

The second, economic policy part begins in Chap. 9 with pleas for an adequate volume of welfare-state benefits and for price stability as prerequisites of a stable, liberal-democratic economic and social order.

Chapter 10 is about the effects of a low interest rate world on international trade. We show here why and how the WTO has to be supplemented by a macroeconomic component. This entails, in particular, greater efforts—including efforts involving fiscal policy—to achieve balanced current accounts.

Chapter 11 applies the suggestions in Chap. 10 to the European Union and, in particular, the eurozone. Here too, in the interest of stabilizing the euro and promoting full employment, there has to be agreement on national fiscal policies that aim at achieving balanced current accounts.

Chapter 12 is a “utopian” proposal for improving the situation in developing countries. It is based on the idea that these countries could take the Chinese “economic miracle” as model—and that the OECD countries could encourage this approach by providing favorable conditions for imports from the developing countries. In order to preserve full employment in the OECD countries, fiscal policy, involving a deliberate increase in net public debt, should be employed to promote prosperity and to stem migratory movements from the developing countries. This sort of win-win cooperation between rich countries and developing countries is possible thanks to the structural surplus of private savings in the OECD countries.

In Chapter 13, we conclude the book with some provisional reflections on how an astute policy of the required net borrowing can be implemented in the OECD plus China region without being abused for populist purposes.

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