Abstract

Since the turn of the millennium, voters in the industrialized countries are increasingly expressing their dissatisfaction. Based on the theoretical concepts of justice by Hayek (1976), Rawls (1972, 2001) and Brennan and Buchanan (2000 [1985]) we argue that the growing dissatisfaction 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 social groups such as the rich, the financial sector and the elder people. 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 a thread for the acceptance of the economic order and growing potential for political instability.

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

JEL: D63, E02, E52.
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 belonging to the income distributions between the 80th and 85th percentiles of the world’s income distribution experienced (close to) zero growth in real income while the rest experienced real income increases above 25%. This implies an increasing income inequality within the industrialized countries (especially Germany, Japan and the US) in favor of the higher end of the income distribution and against the lower and middle-income groups.

Piketty (2014) has attributed increasing income inequality and therefore 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. 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

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1 Growth in China has been substantially higher than in most other countries since the 1990s, which has contributed to a significant decline in income inequality from a global perspective. See also Deaton (2013, 4).
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. When a peak is reached, inequality decreases in a peaceful or a violent way.

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 growth and real income gains. 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). While from the egalitarian perspective there are specific ideal distributive patterns (such as equality of income, wealth or opportunities), from a libertarian perspective there are no normative goals regarding the distributive outcome of economic interaction (Nozick 1974; Hayek 2013 [1973]). We focus on the latter for the formulation of our characterization of the acceptance of the economic order.

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2 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).

3 See Lamont and Favor (1996) for a summary of the main egalitarian distributive principles and their proponents.
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 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 certain 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

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4 “I have now become convinced, however, that the people who habitually employ the phrase [social justice] simply do not know themselves what they mean by it and just use it as an assertion that a claim is justified without giving a reason for it” (Hayek 1976, xi).

5 Similarly, Rizzo (2015) explains markets as complex emerging phenomena and emphasizes the role of abstract rules to sustain the market order.

6 “For in such a system in which each is allowed to use his knowledge for his own purposes the concept of ‘social justice’ is necessarily empty and meaningless, because in it nobody’s will can determine the relative incomes of the different people, or prevent that they be partly dependent on accident. ‘Social justice’ can be given a meaning only in a directed or ‘command’ economy (such as an army) in which the individuals are ordered what to do” (Hayek 1976, 69).
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. 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.

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

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7 “The problem of distributive justice in justice as fairness is always this: how are the institutions of the basic structure to be regulated as one unified scheme of institutions so that a fair, efficient, and productive system of social cooperation can be maintained over time, from one generation to the next?” (Rawls 2001, 50).

8 “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).

9 “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)
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 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 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,
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, improved perspectives for the most favored would be perceived as just, as long as they are linked to an improvement for the least-advantaged of society.\textsuperscript{10}

The motives to “correct” the market outcome for uneven distributions of income have been widely addressed. German Ordoliberalism\textsuperscript{11} emphasized the importance of the institutional framework that constitutes a functioning market order (Eucken 2004 [1952]). Ideally, the rules would apply equally for 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 just market could still have shortcomings which would require a correction, for example via a progressive tax system.\textsuperscript{12} Müller-Armack (1978) saw the market as the best technical instrument for the production of material welfare. The market, however, would 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.\textsuperscript{13} 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),

\textsuperscript{10} Starmans, Sheskin, and Bloom (2017) argue that it is economic unfairness rather than economic inequality what people are usually concerned about. Given justice, however, people do tend to prefer equal outcomes.

\textsuperscript{11} 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.

\textsuperscript{12} 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).

\textsuperscript{13} “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).
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).

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).14

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 an improvement via some kind of compensation. The majority may still accept the privilege for the specific group if it promises to achieve a superior goal.15

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14 “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).
15 As for example for the infant-industry arguments to achieve industrialization, or the bail-out of Greece to rescue the euro.
3. Growth effects of asymmetric monetary policy

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 policy patterns as observed in the large industrialized countries since the mid-1980s can be seen as a political strategy from the point of view of Buchanan (1954), as it has been helping to sustain generous welfare states in the short-term. In the long-term, however, it is likely to undermine growth by (directly and indirectly) modifying the rules of the game.

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)\(^\text{16}\), 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 tight 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).

\(^{16}\) 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.
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 crisis.\(^\text{17}\)

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 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.

\(^{17}\) See Schnabl (2016) for an explanation of why the gradual monetary expansion did not lead to increasing consumer price inflation.
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], 279).

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

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

Sources: European Central Bank, Eurostat and World Economic Outlook (IMF).
a comparatively low marginal efficiency survive, and new investment projects with low marginal efficiency are encouraged.

A policy rate that in crisis is artificially kept below the natural interest rate 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 and 2. 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 a collapse on asset markets.

The liability principle is directly suspended 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.18

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

18 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).
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.\textsuperscript{19} 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 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.

\textsuperscript{19} On the deteriorating quality of investment projects during a financial cycle – hedge finance, speculative finance and Ponzi finance – see Minsky (1986).
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 low interest rates, they are likely to have subdued efforts to increase efficiency and 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 the asymmetric pattern in monetary policy has motivated a gradual change in the rules of the game towards a weaker liability principle. Markets become less spontaneous and more centrally planned, as the liquidity provision of central banks and not the private considerations about expected future returns from innovations and efficiency gains tend to determine investment decisions. The allocation function of interest rates, which distinguishes between high- and low-return investment, is suspended. Since policy makers fear the failure of enterprises and financial institutions with a tightening of the monetary conditions, the central and commercial banks continue to provide funds to less profitable projects.

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

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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 too low real interest rate to an exogenous slowdown of productivity growth. See Dotsey (2016) for the implications of Gordon’s arguments for monetary policy.
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.

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 towards a long-term equilibrium between investment and depreciation (steady-state economy) allows for growth. 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 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). 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 policy 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 low-cost financing.

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 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 bonds and the emission 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

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21 Production factors are used efficiently given constant productivity levels.
22 On the impact of credit booms on the allocation of labor and productivity dynamics see also Borio et al. (2016).
23 For details see Schnabl (2016).
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.

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 of banks. 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, 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 fades. The acceptance of the prevalent economic order is gradually undermined and political instability is likely to increase.
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.
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 unprecedented 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 prices. Yet, assets prices have played a growing role for the distribution of income and wealth since the mid-1980s, for instance between the financial and manufacturing sectors, middle-income and high-income (or wealth) groups as well as young and old citizens.

Financial vs manufacturing sector

Wages in the financial sector have tended to grow faster than wages in the manufacturing sector since the 1980s. 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 banking 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. 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, each newly created currency unit can purchase a smaller portion of goods, services or assets (such as stocks and real estate).

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

![Percentage Change in Wages](image)


In a two-stage banking system with a central bank and commercial banks, 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. 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.\(^\text{24}\)

In contrast, asset purchases by manufacturing enterprises are only possible in the second stage, while the scope for price increases of goods and services remains very limited. Figure 5 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 1980s. This implies stronger incentives for enterprises to substitute real investment by investment in financial markets (including leveraged buy-outs and buy-backs of shares) as profit opportunities in financial markets are higher. While manufacturing enterprises could profit from declining financing costs and possibly speculation gains in financial markets, they have been facing paralyzed growth dynamics which have been restricting their sales perspectives and the scale for price increases.

**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.

In Japan, the average of the bottom 1\% experienced a real income loss of more than 40\% between 1988 and 2008 while the average of the middle deciles slightly decreased. In contrast, the top 10\% experienced a real wage increase of more than double of the increase for the middle-income groups. In Germany, while the top 10\% experienced on average a real wage increase of 20\%, the middle-income groups saw an increase of only 6\%.

\(^{24}\) 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.
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.

Figure 6: Real Income Gain per Decile in the G3-Economies (1980-2008)

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.
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 work from China. Yet, globalization would lead to increasing wage levels with increasing productivity (Ricardo 1817). Given labor mobility between sectors, productivity increases in the sectors exposed to globalization should not only lead to real wages increases in these sectors, but should also 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 this was the case in the industrialized countries during the postwar period up to the 1990s, globalization is not a complete explanation for the low real income gains of the middle class since the 1990s.

The asymmetric pattern in monetary policy offers an additional or 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 impact of cheap liquidity on financial markets provided windfall profits for individuals being active in financial markets. Figure 7 shows the evolution of 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.

As the high-income groups of a country 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- und 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 strongly affected by financial repression.
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 likely 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.\textsuperscript{25}

\textsuperscript{25} Schnabl (2015) shows the dramatic increase of part-time and temporary (precarious) employment forms for the Japanese labor market.
Additionally, Figure 9 shows data provided by Chetty et al. (2017) on income mobility for the US. 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, the share of the people at the age of 30 earning more than their parents had declined to 50%.

The asymmetric monetary policy helps to better understand the uneven generational burden in wages and income. While the overall potential for real wage increases is converging towards zero, real compensation for the elder generation (including social security and pension payments) is likely to remain high. This will demand 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. 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 has declined over time. The probability not to own housing (and in general “risk-free” assets) is larger for younger generations compared to older generations.
Figure 8: US Usual Median Weekly Earnings

Index 1979=100


Figure 9: Absolute Income Mobility by Cohort (USA)

Source: Chetty et al. (2017). Note: Each bar shows the percentage of children of each cohort, who at the age of 30 earned more than their parents.

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 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 sustainable. This is only possible, if additional bond purchases by the central banks keep the interest rate burden low.
4.2 Erosion of acceptance of the economic order and political order

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 without equal liberties and unequal opportunities. In the view of Brennan and Buchanan (2000) a change in the rules of the game without (a tacit) consensus is unjust. But people do not immediately react to unjust changes in the economic order even though they seem to care more about injustice than about inequality (Starmans, Sheskin, and Bloom 2017). The lack of immediate response to injustice can have several reasons.

First, people may not realize a direct welfare loss. This tended to be the case in the 1980s and the 1990s. Although the asymmetric pattern in monetary policies indirectly granted privileges for certain groups (section 3), growth was still high enough to allow for real wage increases in most sectors and for the expansion of social security benefits for the non-privileged groups. However, as the economic order has been gradually transformed towards a less spontaneous order and growth has slowed down, some groups have started to lose. Few people may have showed discontent at this stage because generous welfare states in industrialized have redistributed in favor of the least advantaged and intervened with measures such as minimum wages. As this is costly, increasingly expansionary monetary policies has helped to maintain growing government expenditure.²⁶

Second, even if welfare declines for some groups, the individuals might not realize it. This can be the case, when cuts in real wages and social security benefits are shifted to the new entrants into the labor markets, who are not aware of declining wage and social security levels compared to

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²⁶ 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.
older generations. Individual might also not 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 (Caplan 2001).

Third, even if people realize the decline in welfare, they may ignore it because expressing discontent and organizing resistance is perceived as too costly. 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). Moreover, Hertwig and Engel (2016) identify as reasons for choosing not to know, inter alia, avoiding liability and eschewing responsibility. “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).

Alternatively, people have a natural strive for certainty (Gigerenzer 2015, 20). Therefore, 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 granted by the ultra-expansionary monetary policies could be disguised as unjust, people may tend to refuse to demand reforms because a change in the status quo is linked to uncertainty regarding the future.

With aversion against change, people may tend to accept simple, concrete, 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 more likely to attribute the

27 However, unemployment and in particular youth unemployment is likely to be higher in countries with more rigid wages.
28 Gigerenzer and Garcia-Retamero (2017) show for Germany and Spain that preferring not to know is widespread condition of the mind.
decline of real wages and the loss of welfare for substantial parts of the population to exogenous factors, which do not seem to be in their responsibility. In the context of the current crisis, these explanations are inter alia aging societies, an inevitable decline of the marginal efficiency of investment, migration and globalization.

If the welfare level continues to decline, however, increasing parts of the population may be willing to express their discontent by voting against the established political parties. New political parties at the very left and the very right of the political spectrum are likely to attempt to accelerate a change by hinting to the growing deficiencies. Even if people do not fully understand the reasons for their eroded wealth positions, they may start to distrust the official explanations. Then, the support for the established ruling parties dwindles and the political landscape polarizes. A growing number of people might start willing to embrace a change in the economic order despite the costs and the uncertainty this might imply.

The Timbro Authoritarian Index in Figure 10 shows the support for extreme parties (both left wing and right wing) in European countries with democratic systems. It shows a growing share of votes for extreme parties out of overall votes since the mid 1980s, when the asymmetric monetary policies started. There is a structural break at the turn of the millennium, when the monetary expansion in the large industrial countries accelerated in response to the bursting of the dotcom bubbles. Starting from 1999, the political polarization index is matched with the main refinancing rate of the European Central Bank. When the refinancing rate touches the zero-bound, the bond purchases of the ECB are transformed into an implied interest rate, which then points into negative territory.
Figure 10: Implied Interest Rate and Political Polarization in Europe

Source: Timbro Authoritarian Populism Index 2016, ECB and own calculations. The index comprises all EU member states plus Iceland, Norway, Switzerland and Serbia.

The graph suggests a correlation between monetary expansion and political polarization. Causality could go in both directions. Increasing monetary expansion triggers relative income and wealth losses for certain groups in society, thereby generating the breeding ground for political polarization. The resulting political instability triggers additional expenditure by governments, which strive for political stabilization (for instance by increasing retirement benefits, financial support for young families and financial support for regions with low per-capita income). Since tax revenues are sluggish with staggering growth, additional government bond purchases of central banks become necessary.

In countries with multi-party systems, parties are emerging at the very left and the very right of the political spectrum, which are – albeit significant fluctuations – gradually gaining support. This is visible in most continental European countries. 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 the case in the United Kingdom, the United States and Japan.

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. This can have two consequences. First, with economic nationalism also political nationalism might grow. Second, productivity gains and economic growth can further decline adding to the potential for conflict.

5. Conclusion
The outcomes of the elections in the industrialized countries in recent years suggest an increasing discontent of voters. The literature in economics has provided ageing societies, secular stagnation, innovation and globalization as explanations for low growth and zero (or even negative) real income gains for important parts of population, which is seen to be at the roots of the growing discontent. The common feature of these explanations is that they are exogenously given and 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) in addition to additional redistribution, e.g. via more progressive tax systems or higher inheritance taxes, etc.

We have added to the literature by analyzing the role of increasingly expansionary monetary policies for the gradual decline of productivity growth and the gradual increase of income and wealth inequalities among specific groups. 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 imply the (unjust) granting of privileges to certain groups of the economy. Albeit monetary policies have taken a pivotal role in stabilizing growth during crisis and in stabilizing highly indebted governments, little attention has been given to the unintended side-effects of the 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 grating, 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 become 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, as they grant privileges to specific groups of the societies. 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.
References


