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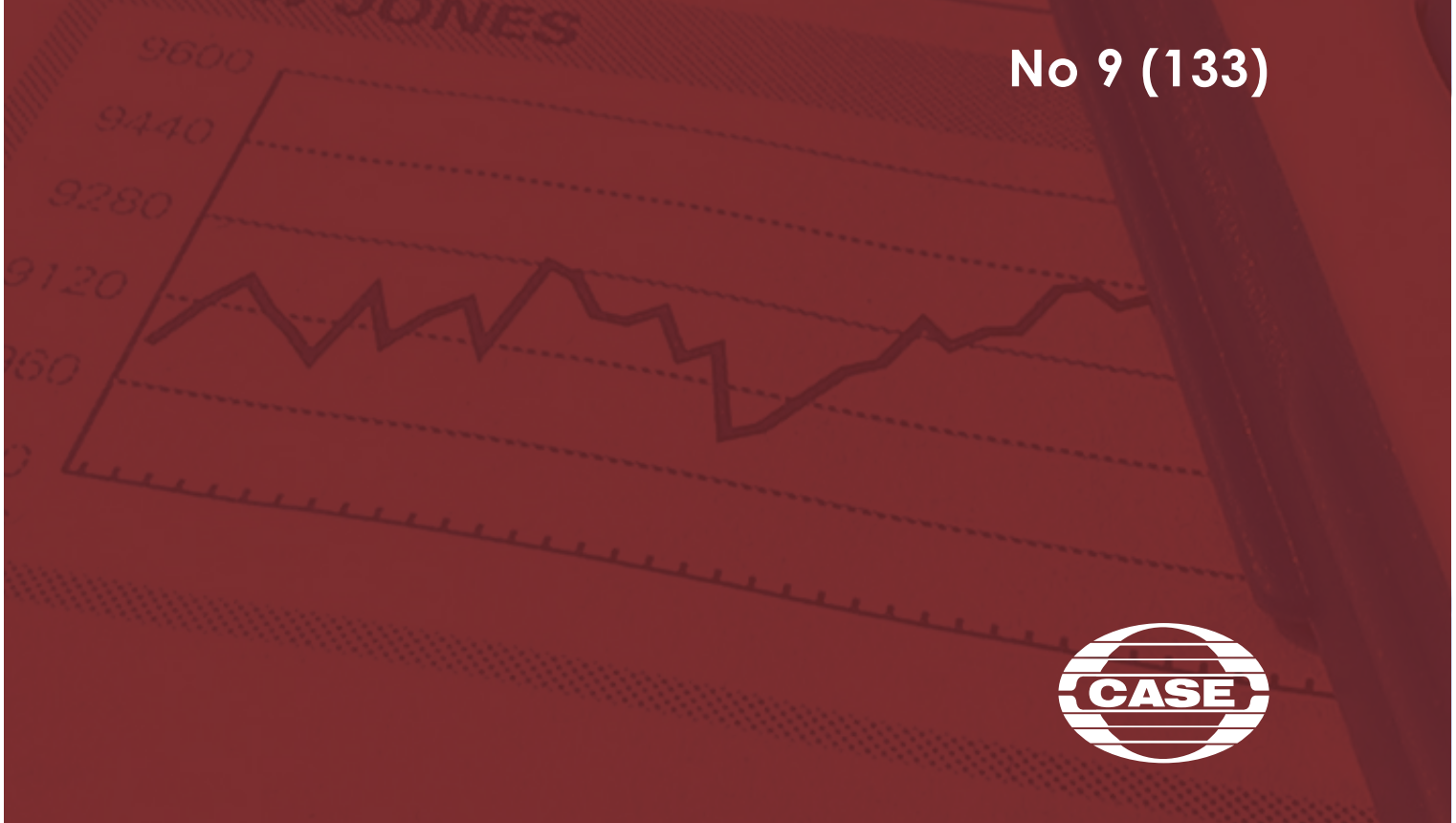
Stabilization Policies and Structural Developments: Poland and the Crises of 1929 and 2008

Zbigniew Polański

No 9 (133)



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Abstract

This paper contrasts the impact of the 1929 and 2008 world crises on the Polish economy. Her much better performance during the recent crisis can be explained by two groups of factors: first, by very different stabilization policies and second, by distinct structural developments (resulting both from authorities' structural policies and spontaneous processes). It is emphasized that several factors responsible for Poland's superior performance during the 2008 crisis also contributed to her economic success vis-à-vis other European Union countries.

1. Introduction

During the crises of 1929 and 2008, like most countries, Poland was heavily hit by a series of strong external shocks. In each historical episode, however, her economy's reaction differed sharply.

The events of 1929 and subsequent years (episode "1929+") resulted in a crisis that lasted in Poland, which was then an agricultural country, until as late as 1935 (Zweig 1944:167; Landau and Tomaszewski 1985:86-114). Not only was its duration longer than in many other countries, but also its depth was more severe. Real national income shrank by more than 20%, industrial output—by almost 40%, wholesale prices declined by more than 50%, and the unemployment rate reached over 30%. All in all, it was observed that Poland in the 1930s had gone "through one of the worst and longest depressions of all European countries" (Wolf 2007a:2).[1]

A very different picture of the Polish economy emerges when looking at the recent crisis (episode "2008+"). Poland suffered no recession, but only temporary slowdowns in 2009 and 2012–3; in fact, between 2008 and 2015, her GDP grew by almost 30%. The unemployment rate increased, reaching a peak of 10.3% in 2013—well below the average for the European Union (EU) and the euro area. Finally, inflation declined substantially, but only in mid-2014 turned into a mild consumer price deflation, which lasted until the autumn of 2016.

Against this background, two main questions emerge.

First, why did Poland do much better during the 2008+ global crisis than during the 1929+ crisis? Or, more precisely: what was the role of economic policies and structural processes (conditions) on the peculiarities of both episodes in Poland?

Second, without aiming to be exhaustive (since this would require an extensive cross-country analysis[2]), a side question arises: why did Poland perform better during the 2008+ period than other EU (and many non-EU) countries?

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1 See also Wolf (2007b:351-2) and Feinstein et al. (2008:96).

2 This was, to some extent, performed by the author as a member of the Warsaw School of Economics' research study group on the EU crisis and policies. Thus far, the project has resulted in two books: Albiński (2014) and Albiński and Polański (2015).

Before answering these questions, we must, however, tackle another preliminary question. Namely, does it make economic sense in the case of Poland to compare both periods (and draw conclusions) given the important historical events separating them (World War II [WWII] and its consequences—among others, the nearly 45 year experience of a centrally planned economy), and the impact of these events (and others, like technical change) on the structure of the economic system?

To respond to these questions—especially the first two—we highlight the role of stabilization (or cyclical) policies and structural factors (both authorities' structural policies and spontaneous structural processes) in crisis development. Our conclusion can eventually be boiled down to the statement that the implementation of more flexible macroeconomic and structural policies than those of the interwar years was the main reason why Poland performed better in the 2008+ period; this also explains why, recently, Poland has performed better than many other EU countries. Other important reasons contributing to such an outcome were timely (or even preemptive) policy decisions and strict regulations—in particular, concerning the financial sector, and the comparatively better timing of when the global turmoil hit Poland.

In economic literature, the impact of these crises on Poland is scarcely described or analyzed; consequently—to the best of our knowledge—comparisons of these crises are non-existent. For example, Eichengreen, in his book relating the two crises (Eichengreen 2015), fails to mention Poland at all; in the collected papers edited by Akerlof et al. (2014), Poland's recent experience is merely hinted at in the context of the floating exchange rate regime (by Shambaugh 2014); and in Allen's work (2013), essentially only current Polish monetary developments are signaled, although the author compares monetary developments in the 1930s and during the recent crisis in the international dimension.

Before going further, a clarification concerning timing must be made. We term the periods under analysis as "1929+" and "2008+" to signal our commitment to the long-term approach. Obviously, because of the outbreak of WWII, the first period concludes in 1939.[3] The analysis of the second period ends in 2015. The key reason for finishing our analysis at this time stems from the fact that a deeper change in Polish economic policy started the following year, signaling the beginning of a new period in her economic history. In some cases, however, data permitting, we provide information on developments in 2016–7, as earlier decisions and processes still shape further outcomes.

The rest of the paper is organized as follows. In the next section, we compare the main features of the 1929+ and 2008+ developments in Poland and explore if it makes

3 Such a time horizon in the analysis of the 1929+ crisis is not unusual. For the US, see, for example, Kindleberger (1973) and Bernstein (1987).

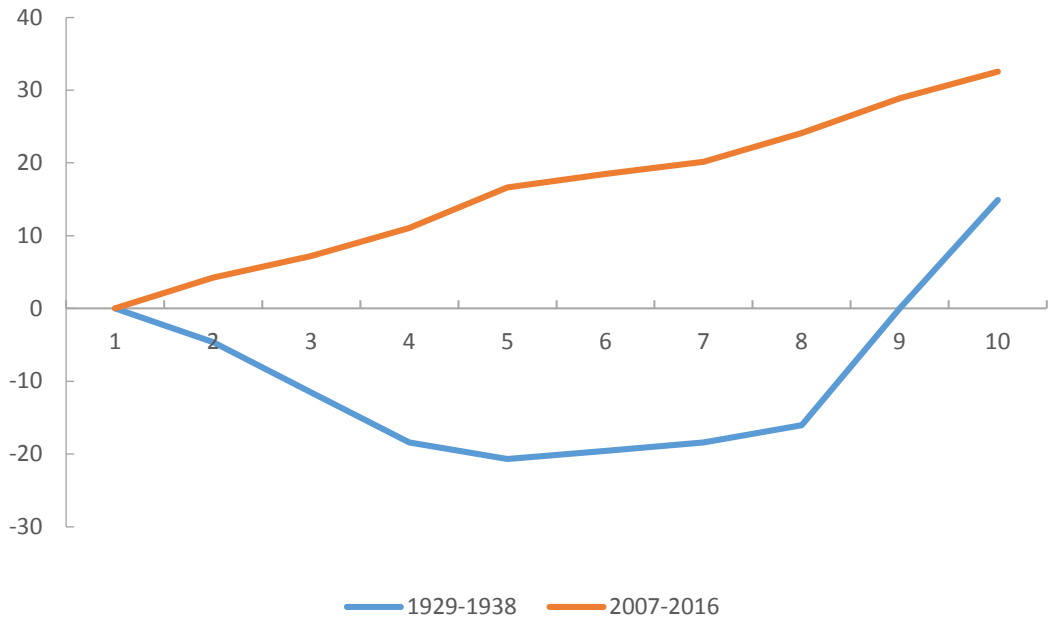
sense to confront these two episodes; thus, we answer (positively) the preliminary query. In Section 3, we present our analytical framework which underpins the responses to the two main questions. In the subsequent section, the 1930s and 2008+ occurrences are analyzed from the perspective of stabilization policies. The structural perspective is applied to the analysis in Section 5. The last section recapitulates, answers the two questions, and signals problems with the evaluation of the 2008–15 period.

2. Poland and the 1929 and 2008 crises confronted

2.1. A glimpse at some macroeconomic developments

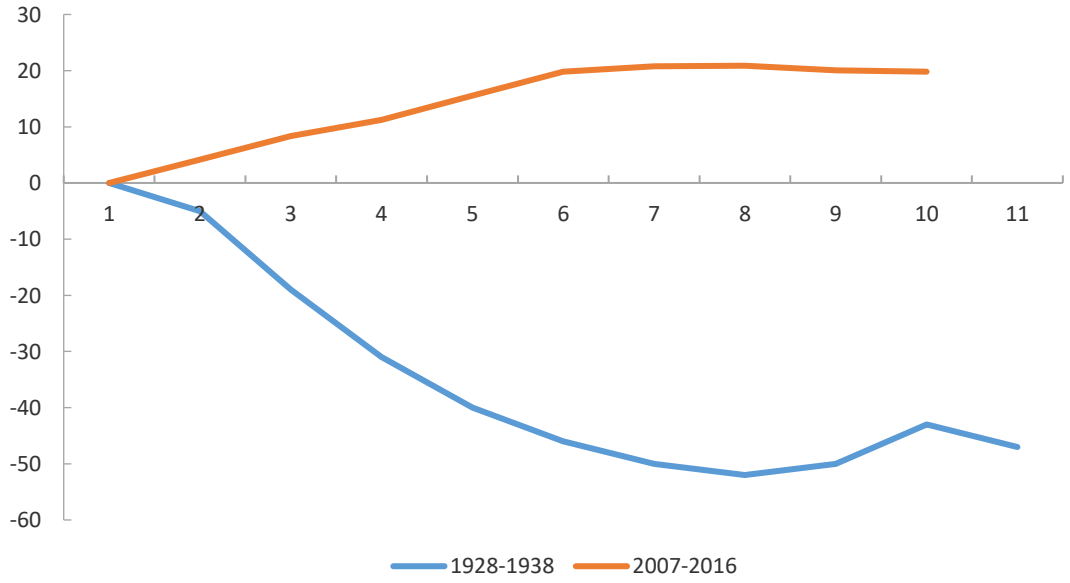
Let us start by looking at the main developments typically reviewed when the macroeconomic picture of a country is initially assessed—that is, real national income, price, and unemployment data. Given their limitations, however, we can only reasonably well address the first two developments of the 1929+ and 2008+ periods.

Figure 1. National income: Poland, 1929–38 vs. 2007–16 (indices in %, base years (t=1): 1929 and 2007)



Note: Data for 1929–38 are estimates of national income in 1990 international Geary-Khamis dollars; data for 2007–16 is Gross Domestic Product (European System of Accounts 2010).
Source: Maddison (2006:476) and the Eurostat website (accessed on November 13, 2017).

Figure 2. Price developments: Poland, 1928–38 vs. 2007–16 (indices in %, base years (t=1): 1928 and 2007)



Note: Data for 1928–38 are wholesale prices of foodstuffs, raw materials, and semi-manufactured goods; data for 2007–16 is Harmonized Index of Consumer Prices.
Source: GUS (2012:293) and the Eurostat website (accessed on November 13, 2017).

Figures 1 and 2 point out that the 1929+ events were for Poland much more severe than the recent events; in fact, they were harsher than in many countries in the 1930s. Let us only say that it is estimated that between 1929 and 1933, Polish real GDP declined by nearly 21%[4], while between 1928 and 1935, the domestic purchasing power of the zloty more than doubled. This is also confirmed by other developments—for example, by the decline of industrial output. According to official statistics, it reached its nadir in 1932: Polish industrial production was lower by more than 37% than in 1929—similar to Germany, but the decrease was much more severe than in other countries (GUS 1939:3; GUS 2012:379). The crisis was also longer: Figures 1 and 2 both suggest that the Polish economy started to recover only in 1935–6.[5]

4 This estimate is based on Maddison (2006:476). However, estimates by Polish economists of national income decline in this period range between 10.3% (by M. Kalecki and L. Landau) and 32.4% (by Z. Knakiewicz) (as quoted in GUS 2012:526).

5 Zweig (1944:61) points out that "The period from 1932–3 to the spring of 1936 may be described as one of stagnation with symptoms of slight recovery." Using higher frequency data obviously sheds additional light on the crisis. For example, Albers and Uebele (2015) construct monthly activity (i.e. encompassing not only industrial production) indices for 30 coun-

Unemployment also reached astonishing levels. However, as in the interwar period Poland was an agricultural country,[6] the available data (in fact, estimates) on unemployment vary to a large degree.

Official Polish statistics of that time did not use the concept of unemployment rate. According to these statistics (GUS 1939:4), the employment of those covered by social insurance was lower by 21% in 1933, while in the same year, the employment of workers in large and medium industries was lower by 36% (in both cases, compared to 1928). However, working hours in the industry amounted to only 58.3% of those of 1929 (GUS 2014:317). Furthermore, if we consider hidden unemployment in the agricultural sector (for example, Zweig (1944:126) estimated this at one-fourth the superfluous peasants' population), then the unemployment rate of over 30% mentioned in the introduction of this study is likely to be a conservative estimate.[7]

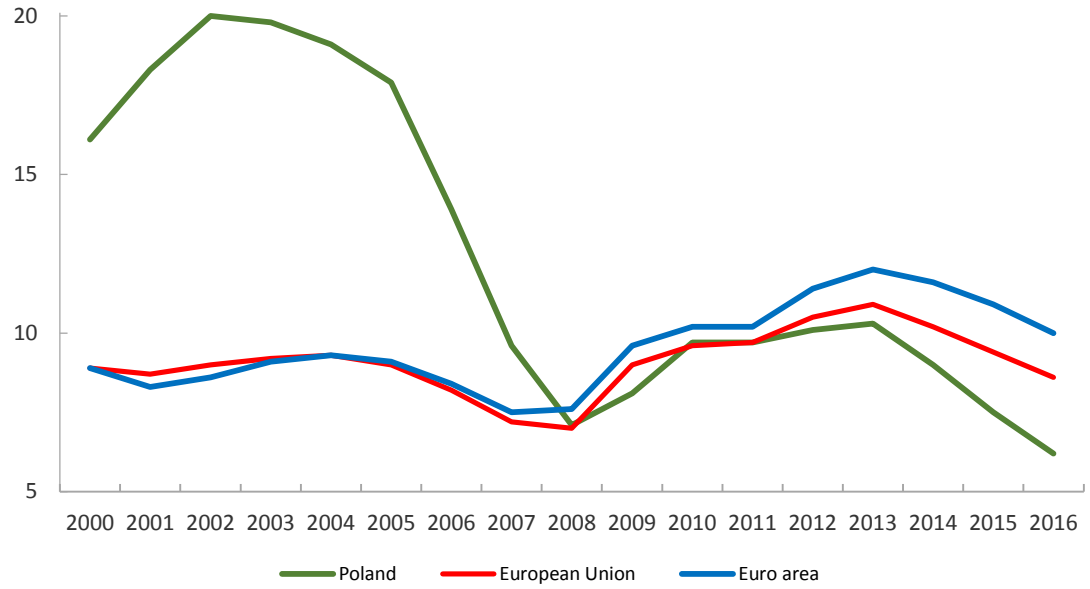
Consequently, time series analyses for both the 1929+ and 2008+ periods, although implicitly suggesting deeper labor market problems in interwar Poland, cannot sensibly be compared. Thus, we propose changing the focus and concentrating on only more recent unemployment developments, as shown in Figure 3.

tries which show three characteristics of Polish development. First, Poland had already entered the crisis in early 1929 (her activity index reached its peak in January of that year) (pp. 20 and 30). Second, the trough of the Polish monthly activity index had already taken place in August of 1932 (p. 30). Finally, they state that, in terms of cumulative loss (a function of duration and amplitude), "the American, Canadian, Polish, Austrian, and German Depressions were the most severe" (p. 21).

6 As stated by the 1931 census, 72.6% of the Polish population lived in rural areas and 65.2% of the professionally active population were engaged in agriculture (GUS 2012:124 and 169).

7 This estimate is suggested in Leszczyńska (2011:31).

Figure 3. Unemployment rate: Poland vis-à-vis the EU and the euro area, 2000–16 (%)



Note: EU Labor Force Survey data; EU (28 countries); and euro area (19 countries).
Source: Eurostat website (accessed on October 13, 2017).

The unemployment rate reached its highest point in Poland after WWII in the beginning of the 2000s. In 2002, it was of 20.0%, well above the EU and euro area averages (9.0% and 8.6%, respectively). Afterwards, however, it began to decline. Starting from 2008, a reverse situation emerges. Paradoxically, while the unemployment rate in Poland once again began to increase (as already mentioned, achieving a peak of 10.3% in 2013), it became lower than that of both the EU and the euro area.

In what follows, we will attempt to explain the diverging developments in the 1929+ and 2008+ periods. Before we do this, however, we must answer our preliminary question: does it really make sense for Poland to compare both historical episodes?

2.2. Does it make sense to compare both episodes?

Is it sensible in the Polish case to make meaningful economic comparisons between the 1929+ and 2008+ periods?

This is a very valid question not only because of the abovementioned data availability problems. Clearly, as for Poland, parallels (or similarities) between the crises under consideration are not as obvious as, for example, in the case of the US and some other developed countries.[8]

The answer to this question is even more important if we fully realize that the pre- and post-WWII economies of Poland differ greatly at very fundamental levels. As we have already hinted at, Poland in the interwar period was an agricultural country, while after WWII (since the mid-1950s), she turned into an industrialized country.[9] Furthermore, from the late 1940s through the late 1980s, her economy functioned under the very different principles of a centrally planned socialist system—that is, on the basis of bureaucratic—and not market—coordination mechanisms.[10] After the political changes of 1989, Poland became a transition economy—transforming its social, political, and economic systems into a modern market system. However, despite these serious differences, there is a case for arguing that important similarities can be exploited.

There are at least five key reasons to study both events simultaneously and conduct a comparative analysis.

First, in both historical cases, Poland was integrated into the European and global economies and was forcefully struck by a succession of severe external shocks, primarily originating from developed Western countries. As we shall see, these shocks, although different in strength in both periods,[11] were transmitted to Poland through similar channels: trade, capital, and banking flows.

Second, in both cases, Poland was a "new" economy in the sense that she was building a new socio-political-economic system; in current terminology, it can be said that in both episodes she was an "emerging" or "catching-up" economy struggling to gain a proper

8 See, among others, Almunia et al. (2010), Bindseil and Winkler (2012), Eingner and Umlauft (2014), and Fratianni and Giri (2017).

9 As a result of the Six-Year Plan of 1950–5 promoting the Stalinist "forced (or accelerated) industrialization" of the country. For more on this, see, for example, Landau and Tomaszewski (1985:215-45).

10 For more on these coordination mechanisms, see Kornai (1984; 2014).

11 Let us also note that both crises were dissimilar in some other respects, too. For example, their early stages differed considerably. In 1929, collapses in equity prices, world trade, and output were not accompanied by major bank failures (these occurred on a larger scale only from the spring of 1931) (see also Subsection 5.3). In 2008, however, bank failures (or rescues) and the collapse of output and trade took place almost simultaneously. See Ritschl (2009), Allen (2013:158), and Fratianni and Giri (2017).

reputation. In the interwar period, she was a newly reborn state, after a more than a century-long partition. In the 1990s and subsequent years, after the collapse of communism, she was building a market economy. In both these eras, many economic (and political) institutions were built almost entirely from scratch.

Third, in both episodes, Poland acutely lacked sufficient resources (both physical and intellectual capital) to promote her economic development (and build her defense industry in the interwar period). Consequently, given the chronic deficiency of domestic savings, she had to import financial capital—this being a crucial factor in economic policymaking, both after 1918 and after 1989.

Fourth, during the post-communist transition, Poland, as in the 1920s, became a typical small open economy (i.e. one in which world prices, interest rates, and output levels and their changes are exogenous to the economy in question[12]), subject to strong financial globalization, with a marked peripheral character.

Fifth, when examining these periods from a broader perspective, a similar, general cyclical pattern of developments can be observed during the periods preceding the crises, during the crises themselves, and in their aftermath, although the magnitude of the events, as shown above, differed greatly. Adopting a bird's eye view, both the 1918+ and 1989+ developments in Poland can be seen as having the following sequence:

- strong inflation accompanied by economic growth problems (1918–23: inflation and hyperinflation; 1989–90: Poland on the brink of hyperinflation, followed by disinflation lasting until 2003);
- stabilization coupled with strong economic growth (1926–9 and 2003–7);
- recession or slowdown with deflation or practically non-existent inflation (1929–35 and 2008–13); and
- recovery (after 1935 and acceleration of GDP growth since 2014).

There are also other economic similarities between the two periods under review, but they are of minor importance for the overall macroeconomic picture. For example, in the interwar period and since 1990, Germany was Poland's main trading partner. One must be careful here, however, as in the former period, the role of trade with Germany was gradually declining, while in the latter, after the initial strong increase (Polański 2000:59), it declined, but stabilized at a high level: in 2015, Poland's exports to Germany were 27.1% of her total exports, while on the imports side, the corresponding share was 22.9% (GUS 2016b:562).

Because of these factors, other similarities arose (as we will discuss later—for example, higher interest rates in Poland than in other countries). Nonetheless, we must acknowledge that these economic parallels were accompanied by great differences in the political

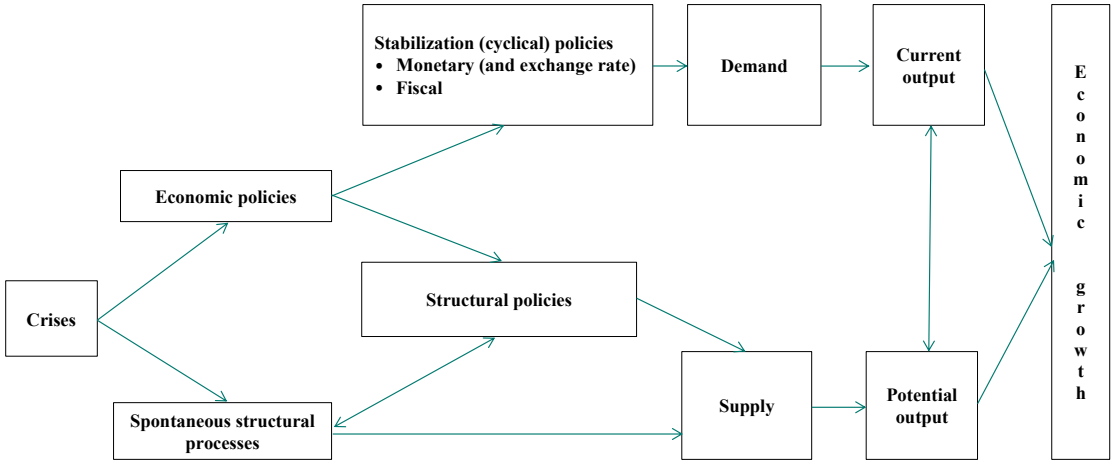
12 Walsh (1998:269).

dimension, both internally and externally. In this respect, Poland's situation in the interwar period and since the start of the 1990s differs dramatically. Without going into detail, let us recall that during the 1926–39 period, Poland was subject to an authoritarian regime, whereas since 2004, she has been a member of the democratic EU (however, short of joining the euro area). Although while during the 2008+ period the international political climate has gradually deteriorated (not only due to economic reasons), Poland has been surrounded by mostly friendly countries. This was clearly not the case in the interwar years, when she found herself trapped between two hostile superpowers (Germany and Soviet Russia) and had only amicable relations with two smaller countries with short common frontiers (Romania and Latvia). These political factors also influenced economic policy decisions and developments in both studied periods. In this paper, however, we concentrate on economic developments. Other aspects of Polish history can be found, for example, in the exhaustive works by Davies (2001; 2005).

3. The framework

To analyze the impact of both crises on the Polish economy and to answer our questions, we propose an analytical framework as described below. The logic of our approach emphasizes the roles of stabilization (or cyclical) policies as well as structural developments (policies and spontaneous processes) in crisis emergence, expansion, and outcomes (see Figure 4).

Figure 4. Crises, economic policies, and spontaneous structural processes: A framework



Source: Author's compilation.

Relying on the ideas of modern economic policy theorists (e.g. Bènassy-Quéré et al. 2010) and policymakers (Draghi 2015), as well as those of Schumpeter (Schumpeter 1911/1934; Schumpeter 1942/1950), our analysis underlines that crises are linked to and result in a sequence of changes (innovations) that can take place in two usually inter-

dependent dimensions: (1) authorities' economic policies and (2) the spontaneous actions of the productive sector.[13]

The dimension "spontaneous actions of the productive sector" consists of private agent initiatives—that is, in its pure form, not directly stimulated (or induced) by public policies (e.g. through taxes or subsidies). Examples of this include private-based actions (e.g. research) leading to labor, product, or financial innovations (which are essentially included in the Schumpeterian concept of the "creative destruction process"). Another example of a spontaneous process is the mechanism known as the Minskian "financial instability hypothesis" (Minsky 1986/2008). One more example here can be the implications of the "animal spirits" phenomena as analyzed by Akerlof and Shiller (2009). Spontaneous actions, among others, result in structural changes leading directly to modifications in supply and potential GDP.

From the upper part of Figure 4, it can be seen that the impact of economic policies on post-crisis developments can result from stabilization as well as structural policies. Stabilization policies—monetary and fiscal—have a demand-side effect and directly influence nominal variables (current GDP), but only do so indirectly in the case of potential output.

Structural policies, on the other hand, are typically nowadays limited to product and labor market policies (or reforms) aimed at improving the performance of these markets (OECD 2015; IMF 2016:101-42). In this context, product markets are often understood broadly—that is, as markets not only for physical goods but also for services, financial markets included (Bènassy-Quéré et al. 2010:515-23). Thus, the concept of product market policies encompasses developing and regulating financial markets as well. Below, we follow this approach; however, we also link the concept of structural policies to state authorities' endeavors directed at changing the productive structure of an economy —or of one of its sectors—through targeted factor allocation or ownership changes. In this instance, we will be talking of "industrial and investment policies" (Subsection 5.4). In any case, structural policies directly concentrate on the supply side—that is, on increasing the potential and resilience of an economy.

13 Crises may also result from these factors as well. In this paper, we stress, however, the causality running from crises to policies and spontaneous processes.

As in the real world, current output and potential output are closely interlinked. We show this in Figure 4 using a double-headed arrow. There is also an interdependence between structural policies and spontaneous structural processes, which is especially important in modern economic systems. Because of this latter interdependence, when answering our questions, we will be considering two perspectives:

1. the perspective of stabilization policies (which is discussed in the next section) and
2. the structural (policies and spontaneous processes) perspective (discussed in Section 5).

4. Stabilization policies in Poland and the crises of 1929 and 2008

As already mentioned, stabilization policies consist of both the monetary and fiscal countercyclical activities of the state. Our central concern in this section is therefore: did both policies provide a macroeconomic stimulus (i.e. an expenditure increase) during the 1929+ and 2008+ periods to counteract the economic slowdowns?

Monetary policy is understood here broadly—that is, as interest rate and exchange rate policies together with foreign exchange control developments (i.e. changes in administrative restrictions on cross-border money transactions). We approach fiscal policy in a similar way: when possible (data permitting), we will rather be talking about public sector actions as opposed to state (national government) budgets only.

4.1. Monetary policy

After the 1923 hyperinflation,[14] a new central bank was created—Bank Polski (Bank of Poland)—and charged with issuing a new currency, the zloty.[15] In April 1924, the Bank began to conduct monetary operations in the framework of the gold-exchange standard (GES), as recommended by the 1922 economic conference in Genoa.[16] During the conference, it was also suggested that monetary authorities should preserve their independence. Thus, Bank Polski was incorporated as a joint-stock company with its main shareholders being private individuals and institutions (the State Treasury's participation in the Bank's equity was initially only 1.1%).[17] Therefore, when formed, Bank Polski was a highly independent institution with a fixed parity of the zloty vis-à-vis gold and foreign currencies convertible into gold.

14 See more on this, for example, in Taylor (1926), Cagan (1956), Sargent (1982), or Horsman (1988:99-103).

15 On the formation and development of the Polish monetary system directly after WWI, see, for example, Karpiński (1968:13-49).

16 Karpiński (1958:17), Morawski (2002:136-7), and Leszczyńska (2013:42-9). On the Genoa conference and the restoration of the gold standard after WWI, see, for example, Brown (1940:342-57), Clarke (1973:5-18), Kindleberger (1973:63-4; 2000:63-4), and Sayers (1976:153-63).

17 Karpiński (1958:18); see also Meyer (1970:62).

Hence, in principle, it was not in a position to buy Treasury debt (in Poland, as in other Central European countries, this and the underlying budgetary deficits were the main reasons for hyperinflation after World War I [WWI]).

However, the introduction of the new monetary system was not without problems. After a period of turmoil (bank and currency crises, the re-emergence of inflationary pressures, and the government's collapse) and the suspension of the Polish currency from the GES, a stabilization plan for the zloty was adopted (1927–30). Following a devaluation, the zloty was allowed to return to the GES system in the autumn of 1927.[18] The new parity was maintained by Poland until WWII—that is, during the whole crisis period.

To confirm its adherence to the GES at the time of its decomposition, in mid-1933 Poland joined the "gold block"—a group of countries committed to maintaining their monetary systems on gold[19] (as opposed to countries in the sterling block or the US or Germany). In April 1936, because of a strong outflow of foreign exchange and gold (see Table 1[20]), Poland unwillingly introduced widespread and exceedingly restrictive foreign exchange controls (Karpiński 1958:169-71; Leszczyńska 2013:336-49). This meant that she de facto went off the gold standard and entered a new period of monetary policy. However, formally, the GES system was maintained and, as mentioned, the gold parity of the zloty remained in place until the outbreak of the war in September 1939 (Morawski 2002:160 and 164). Consequently, during the crisis and its aftermath, the market exchange rate of the zloty hardly depreciated, contrary to most other currencies (see Table 2). Thus, Poland deliberately did not follow the policies that had helped many countries initiating devaluations recover.[21]

18 For more information, see Zweig (1944:48-53), Landau (1963), and Meyer (1970:64-99).

19 The leading country of this group was France, with the others being Belgium, the Netherlands, Italy, and Switzerland. The fold finally broke down in September 1936. For more on Poland's participation in the gold block, see Smith (1936), Karpiński (1958:114-5), and Wolf (2007a; 2007b).

20 For graphs on these developments (1928–36) based on monthly data, see Wolf (2007a:35-7).

21 For the European experience, see Eichengreen and Sachs (1985); for the US experience, see Temin and Wigmore (1990).

Table 1. Foreign reserves at Bank Polski, 1924–38 (selected years, million zlotys)

	1924	1928	1936	1938	1936 (as % of 1928)
Total	641	1335	423	464	31.7
- Gold	178	621	393	445	63.3
- Foreign exchange	463	714	30	19	4.2

Note: End of the year.
Source: Karpiński (1958:236-7).

Table 2. Market exchange rates vis-à-vis the parity as of 1929: The zloty vs. selected European currencies, 1933 and 1938 (%, as of December)

Country	1933	1938
Poland	99.9	99.3
Czechoslovakia	100.4	69.1
France	100.0	43.4
Germany	99.6	99.6
Switzerland	100.2	70.0
United Kingdom	68.1	59.3
Italy	99.0	59.0

Source: GUS (2014:484-5) following the Statistical Yearbooks of the League of Nations.

After the termination of the zloty's stabilization plan in 1930, Bank Polski gradually lost its independence to the extent that after the 1936 imposition of exchange controls, it became almost solely an agent following the government's instructions.[22] This situation was reinforced as it became obvious that the war was imminent. The act of Bank Polski was amended in February 1939, allowing for the creation of money not backed by gold or foreign exchange (fiduciary issue)[23] with the aim of financing military armaments (and counteracting the withdrawal of deposits from commercial banks due to growing

22 Zweig (1944:113) and Knakiewicz (1967:147). Landau (1997:84-5) and Leszczyńska (2013:317-8) stress, however, that, in practice, the loss of independence by Bank Polski had already been taking place since the very early 1930s (i.e. after the stabilization plan concluded).

23 In fact, the process of money supply increase had accelerated earlier: banknotes issued by Bank Polski had already exceeded the statutory limit by September 1938 (Landau 1997:86). See also Zweig (1944:114) and Hartwell (2017, Figure 1).

international tensions) (Landau and Morawski 1995:370).[24] Maintaining a fixed exchange rate of the zloty continued, however, to be of primary importance for the authorities.

Let us move now to the second price of money—the interest rate. It must be stressed from the outset that compared to the current practice of most central banks, interest rates were not of key importance in Bank Polski's policymaking process, at least as it concerns domestic issues.[25] First, under a fixed exchange rate, interest rates had to be of secondary importance (due to the implications of the logic of the impossible trinity theorem for exchange rate targeting[26]); although, after the imposition of exchange controls, this factor must have become of less importance. Second, the interbank money market in interwar Poland was deeply underdeveloped (Sołowij 1939:48-51), and third, Bank Polski was not conducting open market operations.[27] Similar to a majority of continental European central banks, Bank Polski was not permitted to conduct open market operations to avoid the monetization of public debt (Bernanke and James 1991:39; Karpiński 1958:231). In fact, it only set the discount rates on the zloty bills of exchange, and their impact through the interest rate channel on domestic economic activity was limited. Regarding setting market interest rates, the crucial role in determining their levels was played by the administrative maximum rates set for commercial banks by the government as an anti-usury measure. The latter rates were, on average, twice as high as the Bank's discount rates (Leszczyńska 2013:327). Bearing all of this in mind, let us now inspect Bank Polski's interest rate development in the context of other European central banks' rates more closely (see Figure 5).

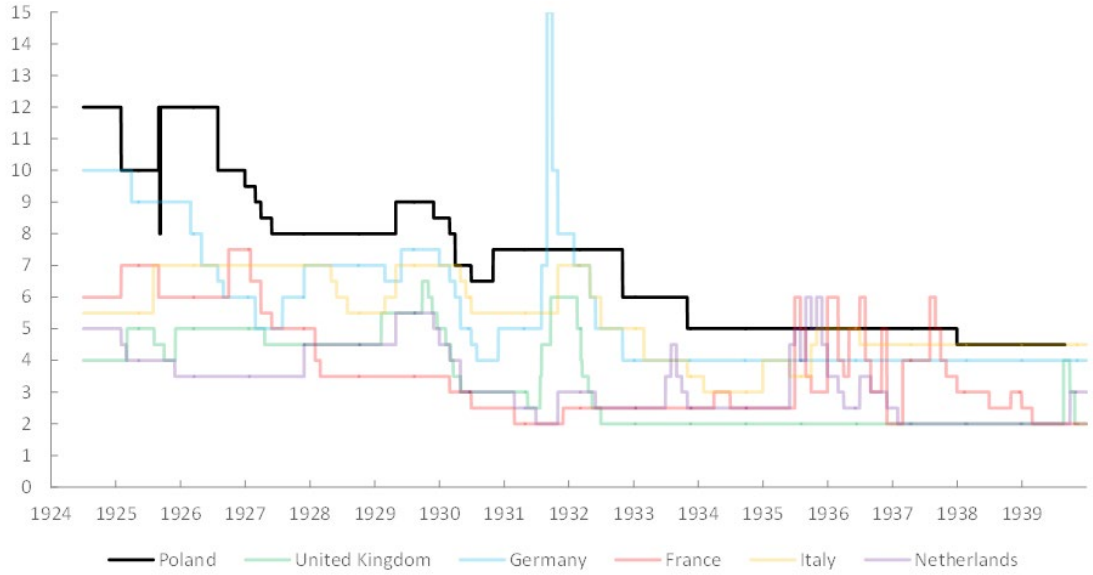
24 There were at least three runs on banks: in March and September of 1938 and in March 1939 (for more see Karpiński 1958:190-3 and Karpiński 1968:153-4).

25 Knakiewicz (1967:189-92) and Leszczyńska (2013:327-8).

26 The theorem states that monetary authorities can implement only two of the following three policies simultaneously: an autonomous (i.e. aimed at achieving domestic goals) interest rate policy, a fixed exchange rate policy, and a policy aimed at the country's full capital integration (i.e. allowing for free capital cross-border flows) (Frankel 1999).

27 Nor did it impose reserve requirements on banks (Leszczyńska 2013:327 and 330).

Figure 5. Discount rates of selected central banks: July 1924 – August/December 1939 (%)



Source: Federal Reserve System (1943/1976:656), Sołowij (1939:84-8), and the Bank of England's website (accessed on October 13, 2017).

As could be expected, central banks' (nominal) interest rates followed a declining pattern during the 1929+ period (with the exception of Germany during the 1931 banking crisis and France, Italy, and the Netherlands in 1935–7). Interestingly, in all these years—even reaching their lowest level since the establishment of Bank Polski—Poland's rates were usually higher than in other countries, and often considerably higher. Two primary factors seem to explain this tendency: first, the chronic shortage of savings compared to Poland's investment needs (albeit during 1930–5 new savings must have surpassed declining investments as her foreign trade account was positive—see Figure 9 in Subsection 5.1), and second, the risk premium resulting from Poland's peripheral status, poor performance during most of the interwar period, and, above all, the constant tensions due to her geopolitical situation—all of which leading to pronounced uncertainty. Even if we consider their limited importance for domestic economic affairs, such high nominal interest rates in times of strong deflation (Figure 2) resulted in very pronounced real interest rates which were not conducive to recovering from the recession and restoring growth. These statements are made in the context of central bank rates, but—as mentioned above—the crucial role in setting market rates was played by the administrative rates set by the government, and these were higher than Bank Polski's rates.

We can summarize our brief account of Polish monetary policy at that time by stating that it did not provide a stimulus to the ailing economy, neither through the exchange rate, nor through the interest rate. The 1929+ Bank Polski's interest rate decisions may be at best characterized as accommodative, in the sense that they followed general economic trends and did not try to actively alter them using monetary stimuli.

An argument could be made here that the logic of the GES system imposed the described policies, implying deflationary effects. It is a valid observation since this monetary framework was blamed for providing a "deflationary bias" which resulted from the asymmetric response of different countries to gold flow movements and the maldistribution of international reserves of gold, leading to monetary contractions in many countries.[28] Obviously, as was usually the case in the first half of the 1930s, money stock in Poland also declined (although relatively modestly).[29] Polish authorities tried to reduce this deflationary bias by amending the Bank's statutes on several occasions,[30] but such actions were of minor importance. Only the April 1936 regulation introducing exchange controls modified the monetary framework and made deeper changes in the Bank's policies possible. This was, nonetheless, done much later than in most countries and, as we have seen, was not followed by exchange rate depreciation and bolder interest rate movements.

Let us now turn to monetary policy in the 2008–15 period. During this episode, central bank policy was very different, concerning both exchange rate and interest rate developments. In principle, this was possible because the new central bank—the Narodowy Bank Polski (National Bank of Poland, NBP)[31]—has been operating under a very different monetary system than its predecessor—that of a contemporary fiat (fully fiduciary) money framework. The latter clearly allows for more flexible economic policies than that which was established in the 1920s.

As hinted in Subsection 2.2, at the end of the 1980s—that is, during the final fall of the communist regime and the centrally planned economy, Poland experienced very high inflation, bordering hyperinflation dynamics, which, contrary to the 1920s experience,

28 For an exhaustive discussion on this aspect of the interwar gold standard, see Bernanke and James (1991:35-44). See also Feinstein et al. (2008:49-51) and Fratianni and Giri (2017).

29 More on this see in Karpiński (1958:236-7), Knakiewicz (1967:133-60), Leszczyńska (2011:35; 2013:318 and 330-1), and Hartwell (2017, Figure 1).

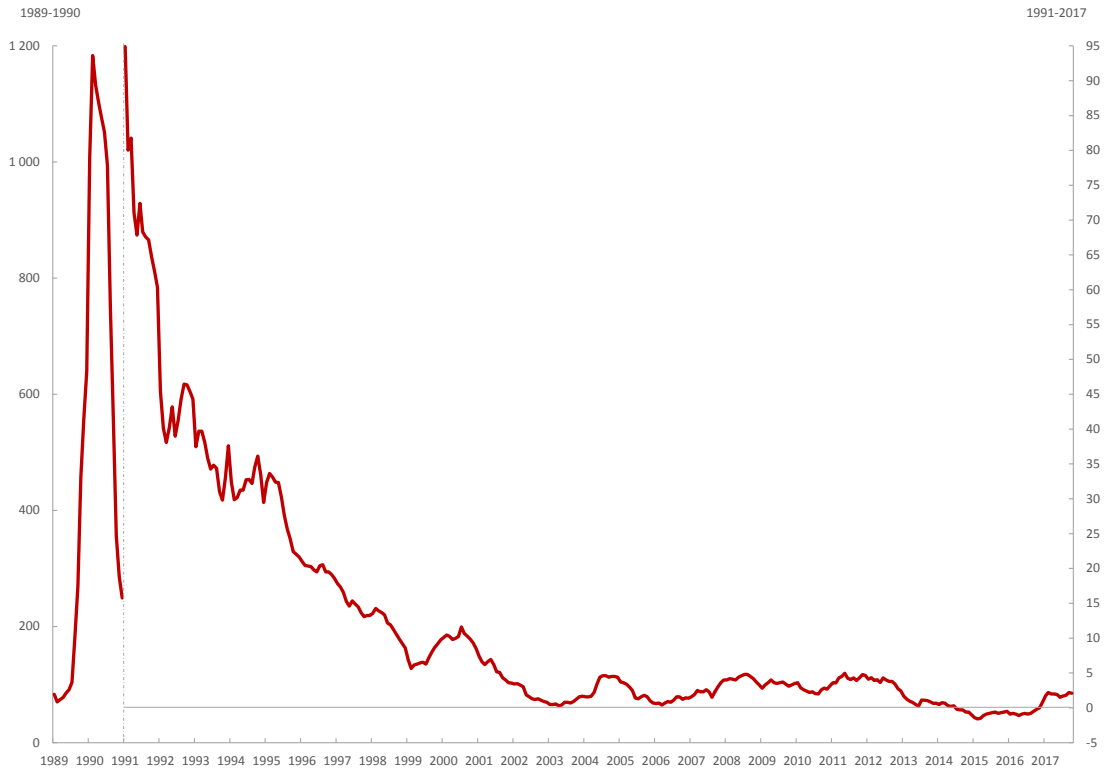
30 In March of 1932, 1933, and 1935, and February 1936 (in the latter case, the Bank provided non-interest funds to the Treasury). On the context and technicalities, see Zweig (1944:112-3), Karpiński (1958:139-42), and Leszczyńska (2013:325 and 338).

31 It was established in 1945, and turned into a modern, independent central bank in the sense of an autonomous institution concentrating on monetary control in the framework of a two-tier banking system at the end of the 1980s and in the early1990s. See Kokoszczyński (2004:212-3). There is vast literature on the late 1980s and early 1990s reforms of the Polish banking sector and the NBP; to the English-language reader, we suggest Mondschean and Opiela (1997) and Ugolini (1996). For a more general perspective from transition countries, see Polański (2016).

did not turn into a genuine hyperinflation. In fact, in 1989–90, there were only two months (October 1989 and January 1990) in which the inflation rate surpassed 50%—the often-used conventional yardstick to define hyperinflation (following Cagan (1956)). To halt the expansion of the inflation process, a stabilization program was adopted—known as the "Balcerowicz plan" from the name of the main architect of Poland's economic policies at that time. From then on, inflation gradually and without major reversals declined, turning in mid-2014 into a mild deflation[32] (see Figure 6).

32 Our narrative stresses consumer price behavior. However, it must be pointed out that in terms of domestic industrial producer prices (Producer Price Index), deflation in Poland had already appeared at the end of 2012.

Figure 6. CPI inflation: Poland, 1989–2017 (%)



Note: Year on year monthly rates; last information: October 2017.
Source: GUS website (accessed on November 17, 2017).

At the end of the 1990s, the NBP adopted full-fledged inflation targeting as its monetary strategy and introduced a freely floating exchange rate regime. Solving in this way the impossible trinity conundrum, it could further concentrate on inflation control so that at the time of joining the EU in 2004, monetary stabilization was completed.[33]

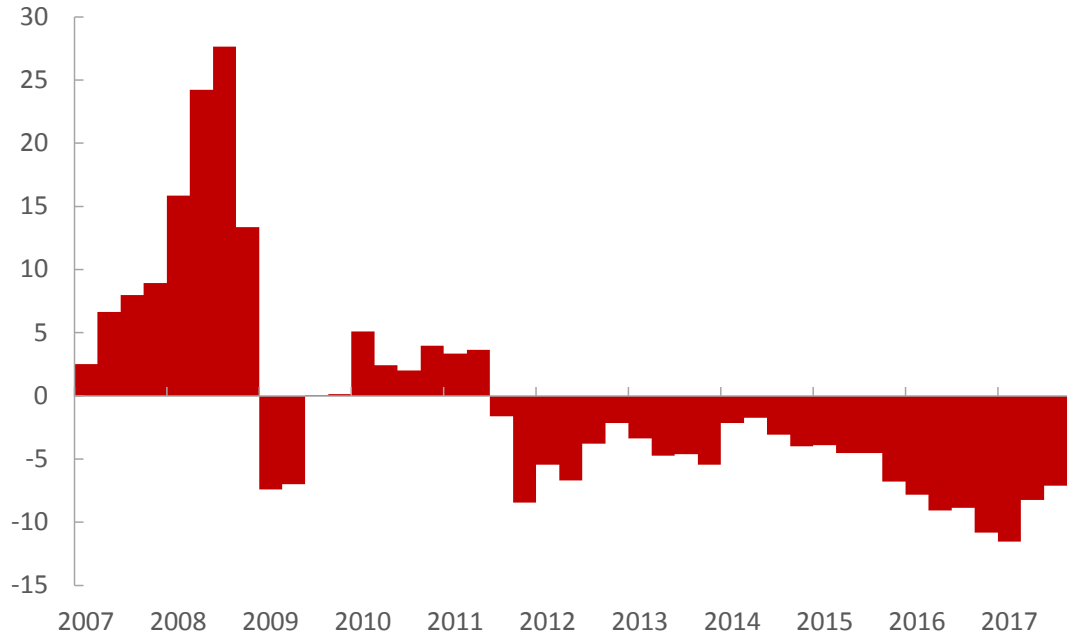
When Poland was hit by the 2008 crisis, her economy was operating well above its capacity—she had a noticeable (roughly 3% of potential product) and positive output gap (see Table 4 in the next subsection), while disequilibria started to emerge—inflation increased again (Figure 6) and a speculative bubble on the housing market began to grow (NBP 2010). However, as we have mentioned elsewhere (Polański 2014:167), Poland

33 Polański (2016:99). More on Polish monetary policy until EU accession can be found in Polański (2004).

was struck by the global turmoil at a comparatively good moment—that is, at a relatively early stage of her strong expansion, when the disequilibria were still not pronounced. Consequently, the shock cooled down her quickly expanding economy without pushing it into a recession (see Figure 1).

The first to react to the 2008 external shocks—and to provide an anti-recessionary monetary stimulus—was the nominal exchange rate, which had already started to depreciate in the middle of that year. After the Lehman Brothers bankruptcy (September 15), its depreciation accelerated. In the second half of 2008 and in the beginning of 2009—just half a year—its effective nominal value decreased by almost 25%, while its real value—as measured by unit labor costs (ULC)—decreased by 37% (Polański 2014:168). The shock-absorbing abilities of a freely-floating exchange rate regime were clearly seen in the Polish case (Stążka-Gawrysiak 2009).

Figure 7. Deviations of the real effective exchange rates (REER) of the zloty from its 10-year average, 2007–17 (%)



Note: ULC are applied as deflators to the REER calculation; 10-year average for 2007–16; last information: third quarter of 2017.
Source: NBP calculations based on OECD data.

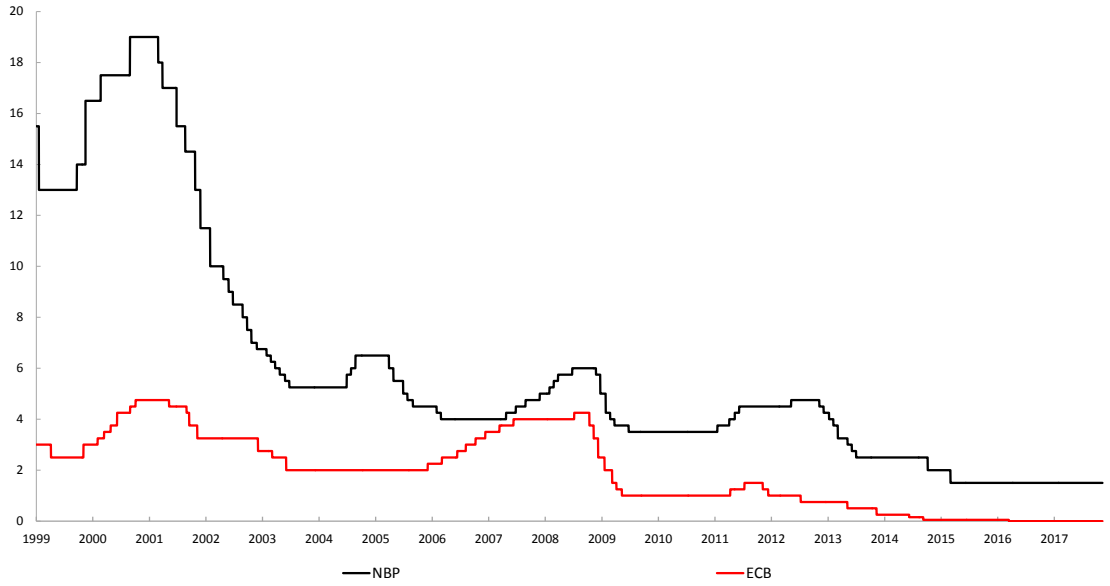
Figure 7 suggests that the impact of the depreciated currency was prolonged: until 2017, the REER of the zloty remained below its 10-year average. Such a long period of currency depreciation in real terms points out, however, that other factors must have played a role in shaping it. How it happened, and why we show the REER computed using ULC indices, will become clear only when we move to structural issues—in particular, labor market developments (discussed in Subsection 5.2).

Returning to the 2008 developments, one must note (as shown in Figure 8) that directly before them, the NBP policy rate again reached elevated levels (in June, the reference rate was raised to 6%), increasing its disparity with that of the ECB. This was clearly the effect of the overheating economy, as the central bank made attempts to cool it down and control inflation at the 2.5% CPI target. With the unfolding of the global financial crisis, the NBP, in line with other central banks, started to cut its rates. Nonetheless, the disparity with ECB rates continued increasing until 2013. During the whole 2008+ period, however, NBP interest rate changes followed the general pattern of the ECB's while continuously remaining above those of the ECB. Thus, to a large extent, it was a similar development to that observed in the 1930s (Figure 5).[34] This should not be entirely surprising, as in both historical episodes, Poland had to import financial capital while being a peripheral country that was only just beginning to build her international reputation.[35]

34 Because of the theme of this paper, we talk in more detail only on the 1929+ and 2008+ events. It must be stressed (as reflected in Figures 5 and 8), however, that in the pre-crises years, Polish central bank interest rates were also above those of its peer central banks.

35 In other words, several factors (shortage of capital and risk premia, among others) resulted in higher natural (or neutral) interest rates than in many other countries. See, for example, Brzoza-Brzezina (2006; 2011:49-64).

Figure 8. The NBP and ECB main policy interest rates, 1999–2017 (%)



Note: NBP – reference rate; ECB – refinancing rate. Last information: November 10, 2017.
Source: ECB and NBP websites (accessed on November 13, 2017).

Another important piece of information provided by Figure 8 is that, contrary not only to the ECB but also to various other central banks of the developed world, the NBP rates always remained well above zero. In March 2015, its reference rate was cut to 1.5% (remaining at this level at least until the autumn of 2017). Thus, similar to the case of Bank Polski in the interwar years, during the global financial crisis and its aftermath, NBP rates reached their lowest point since the beginning of the transition (1989). This was achieved, however, by a more flexible policy, as evidenced by the frequency of interest rate changes.[36] Nevertheless, in the area of interest rates, the NBP did not resort to unconventional decisions such as negative nominal rates.

Essentially the same can be said about its other monetary policy tools. After the shock resulting from the Lehman Brothers collapse, the NBP attempted to introduce some unconventional instruments under a program entitled the "confidence package" (which had already been approved by mid-October 2008). Similar to many other central banks' actions

36 From mid-1929 until 1939, Bank Polski changed its policy rate a mere 10 times, while from mid-2007 until November 2017, the NBP did it 28 times.

of that time, this plan aimed at providing additional liquidity to the banking sector (by extra repo operations, FX swaps, and lowering reserve requirements[37]). These actions, however, proved to be largely pointless (probably except for FX swaps, which supplied foreign denominated liquidity[38]). This was because the Polish banking sector, since the start of the post-communist transition, was characterized by a permanent excess of liquidity (Polański 1994).[39] As a result, the role of the NBP was to absorb the surplus liquidity by selling its own debt instruments (money bills).

At the time of the crisis, thus, the Polish banking sector enjoyed a "liquidity cushion." Attempts at supplying additional domestic liquidity met with a mixed reaction from banks, proving largely futile. Consequently, during 2010, most of these actions were reversed and the reserve requirements returned to their previous level of 3.5%. Not surprisingly, in January 2011, this was accompanied by the start of the NBP's increasing interest rate cycle (which had begun a few months before that of the ECB's—see Figure 8).

In summary: in the period 2008+, there was no need for the NBP to move into the uncharted territory of unconventional decisions. On the one hand, the floating exchange rate proved to be an excellent instrument to stimulate Polish exports (see Figure 10 in Subsection 5.1) and promote growth. On the other hand, inflation rate developments and economic expansion resulting from these strong exports and some other (particularly, consumption) components of aggregate demand did not call for a very deep reduction of interest rates, while the banking sector enjoyed ample domestic liquidity, basically without the need for additional central bank involvement. Therefore, while exchange rate depreciation supplied a strong stimulus to the economy, the same cannot be said of the interest rate policy. Given the circumstances, the latter, per se, did not provide a stimulus resulting in an additional demand expansion. While being significantly more flexible than in the 1930s, in the 2008+ period, interest rate policy was also of an accommodative nature.

37 In 2010, also by adding a new refinancing credit scheme.

38 On the Polish experience with FX swaps, see, for example, Allen (2013:152-7).

39 The main reasons being foreign exchange interventions conducted by the NBP until mid-1999 and, afterwards, the inflow of EU funds.

4.2. Fiscal policy

In both episodes under consideration, Poland faced fiscal deficits. Taken at face value, this similarity can be highly misleading, though. This is particularly true when we look at budgetary developments from the perspective of fiscal stimulus creation, which should counteract economic slowdown and recession.

During the 1930–5 span, Poland's state budget was a deficit budget. Before that period (but only from 1926), it showed surpluses, while afterwards, modest positive balances (see Table 3).

Table 3. Polish state budget: Yearly changes of revenues and expenditures and balance to expenditure ratio, 1928–38 (%)

	1928	1929	1930	1931	1932	1933	1934	1935	1936	1937	1938
Revenues	8.6	0.7	–9.2	–17.8	–11.5	–7.0	8.5	0.5	9.2	9.7	1.7
Expenditures	11.2	5.4	–6.0	–12.3	–9.0	–0.6	3.2	1.5	–5.3	8.9	1.9
Balance /Expenditures	5.9	1.2	–2.3	–8.4	–10.9	–16.6	–12.3	–13.1	0.2	0.9	0.7

Notes: (1) The fiscal year runs from April 1 until March 31. The dates refer to the starting calendar year. (2) In 1934, the national loan is excluded from revenues.
Source: GUS (2012:497).

The nominal size of the state budget (both revenues and expenditures) peaked in 1929. It can be estimated that in the observed year the ratios of revenues and expenditures to GDP amounted to 11.7% and 11.5%, respectively.[40] The yearly rates of growth of revenues and expenditures had already started to decline in 1928, with the pace of reductions being larger in the case of revenues. Consequently, a budget deficit appeared in 1930. It reached its largest nominal value in 1933, which was equivalent to 16.6% of that year's budgetary expenditures and 1.6-1.7% of the estimated national income.[41] In terms of share in expenditures, it was above 10% for four consecutive years (1932–5).

40 Among the available estimates of Polish GDP for 1929, we use the one suggesting its largest size, computed by M. Kalecki and L. Landau (also by C. Klarner). For various estimates of Polish GDP in the interwar period see GUS (2012:526).

41 Again, here we use the estimates providing the largest nominal GDP as computed by the authors mentioned in the previous footnote. The actual ratio of the deficit to GDP was probably higher, as the government tried to hide budgetary deficits by means of creative accounting (Knakiewicz 1967:236-8; Landau and Tomaszewski 1982:259-60). Furthermore, taking into consideration the whole public sector, one must stress that local governments (as a subsector) also often showed deficits (GUS 2012:500-1).

The speed of reductions of budgetary revenues and expenditures declined in 1932; however, it was only two years later when the growth rate of the former surpassed that of the latter, and initially, only temporarily. From 1936, a clear trend of stronger growth of revenues than that of public spending became evident, impeding further deficit formation. The growth of the nominal size of the state budget continued; however, it did not reach the dimension of that of the late 1920s. But with a much lower price level (Figure 2), its size in terms of GDP increased considerably. For example, in 1937, the ratios of budgetary revenues and expenditures to GDP were higher by 3 percentage points (p.p.) than in 1929 (14.7% and 14.6%, respectively[42]).

Likewise, as in the case of other countries, changes in Poland's state budget were closely linked to her macroeconomic developments (Subsection 2.1). Clearly, a deepening recession and deflation led to lower revenues and the appearance and expansion of fiscal imbalances. Contrary, however, to the practice of many other countries—especially of those that left gold at some point of time[43]—and the suggestions made in economic literature (e.g. Keynes 1933/1972:349[44]), Poland actively fought for balanced budgets and, finally, after 1935, managed to return to them.

All Polish governments during the 1929–35 crisis aimed at balancing state accounts (Knakiewicz 1967:206; Landau and Tomaszewski 1985:99-100). This was to be achieved by both spending reductions and revenue increases. Initially, more emphasis was laid down on outlays cuts; the first had already taken place in the 1929 budget and referred to investments (in state enterprises)—the given rationale being the capital outflow from the European markets (Knakiewicz 1967:235). In the following years (until 1935), public investments were further reduced, making them an irrelevant item in the state budget. Salaries and jobs in the public sector—especially civil servants and teachers—were cut in several steps (Karpiński 1968:144); public pensions were also reduced. On the revenue side, taxes were increased, albeit in a selective manner. The latter refers, in particular, to select direct taxes so as not to additionally demotivate the business sector.[45] Indirect taxes were expanded and their rates increased. The final tax increase during the crisis took place in the autumn of 1935 when the income tax rate was raised.

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42 The 1937 GDP as estimated by the Polish Central Statistical Office (GUS 2012:526). See also Jezierski and Leszczyńska (2001:336).

43 It must be stressed, though, that these countries enjoyed modest fiscal shortages when looked at from today's EU standard of the 3% of fiscal deficit to GDP ratio. For more, see Almunia et al. (2010). See also Romer (1992; 2009).

44 Also Kalecki, at that time still an unknown economist, already in 1932 hinted to resort to fiscal deficits (1932a/1979:80-1).

45 In 1933, tax breaks to stimulate housing investments were also introduced.

As a result of these actions, the tax burden increased considerably (Knakiewicz 1967: 219-22; Landau and Tomaszewski 1982:274-5). Despite this, the national government and local governments had to use additional sources to finance their spending, and, therefore, their indebtedness—primarily their domestic debt—increased significantly.[46] Using available estimates of national income for 1936, the public sector debt to GDP ratio can be estimated at 23.1-26.1%, while the national government's debt alone can be estimated at 18.6-20.8% (GUS 2012:501 and 526).

Regardless of the existence of budget deficits (and implied public debt), and even taking into account the aforementioned tax initiatives to act selectively, it cannot be said that fiscal policy had provided a macroeconomic stimulus to Poland's development during the crisis period. Fiscal deficits were above all an outcome of the recession (Figure 1) and deflation (Figure 2). Increasing the tax burden and cutting budgetary outlays obviously did not help in expanding national spending. On the contrary, Poland's fiscal policy of that time was a contractionary factor in the sense that it reduced the badly needed domestic demand. In fact, thus, it had a procyclical, deflationary impact.

While the budgetary situation of the 1930s cannot be considered as providing a macroeconomic fiscal stimulus aimed at smoothing the business cycle, we had a considerably different state of affairs during the 2008+ period (see Table 4).

Table 4. Polish public sector: A general overview, 2007–16 (% of GDP)

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Revenues	41.4	40.7	37.8	38.5	39.1	39.1	38.5	38.7	38.9	38.7
Expenditures	43.2	44.3	45.0	45.8	43.9	42.9	42.6	42.3	41.6	41.2
Balances:										
– Actual	–1.9	–3.6	–7.3	–7.3	–4.8	–3.7	–4.1	–3.6	–2.6	–2.5
– Primary	0.3	–1.5	–4.8	–4.9	–2.3	–1.1	–1.6	–1.6	–0.9	–0.8
– Structural[a]	–3.3	–5.0	–8.0	–8.0	–5.9	–3.8	–3.4	–3.0	–2.4	–2.2
Debt[b]	44.2	46.3	49.4	53.1	54.1	53.7	55.7	50.2	51.1	54.1
Memo:										
Output gap[a]	2.8	2.7	1.5	1.2	2.1	0.2	–1.4	–1.1	–0.5	–0.5

[a] As a percentage of potential GDP.

[b] Stock of gross debt (end of year).

Notes: European System of Accounts 2010. General government sector (national government, local governments, and social security funds).

Source: European Commission (2017a:35; 2017c:109).

46 Notwithstanding the new foreign loans obtained during the 1930-5 period, Poland's external indebtedness in zloty terms declined until WWII (GUS 2012:501). This was mainly possible because of the devaluations of the pound sterling (1931), the US dollar (1933), and other currencies (see Table 2).

Table 4 presents the Polish public sector's incomes and outlays, three basic measures of fiscal balances: actual (or financial), primary, and structural, as well as gross debt developments. Each of these items is related to actual GDP, with the exception of the structural (or cyclically adjusted) balance, which refers to potential GDP. The latter balance estimates what the actual balance would be, had output been at its potential level (i.e. nil output gap was in place). It provides, thus, information on the impact of the government's discretionary decisions on the fiscal balance as opposed to the impact resulting from the functioning of the so-called automatic stabilizers (Bènassy-Quéré et al. 2010:163).

All public sector balance measures clearly show that during the 2008+ period, a strong fiscal stimulus was provided to the economy. Contrary to the 1930–5 period, expenditures had been increasing until 2010 (as part of a constantly growing—both in real and nominal terms—GDP; see Figures 1 and 2). What is more, during the 2008+ crisis, the ratio of revenues to GDP declined, while in the first half of the 1930s, it increased, as nominal GDP at that time declined faster than budgetary revenues.

A fiscal impulse occurred during the entire 2008–15 period; however, from 2011, it had clearly started to moderate. This was not only because the macroeconomic situation became less challenging, but also because in July 2009 Poland was again subject to the EU's excessive deficit procedure (EDP).[47] The new EDP was closed only in mid-2015, after two extensions (initially, it was supposed that the deficit would be corrected by 2012). Hence, despite pressure for fiscal austerity, Poland, similar to some other EU countries,[48] prolonged her relatively lax fiscal orientation. It was only in 2014 that the structural balance, as mentioned above—the measure of the discretionary component of fiscal policy, was reduced to 3%.[49]

Likewise, in 2014, Poland's ratio of gross debt to GDP abruptly fell and remained reduced during next year. This was due to the reorganization of the pension system which, among others, assumed a major transfer of funds from private open pension funds to the Polish Social Insurance Institution (see, for example, Polański 2014:172-3).[50]

How was the fiscal stimulus engineered and managed? The answer is provided by the data in Table 5 and the following information.

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47 It is worthwhile to recall that the previous procedure had been ended only a year earlier (July 2008).

48 Such as, for example, France, Greece, Hungary, Portugal, or Spain (Chrzanowski 2015:148).

49 If such a budget balance is corrected for the one-off and other temporary measures, then in 2014, it reached only –2.8% of potential GDP; in 2013, by this measure, it amounted to –3.4% (European Commission 2017b:180). The cyclically adjusted balance corrected for the one-off and other temporary measures is currently considered by the European Commission as the main indicator for the assessment of a country under the Stability and Growth Pact (Mourre et al. 2013).

50 For a much broader picture of this development, see Bielawska et al. (2015).

Table 5. Polish public sector revenues and expenditures: Selected items, 2007–16 (% of GDP)

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Tax burden[a]:	34.6	34.1	31.2	31.4	31.8	32.1	31.9	31.9	32.4	33.4
– Indirect taxes	14.4	14.4	12.8	13.8	13.9	13.0	12.9	12.8	12.8	13.4
– Direct taxes	8.3	8.4	7.2	6.7	6.7	7.0	6.7	6.8	6.9	7.1
– Social contributions	11.9	11.3	11.2	10.9	11.2	12.1	12.4	12.3	12.5	12.8
Social benefits[b]	14.2	14.0	14.5	14.6	13.9	14.0	14.5	14.4	14.3	15.3
Compensation of employees	10.5	10.8	11.0	11.0	10.5	10.3	10.4	10.4	10.2	10.3
Fixed investment[c]	4.5	4.8	5.0	5.6	5.9	4.7	4.1	4.5	4.4	3.3
Memo: Average tax burden in:										
– EU–28	38.3	38.1	37.4	37.5	38.0	38.6	39.0	39.0	38.6	38.9
– Euro area (19 countries)	38.9	38.5	38.1	38.0	38.5	39.6	40.1	40.3	40.1	40.2

[a] Defined as the sum of revenues from indirect taxes ("taxes on production and imports"), direct taxes ("current taxes on income and wealth"), and social contributions ("actual social contributions"). Figures may not add up due to rounding.

[b] Social transfers other than in kind.

[c] Gross fixed capital formation.

Notes: As in Table 4.

Source: European Commission (2017c:83, 107 and 127).

First, let us note that the tax burden to GDP ratio in Poland, contrary to her pre-war experience and to many other EU countries,[51] visibly declined. From 2007 until 2009 (the lowest ratio), it decreased by 3.4 p.p., increasing slightly thereafter, but at the end of the studied period (2015), it was still lower by 2.2 p.p. than at its beginning.

In Poland, during the 2008+ episode, there were no massive tax increases as in the 1930s, albeit some taxes were raised. For example, in 2011, the Value-Added Tax (VAT) rate was increased: the standard rate increased from 22% to 23% and the reduced rates increased from 3% and 7% to 5% and 8%, respectively. This was not unusual in the EU at

51 See the last two rows in Table 5. In that period, however, strong declines in tax burden-GDP ratios took place in Ireland and, particularly, Spain (see European Commission 2017c:19 and 27).

that time. However, despite increases of VAT rates in most EU countries, Poland's standard VAT rate continued to be above the average (in 2015, the simple average for the EU-28 was 21.6%, while for the euro area it was 20.8%) (European Commission 2017d:24-5).

A different picture emerges when the Personal Income Tax (PIT) is considered. In Poland, its top statutory rate was reduced in 2009 from 40% to 32%, while the average for the EU since that year oscillated around 38–39% (in 2015: 39.0%), and for the euro area—around 39–42% (in 2015: 42.0%). As for the other direct tax, the Corporate Income Tax (CIT), in Poland, it has remained flat at 19% since 2004. In both the EU and the euro area, the top statutory CIT rates, however, declined, being nonetheless continuously above the Polish rate (in 2015, the simple average for the EU was 22.8%, while for the euro area—24.6%) (European Commission 2017d:28 and 34).

Taken together, both indirect and direct taxes as a ratio of GDP considerably declined in Poland: from 22.7% in 2007 to 19.7% in 2015—that is, by 3 p.p. (Table 5). As for the EU these ratios amounted to 26.6% and 26.8% respectively, while for the euro area to 25.6% and 26.2% (European Commission 2017d: 143 and 145).

The last revenue item in Table 5 refers to social contributions. They increased slightly during the covered time frame, but only since 2011. This development should be above all linked with the mounting financial tensions in the social security arrangements which, among others, resulted in the already-mentioned 2014 reform of the pension system. Given constantly higher social payments (benefits) than inflowing social contributions, the government made increasing attempts to improve compliance with social security regulations. Since the start of the decade, this activity was additionally motivated by the increase of the unemployment rate, which—as we already know—peaked in 2013 (see Subsection 2.1).

Public sector employee compensation remained broadly stable as a fraction of GDP. During the time span covered by Table 5, there were no cuts in nominal salaries as happened in some EU countries at that time or in Poland during the 1930s. However, attempts were made to control increases in nominal salaries and the number of positions. Both were frozen (in the context of the EDP implementation) and, as the data suggests, these attempts were relatively successful.

Finally, Table 5 shows that, contrary to the 1929–35 policies, public fixed investments played a major role in the Polish government's outlays. In fact, their growth was an important factor behind the 2007–10 expansion of public spending and the fiscal stimulus. We are witnessing here, however, two developments. The first one, of a longer nature, must be linked to Poland's accession to the EU (May 2004) and the resulting inflow of structural (and other) funds. This is clearly confirmed by the data: while in 2003, the ratio of public fixed investments to GDP was only 2.8%, in 2007, after an uninterrupt-

ed growth, it reached 4.5%. In subsequent years, this ratio further increased, but declined in 2012–3, reaching in 2015 approximately the level of 2007.

Hence, obviously, there was a second development taking place, but of a shorter nature—that is, lasting only until 2011. This additional investment expansion resulted from the organization by Poland (and Ukraine) of the 2012 European football contest (UEFA European Championship or Euro 2012). The decision to co-host these tournaments was taken in mid-April 2007—just before the US subprime crisis erupted. Again, evidently, Poland was lucky in terms of timing. Poland was lucky in terms of the total impact on the Polish economy, too: it was estimated that all forms of outlays related to these games may have caused (during the 2008–20 period) an increase in real GDP by 1.4-2.7% of its total 2009 volume (Borowski et al. 2011).

4.3. Stabilization policies: Summing up

The conclusions from our analysis of stabilization policies during both analyzed periods are succinctly presented in Table 6.

Table 6. Main features of Polish stabilization policies during 1929+ and 2008+ periods

	1929+	2008+
Framework	Gold Exchange Standard (practically until April 1936)	Fiat money
Monetary policy		
- Interest rate policy	Accommodative: No stimulus	More flexible, but accommodative: No stimulus
- Exchange rate policy	No devaluation/ depreciation: No stimulus	Strong depreciation: Stimulus
Fiscal policy	Restrictive (despite temporary fiscal deficits): No stimulus	Temporarily considerable fiscal deficits: Stimulus

Source: Author's compilation.

The analysis thus far has shown that in the dimension of cyclical policies, two very different approaches were followed, largely explaining the differences in macroeconomic performance underlined in Subsection 2.1. In the 1930s, Poland refrained from stimulating aggregate demand by monetary and fiscal policies. During the 2008+ period, the situation was considerably different: both policies (in the case of monetary policy, the exchange rate behavior) provided macroeconomic stimuli.

What were the reasons for such diverging policy approaches?

The answer to this question is not that obvious if we take into account that both historical episodes were preceded by strong inflationary processes (1923 and 1989–90) and long disinflation policies (1924 reforms and the 1927–30 stabilization plan in the case of the first episode, and the policies implemented until 2003 in the case of the second). In both periods, memories of high inflation and harsh stabilization policies were still very vivid, precluding the government and the central bank from an abrupt policy adjustment.

Obviously, during the former period, inflation memories must have been more intense, as the 1923 hyperinflation was much stronger than the 1989–90 inflation episode. Also, the time span separating these two inflationary events and both crises was different. However, the dollarization of the Polish banking system was administratively abolished only in mid-1934 as a result of the devaluation of the US dollar in the preceding year.[52] After the collapse of communism, the de-dollarization proceeded very quickly (Reinhart and Rogoff 2009:194-5), although even today a part of Poland's banking system deposits remains in foreign currencies.[53] Inflationary fears, therefore, must have been present in both episodes—not only among society as a whole, but also among its political elites. However, as has just been said, the time span from high inflation and stabilization (disinflation) to the outbreak of the crises was much shorter in the first case than in the second.

Besides, the political situation (in particular, the international context), as stressed in Subsection 2.2, was very different. Consequently, the authorities of the newly reborn Poland stuck with the pervasive mentality of the gold standard (Eichengreen and Temin 1997) and followed very orthodox financial policies to get a "good housekeeping seal of approval," which was instrumental in attracting foreign capital at reasonable cost (Bordo et al. 1999; Wolf 2007a, 2007b). As mentioned earlier, capital was in short supply, while demand for it was growing as WWII approached. Under these circumstances, the pre-war authorities delayed decisions to make a serious macroeconomic policy regime change in line with that which had allowed other countries to recover more quickly from the Great Depression (Eichengreen and Sachs 1985; Temin and Wigmore 1990; Romer 2014). Instead, Polish authorities adhered to the pre-war gold standard as long as possible; and only in April 1936 were currency controls unwillingly (and temporarily in intention) introduced—therefore implementing at best a partial regime change in its macroeconomic policy. Accordingly, the policy framework continued to be very rigid.

52 See more in: Karpiński (1958:125-8 and 1968:138-41); Knakiewicz 1967:149-50); Landau and Tomaszewski (1982:250-1).

53 At the end of 2015, they still amounted to 8.3% of M3 or 9.6% of M3 bank deposits.

This was not the case in the 2000s. The rigid stabilization policy framework implemented at the start of the 1990s under the Balcerowicz plan, which allowed for a reduction in the high inflation rate, evolved over the course of the decade towards a quite flexible regime (as epitomized by a freely floating exchange rate). Consequently, the system could act as a shock absorber. At the same time, the fiscal authorities followed non-dogmatic policies, which also proved flexible. Therefore, contrary to the prewar experience, the early post-communist transition macroeconomic policy regime in Poland evolved towards a flexible regime before being struck by the 2008+ external shocks.

As we shall see in the next section, Poland was also relatively well prepared for these shocks in the structural dimension of her economy. And, again, this was not the case in the 1930s.

5. Structural developments in Poland and the crises of 1929 and 2008

In this section, we move to the structural developments resulting from both authorities' structural policies and spontaneous processes (i.e. coming from private economic agents' initiatives). As suggested in Section 3, we will analyze these developments under four headings: (1) product markets, (2) labor markets, (3) financial markets, and (4) industrial and investment policies. We will evaluate various developments in terms of flexibility (or rigidity) of market structures, stability of the markets, and the activity of the state in relation to these markets.

Before moving ahead, it is also important to note that during the second of the analyzed episodes, Poland was a Member State of the EU. Using the official EU accession terminology, she was, thus, "a functioning market economy" with "the capacity to cope with competitive pressure and market forces within the Union" (European Council 1993). Therefore, before the 2008+ events, her regulations were compatible with EU standards, promoting the "four freedoms" underlying the concept of the European single market—that is, the free movement of goods, the free movement of persons, freedom to provide services, and free movement of capital (Treaty of Rome 1957, Art. 3). In other words, at the time of the crisis, Poland's product, labor, and financial markets' regulations, together with industrial and investment policies, were in line with those of other EU countries. Hence, we feel exempt from analyzing in detail the Polish regulations in place, especially where they were fully compatible with EU requirements. However, since in the interwar period market standards were internationally less homogenous, in what follows we will have to place some emphasis on characterizing the Polish standards.

5.1. Product markets

For the purpose of this paper, we define product markets' policies as competition and trade policies in their broad sense, both internal and external, including fiscal instruments (taxes, duties, and subsidies, among others), which provide additional incentives to economic agents' behavior. As the impact of domestic and foreign regulations is usually interlinked, let us analyze internal and external developments together.

One of the crucial features of industrial organization in interwar Poland, similar to many other countries of that time (Fear 2006:12), was her high cartelization. Likewise, as in the area of stabilization policies in the 1920s, she was implementing business practices and regulations largely analogous to those in place in most Western states. In this context, it is worthwhile to stress that both top Polish economists of that period, although coming from different schools of thought, namely O. Lange and M. Kalecki, strongly emphasized the role of cartels in the prolongation and depth of the crisis (Lange 1931; Kalecki 1933/1979). This comes as no surprise since at the peak time—around 1935—the cartels controlled approximately 60% of the total Polish industrial output (Landau and Tomaszewski 1985:92 and 1989:131-2).

Cartelization is largely a spontaneous process resulting from market forces which shape business behavior. Given their impact on competition, prices, and output, cartel practices have been in the realm of European governments' policies since WWI (Fear 2006:11-2). In the case of interwar Poland, cartel policies were, however, not entirely consistent. On the one hand, the government saw the cartels as an instrument of economic policy aimed at promoting certain public goals, while on the other hand taking into account publicly voiced opinions resulting from cartels' behavior negative externalities, the government attempted occasionally to restrict their activities (Zweig 1944:104).

In the second half of the 1920s, the Polish government increasingly promoted cartels[54] on the grounds that they can smooth the business cycle (Kalecki 1932b/1979:84) and help in exports expansion (Zweig 1944:104; Landau and Tomaszewski 1985:65-6). In particular, during the Great Depression, cartels were encouraged to conduct dumping policies. As Kalecki (1931/1979:51) put it, "the cartelization of the internal market is a prerequisite here" for such policies. We shall see in a moment (Figure 9), nonetheless, that its impact on export development during the Depression was limited. However, as dumping had to be ultimately financed by domestic agents, its influence on prices was considerable since internal prices became significantly higher than export prices (although both declined with worldwide

54 According to Battaglia (1933 as quoted in GUS 2012:380), in 1929, 38.6% of Polish industrial output was produced by private cartels (while the remaining 24.2% and 37.2% were produced by state monopolies and non-cartel private companies, respectively).

deflation; for Poland, see Figure 2). Table 7 suggests that in the middle of the Depression, the latter declined by more than 20 p.p. than the former, as compared to the pre-crisis situation.

Table 7. Domestic and export prices of goods produced by Polish industry, 1928–34 (indices in %, base year: 1928, and p.p.)

	1929	1930	1931	1932	1933	1934
1. Domestic prices	2.7	–0.1	–9.3	–19.1	–27.6	–30.7
2. Export prices	–0.9	–15.5	–29.7	–41.0	–45.6	–48.6
3. Difference (1–2) (p.p.)	3.6	15.6	20.4	21.9	18.0	17.9

Source: Kalecki and Landau (1935/1988:340-1).

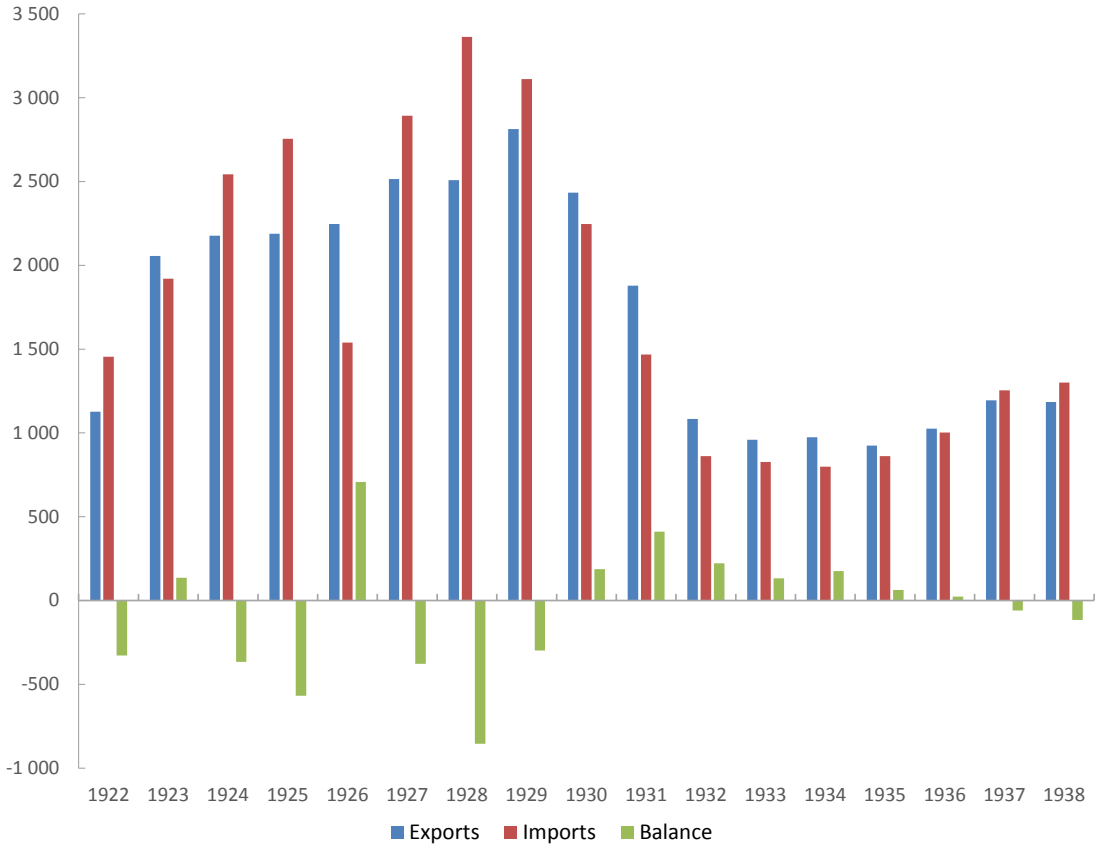
The implementation of higher domestic than export prices by cartels (and some other monopolistic-type arrangements in place) strengthened the phenomenon of "price scissors" (or the "scissors effect")—that is, a product market wedge resulting from the terms of trade between the agricultural and industrial sectors.[55] This in turn led to strong distributive consequences deeply disfavoring the rural population. It was estimated, assuming the value of 1 for 1928, that in 1934 Poland, the ratio of agricultural to industrial prices declined to 0.52, increasing slightly thereafter (in 1936, this ratio reached 0.59, and in 1938—0.66) (Orczyk 1981:582).

Of course, such price developments produced additional social discontent and caused the government to react by deciding to start controlling cartels' policies. For that purpose, at the end of March 1933, Cartel Law became effective. It was amended two and a half years later to give the government power to dissolve cartels. Consequently, in 1936–7, the number of cartels in Poland declined; although, usually it was the smaller cartels which were dissolved (Landau and Tomaszewski 1989:131). However, in 1938, as part of the new economic policies and the drive towards militarization (see Subsection 5.4), the number of cartels increased again. Nonetheless, it is worthwhile stressing that the Polish government made serious legislative attempts at de-cartelization; this was not always the case—for example, in Italy, the Mussolini's governments promoted cartelization in an uninterrupted manner during the entire interwar period and well into WWII, with a special emphasis in the 1930s (Binda and Perugini 2015).

55 See more, although in the context of a communist economy setting, in Lin and Yu (2008) and Cheremukhin et al. (2013, 2015). On the "price scissors" phenomenon in Poland, see also Knakiewicz (1967:66-70) and Landau and Tomaszewski (1982:212-5).

In the 1930s, cartel development, as in many other countries at that time, was intrinsically linked to foreign trade protectionism, which in Poland started in early 1931 (Leszczyńska 2013:303). The Great Depression brought a worldwide decline in trade; in Poland, it resulted in a trade surplus from 1930 (see Figure 9).

Figure 9. Trade balance: Poland, 1922–38 (million zlotys)



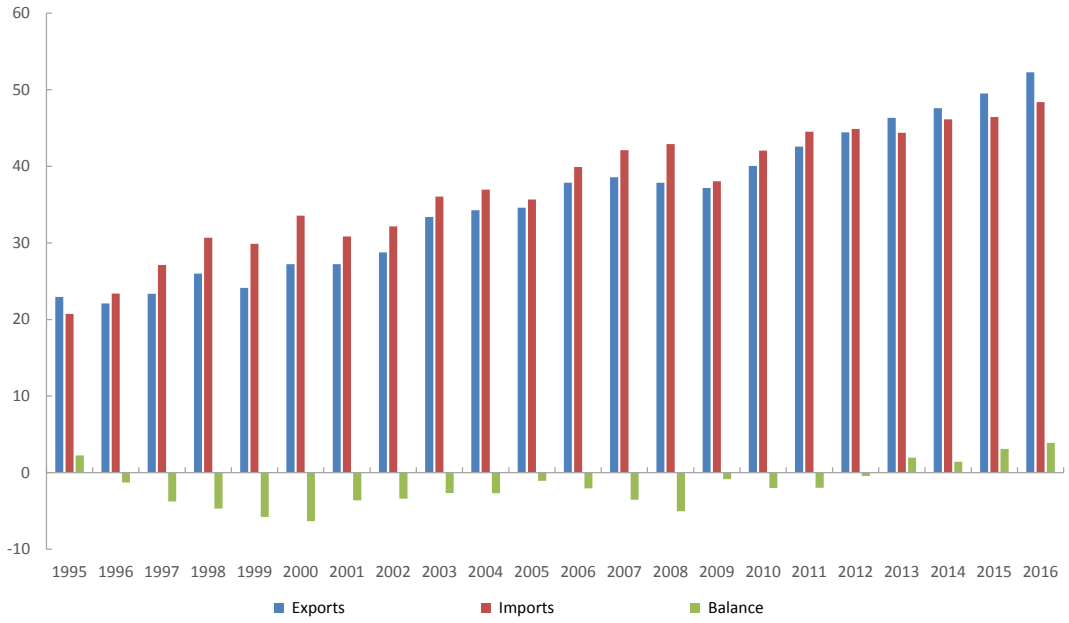
Note: The 1927 parity of the zloty is applied throughout the period.
Source: GUS (2012:470).

Obviously, the trade surplus (which vanished in 1937) was the effect of the recession, as strongly declining domestic demand reduced the volume of imports. The decline of the nominal value of imports was, however, accompanied by a decline in the value of exports. Since the central bank faced an outflow of foreign capital and declining reserves (Table 1),

and the terms of trade (until 1932) were, for Poland, unfavorable (GUS 2012:296), the subsequent governments had a strong motivation not only to restrict imports, but also to force exports. As already mentioned, cartels were considered a useful tool to this end. One can say that the wide use of cartels and extensive trade protectionism (together with the foreign exchange controls implemented in the spring of 1936) were to a large extent a substitute for traditional stabilization policies in Poland until the outbreak of WWII (see Section 4).

After the fall of communism in Poland at the end of the 1980s, product market developments followed a very different route. Since the 1990s, she has been promoting free trade and flexible market structures in line with EU regulations (common market, customs union). Given her strong growth, Poland's foreign trade volume also expanded considerably (see Figure 10).

Figure 10. Trade balance: Poland, 1995–2016 (as % of GDP)



Note: Foreign trade (of goods and services) in terms of national income statistics (European System of Accounts 2010, current prices).
Source: Eurostat website (accessed on October 12, 2017).

As can be seen in Figure 10, Polish exports and imports as a ratio of her GDP substantially increased since she joined the EU.[56] Only in 2009 did a major decline in foreign trade take place. Afterwards, these ratios continued rising again. In this growth context, different to the 1930s recessionary one, a new trend has clearly emerged: in 2013, Poland has started to enjoy trade surpluses (in terms of national income statistics[57]).

Can these developments in Polish foreign trade be explained by product market policies alone? Obviously not. A certain role was played here by the mostly positive terms of trade (GUS 2016b:448). An important factor was also the exchange rate depreciation, as discussed in Subsection 4.1. It was hinted there that for the real effective exchange rate, labor market developments were of major importance. We move, thus, to these latter issues now.

5.2. Labor markets

Let us begin the next structural topic by recalling our earlier remarks on unemployment in Section 2. We observed there that there are important measurement problems when trying to compare unemployment rates across time. It was stressed that in the period between the world wars, Polish society was still predominantly agrarian, with extensive chronic underemployment for which no statistics are available, while after WWII, her society became industrialized. At the time of the 1929+ and 2008+ crises, she faced major joblessness problems. However, because of what has just been said, unemployment rates are impossible to compare precisely, although there is no doubt that during the first period they were much higher than during the second.

Below our remarks will be centered around two main issues, largely of a spontaneous nature. The first will focus on the mostly quantitative aspect of the problem of international migrations and the second will focus on the qualitative problem of labor cost evolution.

The common characteristic of both eras under study is that in the interwar period, as well as since 1990, emigration had a powerful downward influence on unemployment in Poland. Table 8 provides some information on migration flows from and to Poland during the period of 1926–38.

56 As evidenced by Figure 10, this development started, however, much earlier.

57 We stress this because both statistics based on customs information and payments (balance on goods) information are not that clear cut, although they also point to an improving Polish foreign trade balance in recent years. However, only in 2015 did these two balances become positive as well.

Table 8. International migration, Poland: 1926–38 (thousands of persons, unless otherwise indicated)

	1926-30	1931-5	1936-8
1. Emigration	964.1	229.3	286.1
2. Return of migrants	459.7	232.5	178.1
3. Net emigration	504.4	-3.2	108
3.1 As % of total population[a]	1.6	-0.01	0.3

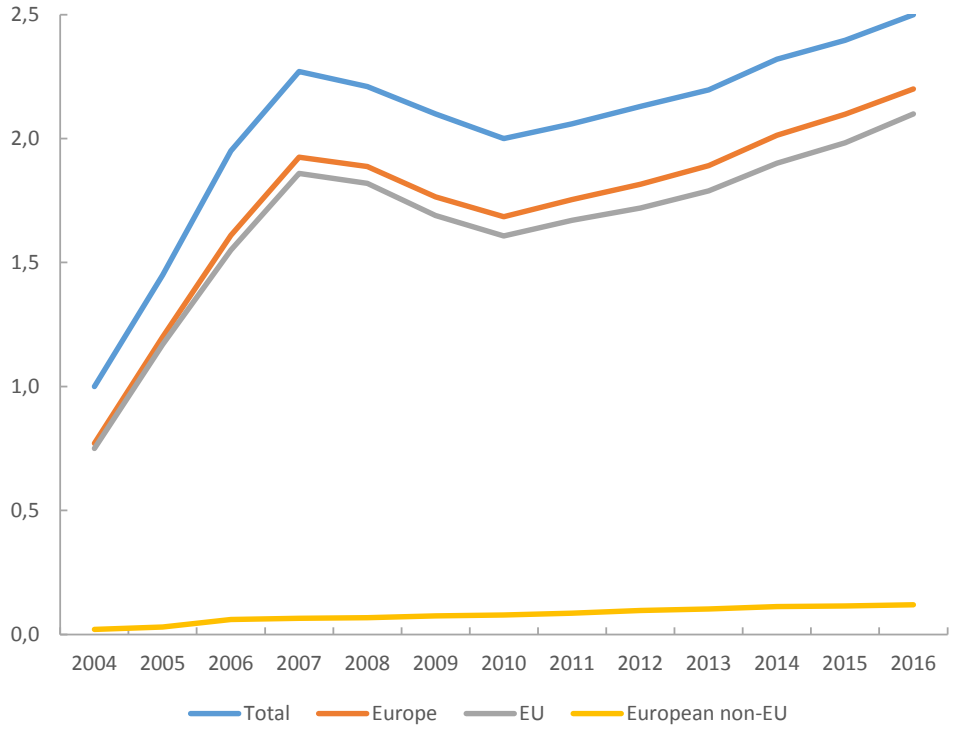
[a] For the first two time spans, the total Polish population as of the census of 1931 (32.1 million) is taken into account, for the third span—an estimate for 1938 (34.8 million).
Note: Total emigration—both temporary (seasonal) and permanent.
Source: GUS (2012:124 and 127).

Paradoxical, at first glance, may be the observation that during the first sub-period shown in Table 8—in the pre-1929+ crisis period—emigration was at its highest level. During the 1926–30 sub-period, of which the years 1927–9 are considered to be the best time in the interwar years, not only in Poland, net emigration surpassed 1.5% of her total population. In the next sub-period (1931–5), the years of the Depression, the return of migrants exceeded the size of emigration—that is, on balance, an inward movement of persons took place. In the third sub-period (1936–8), net migration became positive again, although on a much lower level than in the first of the three time spans.

This time pattern of migrations, though paradoxical as it may initially look, was not that unusual, especially in Europe. In the 1930s, the trends of the earlier decade were reversed, as a consequence of the impact of the Great Depression, which resulted, among others, in the rise of restrictions on entry, clearly reducing the size of migrations (Eichengreen and Hatton 1988:44).

Since Poland joined the EU, we can observe, broadly speaking, a somewhat similar pattern of emigration (see Figure 11).

Figure 11. Polish temporary emigration, 2004–16 (millions of persons)



Note: Estimates of the number of Polish citizens temporarily out of the country at the end of the year.
Source: GUS (2016a:3; 2017:2).

While Table 8 referred to both permanent and temporary (seasonal) emigration, Figure 11 shows only temporary migrants, defined as persons with permanent residence in Poland being abroad for above two (until 2006) or three (since 2007) months. Stressing temporary emigration in this case seems to be a correct approach as currently, or more precisely—since Poland joined the EU, her citizens are taking advantage of the possibility of emigration to other EU countries mainly because of wage differences[58] (although it is obvious that, at a certain point in time, some of the temporary job contracts will become permanent, which will also imply permanent residence). It is not surprising then that during the high-

58 It seems that in the interwar period other factors, by seriously limiting life prospects, also motivated emigration (i.e. causes such as sheer lack of jobs, underemployment, domestic political reasons, and an unclear—from the point of view of some minorities living in Poland—general situation in Europe in the second half of the 1930s).

est uncertainty of future work-related developments—that is, in the years 2008–10, Polish emigration to the EU declined (and returns of migrants increased), implying a total emigration reduction. Figure 11 clearly shows that while emigration to the EU declined over these years, this was not the case of other (non-EU European) destinations.[59] Since 2011, Polish emigration to the EU has started to increase again while continuing growing vis-à-vis European non-EU countries.

Until recently, the total population of Poland was 38.5 million; thus, for example, the number of temporary emigrants at the end of 2014 constituted 6.0% of the Polish population. Clearly, emigration had an important impact on the Polish unemployment rate, evidently reducing its size, especially until 2007 and again since 2011 (see Figures 3 and 11). However, the effect of these migrations cannot be restricted to their impact on unemployment only.

As mentioned, the main incentive for emigration has been the income factor. Since Poland joined the EU, remittances considerably increased, giving an additional boost to the economy. According to balance of payments statistics, gross remittances flowing into Poland almost doubled in 2004 (as compared to the previous year) and were estimated at EUR 2.3 billion (i.e. they amounted to 1.1% of her GDP of that year); in the top 2007, they reached EUR 5.3 billion (1.7% of GDP), and thereafter gradually declined to EUR 3.9 billion (0.9% of GDP) in 2015 (for more details on remittances flowing to Poland, see Chmielewska 2015).

Thus, the impact of emigration on the economy was twofold: on the supply of labor and on the size of remittances. Taken together, however, this impact rather deals with the creation of domestic demand, as emigrants do not only generate remittances but also, by leaving the country, reduce their demand there.[60] But what about the impact of labor market developments, not only of migration, on the supply side of the production process, as implied by our analytical framework (Section 3)? To answer this question, we must move to more qualitative problems—namely, the relationship between changes in nominal wages and in productivity; in short, to the issue of ULC. In both periods under discussion, ULC dynamics were of major importance, although they had different time patterns, different sources, and different effects.

59 According to Polish Central Statistical Office data (GUS 2017:2), in the latter group of countries, Norway was the chief destination for temporary Polish migrants.

60 Of course, output as well, assuming they were to be employed somehow.

For the interwar period, data on ULC evolution is very limited, and in fact we can rather talk of approximations to the ULC concept.[61] In Table 9, we show the available estimates of ULC changes during most of the 1930s crisis in Poland.

Table 9. Unit Labor Costs: Polish industry, 1928–34 (indices in %, base year: 1928)

	1929	1930	1931	1932	1933	1934
1. Workers	8.7	6.6	-3.0	-10.4	-20.8	-25.4
2. Administration and technical staff	8.7	25.2	26.5	28.6	10.2	0.6

Note: Estimates based on data referring only to part of Polish industry (although a major part).
Source: Kalecki and Landau (1935/1988:347-8).

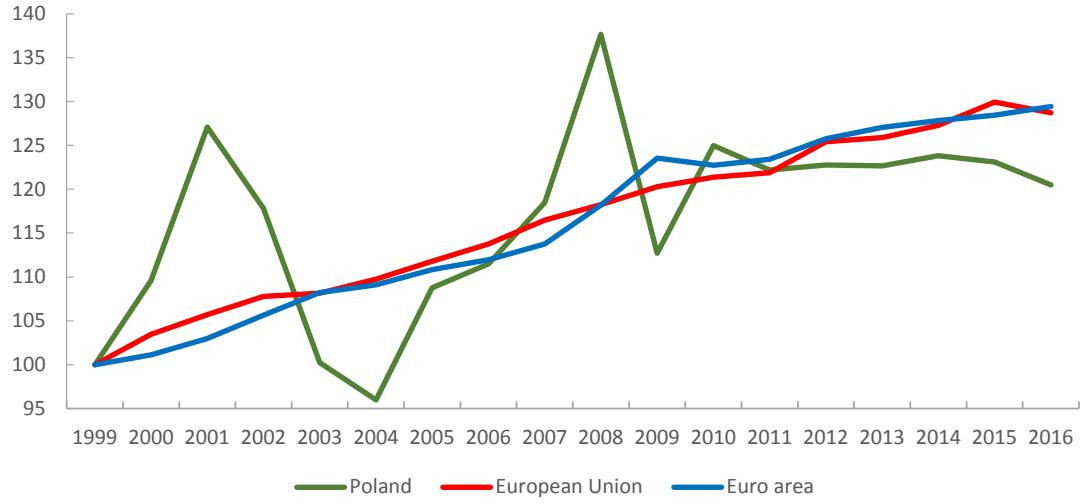
We can clearly perceive from Table 9 that the decline in the volume of industrial production (recession), which in terms of full years lasted in Poland from 1930 until 1932 (see Figure 16 in Subsection 5.4), had a profound impact on ULC levels. The Table shows that the ULC index (base year: 1928) for workers was declining from 1930 until the end of the analyzed period; as concerns administration and technical staff, their ULC started to decline later (only in 1933), but remained above the 1928 level. Such trends of declining ULC during the recession and deflation are not surprising as the reduction of output was accompanied by declining nominal wages (and of course rising unemployment).[62] What may be disturbing is that the ULC decline lasted at least until 1934, while the recession in Polish industry statistically ended two years earlier. Cartels, and other monopolistic--type associations, obviously tried to control the levels of their profits during stagnating production and deflation (see Subsection 4.1). The main observation here is, however, that ULC changes in the first half of the 1930s followed and resulted from the recession, and prepared the groundwork for the expansion of Polish industry in the second half of the decade (Figure 16). What might be debatable, however, is to what extent this decline in nominal ULC translated directly into economic revival since the downturn was accompanied by strong deflation and increasing real wages (Karpiński 1968:143-4; Leszczyńska 2011:31).

61 For example, the OECD states that "ULC are defined as the average cost of labor per unit of output produced" (OECD 2017:72). See also note to Figure 12.

62 According to data quoted by Eichengreen and Hatton (1988:16 and 21–2), after the International Labour Review (1939, No. 40), in Poland, weekly hours of work in industry declined by 7.6% in 1932 (bottom year) as compared to 1929, while nominal hourly earnings in mines, industries, and transport reached their nadir in 1936, being lower by 30% than in 1929 (in real terms, however, this is an increase of 22%).

During the 2008+ crisis period, and in fact, since the beginning of the decade, the pattern of ULC changes was sharply different. Let us have a look at Figure 12 now.

Figure 12. Unit Labor Costs: Poland, the European Union, and the euro area, 1999–2016 (1999 = 100)



Note: ULC are for the overall economy, and are defined as ratio of compensation per employee to real GDP per person employed; EU (28 countries); and euro area (19 countries).
Source: AMECO database (accessed on November 20, 2017).

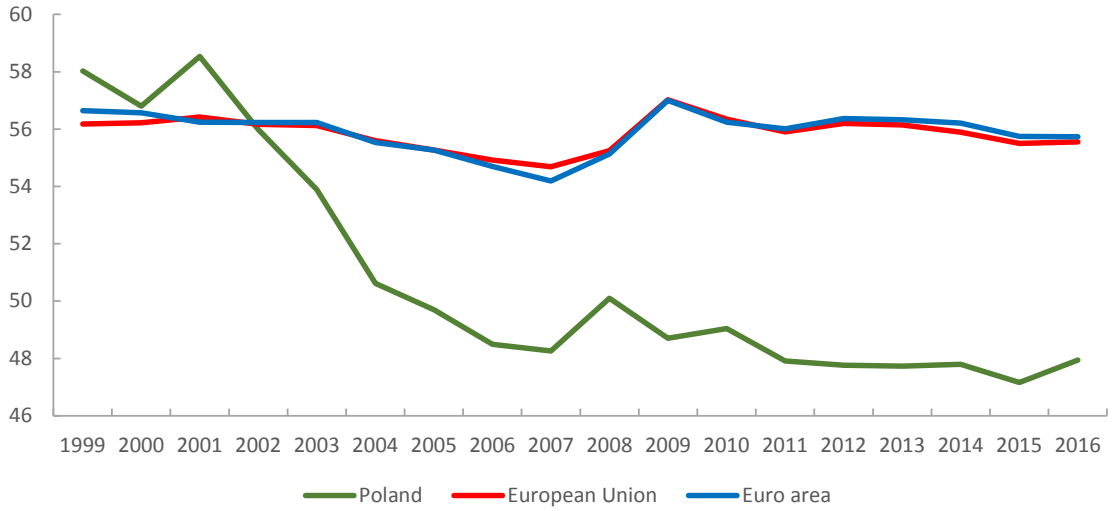
As concerns the time pattern, in the 2000s, ULC development was very different from that observed in the first half of the 1930s. Figure 12 demonstrates that ULC in Poland strongly declined before the 2008+ events—more precisely, during 2002–6. Afterwards, during 2007–8, they strongly increased, but, subsequently, their increase was very moderate; since 2011, they were clearly below the ULC for the EU and the euro area.

As for the sources of the ULC decline during 2002–6, they are only partly linked to the business cycle logic (which was the case after 1928) and they were largely of a spontaneous nature.

In the late 1990s, the Polish economy faced large imbalances, and since the start of the new decade, restrictive stabilization policies were implemented which resulted in a pronounced economic slowdown and an abrupt decline of the ratio of wages to GDP (Figure 13). As shown in Figure 3, the unemployment rate reached very high levels (20.0% in 2002) and only slowly declined afterwards. This reduction of joblessness was not only due

to the revival of the economy, but also resulted from the emergence of a dual labor market in the framework of existing regulations, holding low ULC[63] and wages in check.

Figure 13. Wage share: Poland, the European Union, and the euro area, 1999–2016 (in % of GDP)



Note: Wages in total economy as percentage of GDP at current prices; EU (28 countries); and euro area (19 countries).
Source: AMECO database (accessed on November 20, 2017).

The duality of the Polish labor market resulted from a strong expansion in the 2000s of employment based on non-standard ("atypical") legal forms of contract, which have been much more flexible than the traditional permanent (open-ended) labor contracts. These flexible contract forms are of two basic types: fixed-term contracts (regulated by the Labor Code) and so-called "civil contracts" (regulated by the Civil Code). The latter lack many of the benefits which are typically associated with the Labor Code contracts; for example, in the extreme case of the so-called "contracts for a specific task," the employee is not even entitled to the usual benefits, like social security, health insurance, holidays, or the

63 There were other factors contributing to the low ULC in Poland (both levels and increases) as well, but we do not discuss them here. The most important among them have been the lack of formal, automatic indexation in Poland, low trade union participation, and a relatively high structural unemployment rate. For more, see, for example: ECB (2009:16-21 and 34–6) and NBP (2013:53).

minimum wage requirement.[64] These atypical contract forms, statistically labeled as "temporary employment," dramatically increased in the 2000s; according to Eurostat, in 2012 Poland, temporary employment was the highest among EU countries—in fact, it was about double the EU average (Gatti et al. 2014:12).

Finally, as concerns the effects of ULC dynamics in the post 2008+ period, one must stress two issues: the first is purely economic and the second is of a social nature. In both cases, they are linked to the fact that thanks to the development of the non-standard labor contract forms, Polish labor market became much more flexible.

From the purely economic point of view, this increased flexibility stabilized Polish ULC at low levels, allowing for a strong depreciation of the REER (Figure 7). This clearly promoted Polish price competitiveness and export expansion (Figure 10), largely explaining why Poland did so well during the crisis period. In fact, one can claim that by increasing the flexibility of her labor market and maintaining the ULC in check, she de facto restructured her labor market in anticipation of the 2008+ events, making the economy largely immune to the external shocks.

However, these developments look quite different when the social aspects are considered. True, Polish unemployment declined and was much lower than in other EU countries during the crisis period because of more flexibility in employer-employee relations. As many, especially young people, did not accept low wages and the flexible labor market conditions, the latter in fact contributed to increased emigration, which in turn further stimulated the decline of unemployment (and an inflow of remittances).

All this said, one must also observe that the increased flexibility of the labor market generated social cohesion problems and societal discontent, especially given that wages continued to be a decreasing part of GDP (Figure 13). This contributed to another paradoxical situation: in the middle of the current decade, the social mood in large parts of the population deteriorated, while Poland was, at the same time, by and large a successful economy that passed with relative ease the turbulent 2008+ period.

5.3. Financial markets

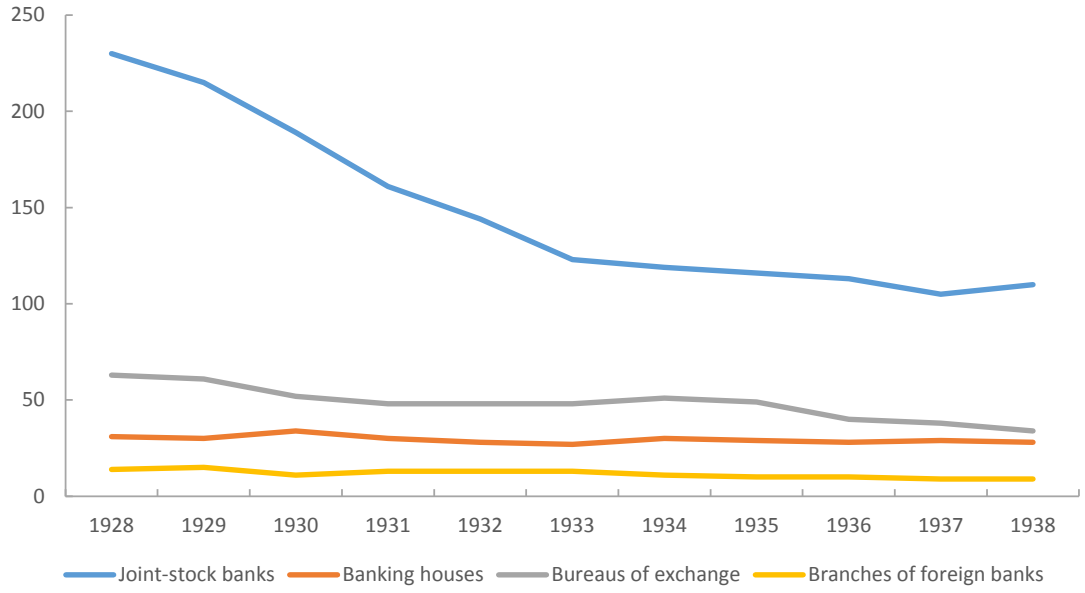
Compared to many other countries during the analyzed episodes, Poland did not suffer very severely from the financial crises: in the 1929+ period, it was clearly less than the well-known cases of the United States or Austria and Germany, while in the 2008+ period, it

64 An overview of employment arrangements in Poland and the benefits linked to them can be found for example in Arak et al. (2014:4-6) or Gatti et al. (2014:13-7).

was virtually not at all. What are the reasons for these developments, which were largely divergent from the dominant pattern of the international crises?

Let us start with a look at the changes in the number of institutions composing the Polish private banking sector in the 1930s (see Figure 14).

Figure 14. Number of private banking institutions: Poland, 1928–38 (end of year)



Note: Joint-stock banks encompass both their headquarters and branches.
Source: Morawski (1996:127).

From 1929, the number of private banking institutions in Poland clearly declined. Surprisingly, however, it can be observed in Figure 14 that 1931, the year of "disastrous" events for European banking (Kindleberger 1973:146-70; Allen 2013:158-72), does not seem to be of particular importance for the contraction of the number of her banks. Although, the collapse of Austrian and German banks caused in Poland a "real panic" and a serious decline of deposits in private banks (Zweig 1944:115; Landau and Morawski 1995:365). In 1931, the number of private Polish bank headquarters remained unchanged (at 50, declining only since 1932), while the number of foreign branches actually increased (from 11 to 13, and remained unchanged at this level until 1933). The number of Polish banks' branches (shown in Figure 14 together with their headquarters) had been declining since

1929.[65] The number of remaining private financial institutions gradually declined too, especially bureaus of exchange in the second half of the 1930s (which should be attributed to the introduction of foreign exchange controls). Thus, similar to many other countries, private Polish banking institutions were touched by the crisis; however, its impact is somewhat moot.

Why was the 1931 European banking crisis not particularly strongly felt in Poland? The literature suggests two explanations, partly overlapping. The first is that in the interwar period, private Polish banking was on a constant downward trend—after 1935 mostly because of political causes (Zweig 1944:117-8). The second stresses that in Poland, the relevant banking crisis (together with a currency crisis) took place in 1925; and afterwards—as a result of a largely spontaneous process—the number of banks continued shrinking, making the year 1931 not a very special one in terms of bank failures (Karpiński 1968:129; Morawski 1996:123-4).

Before going further, it is important to mention again that Figure 14 shows only the development of private banking institutions. Thus, public banks are absent there. Contrary to private banks, usually relatively small, the latter developed strongly during the crisis.[66] For example, public banks' role in the deposit market increased from 54.4% at the end of 1930 to 80.3% at the end of 1936, to slightly decrease in the subsequent two years (reaching 72.6% at end 1938) (Landau and Tomaszewski 1989:396).

The entire interwar period in Poland was characterized by a gradual rise of public banks at the expense of private ones, the main underlying reasons being the unstable economic and political situation and the scarcity of domestic capital (Zweig 1944:114-9; Landau and Morawski 1995:358 and 372). The 1929+ crisis clearly accelerated this trend. It also speeded up due to the behavior of foreign investors, which withdrew from Poland in the course of the 1930s. Figure 14 shows that the number of foreign banks' branches declined (from 15 in the top 1929 to 9 units at the end of the period). When looked from the ownership capital stock structure perspective the situation is essentially the same: while in 1930 the role of foreign investors in the total capital of joint-stock banks was of 33.3%, in 1935 this ratio lowered to nearly 25.0% (Morawski 1996:142).

The underdevelopment of private banking in interwar Poland was also the result of the role of public policies which, despite occasional ideological objections, favored

65 In 1929, the number of bank branches declined by 12 units, in 1930—by 25 units, while in 1931—by 28; however, the following year the number of bank branches declined only by 14 units.

66 Giving their exact number is, however, a little bit tricky. In the 1930s, public banks, among others, included a small group of large state banks with many branches (over 30 in total), communal banks (around 4), communal savings banks (over 300), and a network of entities linked to the postal service (GUS 2012:502). It is also worthwhile remembering that Bank Polski also provided short-term loans to the private sector (see the next footnote).

a statist approach to economic development not only in the second half of the 1930s (more on this in the next subsection).[67] In this context, it is worthwhile stressing that the activities of lender of last resort were not performed by Bank Polski. Poland in the interwar period followed the Austro-Hungarian tradition under which the central bank concentrated on issuing currency, while rescuing commercial banks in trouble was the domain of the government and domestic public banks (Morawski 2012:218). In the case of Poland, the latter task was performed by the powerful Bank Gospodarstwa Krajowego (National Economic Bank), which, above all, specialized in long-term investments in industry and municipalities. Needless to say, such an institutional solution helped the government to influence private banks, in some cases making them state-controlled while preserving their joint-stock company legal status.[68]

Private banks specialized in providing short-term credit to businesses. As could be expected, during the Great Depression, their balance sheets contracted substantially. In 1936, they were (nominally) smaller by more than a half than in 1929 (GUS 1939:219), resembling a credit squeeze, which was, however, counteracted by public banks.[69] Private banks' credit activity recovered starting from 1937, but the following year they still supplied only 25.6% of all short-term credits, while in 1929 their participation in this stock had been almost 50% (Landau and Tomaszewski 1989:404).

In any case, Poland did not suffer from massive bank failures in the 1930s, as only small private banks collapsed and no major bank went bust. Although, similar as in other European countries, trade on the stock exchange in Warsaw crashed in the early 1930s and was depressed during the first half of the decade (Knakiewicz 1967:84). On balance, we can only talk of moderate financial instability at that time.

Even though one may have doubts that the Polish financial system during the 1929+ crisis could be characterized as preserving macroeconomic stability, it was obviously stable during the 2008+ episode. Similarly, as in the 1930s, there was some turbulence accompanied by a decline in Warsaw stock exchange trading, and—as discussed (Subsection 4.1)—a strong depreciation of the zloty in the currency market took place at the end of 2008. These events signaled a withdrawal of foreign investors, but there

67 Concerning private banking, three examples can illustrate this point. First, the already mentioned (in Subsection 4.1) fact that the important factor shaping the market interest rate level was legal (the anti-usury law). Second, the promotion from 1926 (until WWII) by the government of a Warsaw bank cartel with the aim to lower the deposit rates (Morawski 1996:85-8). Third, the fact that Bank Polski was extending short-term loans to the non-banking private sector, with a tendency to increase—its share in total short-term banking credit reaching approximately 14% (Zweig 1944:118; Karpiński 1958:160-5)

68 For example, since 1935, this was the case of the oldest (established in 1870) and one of the largest private Polish banks between world wars, in operation until today—the Bank Handlowy w Warszawie S.A. (Landau and Tomaszewski 1989:398).

69 In line with such activity, in 1933, the government established a new bank (Bank Akceptacyjny S.A.) focusing entirely on short-term credit conversion, especially of rural non-performing loans (Karpiński 1968:142-3).

were no failures of financial institutions. The first failures took place only in 2014–5 and referred to small cooperative banks with no international exposure. In one case, in 2015, the central bank had to act as a lender of last resort and provided liquidity support (NBP 2016b:35). Given also that there was an efficient deposit insurance scheme in place (non-existent in the interwar period), these failures had no impact on financial system stability.

Against this background, once more, a familiar question in this paper arises: how was it possible? Why was financial instability in the 2008+ Poland avoided, contrary to the experience of so many other countries?

Leaving aside the macroeconomic factors (above all the stabilizing role of the floating exchange rate, the excess liquidity of the banking sector, and the FX swaps provided by the central bank), the answer from the financial sector perspective to this question can be stated in the following way.

First, despite its strong development before EU accession,[70] modernization included (Polański 1995, 2000 and 2002, Pietrzak et al. 2008), the financial system in Poland continued to be an unsophisticated one compared to that of developed countries. Derivative markets were still in their infancy, securitization was non-existent, and, consequently, phenomena like shadow banking did not develop. Thus, the main economic reasons for the high fragility of modern financial markets were almost non-existent in Poland at the time of the 2008 crisis.

Second, the banking (and insurance) sector in Poland during the transition was to a large extent developed and modernized thanks to the inflow of foreign capital at the time of its privatization (which took place essentially in the 1990s). What is crucial here, however, is that in the process, foreign investors became owners of banks, which continued operating under Polish law. From a legal point of view, thus, even with full or majority ownership, they continued working based on domestic regulations, and consequently did not become branches of their institutional owners. If the latter were the case, it would imply (under EU law and the concept of the so-called "single passport") that they would be monitored not by Polish supervisors, but by the authorities supervising their headquarters.

Third, such a situation allowed for a coherent and timely (or even anticipatory) introduction of financial regulations and their restrictive implementation. As many countries before the 2008 events, Poland faced a credit boom and, similar to the situation of many

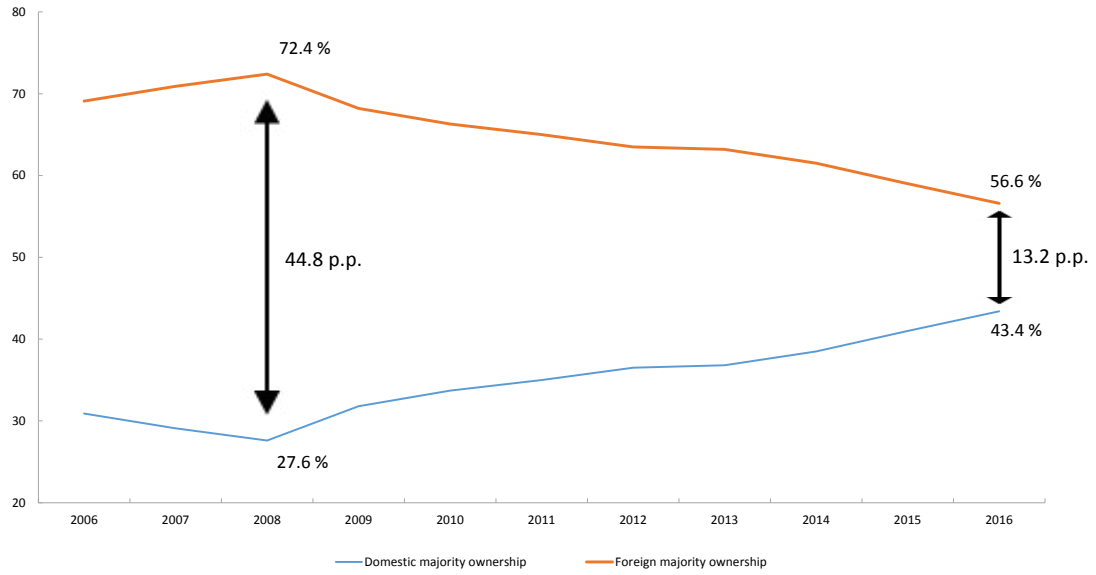
70 In the middle of the first decade of the XXIst century, the structure of the Polish banking system stabilized. It can be characterized as moderately concentrated, below the EU average (Pawłowska 2014 and 2016). At the end of 2008, the Polish financial system was comprised of the following commercial institutions (in parentheses, the number of units and their role in the sector's assets): commercial banks (67, 68.3%), rural and small business cooperative banks (582, 5.4%), credit unions (62, 0.7%), insurance companies (66, 9.8%), investment companies (39, 5.4%), open pension funds (14, 9.8%), and brokerage houses (59, 0.6%) (NBP 2016a:13 and 16). The total bank sector assets to GDP ratio has been perpetually below 100%.

emerging (or transition) economies, these credits were often foreign denominated (let us recall that interest rates in Poland have been permanently higher than in most other countries). Therefore, in the first decade of the current century, bank loans denominated primarily in Swiss francs and euros, usually mortgage credits, quickly grew, creating the potential for a major financial stability problem. This was quickly noticed and, already in 2006, a first regulation (the so-called recommendation "S") was issued by the bank supervisor which curbed the expansion of foreign denominated loans. This regulation was amended several times, making it increasingly restrictive and, in the beginning of 2010, it was supplemented with another regulation (the so-called recommendation "T"), which obliged banks to follow more conservative policies with respect to all types of credit granted to households (Marszałek and Janc 2016:214-7). Such regulations reduced the expansion of domestic loans and, consequently, the following bust was much less painful than in many developed and transition countries (in the second group, let us mention, for example, Hungary, Romania, or Ukraine).

Restrictive regulatory actions were also temporarily implemented at the peak of the worldwide financial turbulence. As mentioned, the development and modernization of the Polish financial system during transition was, to a large extent, relying on foreign investments. Thus, a major part of her banking system became foreign-owned (as of the end of 2008, above 70.0% of total Polish bank sector assets originated in institutions with foreign majority ownership; see Figure 15). To reduce the impact of international turbulence on the Polish banking system, her supervisory authorities temporarily enforced a regulation (once again, in the form of a recommendation) that in 2009 prevented a major outflow of dividends from Poland (KNF 2009). Consequently, that year, an effective freeze on capital transfers from domestic to foreign banks was implemented and only 13% of profits were paid out as dividends (while in the preceding five-year period, it was, on average, 50.0%) (Brzoza-Brzezina et al. 2016:21-2).

Obviously, the transmission of foreign shocks through the banking sector could not be entirely prevented and, similar to the 1930s, the role of foreign investors in the sector gradually declined (see Figure 15).

Figure 15. Changing ownership structure of banks: Poland, 2006–16 (end of year) (% of total banking sector assets)



Source: KNF (Polish Financial Supervision Authority) website (accessed on November 14, 2017).

The process observable in Figure 15 was until a certain point of time to a large extent market driven and spontaneous. However, some observers claimed that foreign-owned banks operating in Poland had behaved procyclically during the crisis (e.g. Kawalec and Gozdek 2012:11). Consequently, during 2014–5, the government promoted changes leading to an increase in the role of private Polish investors. As a result, two medium-size banks with foreign majority ownership moved to the group of institutions with domestic majority ownership.

In summary: the effects of the 1929+ and 2008+ crises were clearly visible on Polish financial markets. In neither case, however, did they destabilize the entire financial system. In the 1930s, a clear destabilization took place in the private banking sector, but it was accompanied by the growth of stable public financial institutions. Thus, at that time, we cannot talk of an overall macroeconomic financial destabilization. At worst, we could speak of a subsector's destabilization. During the 2008+ period, the situation was better—much better. Due to several overlapping reasons (as briefly discussed above), the financial system showed remarkable stability. As suggested by some researchers, it was one of the systems

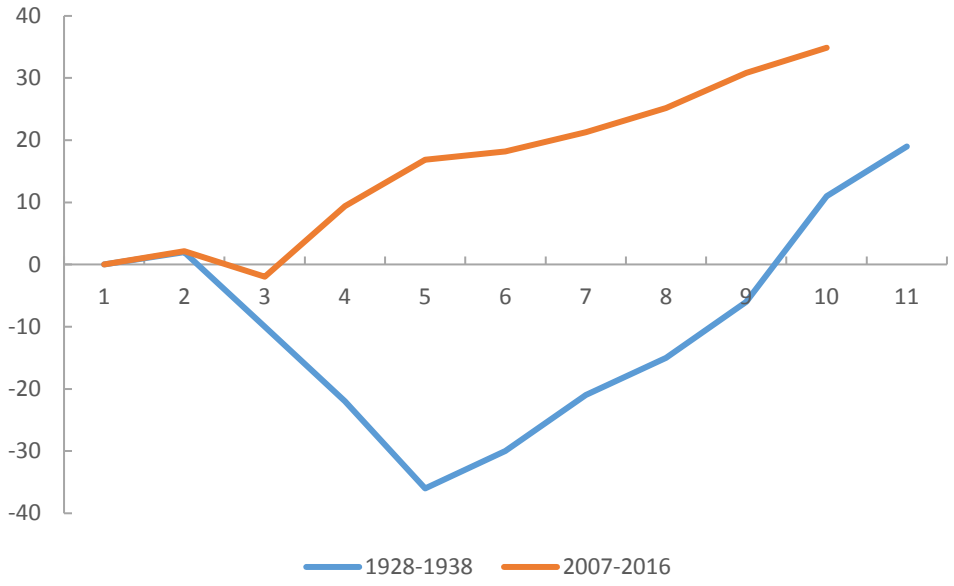
that best combined financial development with economic growth worldwide (Sahay et al. 2015:16 and 22).

5.4. Industrial and investment policies

Thus far, when analyzing the three markets (product, labor, financial), our central concern has been, on the one hand, on economic policies understood as implementing regulations shaping agents' behavior, while on the other, on agents' spontaneous actions. Nonetheless, stressing the importance of regulations does not entirely cover the role of the state in influencing structural developments in an economy. We refer now to economic policies such as industrial and investment policies, geared mostly to changing the productive (supply) side of an economic system to accelerate its expansion. Such policies were implemented—not only in Poland—in the second half of the 1930s, but also to some extent during the period following the 2008+ crisis.

First, however, let us have a closer look at real industrial output changes in Poland in both periods under consideration (see Figure 16).

Figure 16. Industrial production: Poland, 1928–38 vs. 2007–16 (indices in %, base years (t=1): 1928 and 2007)



Source: GUS (2012:379) and Eurostat website (accessed on November 13, 2017).

Figure 16 summarizes the industrial developments in the studied eras. The Figure is to some extent complementary to Figure 1, as both show essentially similar trends; however, some differences are also clearly discernible. One minor difference is that Figure 16 covers one additional year in the case of the first period. A major dissimilarity between the two Figures is that the industrial output changes are more pronounced than those of the national income, the difference resulting from the role of other sectors in national income creation—in particular, in the prewar period, from the dominating role of agriculture. Consequently, in Figure 16, the declines of industrial output are not attenuated by other sectors. Therefore, we can observe from it that industrial production dropped much more than national income in the first period under analysis, and that in 2009, at least as concerns the industrial sector, Poland was truly affected by the external shock.

What is, however, common to these two Figures is the visible acceleration of both national income and industrial production growth from a certain point in time—in the case of the 1930s, from 1936, while in the second, since 2013–4. Figure 16 suggests that national income growth was essentially due to the expansion of the volume of industrial output. Let us look then at industrial policies and the underlying investment policies to shed some additional light to these growth developments.

As already mentioned (Subsection 5.3), in the interwar years, Polish economic policy in practice favored a statist approach, even before the outbreak of the Great Depression. This was visible not only in banking, but also in industry—at the start of 1927, approximately 12% of the "whole national wealth" was owned by the state (Zweig 1944:108, after Kruszewski 1931), with some industries fully (e.g. aviation) or almost fully (e.g. merchant marine) state-owned. The reason for this pronounced role of the state was the aforementioned shortage of private capital and the absence of an armament industry, since Poland had not inherited any from the partition period (Wolf 2007a:14). The most important state investment project, focused on changing the economic structure through developing the transport system and both maritime and naval industries, was the harbor and adjacent city of Gdynia. It was started from scratch just after WWI and its construction accelerated after 1926; by the 1930s, Gdynia became the largest port on the Baltic Sea (at least in terms of freight).

The case of Gdynia was a unique example of a major structural activity of the government until 1935. In fact, from the start of the crisis until then, the government only tried to alleviate its impact by curbing the cartels (internal) price behavior and reducing the "price scissors" phenomenon; over time (since 1933), also by promoting public works and such initiatives as tax breaks in housing construction (Subsection 4.2) (Knakiewicz 1967:247-301).

The real breakthrough came only in 1936—that is, much later than in many other countries. The newly appointed Deputy Prime Minister for economic affairs and Treasury Minister, Mr. E. Kwiatkowski, earlier the main driving force behind the Gdynia project, promoted further industrialization through public investment and the expansion of state ownership. Thus, domestic supply (and obviously demand) expanded in the framework of a four year (1936–40) investment plan, and a simultaneously implemented six year (1937–42) plan for the development and modernization of the Polish armed forces. In this context, the main investment effort was concentrated on creating—again, almost from scratch—an economic zone called the Central Industrial Region, located in the confluence of the Vistula and San rivers.[71]

These development and military initiatives were implemented under a balanced budget, accommodative interest rate policy, and a fixed exchange rate (Section 4). Hence, it was "neither Kaleckian, nor Keynesian style economic intervention program" (Beksiak et al. 2003:21). The additional finance was supplied by (public) banks, Bank Polski (which in 1939 started a fiduciary issue), by other types of internal loans, and—in the case of the defense sector—by a French loan obtained in late 1936 (moreover, we should recall here—see Subsection 4.1—that strict currency controls were also imposed in 1936). As a result, the share of investments in national income increased from 10.7% in 1935 to 13.2% in 1937 (GUS 2012:527), this being mostly industrial investments, although—as stressed—for both civilian and military purposes.

The post-1935 rapid economic expansion visible in Figures 1 and 16 was, to a large extent, underpinned by these actions. However, one should not forget that other important forces were at work, too. Two of them must be signaled: first, the world's cyclical improvement taking place since 1933, and second, the further decline of Polish ULC. According to Kalecki (1939/1980:65), in both 1936 and 1937, ULC in Polish industry were lower by 40% than in 1928.

As an outcome of the above structural interventionism, the role of the state in the economy expanded further and Poland became a largely state directed (or managed) economy. In 1939, the share of state ownership in the Polish economy reached 15–20% (Roszkowski 1981:164), while state enterprises and with state capital participation produced 25–30% of total industrial output (Jezierski and Leszczyńska 2001:310).

What were the final results of all these developments in the second half of the 1930s? Of course, they can be easily dismissed by arguing that the described efforts were in vain, the final corollary being that during WWII, Poland lost her independence in a few weeks'

71 An English–language reader can find more information on the Central Industrial Region, for example, in Zweig (1944:77-82) and Landau and Tomaszewski (1985:117-26).

time. It is also true that the Polish state's intervention in the economy expanded later than in other countries. One should remember, however, that the economic plans were only partially introduced since they were interrupted by the outbreak of the war. As a matter of fact, at the end of the 1938, another—this time a 15 year—plan (1939–54) aiming at a deeper change of the economic structure was made public.[72]

More important is the observation that the structure of the economy was partly changed towards industrial because of the investment effort. For example, the employment structure of society was altered, slightly, but visibly: while in 1931, 72.6% of the Polish population was statistically defined as "rural," in 1938, this share declined to 70.0% (GUS 2012:124). One can also point out that many of the productive assets resulting from the industrial and transport investments of the 1930s are still operating, confirming the durability of at least some of that decade's structural policy initiatives.

While in the interwar years, the role of the state and its industrial and investment policies was gradually increasing, the same cannot be said of the post-1989 period. In fact, the post-communist transition started with a near total neglect from the state as concerns industrial and investment policies, this being a clear reaction to the communist practice of dominant—almost monopolistic—and ultimately ineffective government management.

Until the 2008+ crisis, industrial and investment policies in Poland can be linked to three basic types of activity: privatization, the inflow of foreign direct investment (FDI), and the inflow of EU funds.

Privatization, closely linked to capital market development, took place essentially in the 1990s, leading in the next two decades to a situation in which less than 20% of Polish GDP is being produced in the public sector (GUS 2016b:700) (while in 1989, it produced 70% of GDP[73]). Privatization and capital market development were stimulated by an inflow of foreign capital starting in the early 1990s. Regulatory developments favored the inflow of FDI,[74] which was additionally encouraged by the promotion of special economic zones since the mid-1990s. Most of the FDI was in manufacturing and trade, and—as suggested earlier (Subsection 5.3)—in the financial intermediation sector. Special economic zones flourished with visible spillovers on employment and positive, although weaker, effects on investments (Ciżkowicz et al. 2017). However, as capital movements are highly sensitive to business fluctuations, FDI inflows declined substantially with the

72 Its wider description and analysis can be found in Landau and Tomaszewski (1989:108-12). See also Zweig (1944:79) and Landau and Tomaszewski (1985:119-20).

73 Hartwell (2016:171). It must be remembered that Poland during the communist period retained relatively developed private ownership, particularly in agriculture, but also in the small productive and service sectors.

74 On the logic of capital flow liberalization in Poland, see, for example Ötker-Robe et al. (2007:39-40).

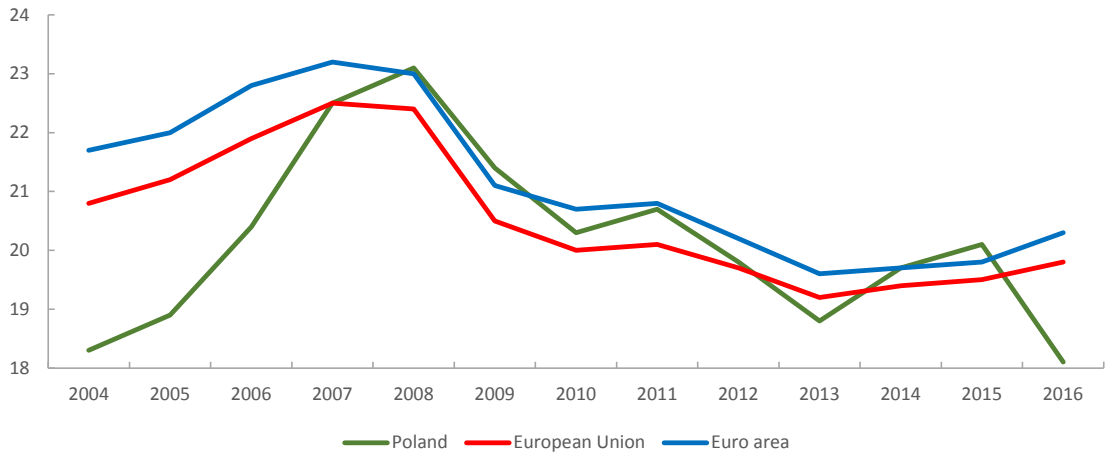
advent of the 2008+ crisis. As in the case of many developing countries, 2009 and 2012–3 were particularly difficult in this respect.

Although implying public policy activity, privatization, capital inflows, and related developments (capital market and special economic zones creation) promoted market mechanisms which were eventually expected to efficiently allocate resources. Such an approach was still dominant during most of the 2008+ period; however, at this time, an important and increasing role was being played by the inflow of public capital in the form of EU funds. Poland had already benefited from these funds since the mid-1990s, initially in the form of pre-accession funds and afterwards as a major beneficiary of the EU multiannual financial frameworks. The EU funds were mostly focused on infrastructural projects and, in practice, meant the return to an active investment policy.

During the post-2008+ period, EU funds, to a large extent, diminished the negative impact of dwindling private capital inflows. In fact, EU net transfers quickly increased: while in 2006 they were equivalent to less than 1% of Polish GDP, in 2009 they reached almost 1.9%, since 2010 they have regularly surpassed 2% of GDP, and in 2014 they reached a top value of 3.2%.

Despite this strong inflow of funds mostly directed towards investments, the share of the latter in GDP declined during the crisis years (see Figure 17).

Figure 17. Investments: Poland, the European Union, and the euro area, 2004–16 (% of GDP)



Note: Gross fixed capital formation as % share of GDP; EU (28 countries); and euro area (19 countries).
Source: Eurostat website (accessed on November 13, 2017).

According to the data in Figure 17, after 2007–8, investment-GDP ratios declined in all three economic areas mentioned. This could be expected during the downturn. However, in the case of Poland, their variance was larger than in the whole EU or the euro area: in her case, the ratio of investment to GDP was at its highest level of 23.1% in 2008, declining thereafter to 18.8% (in 2013), to partly recover in the next two years (20.1% in 2015). These developments were obviously more pronounced than in the other two economic areas; the higher variability of the investment-GDP ratios in Poland signals that EU funds in some years did not fully substitute for the decline of private capital inflows (and domestic private investments).

Since 2014, the rise of the investment ratio in Poland coincided—and was most probably positively influenced—by the attempts to start implementing more active industrial policies. Namely, in mid-2013, a financing vehicle called Polish Development Investments was created with the aim to provide long-term finance for infrastructural projects. The move to industrial and investment policies has been also strongly emphasized in the economic program of the new government formed in the autumn of 2015. In December of the latter year, the Ministry of Economic Development was established with the mandate to conduct full-fledged industrial and investment policies (largely based on EU funds under the so-called "Juncker plan"). On the operational side, in the spring of 2016, the abovementioned financing vehicle was transformed and renamed (to the Polish Development Fund), and its financial and organizational capacity was considerably strengthened.

Time will tell how successful the latter initiatives will be. However, given that crises are market failures, it should come as no surprise that both crises episodes led to active structural economic policies in Poland. In the two considered cases, their implementation started with a delay, under very different macroeconomic and historical circumstances. And in both cases, they seem to have had positive results: during the 1936–8 period, they contributed to growth and started to have some impact on economic structures, while during the post-2008 period, they contributed to the avoidance of recession and the acceleration of economic growth since 2014.

5.5. Structural developments: Summing up

The main conclusions from our analysis in this section can be briefly summarized as in Table 10.

Table 10. Main features of Poland's structural developments during 1929+ and 2008+ periods

Developments	1929+	2008+
Product markets	Rigid High cartelization allowing for dumping Protectionism (tariffs); shift to autarky	Flexible EU regulations in place (anti-monopoly, common market, customs union) Expansion of foreign trade
Labor markets	Flexible Pronounced emigration during the entire interwar period Its decline during the 1930s	Flexible Emigration since the 1990s, accelerated after EU accession Since 2000, largely spontaneous developments leading to a dual labor market and ULC in check
Financial markets	Moderate instability Small- and medium-sized private bank failures Further rise of state ownership and control of banks	Stability No crisis; stable and growth-oriented financial system, not very sophisticated Extended foreign ownership; regulations often more strictly implemented than in most EU countries
Industrial and investment policies	Passive Active policies since 1936	Passive Promoted inflows of FDI and EU funds and special economic zones More active since 2016

Source: Author's compilation.

In Table 10, the structural developments of the 1930s are mostly summarized by terms with negative connotations such as "rigid," "passive," or (moderate) "instability." In the case of the 2008+ period, we rather use terms such as "flexible" or "stability." As for labor markets, we give the same label of "flexible" in both periods. Similarly, with industrial and investment policies, in the two episodes we characterize them as "passive," although some new tendencies emerged, especially at the end of the studied periods.

The final message of this comparison seems to basically be the same as that resulting from the analysis of stabilization policies (Section 4) and summarized in Table 6. Namely, that the post-communist structural policies and institutions resulted in more flexible (i.e. less rigid) economic mechanisms and stable developments than those of the period between the two world wars.

6. Conclusions and epilogue

When answering our two initial questions, we can state the following.

As relates to the first question (on why Poland did much better during the time of the 2008+ crisis), a conclusion can be reached that this was because of the combined effect of several factors, such as: (1) labor market developments resulting in low ULC, (2) the exchange rate and its shock absorber capacity (freely floating regime), (3) fiscal developments, (4) financial sector stability, and (5) a "good luck" factor. Leaving aside the last factor, they can ultimately be boiled down to (partly, except for labor market developments) the implementation of more flexible macroeconomic and structural policies than those implemented during the interwar period. In the case of financial markets, we would stress broader and more coherent regulations (than before WWII) and their often stricter and preemptive in practice implementation (as compared to most other EU countries).

Concerning the second question (on why recently did Poland perform better than other EU countries), it can be stated that most factors responsible for Poland's superior performance during the 2008–15 period (as compared to the 1929+ episode) also contributed to her relative economic success vis-à-vis many other EU countries.

That said, let us observe, though, that despite the very different processes and economic outcomes of the 1929–39 and 2008–15 episodes, in both cases, they had important political—and not only economic policy—implications. Concerning the international dimension, it is now conventional wisdom that the Great Depression contributed to WWII. Nowadays, we are apparently facing another turning point. Some recent developments suggest the buildup of social tensions that can at least be partly attributed to the impact of the 2008 turmoil and the policies implemented since then.

When the domestic perspective is considered, the Polish experience with both crises seems at first glance quite unique or at least not fully consistent. The 1930s crisis in Poland was, as we tried to demonstrate, particularly severe, which was largely due to the misguided economic policies. However, it had no major domestic political impact, the reason for this being twofold: on the one hand, the authoritarian regime in place, while on the other, the deteriorating international scene and the slide towards WWII.

Poland has passed the recent crisis period without major upheavals and with largely adequate economic policies, often in place since the early 1990s. Nevertheless, as a result of the outcome of Presidential and Parliamentary elections in 2015, a major correction of the economic program has been taking place since 2016.

Thus, another important question emerges: what went wrong with the internationally acclaimed, successful economic policies implemented in Poland since the start of the post-communist transition and, especially, during the period of 2008–15?

At this juncture, we are only inclined to state that in Poland during this latter time span, an economic crisis was avoided but at the cost of a social crisis. In the adopted analytical framework (Section 3), the emergence and development of the social crisis must be, above all, linked to labor market processes (Subsection 5.2). They led to social disequilibria, visible in a generalized frustration, which resulted in the 2015 political choices.

We are fully aware that the labor market distortions should be related to the otherwise successful economic policies. This leads us to the very final observation that a profounder understanding of the negative externalities of the policies implemented until 2015 calls for further study.

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NBP (Narodowy Bank Polski, National Bank of Poland): http://www.nbp.pl/