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## Monetary Policy, Inequality and Political Instability

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# Monetary Policy, Inequality and Political Instability

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# Monetary Policy, Inequality and Political Instability

## Abstract

Based on the concepts of justice by Hayek, Rawls and Buchanan we argue that the growing political dissatisfaction in industrialized countries is rooted in the asymmetric pattern in monetary policies since the 1980s for two reasons. First, the structurally declining interest rates and the unconventional monetary policy measures have granted privileges to specific groups. Second, the increasingly expansionary monetary policies have negative growth effects, which reduce the scope for compensation of the ones excluded from the privileges. The result is the fading acceptance of the economic order and growing political instability.

JEL-Codes: D630, E020, E520.

Keywords: Hayek, Rawls, Buchanan, privileges, inequality, monetary policy, order of rules, difference principle, economic order.

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## **1. Introduction**

The outcomes of the most recent elections in the industrialized countries reflect the discontent of significant groups of voters with the current economic order. From an economic perspective, voter's discontent has been traced back to the low (and even negative) real income gains of the middle-income groups. Milanovic (2016, 11) shows that people between the 80<sup>th</sup> and 85<sup>th</sup> percentiles of the world's income distribution experienced (close to) zero growth in real income while the rest experienced real income increases above 25%. Income inequality within the industrialized countries (especially Germany, Japan and the US) has increased in favor of the higher end of the income distribution.

Piketty (2014) has attributed increasing income inequality and political discontent to the market mechanism, under which returns to capital are higher than economic growth. In contrast, Stiglitz (2012) argues that the United States politics have played a pivotal role in helping small interest groups to compound their wealth, while stifling capitalist growth dynamics. Rodrik (2017) sees globalization at the root of the rise of populism. He argues, based on Stolper and Samuelson (1941), that the gains from the reduction of trade barriers (e.g. in form of lower prices for imported goods and productivity gains) are for certain groups smaller than the pressure on their wage levels resulting from globalization. For Inglehart and Norris (2016) the rise of populism can be explained not only by the worsening in the economic perspectives for parts of the population but also by a cultural backlash against progressive cultural change in the age of globalization.

For Milanovic (2016) technological innovation has been an important driver for increasing inequality since the 1980s. Whereas innovators (and high-skilled workers) profited from high rewards, the workers in the old industries experienced unemployment and pressure on wages. The increase in inequality since the 1980s is part of what he calls the "Kuznets waves", endogenous movements of increasing and decreasing income inequality.

We contribute to the literature by analyzing the role of monetary policy for growing income inequality and political discontent among major parts of the population in the industrialized countries. We argue that increasingly expansionary monetary policies have been providing privileges to some parts of the population, while undermining real growth as a source of compensation. We use the concepts of justice by Hayek (1976), Rawls (1972) and Buchanan (1954) as a theoretical framework to explore the relationship between privilege granting, low growth and the acceptance of the economic order and political instability.

## **2. Justice and acceptance of the economic order**

Scholars in the egalitarian tradition have proposed different principles of justice ranging from strict egalitarianism (Nielsen 1979) to equality of opportunity (Sen and McMurrin 1980; Dworkin 1981a, 1981b; Fleurbaey 2001; Roemer and Trannoy 2016).<sup>1</sup> While from the egalitarian perspective there are specific ideal distributive patterns (such as equality of income or wealth), from a libertarian perspective there are no normative goals regarding the distributive outcome of economic interaction (Nozick 1974; Hayek 2013 [1973]). As recent studies have stressed people's preference for a just process as opposed to an equal outcome<sup>2</sup>, we focus on the libertarian perspective for the formulation of our characterization of the acceptance of the economic order.

### **2.1 Markets: just process vs. just outcome**

For Hayek (1976), the concept of “social justice” (understood as “distributive justice”) is empty and only represents a mirage. Hayek (2013 [1973], 34 ff.) distinguishes between two kinds

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<sup>1</sup> See Roemer and Trannoy (2015, 2016) for a discussion of the most relevant contributions to the egalitarian theory since Rawls (1972). Also Piketty (2014) follows an egalitarian tradition. Even though he does not explicitly discuss the ethical justification for redistribution, he seems to regard inequality of wealth and income as unjust. See McCloskey (2014) for a discussion of Piketty (2014).

<sup>2</sup> See Starmans, Sheskin, and Bloom (2017).

of orders for the coordination of economic activities. In *organizations or made orders*, a central plan determines the duties of each of its members and the reward for each activity. In contrast, in *spontaneous or grown orders* the activities are coordinated in a decentralized manner. People interact within a given framework of rules and decide how to use the available resources given their individual knowledge of space and time in what they think would be conducive to the fulfillment of their goals.

According to Hayek (1976, 33) the category of just or unjust can only be applied to the income and wealth distribution of made orders since only in made orders somebody deliberately decides about the distribution of the duties and the rewards. In contrast, in a spontaneous or grown order the realized distribution of income and wealth is an *unintended* result of the decentralized interaction of people under common rules. Hayek (1976, 107 ff.) uses the metaphor of the market as a game. The participants design their strategies of action considering the rules. The rules, the effort of each participant and luck determine the outcome.

Vanberg (2005, 7) distinguishes between the rules of the game, the actions of the game and the results of the game. Since individuals act according to the rules, it is straightforward to ask whether the rules are just. For Hayek, the problem is not whether a certain distribution of income and wealth is just or unjust, but rather whether that distribution is the outcome of a process under just or unjust rules.

For Rawls (1972, 136), similarly, the concept of justice is determined by the rules of the game and not by the outcome of the game. His theory of “justice as fairness” is derived from the hypothesis of the “veil of ignorance”: If people would be in a fair situation of equal liberties (“original position”) and would have to agree on principles of social interaction without knowing what their position in society would be (level of education, income, wealth and so on), what principles would they agree on?

For Rawls, given that individuals are rational, a deliberation behind the veil of ignorance from an original position would lead to an agreement on two principles of justice. The first one is that every person should enjoy equal basic liberties.<sup>3</sup> The second principle has two parts: a) Social and economic inequalities should be attached to positions open to everyone under conditions of equality of opportunity. b). Social and economic inequalities should be to the greatest benefit of the least-advantaged, i.e. the difference principle (Rawls 2001, 43). The individuals, behind the veil of ignorance, would agree on the difference principle only if it does not interfere with the principles of equal liberties and fair equality of opportunity.<sup>4</sup>

For Brennan and Buchanan (2000 [1985], 108 ff.) the ultimate criterion for just rules is the consensus. If the individuals decide to play the game, they are implicitly agreeing on the rules of the game. This implicit agreement makes the game just. A change in the rules during the game without the agreement of the players would be unjust. *“A rule is legitimate, and violation of it constitutes unjust behavior, when the rule is the object of voluntary consent among participants in the rule-governed order”* (Brennan and Buchanan 2000 [1985], 112).

All in all, for Hayek (1976), Rawls (1972, 2001) as well as Brennan and Buchanan (2000 [1985]), the benchmark for justice are the rules of the game and not the distributive pattern of a market outcome. Therefore, interventions that restrict equal liberties by granting privileges to certain groups of the society are unjust. Privileges (such as monopoly rights or bail-out of insolvent companies) would not be capable of finding a consensus since certain market participants would

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<sup>3</sup> *“The basic liberties of citizens are, roughly speaking, political liberty (the right to vote and to be eligible for public office) together with freedom of speech and assembly; liberty of conscience and freedom of thought; freedom of the person along with the right to hold (personal) property; and freedom from arbitrary arrest and seizure as defined by the concept of the rule of law”* (Rawls 1972, 61).

<sup>4</sup> *„As I explain below, the first principle is prior to the second: also, in the second principle fair equality of opportunity is prior to the difference principle. This priority means that applying a principle (or checking it against test cases) we assume that the prior principles are fully satisfied. We seek a principle of distribution (in the narrower sense) that holds within the setting of background institutions that secure the basic equal liberties (...) as well as fair equality of opportunity.”* (Rawls 2001, 43)



be excluded from specific rights. People would not agree neither in Rawls' fair original position behind the “veil of ignorance” nor would they find a consensus in Brennan and Buchanan’s (2000 [1985]) constitutional setting, unless there is a compensation for the exclusion from the privilege.

## **2.2 Income distribution and acceptance of the economic order**

Even though the attribute of just or unjust is determined by the rules of the game, the outcome plays an important role for the acceptance of the game. From the contractarian perspectives (Rawls 1972, 2001; Brennan and Buchanan 2000 [1985]), the people implicitly accept the order since it emerges from the tacit agreement on a specific set of rules itself. People, however, are not able to choose in which order they are born and the order may change (or may be changed) without the consensus of each individual. Then, the discontent can be expressed in the desire for government intervention and redistribution.

In the view of Hayek (1976, 80) people might ask for redistribution if they understand the market not as a spontaneous but as a planned order and therefore perceive the individual rewards as unjust because they do not fully correspond to the effort each participant spent. For Rawls (1972, 2001), behind the veil of ignorance people would agree on equal liberties and fair equality of opportunity as a basic framework under which redistribution can be done. Given these two pre-requisites, growing incomes for the most favored would be perceived as just, as long as they are linked to an improvement for the least-advantaged of society.

The motives to “correct” the market outcome for uneven distributions of income have been widely addressed. German Ordoliberalism<sup>5</sup> emphasized the institutional framework that constitutes a functioning market order (Eucken 2004 [1952]). Ideally, the rules would apply equally for

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<sup>5</sup> Vanberg (2015) offers an overview of the ordoliberal rule-oriented economic tradition and its relevance for understanding Germany’s economic policy during the European financial and debt crises.

everyone without privileges for any member of society. Freedom of privileges gave markets an inherent moral value: the non-discriminatory treatment of the participants (Vanberg 2002).

For Eucken (2004 [1952], 316), in line with Hayek (1976), a market order would be just if it would not grant any privileges. In contrast to Hayek (1976), for Eucken a free market order could still have shortcomings which would require a correction, for example via a progressive tax system.<sup>6</sup> Müller-Armack (1978) saw the market as the best technical instrument for the creation of material welfare, which would, however, require a social correction (Vanberg 2002). Redistribution should allow the harmonization of the material benefits from markets among all social groups to ensure a peaceful social order.<sup>7</sup> Social compensation was seen as a way to ensure the acceptance of the economic order, which itself was the device of producing the necessary economic welfare for redistribution. For both, Eucken (2004 [1952]) and Müller-Armack (1978), redistribution would achieve its peace-enhancing goal only with a functioning market order under just rules.

The redistribution mechanism itself, however, can undermine the rules that constitute the functioning of the market. When governments claim to “correct” the market outcomes, a door is opened for granting privileges. The correction of the market outcome in the name of justice makes governments vulnerable to interest groups. *“[T]he more dependent the position of the individuals or groups is seen to become on the actions of government, the more they will insist that the governments aim at some recognizable scheme of distributive justice”* (Hayek 1976, 68).

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<sup>6</sup> He observed significant differences in the purchasing power of the citizens of post-war Germany. While firms tended to produce luxury goods to cover insignificant needs of wealthy people, the most urgent needs of the poorest individuals remained unsatisfied (Eucken 2004 [1952], 300).

<sup>7</sup> *“The decisive problem is how the divergent objectives of social security and economic freedom can be harmonized in a way, contrary to the attempts in the past to seek social progress through the elimination of competition.”* (Müller-Armack 1978, 327).

Mises (2008 [1952]) called this interventionist approach of “fixing” the market outcome the “middle-of-the-road policies”. Even if well intentioned, interventions would lead to further interventions (i.e. intervention spirals) which would gradually undermine the market order, and finally lead to socialism (i.e. a centrally planned order).<sup>8</sup>

In democratic societies, political parties compete for votes and offer bundles of policies to gain the support of the majority of voters (Buchanan 1954). A policy intervention is usually a privilege for one specific group (such as a monopoly right, or a subsidized credit to prevent the bankruptcy of a company) at the cost of the ones who do not receive the privilege. Even despite being excluded from the privilege, voters may support such a proposal if they expect some kind of compensation. The majority may still accept the privilege for the specific group if the intervention promises to achieve a superior goal.<sup>9</sup>

### **3. Asymmetric monetary policy as a change in the economic order**

If growth slows down such that it is not high enough to finance the redistribution systems of industrialized countries, the temptation grows to ensure the sustainability of the social welfare states via the central bank. The asymmetric monetary policies as observed in the large industrialized countries since the mid-1980s can be seen as a political strategy from the point of view of Brennan and Buchanan 2000 [1985] as they helped to sustain growth and redistribution in the short-term. In the long-term, however, they have undermined growth and welfare by modifying the rules of the game.

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<sup>8</sup> “*Interventionism cannot be considered as an economic system destined to stay. It is a method for the transformation of capitalism into socialism by a series of successive steps*” (Mises 2008 [1952], 48).

<sup>9</sup> As for example for the infant-industry arguments to achieve industrialization, or the bail-out of Greece to rescue the euro.

### 3.1 Asymmetric monetary policy and changing rules of the game

From the perspective of the Austrian business cycle theory (Mises 1912; Hayek 1929), central banks tend to make mistakes during both crisis and boom. If central banks hold the monetary policy rate below the natural interest rate (the interest rate at which investment and savings are equal)<sup>10</sup>, they create the breeding ground for unsustainable booms, which inevitably end in crisis

If the central banks hold the policy interest rate higher than the natural interest rate, the crisis is aggravated. Friedman and Schwartz (1963) as well as Bernanke (2005) argued that the US Fed had kept interest rates too high during the early years of the 1930s world economic crisis, thereby aggravating the crisis. Similarly, the Bank of Japan was blamed for having kept interest rates too high during the early years after the bursting of the Japanese bubble in the early 1990s (Bernanke 2000; Posen 2000).

Hayek (1931) assumed symmetric monetary policy mistakes in his monetary overinvestment theory: over time, central banks keep the policy interest rate by turns above or below the natural interest rate. In contrast, Hoffmann and Schnabl (2011) argue that since the mid 1980s central banks in the industrialized countries have been increasingly disinclined to keep interest rates too high and have instead kept the interest rate too low during and after crisis.<sup>11</sup>

The consequence has been a gradual decline of short-term interest rates against zero as shown in Figure 1. With short-term interest rates at the zero-bound, unconventional monetary policies – being mainly based on extensive government bond purchases – inflated central bank

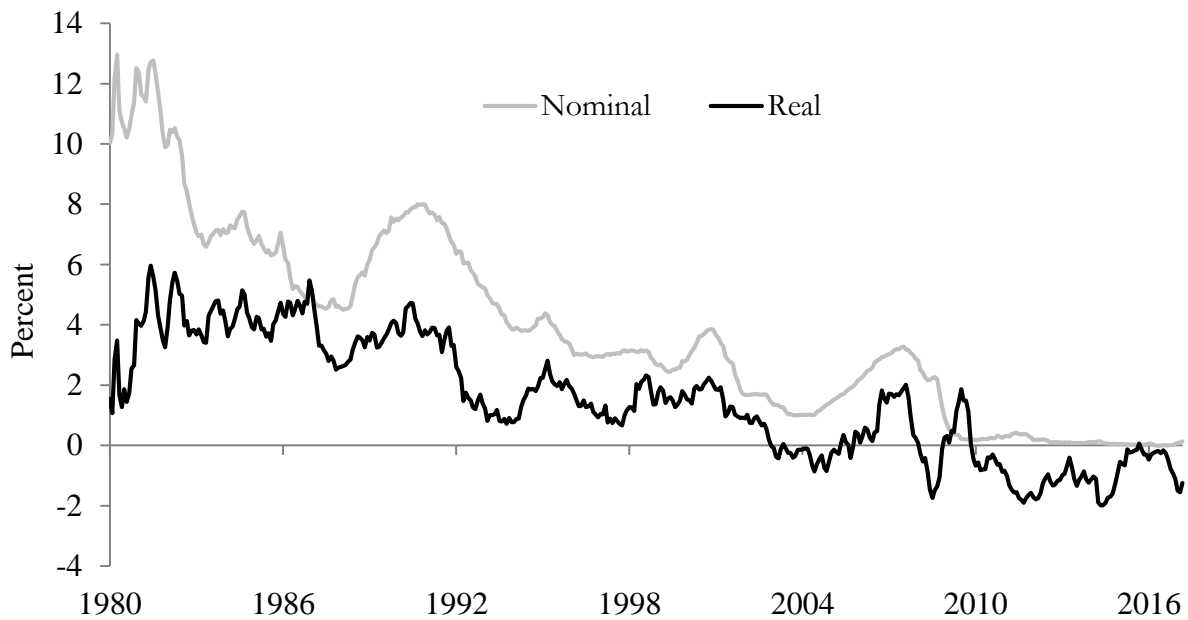
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<sup>10</sup> Mises (1912) and Hayek (1929) explained business cycles by the deviation of the central bank (capital market) interest rate from the natural rate of interest. Hayek emphasized the importance of the intertemporal alignments of plans of producers and consumers to explain overinvestment as a mismatch between the production structure and consumer preferences. Therefore, the natural interest rate is the interest rate which aligns saving and consumption preferences with the production structure over time.

<sup>11</sup> See Schnabl (2016) for an explanation of why the gradual monetary expansion did not lead to increasing consumer price inflation.

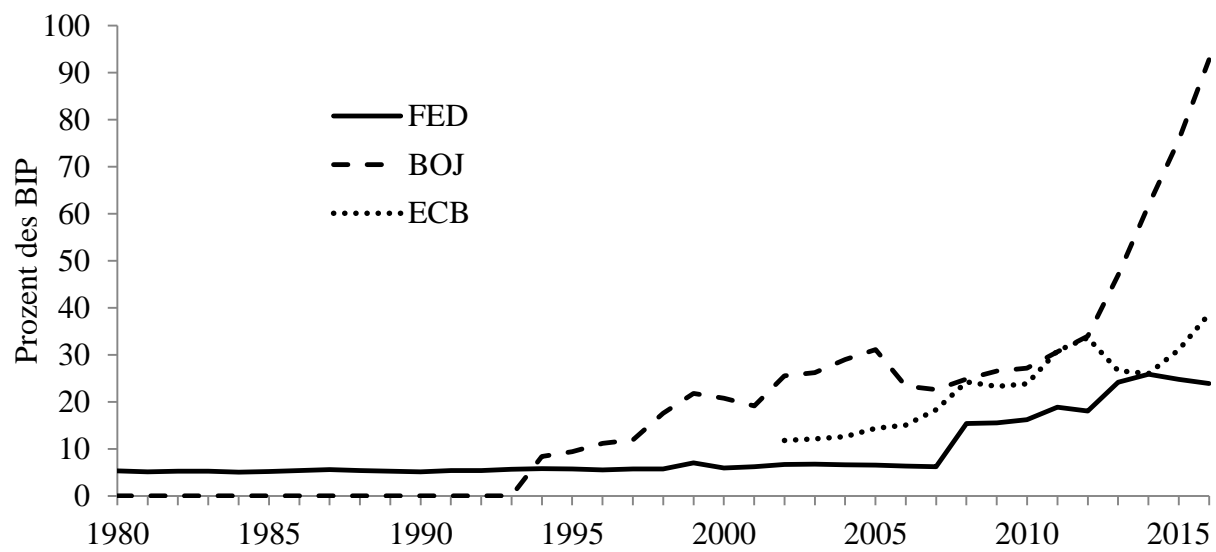
balance sheets (Figure 2), thereby further depressing interest rates at the long end of the yield curves.

**Figure 1: Short-term Interest Rates in G3 Countries**



Note: The lines show the (unweighted) average of the money market rates for the United States, Germany and Japan. From 1999 on the euro area replaces Germany.  
Source: International Financial Statistics, IMF.

**Figure 2: Central Bank Total Assets as Percent of GDP**



Sources: ECB, Eurostat and World Economic Outlook (IMF).

This asymmetric pattern in monetary policy systematically disturbed the rules of the game. Markets can be understood as institutionally secured arenas for voluntary exchange (Vanberg 2001). The price mechanism guides the exchange by signaling the relative scarcity of goods and setting incentives for production. A key element for the price mechanism to work is the liability principle: market participants bear the responsibility for their actions. They can privatize profits but also have to bear losses, i.e. the risks of their investment decisions (Eucken 2004 [1952]).

The liability principle implies that, during crisis, an adjustment process takes place in which unprofitable investment projects are dismantled (Schumpeter 1934). This “creative destruction” is necessary to relocate production factors to new, more profitable investment projects. The benchmark for the profitability of investment projects is the interest rate. If the central bank sets the interest rate equal to the natural interest rate, all investment projects with an expected return below the natural interest rate have to be dismantled or will not be realized. If, however, the monetary policy rate is systematically set below the natural interest rate, investment projects with a comparatively low marginal efficiency survive. New investment projects with low marginal efficiency are encouraged.

A policy rate that is artificially kept below the natural interest rate in crisis weakens the liability principle because it grants a privilege for those investors who have launched low-return investment projects. From the point of view of Hayek (1976) and Rawls (1972), this can be seen as unjust. This is particularly the case, when central banks follow an asymmetric interest rate path as shown in Figure 1. While during the boom very easy financing conditions encourage investments with low marginal efficiency, these low-return investments are shielded against default during the bust when central banks set the interest rates even lower. In particular, a privilege is given to the

economic agents who have speculated during the boom on rising asset prices, as interest rate cuts prevent or contain a collapse on asset markets.

The liability principle is directly suspended by privilege granting when governments bail-out market participants in crisis by subsidies (enterprises) or recapitalizations (financial institutions). Since the 1980s, governments have increasingly bailed-out financial institutions during crisis to maintain the stability of the financial system. Bail-outs have occurred directly in the form of nationalization and/or recapitalization of financial institutions in distress. Indirectly central banks have subsidized financial institutions by cutting interest rates sharply and by buying extensively government and corporate bonds. Whereas during the financial market boom, fast growing profits were privatized via higher wages and bonus payments in the financial sector, during crisis the losses were covered by the state, that is the tax payers.<sup>12</sup>

Market participants are likely to re-accommodate their strategies if the liability principle is systematically suspended. Moral hazard (Arrow 1968) occurs, for example in form of one-way bets on rising asset prices. If banks and enterprises can expect central banks to react with lowering interest rates in response to crisis, they have an incentive to make less cautious investment decisions during the boom for two reasons. First, as the low-cost liquidity provision drives asset prices upwards, expectations about further increasing asset prices become the very reason for investment rather than expected profitability. As Schumpeter (1934, 226) puts it: “*The symptoms of prosperity themselves finally become [...] a factor of prosperity.*”

Second, the moral hazard problem is widened if the expected probability of the bail-out is larger for large entities, because they are regarded as “too big to fail”. Especially in the financial sector, contagion effects among the highly intertwined financial institutions have become an

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<sup>12</sup> The public rescue measures went hand in hand with the asymmetric monetary policy, as costly rescue measures increased public debt. Growing public debt only remained sustainable, because the central banks bought large amounts of government bonds to keep their yields at ever lower levels (Schnabl 2015).

important argument for monetary policy rescue measures (Bernanke 2008). Even if the management expects a financial institution to collapse during crisis, it will still have pre-crisis incentives to make risky investment decisions. The reason is that speculation profits are privatized during the boom, whereas the losses can be shifted to the stockholders or to the public during the bust.

In the long term, the weakened liability principle paralyzes the incentives for enterprises to realize profits by innovation and efficiency gains, as no implicit insurance mechanism is provided for the risk linked to investment in real economic activity. With easy financing conditions due to gradually declining interest rates, the net worth of stock listed enterprises will tend to increase even without innovations and efficiency gains, as speculation drives stock prices upwards. When stock prices collapse, investors can expect additional liquidity provision by the central banks, sustaining the level of stock prices even without the dismantling of low-return investment projects.

Caballero, Hoshi, and Kashyap (2008) show for Japan that under the zero interest rate policies, the profits of Japanese (zombie) companies became strongly dependent on the low-cost liquidity provision of the Bank of Japan via the banking system (zombie banks). If banks and companies have been anticipating the gradual decline of interest rates, they are likely to have subdued efforts to increase efficiency and to generate innovation. The result has been declining productivity growth in the Japanese economy. Sekine et al. (2003) find forbearance lending: Banks continue to provide irrecoverable loans, thus keeping themselves and (potentially) insolvent companies alive. Similarly, Peek and Rosengren (2005) associate Japan's central bank crisis management with a misallocation of capital via the credit sector, which keeps companies with poor profit prospects alive (*"evergreening"*).

The upshot is that the asymmetric pattern in monetary policy has prompted a gradual change in the rules of the game towards a weaker liability principle. Markets become less spontaneous and



more centrally planned, as increasingly the liquidity provision of central banks and not the private considerations about expected future returns from innovations and efficiency gains determine investment decisions. The allocation function of interest rates, which separates between high- and low-return investment, is suspended. Since policy makers fear the failure of enterprises and financial institutions in case of a tightening of the monetary conditions, the central bank keeps providing low-cost liquidity and commercial banks continue to low-interest rate-credit to projects with low profitability.<sup>13</sup>

The outcome is comparable to what Kornai (1993) called the “soft budget constraints” in the case of the Central and Eastern European centrally planned economies: the government prevented non-profitable firms from collapsing to prevent an increase in unemployment by providing funds via the state-owned banking sectors. State-owned banks refinanced themselves at the central bank, which led to a growth of money supply beyond the amounts of goods and services produced.

### **3.2 Effects on productivity increases and economic growth**

The gradual weakening of the liability principle and the resulting change in strategies of market participants affect the outcome of the market process in two ways. First, assuming constant technological innovation, the allocation efficiency is disturbed, as the allocation function of the interest rate is undermined. Resources are shifted during the low-cost liquidity driven upswings towards investment projects with relative low marginal efficiency. The average marginal efficiency of investment decreases.

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<sup>13</sup> See Summers (2014) and Gordon (2012) for justifications of this policy. For Summers (2014) the “natural” real interest rate is the interest rate that balances savings and investment at full employment. It is very low (negative) due slower population growth, technological innovations and rising inequality. Gordon (2012) attributes the low real interest rate to an exogenous slowdown of productivity growth.

With a symmetric monetary policy pattern, the investment projects with low marginal efficiency would have to be dismantled during the downturn and the average efficiency of investment would increase again. With further interest rate cuts in the downswing, however, the lower average efficiency of investment achieved at the peak of the boom remains constant. It further decreases during the crisis if new investment projects with even lower marginal efficiency are financed. The overall investment structure is distorted towards projects with low marginal efficiency.

Second, the asymmetric monetary policies paralyze the incentives for innovation. In the neoclassical growth theory, the accumulation of capital generates growth up to a long-term equilibrium between investment and depreciation (steady-state economy). The steady state condition is based on the assumption of a declining marginal efficiency of capital when the stock of capital increases (Solow 1956; Swan 1956). Only innovation and technological progress, which can be assumed to be linked to increasing productivity, can generate growth beyond the steady state in the long term (Solow 1957). The asymmetric monetary policy pattern undermines this innovation process.

Leibenstein (1966) sees incentives and motivation as major determinants of a concept of efficiency which goes beyond allocation efficiency. Enterprises do not realize all possible efficiency gains when competition is limited (x-inefficiency).<sup>14</sup> Limits to competition arise when the gradual compression of financing costs substitute innovation and the strive for efficiency gains among enterprises. Competition is also restricted, when asymmetric monetary policies lead to a concentration in the financial and enterprise sectors by undermining the traditional banking business and thereby limiting the access of small and medium enterprises to financing.<sup>15</sup>

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<sup>14</sup> On the impact of credit booms on the allocation of labor and productivity dynamics see also Borio et al. (2016).

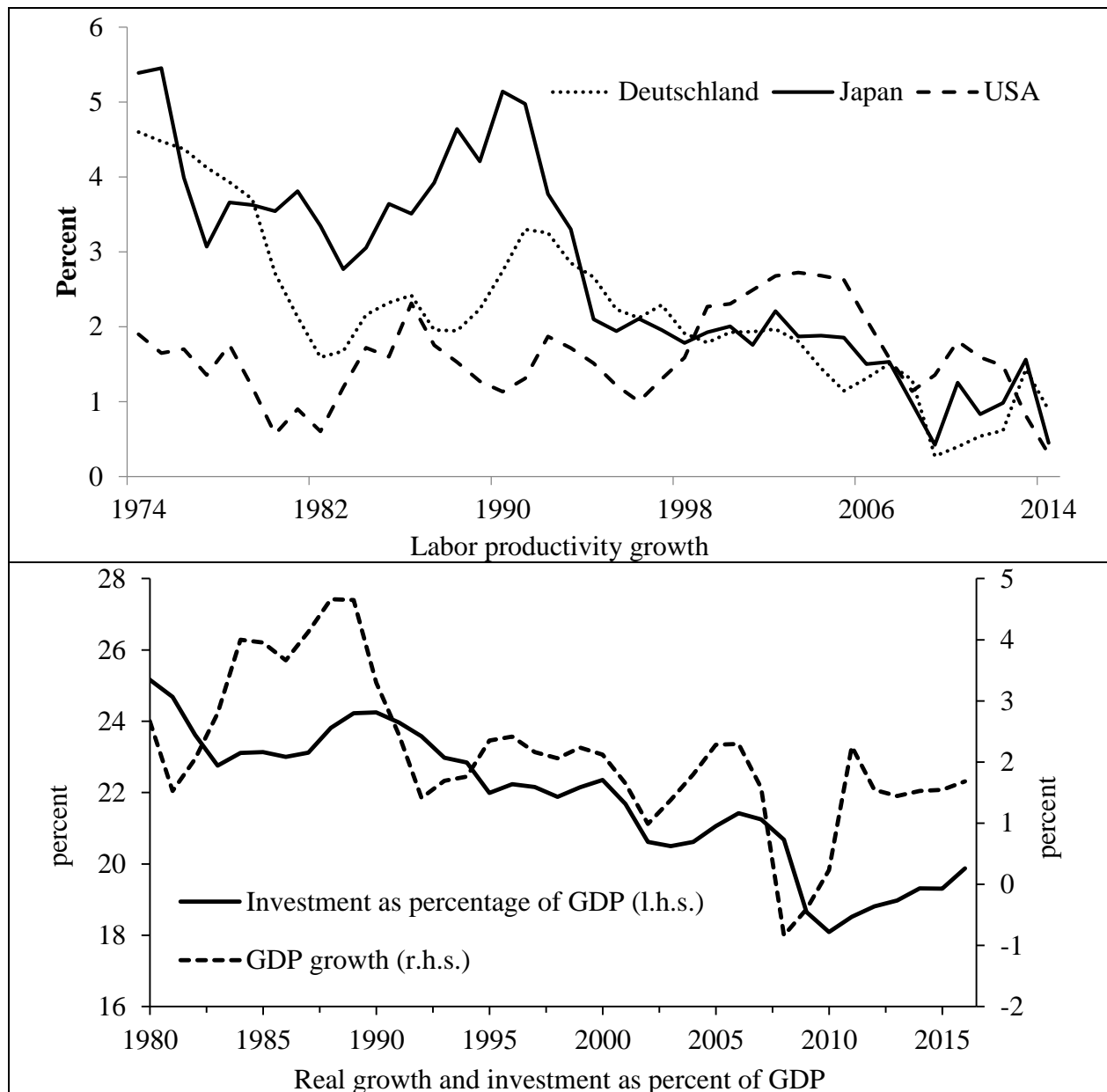
<sup>15</sup> For details see Schnabl (2016).

This seems to have been the case in Japan. Gerstenberger and Schnabl (2017) show for the Japanese banking sector that the persistent monetary expansion has gradually depressed the lending-deposit-spread as the traditional source of income for Japanese banks. This has created pressure to generate alternative sources of income such as fees and commissions. The largest scope to increase revenues from fees is investment banking, where large banks have a comparative advantage due to economies of scale and easier access to international financial markets.

The concentration process in the financial sector has been accompanied by a concentration in the enterprise sector because the benefits originating from the increasingly expansionary monetary policies have been larger for large enterprises than for small and medium enterprises for three reasons. First, large enterprises have direct access to capital markets and are able to substitute bank credit by direct financing via the emission of bonds and of stocks. Central banks (especially the ECB and the BoJ) have been buying bonds of large enterprises in the course of extensive asset purchase programs. Second, having direct access to low-cost funds, large enterprises can raise credit to take over smaller enterprises (leveraged buy-outs). Third, the gradual monetary expansion depreciates the currencies generating windfall profits for the more export-oriented large enterprises.

In contrast, small and medium enterprises remain dependent on bank financing as they cannot profit from central bank bond purchases and financing at large capital markets. The stability of banks is, however, undermined by the low-interest rate policies as the margin between lending and deposit rates – as traditional source of income – is depressed. Furthermore, as large enterprises withdraw from bank-financing as their cash reserves increase, the risk in the credit portfolio of banks increases forcing them to reduce the credit exposure to small and medium enterprises.

**Figure 3: Labor Productivity Growth, Investment and Real Growth in G3 Countries**



Source: Eurostat, OECD, Cabinet Office (Japan). In the lower panel, each line is the average of the values for the three countries.

All in all, in the course of the asymmetric pattern in monetary policy crisis management, the provision of liquidity and loans is increasingly independent from efficiency criteria. Fragile banks hesitate to reduce credit exposure to enterprises with low profitability, because a collapse of an enterprise would increase the stock of bad loans. This causes the average productivity of “zombie

firms” supported by “zombie banks” to remain low. Loan provision to new dynamic enterprises becomes more restrictive, as production factors remain bound in investment projects with low marginal efficiency. A reduced pace of innovation, which according to Hayek (1968) is triggered by lower levels of competition, has a negative impact on productivity gains and thereby growth. As Figure 3 shows in the upper panel, productivity gains and real growth have declined in all major industrialized countries with the start of the asymmetric monetary policy pattern in the mid-1980s.

#### **4. Distribution effects and acceptance of the economic order**

As asymmetric monetary policies erode productivity growth, the scope for increases in the general wage level and social security benefits shrinks. Voters become increasingly disappointed because the possibility for compensation for being excluded from the privileges provided to others fades. The acceptance of the prevalent economic order is gradually undermined as the market participants regard the new order as increasingly unjust. Political instability increases.

##### **4.1 Distribution effects of asymmetric monetary policy**

As a basic principle, monetary policy has distribution effects. For this very reason central banks were aimed to be shielded against the influence of interest groups (Issing 2006). Given the tremendous degree of monetary expansion as observed since the mid-1980s, one would expect substantial distribution effects. Up to the present, the perception prevails that the distribution effects of monetary policy are transmitted via consumer price inflation. Yet, whereas consumer prices are constant, assets prices have played a growing role for the redistribution of income and wealth since the mid-1980s, for instance between the financial and manufacturing sectors, between

middle-income and high-income (or wealth) groups as well as between young and old citizens.<sup>16</sup>

An increasing number of people is likely to regard this process as unjust.

### *Financial vs manufacturing sector*

Figure 4 shows the yearly percentage change in wages for the financial and manufacturing sectors in the US since 1965. Between 1965 and 1985, wage increases in the manufacturing sector, where productivity increases usually occur, were larger than in the financial sector. The employees in the financial sector suffered more from the high-inflation period of the 1970s than the employees in the manufacturing sector. In contrast, since the mid 1980s real wages in the financial sector grew faster than real wages in the manufacturing sector.

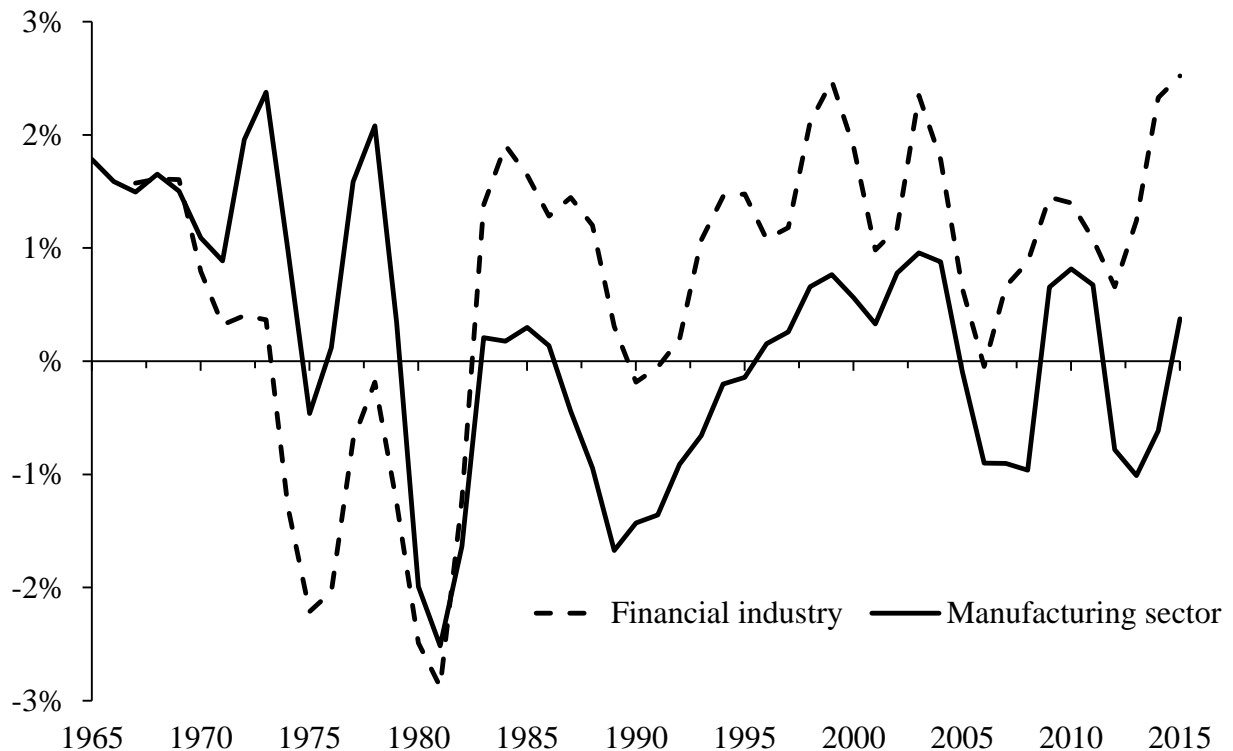
Cantillon (1931) stressed the redistribution effects of monetary expansion in favor of the financial sector relative to other parts of the economy (Cantillon Effect). Expansionary monetary policy constitutes a transfer of purchasing power away from those who hold old money to whoever receives new money from the central bank. Given a persistent monetary expansion by the central bank, commercial banks not only benefit from accelerating credit growth, they can also buy stocks, real estate, securities, etc. at still constant prices.

If the sellers of these assets use the received funds for new purchases in these asset classes, real estate, stock and security prices have already increased. As more currency units are created, additional transactions are made and prices increase, each previously created currency unit can purchase a smaller portion of goods, services or assets (such as stocks and real estate) than before.

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<sup>16</sup> Other redistribution patterns not discussed here are from the private sector to the public sector (via financial repression), from small and medium enterprises to large enterprises (via financing conditions on financial markets) and from regions which are dominated by small and medium enterprises to regions with clusters of large enterprises (via the concentration effects in the enterprise and financial sectors).

**Figure 4: Percentage Change in Wages in the US Manufacturing and Financial Sectors**



Source: International Financial Statistics (IMF).

This implies a redistribution in favor of financial institutions. With the asymmetric monetary policy since the 1980s, fast increasing asset prices opened opportunities for windfall profits in the financial sector during the boom period. When the asset market booms ended with dramatic crisis, the central banks provided additional low-cost liquidity which minimized the losses of financial institutions. Many tumbling financial institutions were directly recapitalized.<sup>17</sup>

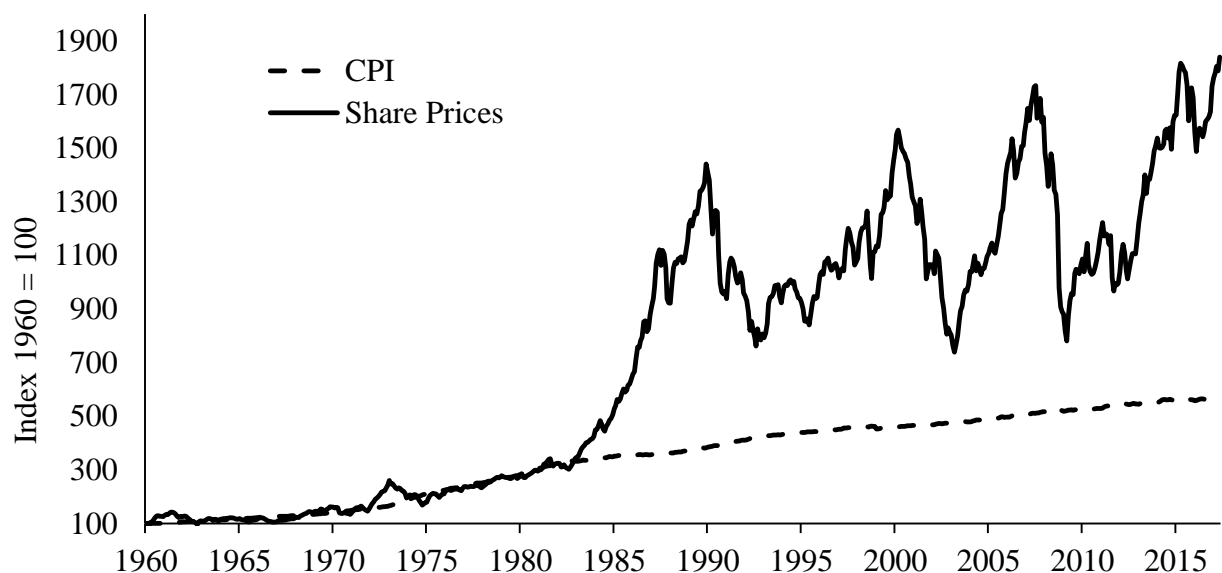
In contrast, asset purchases by manufacturing enterprises were only possible in the second stage, while the scope for price increases of goods and services remained very limited. Figure 5

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<sup>17</sup> Over time, the number of financial institutions, which profit from asymmetric monetary policies may become narrower, as the unconventional monetary policy undermines the traditional banking business by compressing lending-deposit spreads.

shows the significant increase in the mean of asset prices above the price level for goods and services in the large industrial countries (US, Japan, Germany/euro area) since the 1960s. While manufacturing enterprises could profit from declining financing costs, they have been facing paralyzed growth dynamics which have been restricting their sales perspectives. This implies a stronger incentive for enterprises to substitute fixed capital investment by investment in financial markets (including leveraged buy-outs and buy-backs of shares) as profit opportunities in financial markets are higher. Exorbitant payments in the financial sector—in particular investment banking—and to the high management of stock-listed firms have caused growing skepticism in the public.

**Figure 5: Development of Stock and Consumer Prices in G3 Countries**

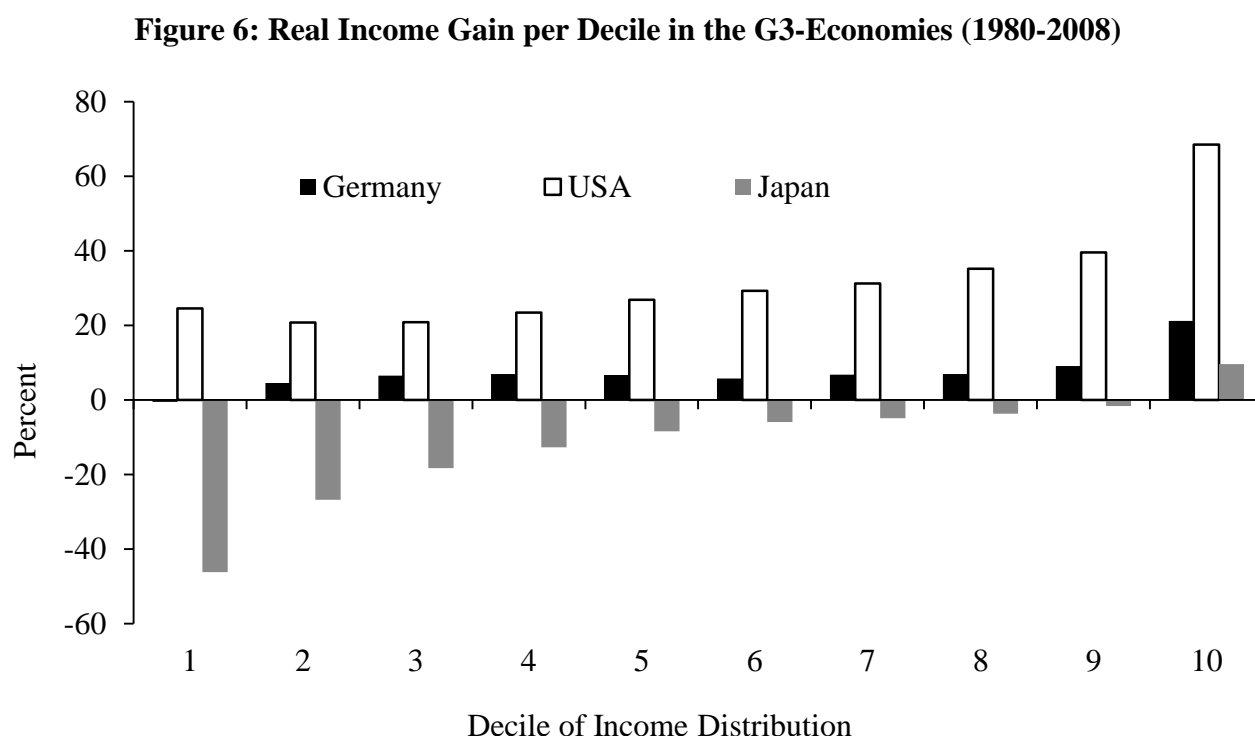


Source: IFS and OECD. Arithmetic averages for the US, Japan and Germany. After 1999 the CPI index for the euro area replaces Germany.



### *Middle-income vs high-income groups*

Figure 6 shows the real income gains between the late 1980s and 2008 for each decile of the income distribution in Germany, the US and Japan as provided by Lakner and Milanovic (2016). In all three countries, the top 10% of the income distribution had the largest real income gains. In Japan, the change on average income was positive only for the top 10% of the distribution, for all other income deciles it was negative. Milanovic (2016) attributes the comparatively low real income gains of the middle-income groups in the industrialized countries to globalization, i.e. due to growing competition by less qualified workers from China.

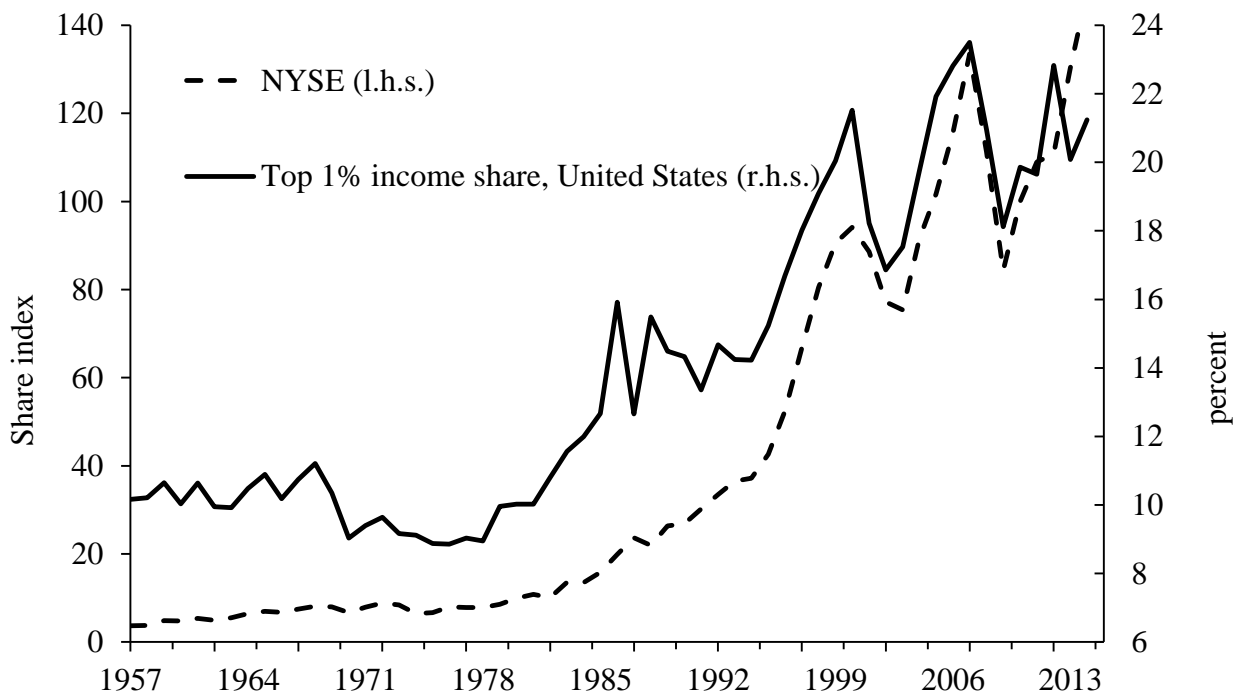


Note: Each line represents the percentage change of the average total income between 1986 (USA), 1988 (Japan), 1989 (Germany) and 2008 for each decile of the income distribution.  
Source: Lakner-Milanovic World Panel Income Distribution.

Yet, globalization would lead to increasing real wage levels as productivity increases (Ricardo 1817). Given labor mobility between sectors, productivity increases in the sectors exposed

to globalization should not only lead to real wage increases in these sectors. Given labor mobility across sectors, they should translate into real wage increases in other sectors with lower potential for productivity increases, i.e. the non-tradable goods sector (Balassa 1964, Samuelson 1964). As globalization came along with productivity and real wage increases during the postwar period up to the 1990s, globalization cannot be a complete explanation for the low (or even negative) real income gains of the middle class since the 1990s.

**Figure 7: US Top 1% Income Share and Stock Prices**



Notes: NYSE index, 2010 = 100.

Sources: OECD, The World Top Incomes Database.

The asymmetric pattern in monetary policy offers an alternative explanation. On one side, the real wages of major parts of the population increasingly tended to stagnate as the low-cost liquidity provision of central banks depressed productivity gains (see section 3.2.). On the other side, the lost-cost liquidity provision of central banks provided windfall profits for individuals

being active in financial markets. Figure 7 shows the evolution of the US stock market (NYSE) and the income share of the top 1% in the US showing close correlation from the early 1990s. A possible transmission channel are bonus payments during stock market booms, which hike when the value of (stock-listed) enterprises is growing and speculation accelerates. In particular, the upper management of financial institutions and the high management of stock-listed enterprises has profited from generous bonus payments.

As the high-income groups usually hold a large proportion of the total assets, an asymmetric monetary policy, which drives up asset prices, automatically inflates the wealth of high-income groups. In contrast, the revenues from low-risk saving forms such as government bonds and bank deposits, which the middle- and lower-income groups usually hold, are depressed towards zero by unconventional monetary policies. The middle and lower income groups tend to be risk-averse due to missing knowledge concerning asset markets and therefore tend to systematically invest in asset classes which are negatively affected by monetary expansion and financial repression. In the public growing income and wealth inequality as well as zero interest rates on savings deposits have become the origin of growing dissatisfaction.

### *Young versus old*

The upper panel of Figure 8 shows the median weekly earnings deflated by consumer prices for different age groups in the United States per year. Since 1979, real wages have tended to increase for the employees between 45 and 64 years old. In sharp contrast, the real wage levels of the younger generations have declined (i.e. the age groups between 15 and 34 years old). The decline of real wages has been accompanied by an increase of temporary and part-time (precarious) employment forms, which is equivalent to a curtailing of fringe benefits including the build-up of

pension claims.<sup>18</sup>

Chetty et al. (2017) show for the US, that for the birth cohort of 1940, more than 90% of the individuals at the age of 30 earned more than their parents at the same age. For children born in the early 1980s, i.e. by 2010, this share had declined to 50%.

The link between asymmetric monetary policy and declining wages of the younger generation is via the combination of the negative growth effects of ultra-loose monetary policy and its redistribution effects. While asymmetric monetary policy has pushed productivity increases and thereby the overall potential for real wage increases converge towards zero, real wages for the elder generation (including social security and pension payments) have remained high or increased even further. This implies a reduction of the real wage level, the level of social security and the pension claims for new entrants in the labor markets, i.e. previously unemployed people and the younger generation.

The inter-generational redistribution problem is compounded by the impact of asymmetric monetary policies on real estate and stock prices. Since the older citizens own the major share of stocks and real estate, their wealth is inflated by the asymmetric monetary policy. In contrast, the young citizens have to work longer to acquire the same financial assets compared to former generations. In particular, housing, a traditional “risk-free” investment, is becoming increasingly unaffordable for the younger generation in regions with buoyant economic activity.

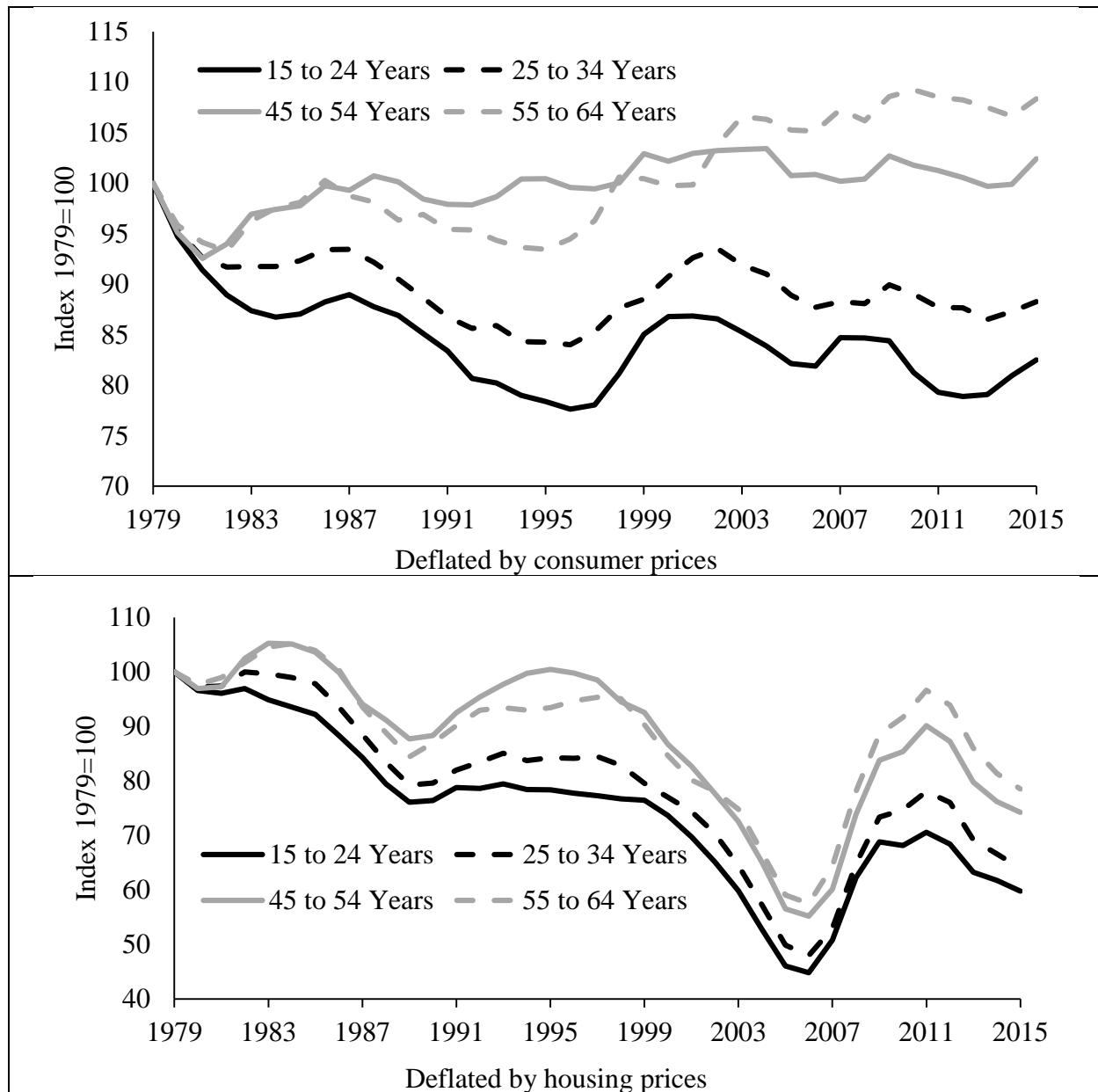
In the lower panel of Figure 8 the median incomes of different age groups in the United States are deflated by housing prices. This reflects the real burden for those individuals in the younger generations who do not own real estate but would like to acquire it. Based on this measure the “real income” of all age groups not owning but aiming to acquire housing has declined over

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<sup>18</sup> Schnabl (2015) shows the increase of part-time and temporary (precarious) employment forms for the Japanese labor market.

time. The probability not to own housing (and in general “risk-free” assets) is larger for younger generations compared to older generations. This is increasingly regarded as unjust in the public.

**Figure 8: US Usual Median Weekly Earnings**



Source: US Bureau of Labor Statistics.

As stressed by Easterlin, Pollak, and Wachter (1980) young people aim to provide the same material circumstances to their children as they have had it in their childhood. Given lower wage levels and higher real estate prices it is becoming increasingly difficult to provide the same material circumstances to their children. This increases the likelihood that young people postpone family planning and/or reduce the number of children. The birth rates will tend to decline.

Since with low birth rates the public health and pensions schemes become unsustainable, the governments have to mobilize substantial amounts of subsidies to keep the social security systems stable. This is only possible, if additional bond purchases by the central banks keep the interest rate burden of growing public debt low.

#### **4.2 Erosion of acceptance of the economic order and political order**

The monetary policy has granted inter alia privileges to the financial sector, the high-income class and the elder generation. From the point of view of Hayek (1976), granting privileges to certain groups is unjust (section 2). Following Rawls (1972), people behind the veil of ignorance would not accept an order with unequal liberties and unequal opportunities. In the view of Brennan and Buchanan (2000) a change in the rules of the game without consensus is perceived as unjust. One would expect individuals to express discontent, in particular when low growth does not allow for compensation.

Yet, people do not immediately react to unjust changes in the economic order for different reasons. First, people do not realize a direct welfare loss, as it tended to be the case in the 1980s and the 1990s. Although the asymmetric pattern in monetary policies granted privileges for certain groups (section 4.1), growth was still high enough to expand social security benefits for the non-

privileged groups (direct compensation<sup>19</sup>) and to allow for real wage increases in all sectors of the economy (indirect compensation).

Second, even if aggregate welfare declines for some groups (such as the middle class), the individuals might not realize it. This is the case, if cuts in real wages and social security benefits are shifted to the new entrants into the labor markets. They are not aware of declining wage and social security levels compared to older generations (as their individual wage levels still increase).

Third, individuals may not (want to) recognize the declining welfare if the cost of acquiring the knowledge about a possible decline of welfare exceeds the expected benefit from understanding the consequences of a change in the rules of the game. Remaining ignorant is rational (Caplan 2001).

Fourth, even if people realize the decline in welfare, they may ignore it because expressing discontent and organizing resistance is perceived as costly. Hertwig and Engel (2016) identify as reasons for choosing not to know, inter alia, avoiding liability and eschewing responsibility.<sup>20</sup> *“Eschewing moral responsibility through ignorance also helps to prevent cognitive dissonance - often it is better not to know because if you did know, then you would have to act and stick your neck out”* (Maslow 1963, 123). This is in particular the case, as the individual benefit of personal intervention can be assumed to be smaller than the individual cost of organization (Olson 1965).

Fifth, people have a natural preference for certainty (Gigerenzer 2015, 20). The stronger people's aversion against uncertainty, the higher the welfare loss they would be willing to accept as a trade-off for continuing with the status-quo. Albeit an economic order based on privileges

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<sup>19</sup> Low-cost liquidity provision generates additional tax revenues during financial market booms triggered by low interest rates (as currently in Germany). When the boom turns into bust, declining tax revenues are compensated by extensive government bond purchases of central banks (as currently in Italy and Japan). This also keeps the interest rate payments of highly indebted governments low.

<sup>20</sup> Gigerenzer and Garcia-Retamero (2017) show for Germany and Spain that preferring not to know is widespread condition of the mind. This can be particularly the case, when people criticizing the prevailing order are sanctioned by being labelled illiterate or unsocial.

granted by the ultra-expansionary monetary policies could be disguised as unjust, people may tend to refuse to ask for change because reforms are associated with uncertainty regarding the future.

Sixth, with aversion against change, people may tend to accept simple, but not necessarily accurate explanations to make sense of the world (Kahneman 2011, 199). Politicians are likely to accommodate their rhetoric correspondingly, which can lead to the wide acceptance of false or incomplete explanations. For instance, policy makers are likely to attribute the decline of real wages and the loss of welfare for substantial parts of the population to factors, which seem outside their responsibility. In the context of the current crisis, these explanations are aging societies, an inevitable decline of the marginal efficiency of investment, innovation, migration and – in particular – globalization (see section 1).

However, if the welfare level continues to decline increasing parts of the population become willing to express their discontent by voting against the established political parties. Even if people do not fully understand the reasons for their eroded wealth positions, they start to distrust the official explanations. New political parties at the very left and the very right of the political spectrum strive for votes by hinting to the growing deficiencies. The support for the established ruling parties dwindles and the political landscape polarizes.

Figure 9 shows for the average of the 28 EU-member states the shares of votes for established parties, which is calculated by one minus the share of votes for extreme left-wing plus extreme right-wing parties in elections for parliaments.<sup>21</sup> This index for support for established parties is matched with the implied central bank interest rate.<sup>22</sup> Figure 9 shows a declining

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<sup>21</sup> In countries with two-party systems, candidates who take over more extreme positions at the right or the left political spectrum are more likely to gain power. This is for instance the case in the United Kingdom and the United States. Furthermore, also the established parties may tend to shift their programs more to the extreme to prevent losing votes. Both trends are not captured by our proxy for political polarization.

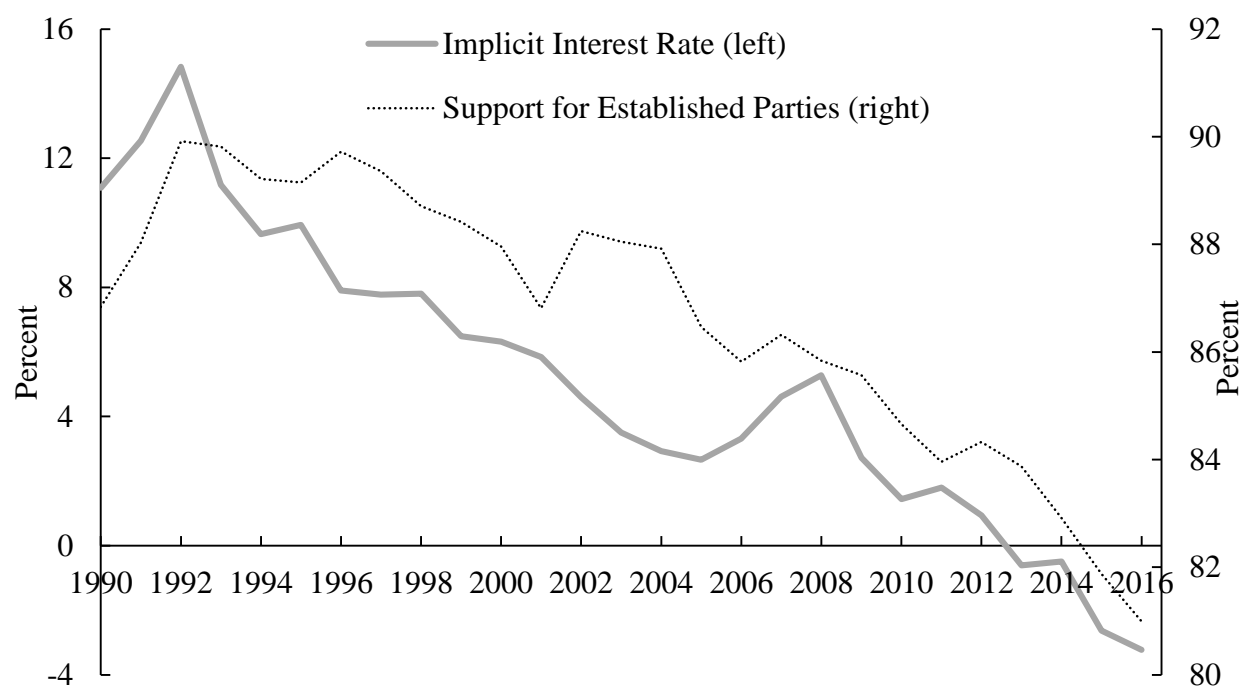
<sup>22</sup> The implied interest rate index by Wu and Xia (2017) transforms bonds purchases of central banks into interest rate cuts turning the index negative after short-term interest rates have reached the zero bound. For detailed information on the data see Schnabl and Müller (2017).



(growing) share of votes for established (extreme parties) as a share of overall votes since the mid 1980s, when the asymmetric monetary policies started.

The causality between monetary expansion and political polarization can go in both directions. Increasing monetary expansion produces via negative growth and redistribution effects an increasing number of losers, thereby generating the breeding ground for political polarization. The resulting loss of votes for the established parties triggers additional redistribution efforts, which aim to restore political stability (for instance by increasing retirement benefits and by providing more financial support for young families and regions with low per-capita income). Since tax revenues are sluggish with staggering growth, additional government bond purchases of central banks become necessary to finance the additional government expenditure.

**Figure 9: Implied Interest Rate and Support for Established Parties in the EU28**



Source: Wu and Xia (2017) and Schnabl and Müller (2017). Support for established parties calculated as 1 minus share of votes for extreme left- and right-wing parties.

Distrust in the economic order may emerge, if markets and globalization are blamed for being at the roots of declining growth and growing inequality (see Piketty 2014, Summers 2014 and Rodrik 2017). Then, policies that further undermine the spontaneous market order – such as the built-up of barriers to trade, capital flows and migration – are likely to be implemented. Productivity gains and real growth further decline adding momentum to the political polarization process.

## **5. Conclusion**

The outcomes of the elections in the industrialized countries over the past three decades suggest an increasing discontent of voters. The literature has provided ageing societies, secular stagnation, innovation and globalization as explanations for low growth and low (or even negative) real income gains for growing parts of the population. The common feature of these explanations is that they do not seem to be in the responsibility of policy makers. In such a framework, the only possible policy response to growing inequality is political action, either by restricting market forces (e.g. the build-up of trade restrictions, barriers to labor and capital movements as well as by all kind of regulations) or additional redistribution, e.g. via more progressive tax systems, higher inheritance taxes, etc.

We have contributed to the literature by analyzing the role of increasingly expansionary monetary policies for the gradual increase of income and wealth inequalities. Based on the theories of justice by Hayek (1976), Rawls (1972, 2001) and Brennan and Buchanan (2000 [1985]), we have argued that the asymmetric pattern in monetary policy since the 1980s is equivalent to an unjust granting of privileges to certain groups. Albeit monetary policies have taken a pivotal role in stabilizing growth during crisis and in stabilizing highly indebted governments, surprisingly little

attention has been given to the unintended side-effects of these tremendous monetary policy interventions.

We have argued that increasingly expansionary monetary policies have a destabilizing effect on economies and societies for two reasons. First, by changing the rules of the game in the form of privilege granting, central banks have hindered the spontaneity of the market order, thereby eroding the basis for economic growth and for the compensation of the non-privileged groups. Second, the unintended redistribution effects are hollowing out the middle class, which has been traditionally the stabilizer of western democracies. A vicious cycle of declining growth and monetary expansion becomes the breeding ground for economic and political instabilities, which endanger peace.

To sustain social coherence and political stability on a national and international level, we postulate the timely exit from low-interest policies and extensive government bond purchases by central banks. A slow but decisive exit from the ultra-expansionary monetary policy environment would dismantle privileges, discourage speculation in financial markets and would strengthen the incentives for investment in innovation and efficiency gains by enterprises. The resulting revival of productivity gains would build the basis for real wage increases for all groups of the societies.

For the reconstitution of the allocation and signaling function of the interest rate it is important to consider further research on alternative monetary regimes which would not be prone to the pretense of knowledge of central bankers and the power that the printing press provides.

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