

# Peculiarities of German World Economic Development Policy

Mikhail Savelyev<sup>1</sup> <sup>a</sup>, Andrey Savchenko<sup>1</sup> <sup>b</sup>, Valery Ivanov<sup>2</sup> <sup>c</sup> and Yury Polyakov<sup>2</sup> <sup>d</sup>

<sup>1</sup>Association for Methodological Support of Business Activity and Social Development "Mitra", Pushkinskaya 241, Izhevsk, Russia

<sup>2</sup>Udmurt State University, Universitetskaya, 1, Izhevsk, Russia

**Keywords:** Economic development policy, Germany, German world, culture, institutions.

**Abstract:** The growth rates and sustainability of the economic development of German-speaking countries in the years 1850-2020 have been investigated. The comparison is made for 18 economic cycles, which are grouped into 4 historical periods: imperial, republican-fascist, division and unity. The proposed method for economic development policies to be studied makes it possible to quantify the proximity of economic development strategies based on the changes in economic growth and risk. The features of progressive, regressive, conservative and aggressive policies of economic development are described. The formula for evaluating the index of similarity of economic development policy is proposed. In accordance with this indicator, a comparison of the economic policy of Germany with more than 30 European countries showed that the similarity of policies depends on the influence of the cultures and institutions of the compared countries on the strategy of their economic development. In the current historical period, 3 cultural and geographical groups of countries have been identified with a policy of economic development that coincides with Germany, with an independent and opposite policy. The results of the research show the area of the German world as a sub-civilizational community.


## 1 INTRODUCTION


The work examines the development of the economies of the German world countries. The hypothesis about the dependence of the economic development policy of the studied countries is tested: if the cultural and institutional proximity of these countries, the similarity of their economic development strategies affects the coincidence of their economic development trends.


Such studies include the work (Baltserovich L. & Zhontsy, 2012) where the trajectories of economic growth of Australia and New Zealand are compared on the basis of the similarity of their cultures. In the work (Helantera A. & Ollus), based on a comparative analysis of Finland and Russia, it is shown that the differences in the economic and technological development of these countries are determined by the activities of the government.


Some works are devoted to the German economy (Ridley, 1968; Evans, 1986; Tsedilin, 2005; Uebele. & Sarferaz, 2009; Streb & Waidlein, 2013; Olczyk, 2019; Boldyrev et al., 2020; Savelyev et al., 2020a).

However a comparative study of cultural and institutional phenomena has not been identified. Especially little is paid to research on the GDR economic performance. The history of the post-war economic recovery in eastern Germany is described by Kulbakin (Kulbakin, 1979). Yablokov B.V. explores peculiarities of practical implementation in 1963-1973 of the "new economic system" of the GDR, which actually imitated market-based mechanism within the centralized planned economy (Yablokov, 2018). Having studied the GDR economy from 1961 to 1976, P. Ludz, came to the conclusion that the leadership of the GDR did not manage to adapt the East German economy to a new type of industrial society, which combines advantages in the

<sup>a</sup>  <https://orcid.org/0000-0002-4145-4098>

<sup>b</sup>  <https://orcid.org/0000-0003-4452-5071>

<sup>c</sup>  <https://orcid.org/0000-0002-8470-0869>

<sup>d</sup>  <https://orcid.org/0000-0001-9328-218X>

social sphere with the efficiency of a market economy (Ludz, 1977).

## 2 MATERIALS AND METHODS

This study is focused on the economic development of the countries of the German world which comprises German-speaking countries and countries are exposed to the German institutions and culture. The study does not include the American countries of German migration, in which the influence of the culture and institutions of their former metropolises is more significant, and the former German colonies, which practically did not inherit the institutions of the German Empire and gained independence from other countries, and data for the colonial period of their relations with Germany have not been found.

The features of the policy of economic development and their results in the historical retrospective of 1850-2020 are under study.

A feature of the research methodology is the use for assessing economic development, besides the usual indicators of economic growth (growth rates of real GDP), also indicators of stability (risks) of this development - the standard deviations (here and after SD) of the growth rates of real GDP. The risk assessment period is defined as the economic cycle from the first year of the start (or acceleration) of economic growth to the last year of the recession (or slowdown) in Germany. This approach allows us to assess the quality of economic decisions and their implementation within the specific culture of the German world.

For the purposes of analysis, economic cycles are combined into four historical periods:

- imperial period - 7 cycles - until 1919;
- period of the Weimar Republic and the Third Reich - 3 cycles - until 1946;
- the period of division into two states (FRG and GDR) - 5 cycles - until 1990;
- the period of united Germany - 3 cycles - until 2020.

Within this approach, the policy of economic development is considered to be as progressive when the subsequent period, in comparison with the previous one, has a higher rate of growth of macroeconomic indicators and a lower rate of risk (SD). On the contrary, decreasing in growth and increasing in risks are associated with the regressive policy of economic development. A mutual decline in growth rates and risks is the indicator of the conservative policy of economic development, and in the case of growth, it is aggressive.

The index of coincidence of the development policies of Germany with the countries of the German world is calculated by the formula (1).

$$IC = (M - O)/N \times 100 \%, \quad (1)$$

where:

IC is an index of coincidence of development policies, for convenience on the percentage,

N is the total number of studied periods (economic cycles),

M is the number of coincidences of development policies,

O is the number of opposite development policies.

This approach is theoretically substantiated in earlier studies by the authors, which shows the correlation between culture and institutional models, which is confirmed by econometric studies of economic development (Savelyev, 2015; Savelyev, 2020; Savelyev et al., 2020a, 2020b; Savelyev et al., 2021a, 2021b, 2021c, 2021d). Data sources were works (Maddison, 2008; Bolt, van Zanden, 2014; World Bank, 2019; TED, 2020).

Information base for the analysis of data on the Russian Empire – Nominal GDP historical series (Dincecco, 2013). This source contains data on nominal GDP. For correct comparison for the period 1900-1913 according to (Maddison, 2008), the average annual inflation index was evaluated and the values of nominal GDP reduced by this index were obtained. This indicator can be considered the closest analogue of real GDP. Actual inflation by years may differ significantly, but for the purposes of this work, longer periods than a year are studied, and deviations of real GDP from the calculated one due to the deviation of the actual annual inflation index from the average annual level are leveled, which allows us to calculate growth data reduced by the average annual inflation nominal GDP comparable to real growth.

## 3 RESULTS AND DISCUSSION

The evaluation of the development policy during the periods of certain economic cycles in the studied countries is presented in Table 1. Analysis of the evaluation of the coincidences of policies and opposite policies in these periods is made in Table 2.

Table 1. Economic development policy of the countries of the German world

Country \ Cycle	1862-1871	1872-1880	1881-1891	1892-1901
Germany	Prog.	Regress.	Prog.	Agress.
Austria	—	—	Agress.	Conser.
Switzerland	Conser.	Conser.	Prog.	Prog.
Great Britain	Agress.	Conser.	Agress.	Agress.
Belgium	Conser.	Agress.	Conser.	Conser.
Netherlands	Prog.	Agress.	Conser.	Agress.
France	Regress.	Agress.	Conser.	Agress.
Italy	—	Prog.	Regress.	Agress.
Denmark	Prog.	Conser.	Prog.	Prog.
Sweden	Agress.	Conser.	Prog.	Prog.
Finlandia	Conser.	Conser.	Agress.	Agress.
Russian empire	-	—	—	Prog.

Country \ Cycle	1902-1908	1909-1915	1916-1919	1920-1923	1924-1932
Germany	Prog.	Regress.	Regress.	Agress.	Prog.
Austria	Agress.	Regress.	Cons.	Prog.	Regress.
Switzerland	Regress.	Cons.	Regress.	Prog.	Cons.
Great Britain	Cons.	Prog.	Regress.	Agress.	Prog.
Belgium	Agress.	Regress.	Regress.	Prog.	Cons.
Netherlands	Prog.	Agress.	Agress.	Prog.	Regress.
France	Cons.	Regress.	Regress.	Prog.	Regress.
Italy	Prog.	Agress.	Regress.	Prog.	Prog.
Denmark	Regress.	Regress.	Regress.	Prog.	Cons.
Sweden	Agress.	Prog.	Regress.	Agress.	Cons.
Finlandia	Cons.	Regress.	Regress.	Prog.	Regress.
Russian empire	Regress.	Prog.	—	—	—
Czechoslovakia	—	—	—	—	Regress.
Yugoslavia	—	—	—	—	Regress.

Country \ Cycle	1933-1946	1947-1958	1959-1967	1968-1975
Germany	Regress.	Prog.	Conser.	Conser.
Austria	Regress.	Prog.	Conser.	Agress.
Switzerland	Agress.	Prog.	Prog.	Regress.
Luxembourg.	—	—	Prog.	Agress.
Great Britain	Agress.	Conser.	Prog.	Regress.
Belgium	Regress.	Prog.	Prog.	Regress.
Niederl.	Regress.	Prog.	Conser.	Conser.
France	Regress.	Prog.	Conser.	Regress.
Italy	Regress.	Prog.	Conser.	Regress.
Denmark	Regress.	Prog.	Prog.	Conser.
Sweden	Agress.	Conser.	Prog.	Regress.
Finlan	Agress.	Prog.	Prog.	Agress.
Turkey	Regress.	Prog.	Conser.	Prog.
Czechoslovakia	Regress.	Prog.	Conser.	Conser.
Yugoslavia	Prog.	Agress.	Prog.	Agress.
USSR	Agress.	Prog.	Regress.	Conser.
Poland	—	Conser.	Regress.	Agress.
Hungary	—	Prog.	Conser.	Regress.
Romania	—	Agress.	Conser.	Regress.
Bulgaria	—	Prog.	Prog.	Regress.
R S F SR	—	—	Prog.	Conser.

Table 1. Economic development policy of the countries of the German world (cont.).

Country \ Cycle	1976-1982	1983-1990	1991-2003	2004-2009	2010-2020
Germany	Conser.	Conser.	Conser.	Regress.	Prog.
Austria	Regress.	Agress.	Conser.	Regress.	Regress.
Switzerland	Conser.	Prog.	Conser.	Agress.	Conser.
Luxembourg	Conser.	Agress.	Conser.	Regress.	Prog.
Great Britain	Conser.	Prog.	Regress.	Regress.	Regress.
Belgium	Conser.	Prog.	Conser.	Regress.	Regress.
Netherlands	Conser.	Prog.	Regress.	Regress.	Conser.
France	Conser.	Regress.	Regress.	Regress.	Regress.
Italy	Conser.	Conser.	Regress.	Regress.	Regress.
Denmark	Conser.	Prog.	Conser.	Regress.	Prog.
Sweden	Regress.	Prog.	Regress.	Regress.	Regress.
Finland	Conser.	Prog.	Regress.	Regress.	Conser.
Turkey	Regress.	Regress.	Regress.	Agress.	Prog.
Czechoslovakia	Regress.	Regress.	Agress.	Prog.	—
Yugoslavia	Conser.	Regress.	Regress.	Prog.	—
the USSR	Conser.	Regress.	Regress.	Prog.	—
Poland	Regress.	Agress.	Prog.	Prog.	Regress.
Hungary	Regress.	Regress.	Agress.	Conser.	Prog.
Romania	Conser.	Regress.	Agress.	Prog.	Conser.
Bulgaria	Regress.	Regress.	Agress.	Prog.	Conser.
Czech Republic	Regress.	Prog.	Regress.	Prog.	Conser.
Slovakia	Agress.	Conser.	Agress.	Prog.	Conser.
Croatia	Conser.	Regress.	Agress.	Prog.	Conser.
Slovenia	Conser.	Regress.	Agress.	Agress.	Conser.
Russia	Conser.	Regress.	Regress.	Prog.	Conser.
Kazakhstan	Conser.	Prog.	Regress.	Prog.	Conser.
Lithuania	Prog.	Regress.	Regress.	Prog.	Conser.
Latvia	Prog.	Prog.	Regress.	Agress.	Conser.
Estonia	Prog.	Agress.	Regress.	Agress.	Prog.
Kyrgyzstan	Prog.	Prog.	Regress.	Prog.	Regress.
Serbia	Conser.	Regress.	Regress.	Prog.	Conser.
Ukraine	Prog.	Prog.	Regress.	Prog.	Regress.
Belarus	Prog.	Prog.	Regress.	Prog.	Regress.

Analysis of the data in Table 2 confirms that the policy matching index does not show the closeness of the cultures of the German world. The policy matching index of the German-speaking is not higher than other Western European countries. This indicator fails to reflect the institutional closeness of the countries: for the CMEA countries and the EU during the period of their simultaneous existence, this indicator is approximately equal.

Most likely, this indicator characterizes the closeness of development strategies in general and innovation activity in particular, which, in turn, are dependent on culture and institutions: in the period of fragmentation, the similarity of policies is higher with the EU countries than with the CMEA countries. institutions in most of Germany coincided with those of the EU. And the most consistently high rates of similarity of policies are shown by countries culturally close to Germany: Denmark, Luxembourg, the Netherlands, Belgium.

Another phenomenon identified with the policy similarity indicator for the last analyzed historical period after the unification of Germany is an impact on a group of countries by the German institution and culture. These are mainly Protestant, German-speaking, which have a similar economic structure with Germany, an almost indistinguishable institutional model, integrated geographically, technologically and infrastructurally.

It is obvious that Italy, France, Great Britain and Sweden have development strategies independent of Germany and zero index values. They are culturally and institutionally more distant from the German World. The countries of Eastern Europe are currently developing in relation to Germany, mainly with negative indicators of the index, because they in a relationship of semi-colonial dependence on Germany as suppliers of resources and sales markets. In fact, these three groups of European countries outline the contours of Europe's future if the EU continues to disintegrate.

Table 2. Index of coincidence of economic development policies of Germany with the countries of the German world

Country	Historical period				Total for the entire study period
	1862-1919	1920-1946	1947-1990	1991-2020	
Austria	0	0	0	33,3	6,25
Switzerland	14,3	0	40	33,3	22,2
Luxembourg	-	-	-25	100	28,6
Belgium	14,3	33,3	40	33,3	27,8
Netherlands	42,9	0	80	33,3	27,8
France	28,6	0	60	0	33,3
Italy	16,7	66,7	80	0	41,2
Great Britain	14,3	66,7	20	0	22,2
Denmark	42,9	33,3	60	100	55,6
Sweden	14,3	33,3	0	0	11,1
Finlandia	42,9	-33,3	20	33,3	22,2
Turkey	-	100	40	0	33,3
Russian Empire , USSR, RF	-66,7	0	60	-33,3	0
Kazakhstan	-	-	50	-33,3	0
Lithuania	-	-	0	-33,3	-20
Latvia	-	-	0	0	0
Estonia	-	-	-50	33,3	0
Kyrgyzstan	-	-	0	-66,7	-40
Ukraine	-	-	0	-66,7	-40
Belarus	-	-	0	-66,7	-40
Czechoslovakia	-	0	60	-100	11,1
Czech Republic	-	-	0	-33,3	-20
Slovakia	-	-	0	-66,7	-40
Yugoslavia	-	-100	0	-50	-33,3
Croatia	-	-	50	-66,7	-20
Slovenia	-	-	50	-66,7	-20
Serbia	-	-	50	-33,3	0
Poland	-	-	-60	-66,7	-62,5
Hungary	-	-	40	0	25
Romania	-	-	40	-66,7	0
Bulgaria	-	-	20	-66,7	-12,5

## 4 CONCLUSIONS

The index of coincidence of economic development policies characterizes the proximity of economic development strategies, which, in turn, depends on culture and institutions. To differentiate the influence of culture and institutions, a more sophisticated research methodology is required.

The predictive application of the methodology lies in the ability to identify groups of countries with similar economic development policies, institutional and cultural proximity for the formation of future economic unions.

The result of the study is also the identification of the boundaries of the German world, as a sub-civilizational community

## ACKNOWLEDGEMENTS

The reported study was funded by RFBR, project number 20-010-00869.

## REFERENCES

- Baltserovich, L., Zhontsy, A., 2012. *Mysteries of economic growth: forces and crises*, MYSL Publ. Moscow.
- Between East and West, Political Analysis (1961-1976)*, 1977. Munich.
- Boldyrev, R. Y., Boldyreva, S. Y., Vakhabova, A. A., Tychina, O. L., 2020. Science and Technic Revolution's Impact on the Economic Development of Germany in 16th – 19th Centuries. ISC 2019. *In Lecture Notes in Networks and Systems*. 129.
- Bolt, J., van Zanden, J. L., 2014. The Maddison Project: Collaborative research on historical national accounts. *In Economic History Review*. 67(3). pp. 627-651

- Dincecco, M., Mauricio, P., 2013. "Nominal GDP Series, 1870-2000". Global Prices and Incomes Database, <http://gpih.ucdavis.edu>.
- Evans, R., 1986. The German Empire 1871-1918. In *German History*. 3. pp. 89-92.
- Helantera, A., Ollus, S. E., Why Russia is not Finland? A comparative analysis of the competitiveness, <https://iq.hse.ru>.
- Kulbakin, V. D., 1979. *History of German Democratic Republic (1949—1979)*, Nauka Publ. Moscow.
- Maddison A., Historical Statistics, <http://www.ggd.net>.
- Olczyk, G., (2019). Elements of economic culture as informal institutions in the economic development of Germany. In *Economics and Law*. 18. p. 233.
- Ridley, F., 1968. The Economic Causes of the German Empire. In *Business History*. 10. pp. 121-125.
- Savelyev, M., 2015. Multicultural institutionalism: General economic theory of civilizations. The political economy of traditionalism. In *Network Society*. 488.
- Savelyev, M., 2020. Methods for researching the sustainability of economic development of territories. In *Problems of regional economy*. 3(4). pp. 54-62.
- Savelyev, M., Gruzdeva, T., Savchenko, A., Koretsky, V., Pushina, N., 2021b. Assessment of the Competitiveness and economic development policies of the countries of the Former French Empire. In *SHS Web Conf.* 101 02005.
- Savelyev, M., Ivanov, V., Polyakov, Yu., 2020a. The effect of institutional differences on the economic development of German-speaking countries. In *E3S Web of Conf.* 222 05009.
- Savelyev, M., Kutyashova, E., Savchenko, A., Koretsky, V., Polyakov, Yu., 2021a. Diversity of economic development in Portuguese-speaking countries. In *SHS Web Conf.* 101 02004.
- Savelyev, M., Pushina, N., Bryndin, A., 2021d. Search for Effective Governments in Post-Soviet Russia While Excluding the Factor of World Oil Prices from the Results of the Country's Economic Development. In *IOP Conf. Ser.: Earth Environ Sci.* 666062092.
- Savelyev, M., Pushina, N., Savchenko, A., 2020b. Assessment of the sustainability of economic development under the governments of Russia. In *E3S Web Conf.* 208 03052.
- Savelyev, M., Sokolova, N., Polyakov, Yu., 2021c. Newly Industrialized Countries: Is There an Alternative to the Golden Billion? In *IOP Conf. Ser.: Earth Environ Sci.* 666062093.
- Streb, J., Waidlein, N., 2013. *Knowledge and Space in Economic History: Innovations in the German Empire, 1877–1918*. 5.
- The conference board, <https://conference-board.org>.
- Tsedilin, L. 2005. The EU Enlargement and the Prospects of Eastern Germany Lands. In *Economic issues*. 4. pp. 23-42.
- Uebele, M., Sarferaz, S., 2009. Tracking down the business cycle: A dynamic factor model for Germany 1820-1913. In *Explorations in Economic History*. 46. pp. 368-387.
- World Bank, "World Development Indicators", <https://databank.worldbank.org>.
- Yablokov, B.V., 2018. *Foreign economic policy of GDR in the "New economic system" (1963- 1973)*.