



POZNAŃ UNIVERSITY
OF ECONOMICS
AND BUSINESS



How does a historical experience of hyperinflation influence
Germans current approach to inflation?

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Outline

- Research question, motivation
- Periods of inflation in Germany (1871 - 2023) – causes, effects
- The contemporary opinion of Germans regarding inflation
- The impact of the hyperinflation experience on the contemporary German approach to inflation

Research question and motivation

Research question:

- How does historical experience of inflation influence Germans' current approach to inflation?

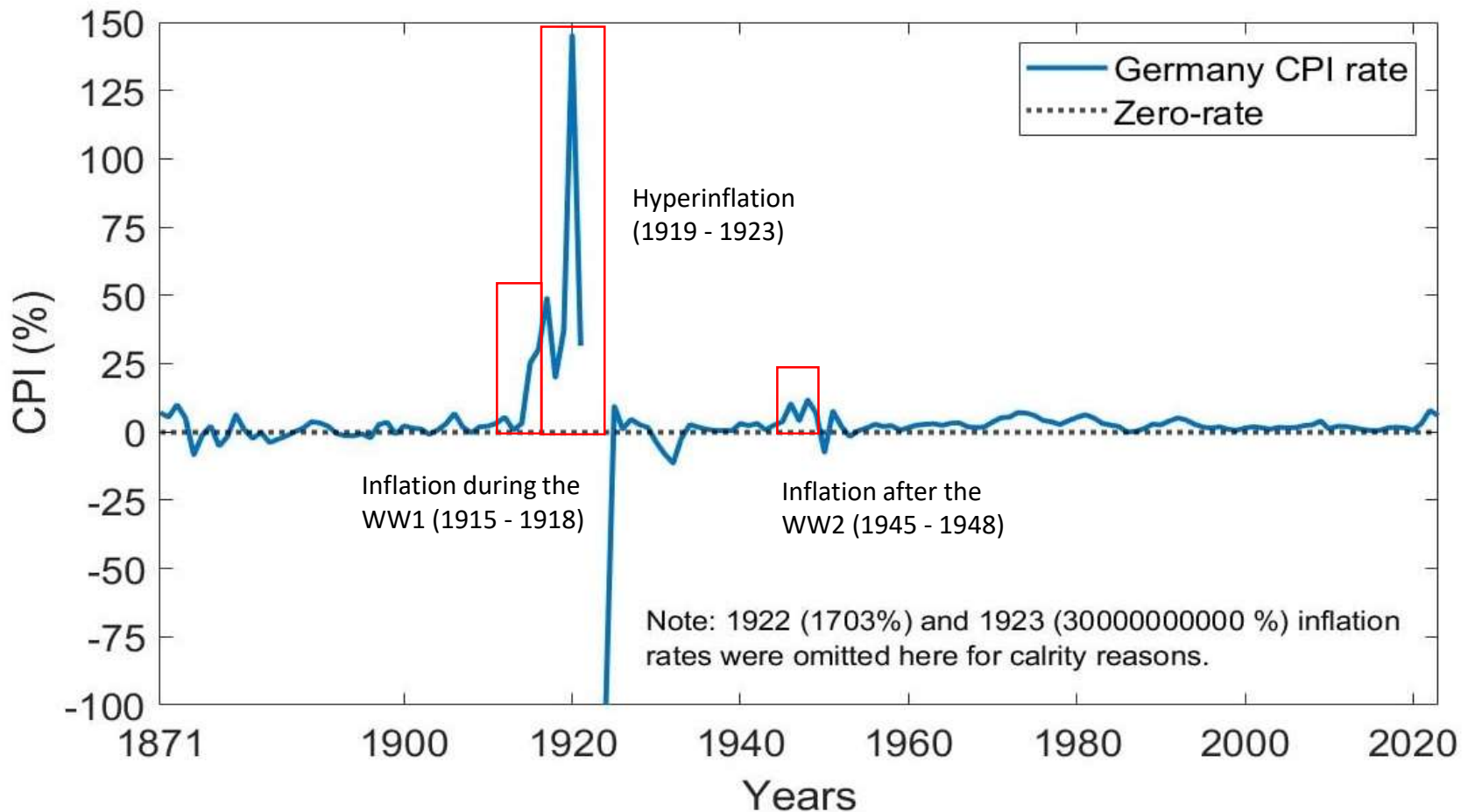
Motivation:

- Germany's economic stability is crucial for the cohesion and stability of the European Union; studying the history of inflation helps to understand what factors might threaten this stability and how to counteract them;
- Analyzing German hyperinflation, especially during the Weimar Republic, allows us to understand how extreme economic, political, and social conditions can lead to financial destabilization.

Hyperinflation - definition

Hyperinflation: (Cagan, *The Monetary Dynamics of Hyperinflation*, 1956 p.25): *The term "hyperinflation" must be properly defined. I shall define hyperinflation as beginning in the month the rise in prices exceeds 50 per cent and as ending in the month before the monthly rise in prices drops below that amount and stays below for at least a year.*

Inflation in Germany in the years 1871 - 2023

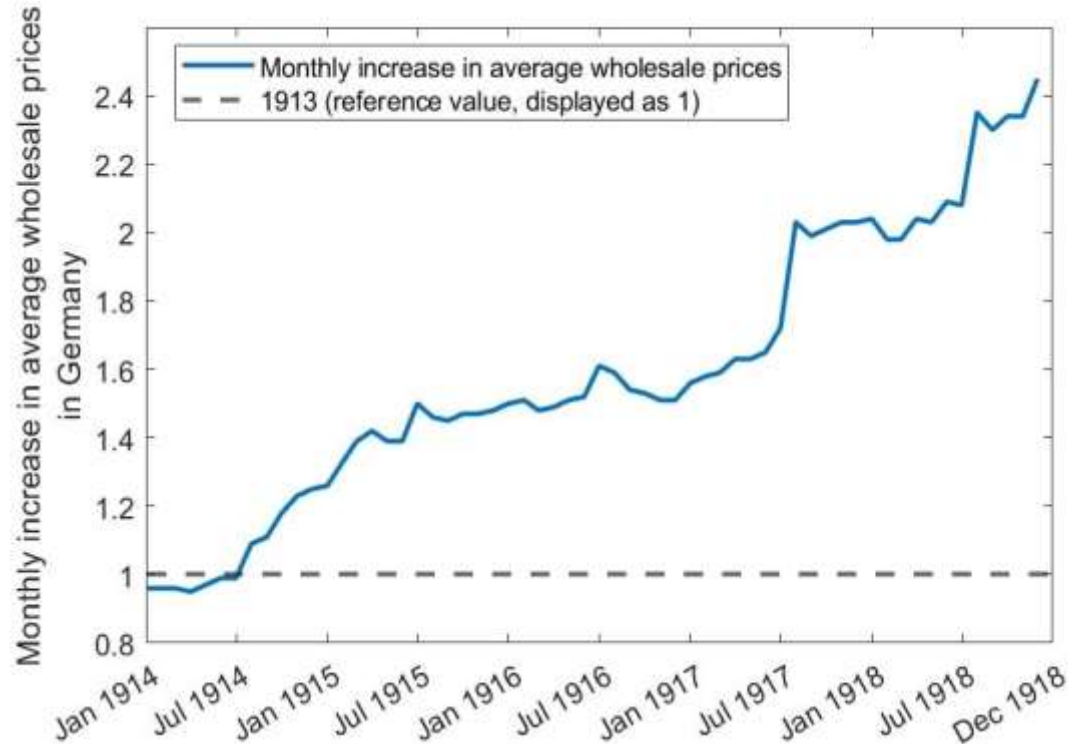


Source: Own work based on *Capital is Back: Wealth-Income Ratios in Rich Countries 1700-2010*, Picketty and Zuckamn, Table DE.15a: Price indices in Germany, 1870-2011 (annual series) <https://gabriel-zucman.eu/capitalisback/> and data from International Monetary Fund, World Economic Outlook Database, April 2024

Inflation during WW1 (1914 – 1918)

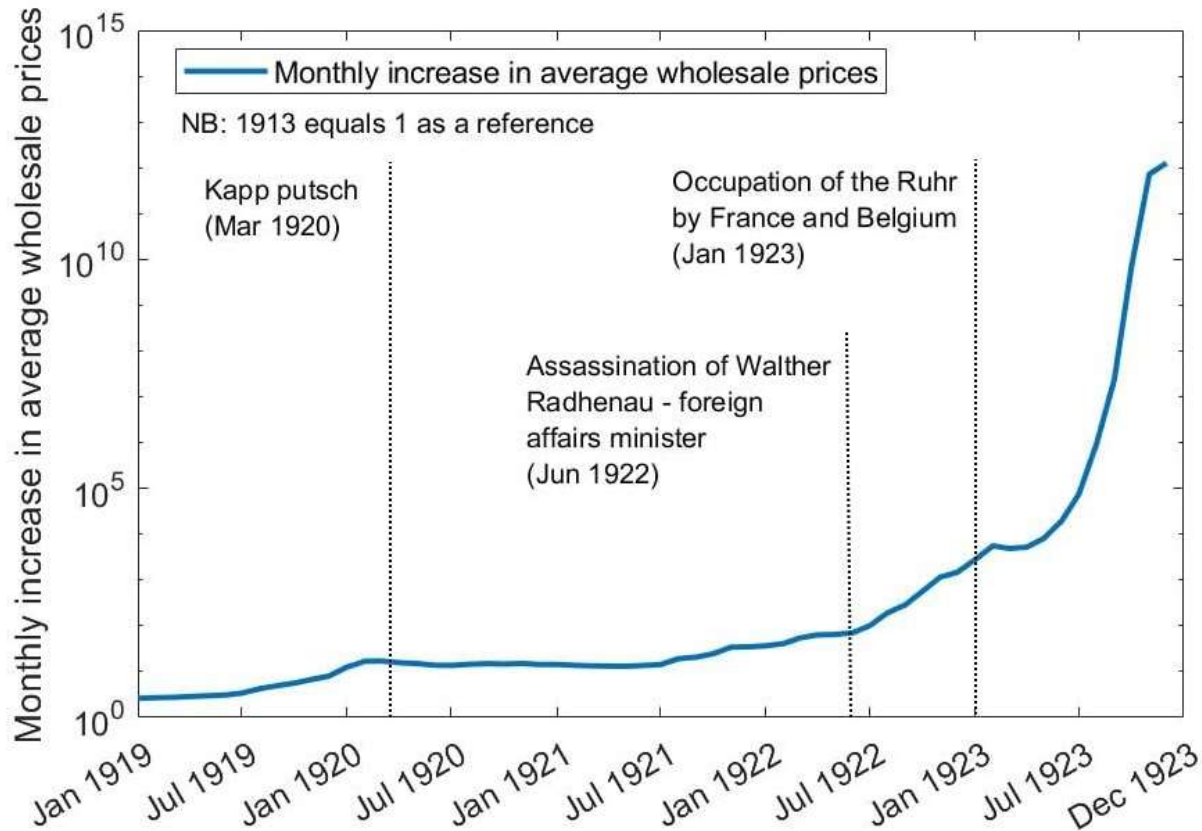
Causes:

- The naval blockade imposed by the Allied Powers (Osborne, 2004)
- War expenditures (Balderston, 1989)
- Resource constraints (Osborne, 2004)
- Mobilization of millions of citizens (Feldman, Gerald, 1996)
- Food rationing (Allen, 1998)
- Indebting the economy (Evans, 2003)



Source: Own work based on *Zahlen zur geldentwertung in Deutschland 1914 bis 1923*, Hobbing, page 17, tab 22

Hyperinflation 1919 – 1923



Wholesale prices were 1 261 600 000 000 times higher in december 1923 than in 1913 (Hobbing, 1925).



Source: *Banknoten der superlative. Eine Wanderausstellung in den Filialen der HypoVereinsbank.* <https://www.geldscheinsammlung.de/media/2018/10/flyer-superlative-der-banknoten.pdf>

Source: Own work based on *Zahlen zur geldentwertung in Deutschland 1914 bis 1923*, Hobbing, page 17, tab 22

prices.

Großhandelsindexziffern in Papiermark (Fortsetzung). In Monatsdurchschnitten (1913 = 1).

Monate	I. Getreide und Kartoffeln	II. Fette, Zucker, Fleisch u. Fisch	III. Kolo- nial- waren, Hopfen	IV. Häute und Leder	V. Tex- tilien	VI. Metalle und Petrol- eum	VII. Kohle und Eisen	Lebens- mittel	Indu- strie- stoffe	Inlands- waren	Einfuhr- waren	Gesamt- index
1921												
Januar	10,43	19,84	12,56	20,42	22,58	17,35	15,87	12,77	17,43	13,62	18,23	14,39
Februar	10,14	17,75	11,80	17,95	19,86	16,60	16,28	12,02	17,02	13,20	16,60	13,76
März	10,05	15,95	11,48	18,21	19,22	16,05	16,28	11,52	16,85	12,82	16,15	13,38
April	9,93	15,14	11,20	18,04	18,21	15,72	16,96	11,23	17,06	12,80	15,60	13,26
Mai	10,15	14,09	11,59	16,49	17,73	15,13	16,71	11,17	16,67	12,66	15,23	13,08
Juni	10,43	16,26	12,73	18,18	18,14	15,51	16,71	11,94	16,87	13,20	15,95	13,66
Juli	10,96	16,33	14,47	19,14	19,85	15,81	17,40	12,45	17,69	13,69	17,21	14,28
August	20,33	17,62	17,31	23,05	21,93	16,73	17,74	19,49	18,57	19,13	19,35	19,17
September	20,16	19,43	23,17	37,27	30,70	20,36	18,30	20,20	21,55	19,52	26,43	20,67
Oktober	23,80	23,25	30,99	45,39	41,76	29,65	18,85	24,17	25,39	22,35	35,85	24,60
November	31,97	31,54	49,23	60,77	65,18	51,23	23,80	33,08	36,18	29,67	56,62	34,16
Dezember	31,27	31,06	46,52	40,54	61,58	43,79	32,98	32,29	39,69	31,70	50,71	34,87
1922												
Januar	33,63	35,55	48,19	46,68	59,39	43,13	33,07	35,09	39,55	33,83	50,75	36,65
Februar	37,73	38,49	61,39	57,61	65,38	44,89	36,87	39,56	43,77	37,63	58,00	41,03
März	54,54	43,51	79,64	66,12	84,96	58,08	46,25	53,73	55,47	60,27	74,63	54,33
April	61,69	50,49	87,08	69,57	95,05	63,78	62,41	60,86	68,58	59,85	82,03	63,55
Mai	58,02	51,48	86,21	70,40	106,04	64,89	70,61	58,47	76,02	60,26	86,17	64,58
Juni	60,52	66,13	92,54	80,11	118,51	70,29	74,69	64,05	81,97	65,40	94,79	70,30
Juli	93,32	86,82	130,76	126,67	170,02	108,32	96,46	94,42	112,11	93,00	138,54	100,59
August	188,4	159,2	333,3	395,4	352,1	256,7	123,6	191,7	192,5	165,4	324,9	192,0
September	243,1	261,2	411,6	416,0	523,9	332,0	286,2	259,1	339,1	258,2	431,1	287,0
Oktober	523,0	579,7	924,9	990,8	1028,5	686,1	395,6	564,2	569,4	498,5	903,4	566,0
November	919	1026	2199	2130	2428	1 706	971	1033	1371	953	2141	1154
Dezember	1009	1221	2485	2181	2897	1 844	1873	1161	2061	1283	2432	1475
1923												
Januar	2 085	2 642	4 593	5 130	5 320	4 051	2 831	2 390	3 523	2 390	4 758	2 785
Februar	3 814	4 810	7 580	7 548	11 079	7 385	7 288	4 308	7 971	4 942	8 796	5 585
März	2 803	4 375	5 208	5 674	8 933	5 982	7 087	3 336	7 790	4 503	6 816	4 888
April	3 473	4 802	5 917	6 566	9 693	6 346	7 309	3 952	7 566	4 761	7 466	5 212
Mai	5 388	7 665	11 368	12 351	17 185	11 474	10 087	6 335	11 601	7 084	13 601	8 170
Juni	13 225	16 511	25 412	29 776	39 081	26 828	24 980	14 840	27 832	17 029	31 166	19 385
Juli	64 133	62 669	79 380	101 999	113 689	102 504	85 503	64 856	93 351	69 695	100 244	74 787
August	514 293	942 035	1 154 037	1 274 404	1 517 373	1 257 752	1 525 219	658 401	1 478 063	867 771	1 325 388	944 041
September	12 091 430	25 933 206	27 907 458	34 373 437	38 453 236	28 201 648	40 135 886	16 413 891	38 036 070	22 256 605	32 410 336	23 948 893
in Millionen												
Oktober	4 144,2	7 710,7	10 761,5	9 638,3	9 751,0	6 968,0	10 999,7	5 435,3	10 197,5	6 662,3	9 257,3	7 094,8
in Milliarden												
November	515,9	1 084,3	956,1	807,4	885,5	599,2	837,4	678,8	813,4	706,9	819,6	725,7
Dezember	873,2	1 592,2	1 902,9	1 439,4	1 788,9	1 110,8	1 567,3	1 112,2	1 540,7	1 193,2	1 603,3	1 261,6

Source: Zahlen
zur geldentwertung in
Deutschland 1914 bis 1923,
Hobbing, page 17, tab 22



Hyperinflation in different indicators (1920 - 1923)

Indicators of the German Hyperinflation, 1914-1923: Quarterly indices of the price level,

1914=1

	Reichsindex	Reichsindex without clothing	Berlin minimum for 4 person family (Kuczynski)	Wholesale prices	Exchange Rate with \$
1913-14	1	1	1	1	1
20/I	9	8	10	17	22
20/II	11	9	12	15	12
20/III	10	9	11	14	12
20/IV	11	10	11	15	17
21/I	12	10	11	14	15
21/II	11	10	10	13	15
21/III	13	12	12	18	21
21/IV	17	15	17	31	48
22/I	25	22	23	44	54
22/II	38	35	36	66	71
22/III	88	78	109	193	246
22/IV	451	402	565	1065	1426
1923/1	1120	1034	1291	2783	4281
1923/2	2643	2408	2814	5585	6650
1923/3	2854	2627	2608	4888	5048
1923/4	2954	2764	2596	5212	5826
1923/5	3816	3521	4233	8170	11355
1923/6	7650	6979	8770	19385	26202
1923/7	37651	33300	32886	74787	84186
1923/8	586045	508631	590170	944041	1100632
1923/9	15000000	13200000	14800000	23900000	23500000
1923/10	3657000000	3265000000	5011800000	7100000000	6000000000
1923/11	6.57E+11	6.33E+11	6.971E+11	7.257E+11	5.22E+11
1923/12	1.247E+12	1.182E+12	0	1.2616E+12	1E+12

Explanatory notes:

(1) quarterly figures formed by averaging three monthly figures

(2) 6.57E+11 = 6.57*10¹¹ = 657000000000

Source: C.-L. Holtfrerich, Die deutsche Inflation 1914-1923 (Berlin, 1980)

Source: https://adamtooz.com/2021/06/12/chartbook-newsletter-22-how-do-you-count-inflation-tracking-weimars-hyperinflation/?fbclid=IwY2xjawEfGWtleHRuA2FlbQIxMAABHa784FXG7nketogRMMyz748svzUdKRLtNgxzmjH8xwC6ASmPjCqYvVhQZw_aem_vnrQx3572qhL6f2Hq-LLuQ

Causes of hyperinflation

External factors:

- Reparations imposed on Germany by the Entente powers as a result of the provisions of the Treaty of Versailles (Marks, Sally, 1979)
- Territorial losses of Germany (Kolb, Enbenhart, 2012)

Internal factors:

- Germany's very high debt incurred to finance the war (Balderstone, 1989)
- Social riots (the November Revolution - "Spartakusaufstand" of 1918-1919) (Fergusson, 2012)
- Loss of labor force due to wartime casualties (Ellis, 2001)

Effects of German hyperinflation

- Collapse of public trust in democratic politicians (Fergusson, 2012)
- Collapse of public trust in financial institutions (Fergusson, 2012)
- Rise in popularity of extremist political groups among the population (Tampke, 2017)
- The weakening of the middle class in Germany (Barkhausen, Teupe, 2023)
- The traumatic experience of poverty passed down from generation to generation and it led to aversion to inflation among the German public opinion (Barkhausen, Teupe, 2023)

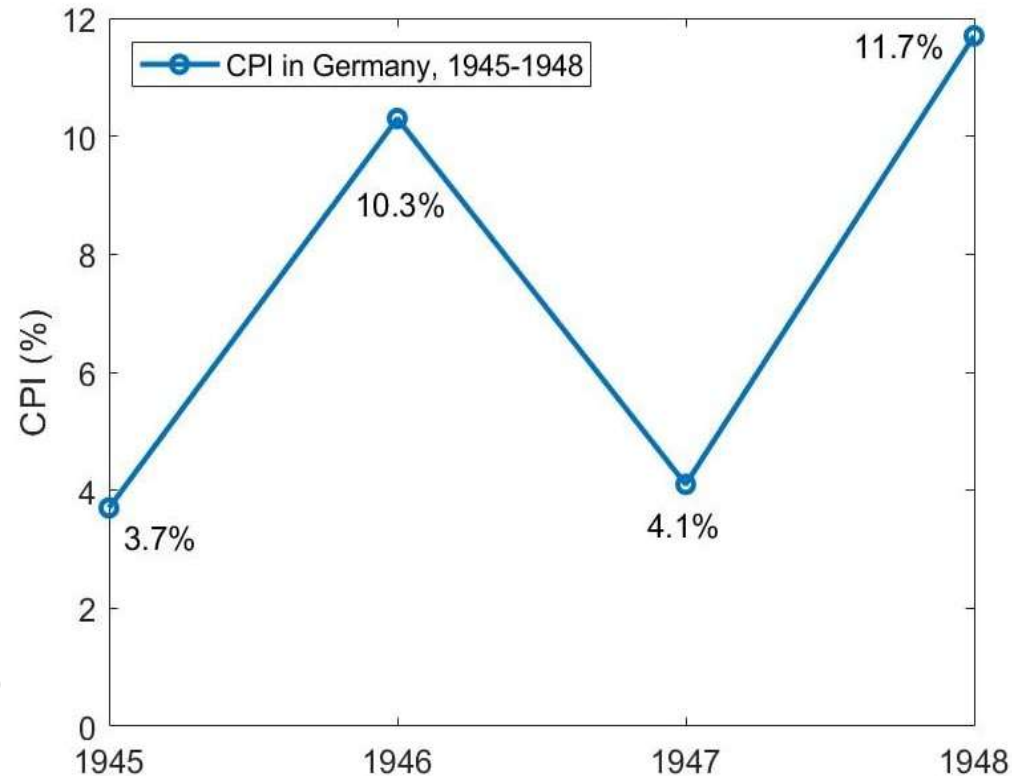
The causes of inflation 1945 – 1948

External factors:

- Post-war devastation of the country (Brakman; Steven; Garretsen, 2002)
- The confiscation of a large portion of industrial infrastructure by the Allies (Janik, 2021)

Internal factors:

- High level of unemployment (Eichengreen, 2023)
- Ruined cities and a large number of homeless people (Eichengreen, 2023)
- A black market began to develop (Janik, 2021)
- Germany's high debt incurred to finance the war (Lindholm, 1949)



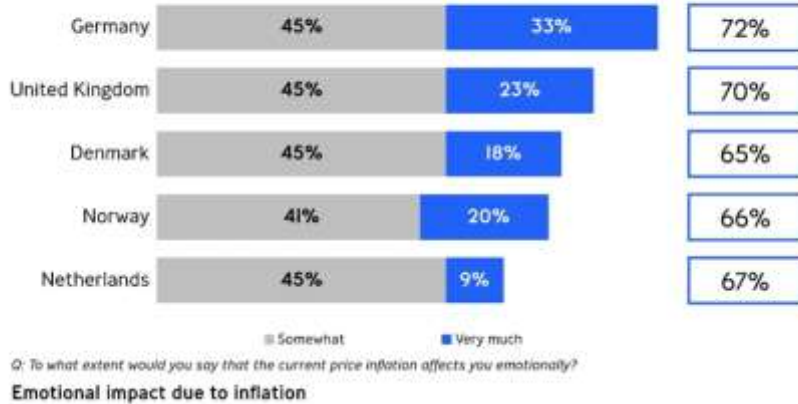
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Measures against inflation and economic reforms 1948

- Replacement of the Reichsmark with the Deutsche Mark (Janik, 2021)
- Abolition of the rationing system (Bucheim, 1988)
- Regulation of taxes (Hardach, 2022)
- Introduction of a free-market economy (Hardach,2022)

The contemporary opinion of Germans regarding inflation

dvj insights



Source: DVJ Insights 2022 <https://www.dvj-insights.com/price-inflation-study/>

Inflation: Geringere Teuerungsraten als im Vorjahr erwartet

Erwarten Sie, dass die folgenden Arten von Ausgaben in den kommenden sechs Monaten steigen, sinken oder gleich bleiben werden?



Quelle: Ipsos Global Inflation Monitor. Online-Umfrage in 29 Ländern. Deutschland n=1.000 Befragte im Alter von 16 bis 74 Jahren. Top-2-Boxen einer 5er-Skala (1 = Werden stark steigen bis 5 = Werden stark sinken). Feldzeit: 24. März bis 7. April 2023.



Drei-Jahres-Trend: Top 5-Sorgen in Deutschland

Welche drei der folgenden Themen machen Ihnen in Ihrem Land die größten Sorgen?



Quelle: Ipsos Global Advisor-Studie »What Worries the World«. Online-Umfrage unter 25.202 Befragten in 29 Ländern. Deutschland n=1.000 Befragte im Alter von 16 bis 74 Jahren.



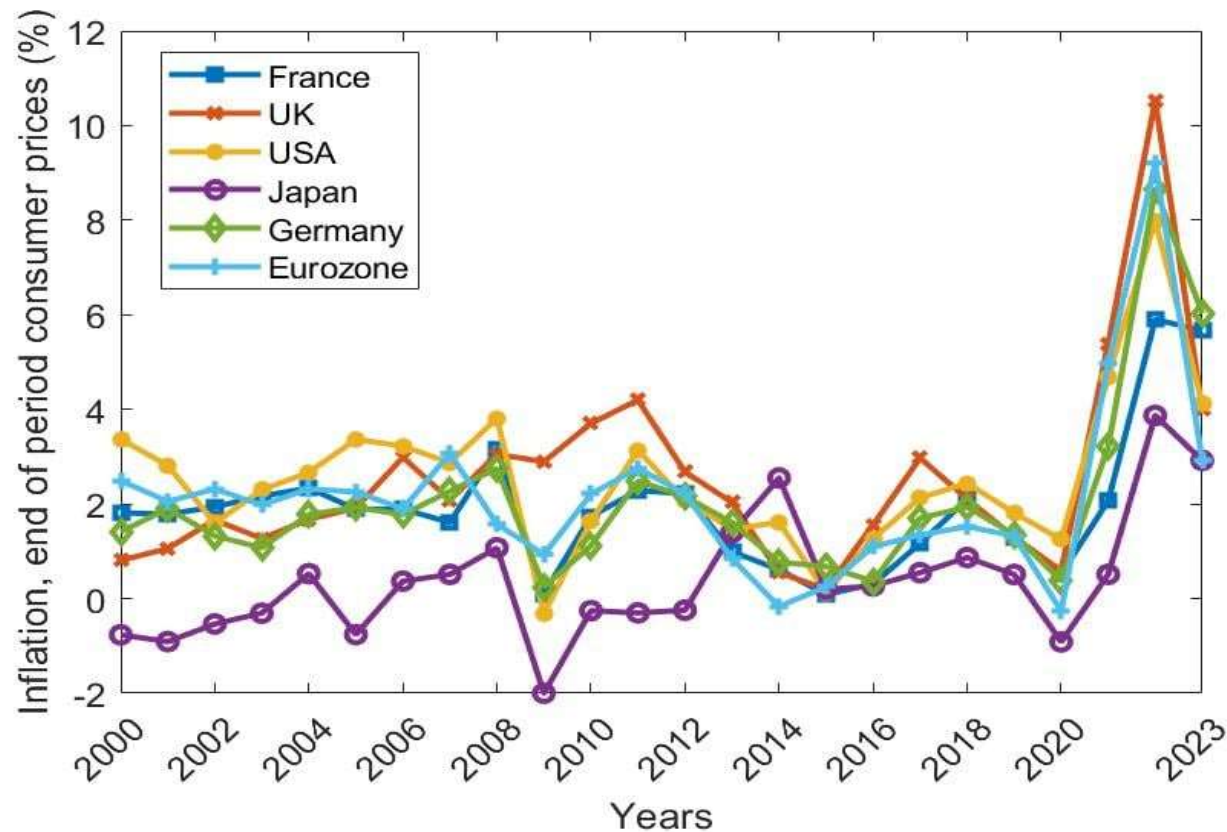
Source: IPSOS 2024 <https://www.ipsos.com/de-de/angst-der-deutschen-vor-zunehmendem-extremismus-steigt-sprunghaft>

Source: IPSOS 2023 <https://www.ipsos.com/de-de/inflation-jeder-vierte-deutsche-hat-schwierigkeiten-finanziell-uber-die-runden-zu-kommen>

The impact of the hyperinflation experience on the contemporary German approach to inflation

- The experience of hyperinflation from 1920 to 1923 was traumatic and has persisted in the collective memory of the German people (Haffert, 2023)
- Germany, aware of the threat of excessively high inflation, strives to keep inflation at a low and stable level (Yu, 2024)
- During periods of rising inflation, German households and businesses try to save money, leading to a decrease in consumption (Malmiender, Li, 2023)
- The German government seeks to avoid budget deficits and is also cautious in terms of taking on loans (Sachverständigenrat, 2023)
- Bundesbank and the ECB aim to stabilize and reduce inflation to avoid the dangers associated with excessively high inflation, and currently consider this a priority task (Mayer, Toffal, 2023)
- The rise in inflation has a negative impact on political support for the ruling parties in Germany, as well as on trust in the government (Best, Decker, Fischer, Küppers, 2023).

Inflation in selected countries and the Eurozone 2000–2023



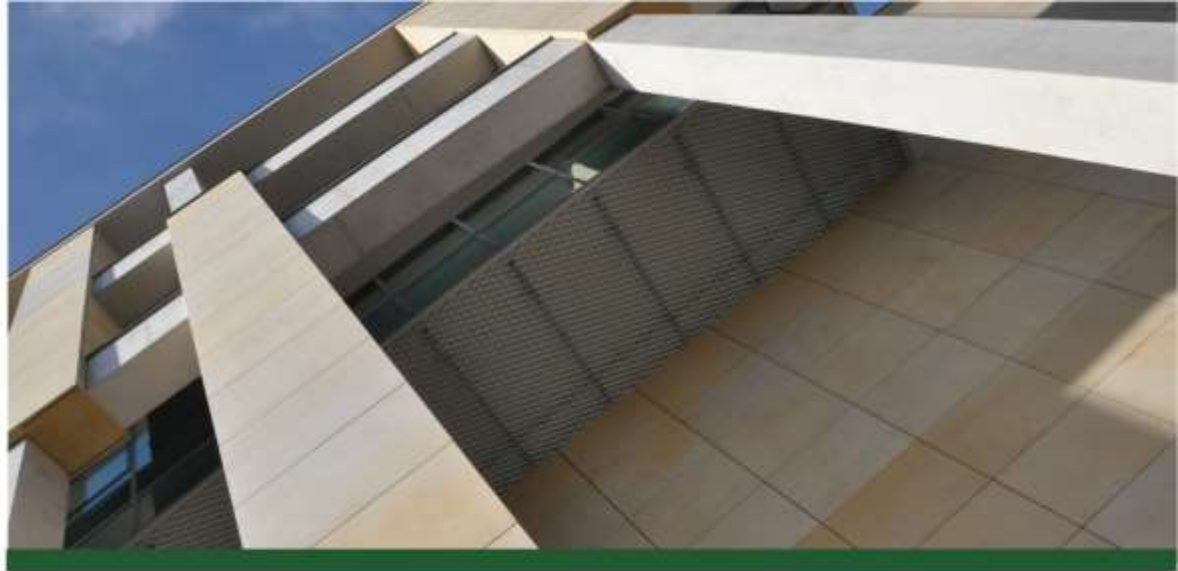
Source: Own work based on data from International Monetary Fund, World Economic Outlook Database, April 2024

Bibliography:

- Allen, K. (1998) Sharing Scarcity: Bread Rationing and the First World War in Berlin, 1914–1923, *Journal of Social History*, (Volume 32) pp. 370 - 393
- Balderston, T. War, finance and inflation in Britain and Germany, 1914-1918, *Economic History Review*, (2nd ser. XLII, 2) pp. 222 - 244
- Best V, Decker F, Fischer S, Küppers, A. (2023) *Demokratievertrauen in Krisenzeiten Wie blicken die Menschen in Deutschland auf Politik, Institutionen und Gesellschaft?*, Friedrich-Ebert-Stiftung
- Brakman S, Garresten H, Schramm M, (2004), The strategic bombing of German cities during World War II and its impact on city growth, *Journal of Economic Geography* (Volume 4) pp. 201 - 218
- Buchheim, C, (1988) Die Währungsreform 1948 In Westdeutschland, *Jahrgang* (36) , pp. 189 - 231
- Cagan, P. (1956) The Monetary Dynamics of Hyperinflation. In: Friedman, M., Ed., *Studies in the Quantity Theory of Money*, The University of Chicago Press, Chicago, pp. 25-117
- Eichengreen, B. (2023) Economic Recovery in Post-World War II West Germany and Ukraine Today, *EconPolForum* (Vol 34), pp. 30 - 35
- Ellis, J., Cox, M. (2001), *The World War I Databook*, Aurum
- Evans, R. (2003) *The Coming of the Third Reich*, Penguin Books Ltd
- Feldman, G. (1997) *The great disorder politics, economics, and society in the German inflation, 1914–1924*, Oxford University Press
- Fergusson, A. (2010) *When Money Dies: The Nightmare of the Weimar Collapse*, Public Cafair Books
- Greitens, J. (2023) Inflations-Trauma? Die Hyperinflation von 1923 in Bildern und Theorien, *Wirtschaftsdienst* (103), pp. 80 - 83
- Haffert, L. (2023) Die hyperinflation 1923 im Kollektiven gedachmits, *Aus Politik und Zeitgeschichte*, (73) pp. 36 - 41
- Hardach, G. (2022) *Gegenwartsgeschichte der deutschen Wirtschaft*, De Gruyter Oldenbourg
- Hobbing (1925) *Zahlen zur geldentwertung in Deutschland 1914 bis 1923*, (5) Berbeit im statistischen rechsamt, https://www.statistischebibliothek.de/mir/receive/DEMonografie_mods_00003994
- Janik, M. (2021) Economic and Political Reconstruction and Development of FRG in the Period after World War II, *Historia i polityka*, (No. 36), pp. 139 - 151
- Kolb, E. (2004) *The Weimar Republic*, Taylor & Francis Ltd
- Lindholm, W. (1947) *German Finance in World War II*, *American Economic Review* (Vol. 37), pp. 121 - 134
- Malmedier, U, Li, K. (2023) Zur enstethung und wirkung vonnflationserwartungen, *Aus Politik und Zeitgeschichte*, (73), pp. 51 - 57
- Marks, S. (1978) The Myths of Reparations, *Central European History* (11), pp. 231 - 255
- Mayer T, Toffal N. (2023) *Kampf gegen die Inflation oder für die Finanzstabilität*, article, <https://www.flossbachvonstorch-researchinstitute.com/de/kommentare/kampf-gegen-die-inflation-oder-fuer-die-finanzstabilitaet-das-eine-muss-das-andere-nicht-ausschliessen/>
- Osborne, E. (2004) *Britain's Economic Blockade of Germany, 1914-1919*, Routledge
- Sachverständigenrat (2023). *Jahresgutachten 2022/23, Kapitel 3. Deutsche Finanzpolitik vor schwierigen Herausforderungen*
- Tampke, J. (2017) *A Perfidious Distortion of History: the Versailles Peace Treaty and the success of the Nazi*, Scrive Publications
- Teupe, S, Barkhausen, D. (2023) The German Inflation Trauma Weimar's policy lessons between persistence and reconstruction, *Experience and Expectation. Historical Foundations of Economic Behaviour* (No.40), pp. 1 - 27
- Yu, S. (18. April 2024) *Analysis of German's Monetary Policy and Social Impact During COVID-19*, Proceedings of the 3rd International Conference on Business and Policy Studies, (Cardiff, UK; Aberdeen, UK; Beijing, China)



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