ORIGINAL PAPER

DOI: 10.26794/2587-5671-2025-29-3-207-217
UDC 336.018(045)
JEL B22, E31

The Hypothesis of a Different Nature of the Phillips Curve and Its Impact on Financial Flows

V.A. Petukhov
Financial University under the Government of the Russian Federation, Moscow, Russian Federation

ABSTRACT

The Phillips curve is one of the most widely debated economic patterns. Its practical application, including for adjusting monetary policy, still causes significant disagreement among economists. In this regard, understanding the nature (essence) of the Phillips curve is an urgent task. The **purpose** of the study is to substantiate the hypothesis that the Phillips curve is based on a different pattern than is currently believed among economists. **Methods** of analysis and synthesis, system and logical analysis, were used. The empirical basis of the study is based on statistical data of the US economy for the period from 1980 to 2022. The essence of the study: real analysis of economic indicators (real wages, real GDP, etc.) in the vast majority of cases takes precedence over nominal analysis of economic indicators (nominal wages, nominal GDP, etc.). These two analyzes are the same if prices remain constant. It was during this period of Phillips's study of the British economy (1862–1913) that prices remained virtually unchanged. The rest of the Phillips curve (1914–1957) was heavily influenced by non-economic factors and may therefore be less significant. Since Phillips originally defined his curve as an inverse relationship between nominal wages and unemployment, at constant prices this means that there is an inverse relationship between real wages and unemployment. This dependence is explained by the author by the fact that the UK economy already had a cyclical pattern, when during economic growth real wages rise and unemployment falls, and vice versa. **Conclusion**: It is quite reasonable to believe that the above curve shows an inverse relationship between fluctuations in unemployment and fluctuations in real wages.

Keywords: finance; unemployment; economic cyclicality; real wages; Phillips curve; modern US economy

For citation: **Petukhov V.A. The hypothesis of a different nature of the Phillips curve and its impact on financial flows.** ***Finance: Theory and Practice*****. 2025;29(3):207-217. DOI: 10.26794/2587-5671-2025-29-3-207-217**

INTRODUCTION

A large number of scientific works are dedicated to the analysis of the Phillips curve — both in the second half of the 20th century and in the early 21st century. This is due to the fact that unemployment and inflation in the modern market economy will always be highly relevant topics, and therefore the relationship between these economic indicators will constantly attract the close attention of economists. Therefore, the *relevance* of studying the Phillips curve will remain for a long time. The *novelty of the research* lies in the fact that the author proposes their own hypothesis that the Phillips curve is based on a different relationship. In other words, the Phillips curve has a different nature. Therefore, if the author's hypothesis is confirmed, the *scientific significance* of this hypothesis will be substantial, as it will allow for the exploration of the relationship between wages, inflation, and unemployment from different perspectives. Hence, the *practical significance* of the research follows, as the change in the theoretical concept will also lead to certain adjustments in practical activities (for example, in monetary policy).

The *degree of development* of this topic in the scientific field is quite high. Since the publication of the famous article by A. Phillips (1958) and up to the present time, thousands of articles on this issue have been published. At the present stage, many scholars use the Phillips curve for economic analysis. Thus, Russian economists D. Averina, T. Gorshkova, E. Sinelnikova-Muryleva, D. Orlov, E. Postnikov, E. Gurvich, E. Vakulenko, A. Zubarev, A. Gorodnov, and A. Andrjukhin use this curve to study the modern Russian economy [1–5].

I. Shevchenko and M. Korobeinikova investigate the impact of macroeconomic indicators of the Phillips curve on economic growth [6]. The chief economist of the monetary policy department of the Central Bank of Russia, D. Shestakov, discusses the correct choice between inflation and unemployment [7].

A number of contemporary Western scholars (P. Beaudry, C. Hou, F. Portier, A. Auclert, R. Rigato, M. Rognlie, L. Straub, E. Rubbo, R. Lucas) have focused primarily on the interaction of this curve with modern monetary policy [8–11]. In an earlier period, the well-known economist Milton Friedman wrote about the issue of the relationship between unemployment and inflation [12].

The purpose of the study: justification of the hypothesis about the possible different nature of the Phillips curve.

Research objectives:

- identify the conditions under which A. Phillips statistically justified the inverse relationship between nominal wages and unemployment;
- determine what other relationship the Phillips curve indicates under these economic conditions;
- justify the hypothesis;
- analyse statistical data in the US economy (1980–2022) to confirm (or refute) the author's hypothesis.

The article applies methods of analysis and synthesis, systemic and logical analysis.

RESULTS AND DISCUSSION

As the initial basis for the research, the widely known article by Alban William Phillips "The Relation between Unemployment and the Rate of Change of Money Wage Rates in the United Kingdom, 1861–1957" was used [13].

From this period, the most important for analysis, according to the author, is the pre-war period of 1862–1913, as the data for the subsequent years (two world wars, the interwar period, and the recovery period) were influenced by many serious non-economic factors. In other words, the presence of a long-term peaceful period (1862–1913) with respect for private property rights and the absence of serious military and social conflicts in the country allows

for a more rigorous and balanced economic analysis of the Phillips curve.

The importance of analysis. The author believes that the foundation of the research should primarily be based on real analysis. This analysis in economics represents an analysis of economic indicators (wages, profits, etc.) adjusted for changes in the price level, i.e., the calculation is done in constant prices (often the prices of the base year). At the same time, nominal analysis is based on the study of economic indicators at current prices. Almost all specialists agree that the real analysis is more important when comparing these two types of research. The indicator of real wages undoubtedly takes precedence over nominal wages, and the indicator of real GDP is significantly more important for society compared to nominal GDP. When analyzing economic cyclicality, the wave-like nature of this cyclicality is based precisely on fluctuations in real (rather than nominal) GDP.

In economics, the nominal and real analysis of economic indicators coincide if prices remain unchanged. Thus, in the SNA (System of National Accounts), the indicators of real and nominal GDP for the base year coincide, as the calculation is conducted in constant (unchanged) prices of the base year.

Real analysis and the Phillips curve. Based on the above, the author believes that, first and foremost, the Phillips curve should be examined from the perspective of real analysis. As previously noted, the most significant period for analysis is 1862–1913. What is characteristic of this period? For this period (as well as generally for the 19th century), a typical phenomenon was unchanged (stable) prices, which could fluctuate within a few percent.

In this situation (with stable prices), nominal and real analysis go in the same direction, which means that the inverse relationship between unemployment and nominal wages can confidently be interpreted as the inverse relationship between fluctuations in real wages and unemployment.

The presence of economic cyclicity. To continue the analysis, it should be recalled that the economy of the United Kingdom during that period was characterized by economic cyclicality (the UK entered economic cyclicality in the early 19th century), i.e., approximately every 10 years an economic cycle was observed, during which economic growth was followed by an economic downturn, with the duration of the downturn (from six months to 1.5 years) being significantly shorter than the duration of the economic upturn (here we are talking about Juglar's medium-term economic cycles).

How does economic cyclicality affect real wages and unemployment? It is quite obvious that (all else being equal) during economic growth, real wages should rise and unemployment should decrease, and conversely, during an economic downturn, real wages should fall and unemployment should rise [14, 15].

(*Note*. In reality, as noted by specialists in economic cyclicality, at the beginning of an economic upturn, there is no such strict dependence between economic growth and changes in unemployment, but this can be disregarded when analyzing the picture as a whole.

Therefore, the aforementioned real analysis with constant prices coincides with the nominal analysis, where an increase in nominal wages leads to a decrease in unemployment, and conversely, a decrease in nominal wages leads to an increase in unemployment. The Phillips curve, based on statistical data, precisely illustrates this situation from the perspective of nominal analysis.

From the author's reasoning, based on real analysis, it follows that in the upper left part of the Phillips curve (during the period 1861–1913), there should be years characterized as periods of economic growth, i.e., periods with low unemployment and rising nominal (real) wages [13, p. 285]. The opposite situation is observed in the lower right part of the Phillips

curve — there should be years of economic downturn with rising unemployment and falling nominal (real) wages. This author's assumption is confirmed by statistical data: 1879, 1884, 1885, 1892, 1893, 1903, and 1908 are periods of economic decline.

The situation with the year 1900. This year, at first glance, contradicts the author's approach. It was a crisis year, but it is positioned in the upper left on the Phillips curve, as unemployment this year was quite low (2.5%) with a slight increase in nominal wages (around 1%).

The first to propose a logical resolution to this unclear situation was Evgeny Solovyov (a student at the Financial University under the Government of the Russian Federation). He suggested that this period of time coincided with the Second Anglo-Boer War, which took place from 1899 to 1902. So many potential unemployed avoided this unpleasant fate and became the foundation for the sharp growth of both the British Army and military production.

The author found that this assumption by E. Solovyov is fully confirmed. Thus, British troops at the beginning of hostilities in this region numbered 24 000 to 28 000 people. Over the next 9 months, the army increased to 200 000, and a total of approximately 400 000 people were sent to South Africa during the war.

In addition, it is worth considering the increase in the workforce involved in the rear, which had to meet the needs of the army and the demands of military logistics. This situation also explains the increase in real wages for these individuals during the mobilization period. Therefore, this exception (1900) is based on non-economic reasons and can be considered quite justified.

The consequences of the divergence between real and nominal analysis in the study of the Phillips curve. Now it is worth transitioning from the analysis at stable prices to the analysis at changing prices. In the Western economy, price stability existed until the First World War. Later, world wars followed, the interwar period (when, for example, the United Kingdom would alternate between returning to the gold standard and abandoning it), and the final break with the gold standard by the leading countries of the world. This inevitably led to price instability in Western countries in the second half of the 20th century.

When prices fluctuate, the results of real and nominal analysis begin to differ significantly from each other. Thus, an increase in nominal wages can occur simultaneously with a decrease in real wages. Now, these values with changing prices could move in opposite directions with different unemployment rates. Many economists (including P. Samuelson) preferred the path of nominal analysis. As a result, this led to the initial formulation by A. Phillips of the aforementioned relationship being replaced by the assertion that there is an inverse relationship between inflation and unemployment.

However, based on statistical data, economists quickly realized that such a dependency (at least in the long term) does not exist. Thus, Milton Friedman in his Nobel lecture in 1976 directly pointed out (referring to economic data from the then British Prime Minister) that in the economy, situations are often observed where rising prices correspond to high unemployment, and falling prices correspond to low unemployment. (One can add that in modern Russia, during the COVID epidemic, both inflation and unemployment increased simultaneously).

At present, economists, relying on extensive statistics, have reached a unanimous conclusion about the absence of an inverse relationship between inflation and unemployment in the long term. But the question has become quite pressing: does this relationship exist in the short term? Opinions among specialists were roughly divided.

Research in this area is currently yielding contradictory results. The Phillips curve takes on a positive slope, then a negative one, then

Table 1

US Unemployment Rate (% of Total Working Population)

Year	1980	1981	1982	1983	1984	1985	1986	1987	1988
%	7.2	7.6	9.7	9.6	7.5	7.2	7.0	6.2	5.5
Year	**1989**	**1990**	**1991**	**1992**	**1993**	**1994**	**1995**	**1996**	**1997**
%	5.3	5.6	6.9	7.5	6.9	6.1	5.6	5.4	4.9
Year	**1998**	**1999**	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**
%	4.5	4.2	4.0	4.7	5.8	6.0	5.5	5.1	4.6
Year	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**
%	4.6	5.8	9.3	9.6	8.9	8.1	7.4	6.2	5.3
Year	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**
%	4.9	4.4	3.9	3.7	8.1	5.4	3.6	–	–

Source: IMF. URL: https://svspb.net/danmark/bezrabotica.php?l=ssha (accessed on 15.10.2023).

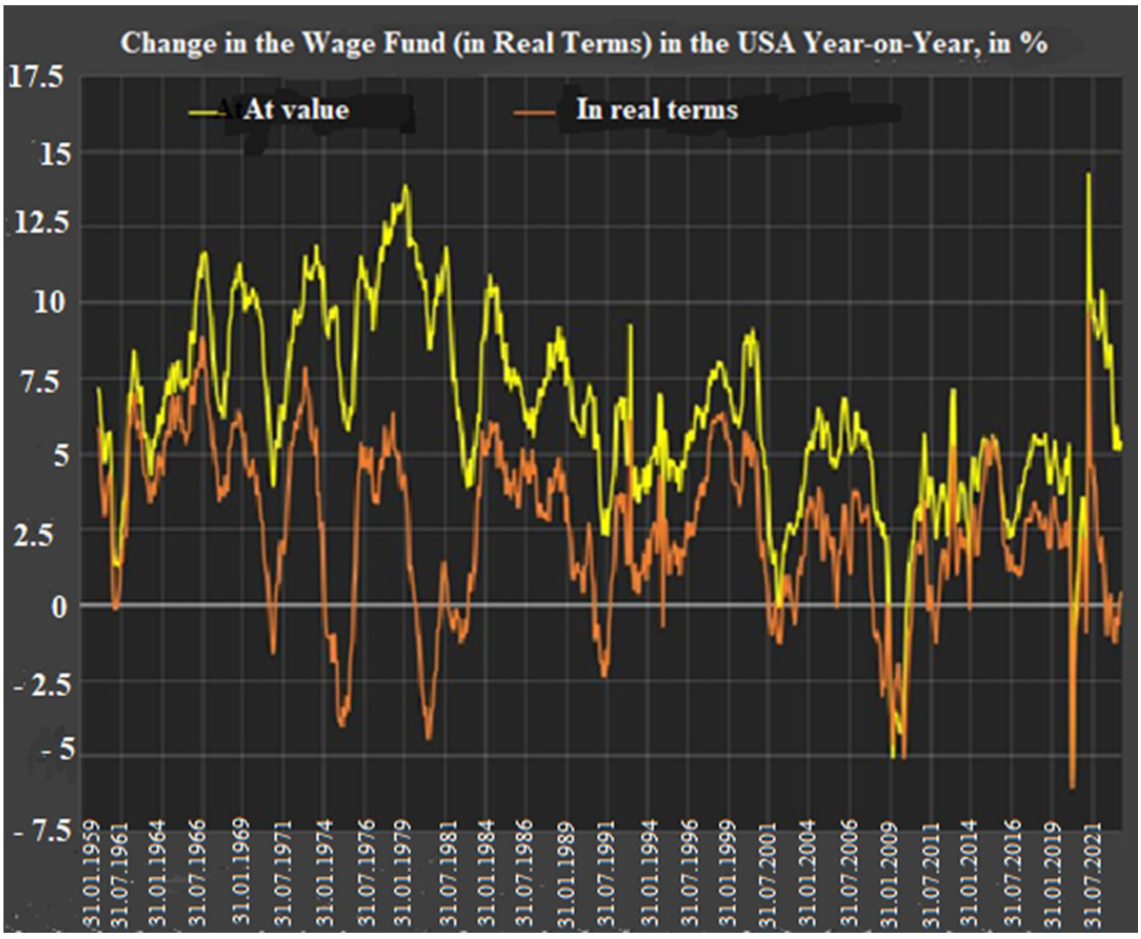

Fig. 1. **Change in the Wage Fund (in Real Terms) in the USA Year–on–Year, in %**

Source: Analytical center TAdviser (TAdviser) URL: https://www.tadviser.ru/index.php/%D0%A1%D1%82%D0%B0%D1%82%D1%8C%D1%8F:%D0%97%D0%B0%D1%80%D0%BF%D0%BB%D0%B0%D1%82%D1%8B_%D0%B2_%D0%A1%D0%A8%D0%90 (accessed on 15.10.2023).

Table 2

Changes in the Wage Fund (in Real Terms) in the USA (1980–2022) from the End of the Year to the End of the Previous Year, in %

Year	1980	1981	1982	1983	1984	1985	1986	1987	1988
%	–2,7	–0,7	0	+5	+4,5	+3	+3,8	+3,7	+2,5
Year	1989	1990	1991	1992	1993	1994	1995	1996	1997
%	+0,5	–2	+1,3	+0,5	+1	+2	+1	+3	+6,2
Year	1998	1999	2000	2001	2002	2003	2004	2005	2006
%	+5	+4	+2	–1,2	–0,5	+3,2	+2,5	+2,5	+2,7
Year	2007	2008	2009	2010	2011	2012	2013	2014	2015
%	–1	–4,7	–5	+3	0	+1	–0,2	+4,5	+2
Year	2016	2017	2018	2019	2020	2021	2022	2023	2024
%	+1,2	+3,3	+2,5	+2	–6 (1st half of the year) +9.5 (2nd half of the year))	+2	0	–	–

Source: Compiled by the Author Based on the Chart of the TAdviser Analytical Center. URL: https://www.tadviser.ru/index.php/%D0%A1%D1%82%D0%B0%D1%82%D1%8C%D1%8F:%D0%97%D0%B0%D1%80%D0%BF%D0%BB%D0%B0%D1%82%D1%8B_%D0%B2_%D0%A1%D0%A8%D0%90 (accessed on 15.10.2023).

becomes flat, then represents a chaotic set of points [5, 8, 10].

The author believes that it is necessary to start the analysis of this dependency (formulated by O. Phillips) from the perspective of real, rather than nominal, analysis. In other words, it is necessary to analyse the relationship between real wages and unemployment, which, under stable prices, acted as the relationship between nominal wages and unemployment.

HYPOTHESIS TESTING

This author's hypothesis needs to be tested on contemporary statistical data [16].

Based on the above, for the analysis, it is necessary to choose an economy that meets the following conditions:

1) the presence of a modern developed market economy with economic cyclicality, in which mid-term Juglar economic cycles are regularly observed;

2) the presence of stable prices in the economy for conducting real analysis. In the absence of this price stability, there is an opportunity to convert the necessary economic indicators from nominal to real indicators;

3) the presence of a long period of time (preferably several decades) during which the country is free from serious military actions, significant social conflicts, and technological disasters.

These conditions correspond to the US economy in the post-war period. The author took data on the dynamics of unemployment and real wages from 1980 to 2022. Data on unemployment in the US economy for the specified period is shown in *Table 1*.

Since the U.S. Department of Labor's data on real wage dynamics is currently unavailable

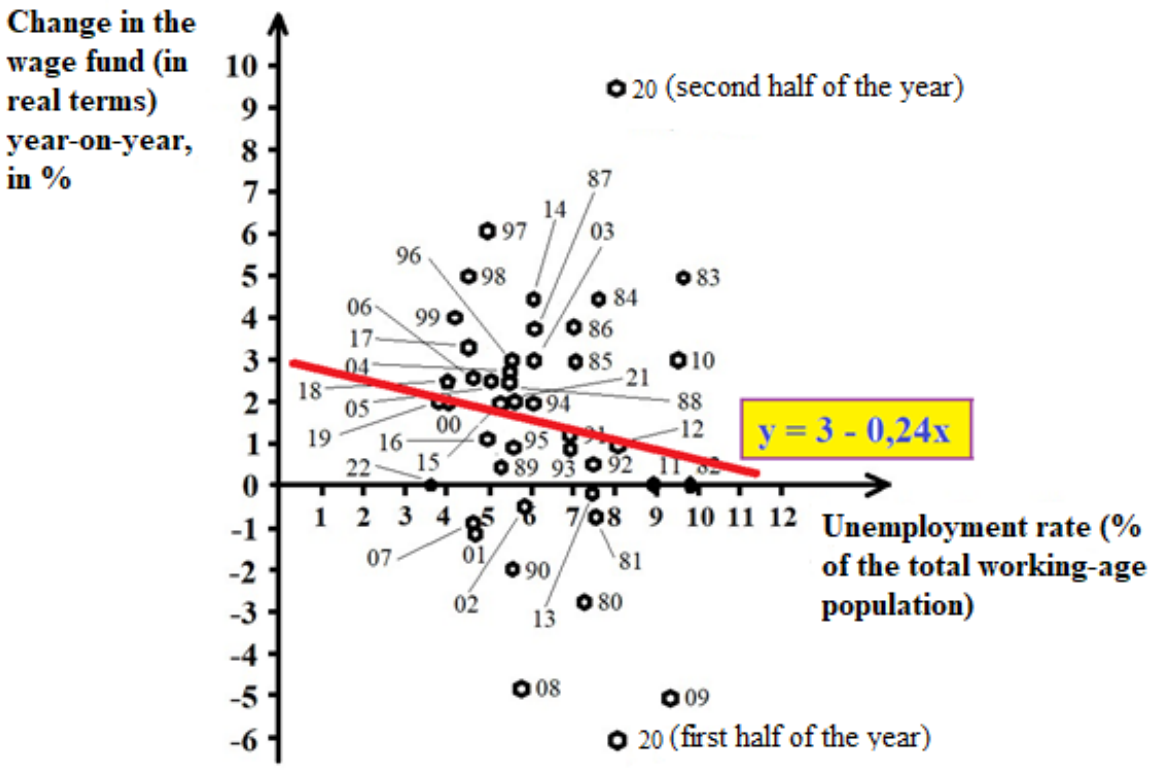

Fig. 2. **The Relationship Between the Dynamics of the Real Wage Fund and Changes in the Unemployment Rate in the United States (1989–2022)**

Source: Compiled by the author based on IMF data and data based on the chart of the TAdviser analytical center (TAdviser) URL: https://svspb.net/danmark/bezrabotica.php?l=ssha; URL: https://www.tadviser.ru/index.php/%D0%A1%D1%82%D0%B0%D1%82%D1%8C%D1%8F:%D0%97%D0%B0%D1%80%D0%BF%D0%BB%D0%B0%D1%82%D1%8B_%D0%B2_%D0%A1%D0%A8%D0%90 (accessed on 15.10.2023).

to the Russian user, the author has compiled the data from *Fig. 1* into *Table 2*.

In *Table 2*, 2020 is examined in more detail (there are indicators for half-year periods), as a result of two quarters of economic decline in 2020, real wages fell, but subsequent anti-COVID compensatory government payments in the same year significantly increased the level of real wages.

Using this statistical data, the author created the following graphical scheme showing the relationship between fluctuations in real wages and unemployment *(Fig. 2)*. To determine the mathematical relationship between these indicators, the least squares method (LSM) was applied. The results of the calculations using this method show that in the U.S. economy (1980–2022), there is an inverse relationship between changes in real wages and unemployment. Mathematically, this relationship when applying LSM can be represented by a line: $y = 3–0.24x$.

POSSIBLE CHANGE IN FINANCIAL FLOWS WITH THE EXISTENCE OF A REVERSE DEPENDENCE BETWEEN REAL WAGES AND UNEMPLOYMENT

If the author's hypothesis is justified, it can be tried out in practice by managing the unemployment rate through changes in real wages. This is an approach that many economists have previously used, believing that there is a connection between inflation and unemployment. For this, it is necessary

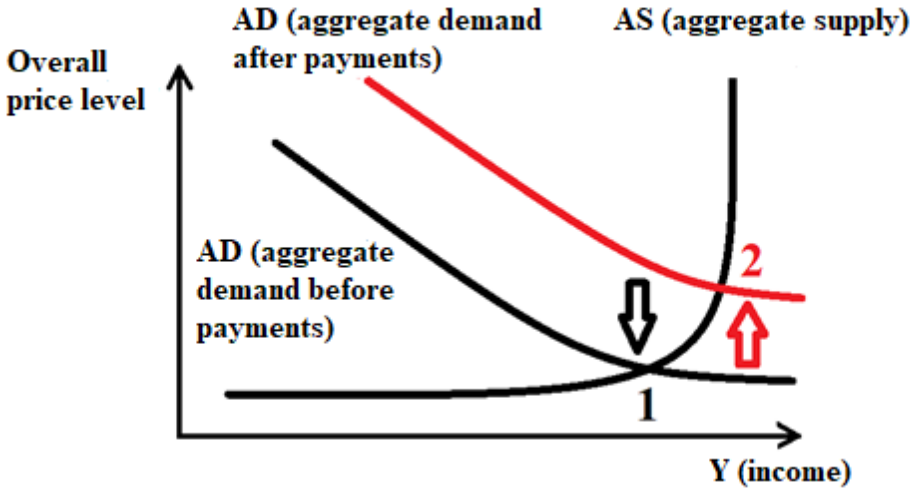

Fig. 3. **Dynamics of the AD Curve with an Increase in Payments to Employees from the Budget**

Source: Compiled by the author.

to determine the conditions under which this attempt will be correct, i. e., the necessary "frameworks" of the analysis. According to the author's hypothesis, the key factor that is not taken into account when analyzing the relationship between real wages and unemployment, but is their main cause and causes fluctuations in these indicators, is economic cyclicality. For understand the dynamics of these economic indicators, it is necessary to take into account the medium-term economic cycles in a market economy.

In turn, the normal progression of the medium-term economic cycle requires certain conditions, namely:

- the presence of a developed market economy;
- respect for private property rights;
- the absence of serious military conflicts, significant social upheavals, and technological disasters.

If these "framework" conditions are met, an analysis based on the author's hypothesis can be conducted. Currently, the author is considering two main options.

1. If an increase in real wages reduces cyclical unemployment, then an increase in government payments will lead to a reduction in this type of unemployment. In this scenario, we will also assume that the increase in various payments is not financed by the issuance of additional money, but by changing the structure of budget expenditures at different levels (federal, regional, municipal), i.e., budget expenditures on other needs will be correspondingly reduced. Therefore, such redistribution will occur with stable prices in the economy.

From the perspective of macroeconomic analysis using the AD-AS model (aggregate demand and aggregate supply model), the situation will also remain unchanged, as the increase in aggregate demand from hired workers will be offset by an equal decrease in aggregate demand from various budgets (*Fig. 3*). The increase in payments will shift the AD curve upward from point 1 to point 2, while the reduction in budget expenditures on other needs will again decrease aggregate demand and return the AD curve to point 1.

Therefore, the aggregate demand curve (AD) in the AD-AS model will remain in place, which, with an unchanged aggregate supply curve (AS), will give the same intersection point of these curves. This point will show that both before and after

the specified government payments, the overall price level in the country's economy will remain the same.

But it is quite likely that entrepreneurs will start reducing salaries (for example, by underreporting bonuses), as employees will receive payments from various budgets. For entrepreneurs, this will mean a reduction in costs, and therefore an increase in profit and profit margins.

This will further encourage them to expand production, which will affect the reduction of unemployment. How long will this process take?

Economic practice shows that as one approaches the peak of an economic upturn, the rate of profit decreases. From the author's perspective, whose dissertation topic was modern economic cyclicality, this inevitably occurs due to the law of diminishing returns, which operates when using previous unchanged technologies.* It is precisely the action of this law, in the presence of unchanged technologies, that determines the emergence of extensive growth approximately from the beginning to the end of the upswing in the medium-term economic cycle [17]. It should be noted that currently, a number of papers by Western scholars are dedicated to the issue of economic cyclicality and its associated various economic indicators [18–21].

From the author's perspective, the aforementioned increase in the rate of profit and the production volume stimulated by it (and thus the reduction in unemployment) will temporarily suspend the law of diminishing returns for entrepreneurs in the short term. In other words, there will be a temporary decrease in unemployment, but the next economic crisis will only be postponed, and this will have to be paid for by reducing budget expenditures in other areas (social security, education, healthcare, defense, etc.).

2. Let's assume that the increase in real wages for employees will occur exclusively through monetary emission, rather than through budget expenditures. This will lead to inflationary processes starting in the economy. Let's also assume, as in the first case, that entrepreneurs will start reducing their employees' salaries, believing that this reduction will be more than compensated by additional payments.

Entrepreneurs will find themselves in a dual situation: on one hand, reducing wage costs will increase their profits, on the other hand, inflation creates an inflation tax that will decrease their profits. Which of these two opposing forces will prevail is impossible to say in general terms; much depends on specific indicators in a particular situation. Accordingly, fluctuations in the rate of profit and the level of unemployment towards an increase or decrease will turn out to be quite different. In other words, an increase in the real wages of employees solely through monetary emission will lead to inflation in the economy, resulting in an inflation tax on the rest of the country's population (including entrepreneurs). The reduction of the unemployment rate in this case is not guaranteed.

Overall conclusion on the two options. Increasing the real wages of employees by the state to reduce the unemployment rate is a highly controversial issue and can have ambiguous effects. The potential decrease in unemployment could very well lead to inflation in the economy and a reduction in the share of expenditures in the budgets of various levels for other needs.

The author consider that a more significant approach in this direction is as follows: since the growth of real wages and the reduction of unemployment are caused by economic growth, it is the stimulation of economic growth that produces the necessary effect, simultaneously improving these two economic

* Petukhov V.A. Features of Economic Cycles in the Context of Global Technological Shifts: PhD Thesis in Economic Sciences: Specialisation 08.00.01. Moscow: RGB; 2013. 192 p.

indicators. Currently, there are a number of proven tools in fiscal and monetary policies that stimulate economic growth. A broader basis for developing methods and approaches for this stimulation is created by various theories of economic growth and economic cyclicality. Thus, contemporary Russian scholars O. Sukharev and E. Voronchikhina in their work investigate the impact of inflation targeting policy in Russia on the rate of economic growth [22].

CONCLUSION

1. The author's hypothesis that the Phillips curve reflects an inverse relationship between fluctuations in unemployment and fluctuations in real wages is well supported by data from the modern U.S. economy over a period of more than 40 years — from 1980 to 2022.

However, for a more serious justification, studies on the economies of other countries are necessary.

2. If the hypothesis is thoroughly confirmed and proves to be true, the use of the Phillips curve to establish the relationship between inflation and unemployment will become a futile endeavour. For several decades now (up to the present time), researchers have noted that the Phillips curve behaves ambiguously and quite strangely. It shows a positive slope, then a negative one, then it becomes flat, then it is a chaotic set of points.

3. The practical application of the inverse relationship between real wages and unemployment is very controversial and ambiguous. It is preferable to focus on stimulating economic growth, which simultaneously increases real wages and reduces unemployment.

REFERENCES

1. Averina D., Gorshkova T., Sinelnikova-Muryleva E. Phillips curve estimation on regional data. *Ekonomicheskii zhurnal Vysshei shkoly ekonomiki = HSE Economic Journal.* 2018;22(4):609–630. (In Russ.). DOI: 10.17323/1813–8691–2018–22–4–609–630
2. Orlov D.A., Postnikov E.A. Phillips curve: Inflation and NAIRU in the Russian regions. *Zhurnal Novoi ekonomicheskoi assotsiatsii = Journal of the New Economic Association*. 2022;(3):61–80. (In Russ.). DOI: 10.31737/2221–2264–2022–55–3–4
3. Gurvich E.T., Vakulenko E.S. Studies of Russian labor market and economic policy. *Zhurnal Novoi ekonomicheskoi assotsiatsii = Journal of the New Economic Association.* 2018;(1):203–212. (In Russ.). DOI: 10.31737/2221–2264–2018–37–1–11
4. Zubarev A.V., Gorodnov A.M. The Phillips curve for an open economy: The evolution of inflation processes in Russia. *Voprosy ekonomiki.* 2023;(12):103–119. (In Russ.). DOI: 10.32609/0042–8736–2023–12–103–119
5. Andrjukhin A.J. Assessment of the relationship between unemployment and inflation in the Russian economy. *Nauchnyi rezul'tat. Ekonomicheskie issledovaniya = Research Result. Economic Research*. 2020;6(4):13–24. (In Russ.). DOI: 10.18413/2409–1634–2020–6–4–0–2
6. Shevchenko I.V., Korobeinikova M.S. The influence of the Phillips curve macroeconomic indicators on economic growth: Regulation, measures, limits, opportunities at the present stage. *Regional'naya ekonomika: teoriya i praktika = Regional Economics: Theory and Practice*. 2017;15(10):1868–1893. (In Russ.). DOI: 10.24891/re.15.10.1868
7. Shestakov D. How to choose between inflation and unemployment. ECONS: Economic Conversations. Jul. 19, 2019. URL: https://econs.online/articles/opinions/kak-pravilno-vybirat-mezhdu-inflyatsiey-i-bezrabot/ (accessed on 20.07.2024). (In Russ.).
8. Beaudry P., Hou C., Portier F. Monetary policy when the Phillips curve is quite flat. *American Economic Journal: Macroeconomics*. 2024;16(1):1–28. DOI: 10.1257/mac.20220088
9. Auclert A., Rigato R., Rognlie M., Straub L. New pricing models, same old Phillips curves? *The Quarterly Journal of Economics*. 2024;139(1):121–186. DOI: 10.1093/qje/qjad041

10. Rubbo E. Networks, Phillips curves, and monetary policy. *Econometrica.* 2023;91(4):1417–1455. DOI: 10.3982/ECTA18654
11. Lucas R.E., Jr. Some international evidence on output-inflation tradeoffs. *The American Economic Review*. 1973;63(3):326–334. URL: https://elearning.unito.it/sme/pluginfile.php/192712/course/section/41483/Lucas_AER 73.pdf (accessed on 22.07.2024).
12. Friedman M. The role of monetary policy. *The American Economic Review*. 1968;58(1):1–17. URL: https://www.aeaweb.org/aer/top20/58.1.1–17.pdf
13. Phillips A.W. The relation between unemployment and the rate of change of money wage rates in the United Kingdom, 1861–1957. *Economica.* 1958;25(100):283–299. DOI: 10.1111/j.1468–0335.1958.tb00003.x
14. Kudlyak M. How cyclical is the user cost of labor? *Journal of Economic Perspectives.* 2024;38(2):159–180. DOI: 10.1257/jep.38.2.159
15. Carrillo-Tudela C., Visschers L. Unemployment and endogenous reallocation over the business cycle. *Econometrica.* 2023;91(3):1119–1153. DOI: 10.3982/ECTA12498
16. Petukhov V.A. Possible explanation for the appearance of the Phillips curve. *Akademicheskaya publitsistika.* 2023;(8–2):46–53. URL: https://aeterna-ufa.ru/sbornik/AP-2023–08–2.pdf (accessed on 19.12.2023). (In Russ.).
17. Petukhov V.A. Model of medium-term economic cycle and its preliminary verification using the index of leading indicators and some other indicators. *Rossiiskoe predprinimatel'stvo = Russian Journal of Entrepreneurship*. 2017;18(13):2021–2034. (In Russ.). DOI: 10.18334/rp.18.13.38070
18. Dew-Becker I., Giglio S. Cross-sectional uncertainty and the business cycle: Evidence from 40 years of options data. *American Economic Journal: Macroeconomics.* 2023;15(2):65–96. DOI: 10.1257/mac.20210136
19. Busch C., Domeij D., Guvenen F., Madera R. Skewed idiosyncratic income risk over the business cycle: Sources and insurance. *American Economic Journal: Macroeconomics.* 2022;14(2):207–242. DOI: 10.1257/mac.20190019
20. Danielsson J., Valenzuela M., Zer I. The impact of risk cycles on business cycles: A historical view. *The Review of Financial Studies*. 2023;36(7): 2922–2961. DOI: 10.1093/rfs/hhac091
21. Gómez-Cram R. Late to recessions: Stocks and the business cycle. *The Journal of Finance.* 2022;77(2):923–966. DOI: 10.1111/jofi.13100
22. Sukharev O.S., Voronchikhina E.N. Inflation targeting: Eliminating economic growth and structural deformation in Russia. *Finance: Theory and Practice.* 2024;28(1):6–19. DOI: 10.26794/2587–5671–2024–28–1–6–19

ABOUT THE AUTHOR

Valery A. Petukhov — Cand. Sci. (Econ.), Senior Lecturer, Department of Economic Theory, Financial University under the Government of the Russian Federation, Moscow, Russian Federation
https://orcid.org/0000-0001-5181-2074
valeripetuhov@mail.ru

Conflicts of Interest Statement: The author has no conflicts of interest to declare.

The article was submitted on 13.08.2024; revised on 15.10.2024 and accepted for publication on 25.10.2024.
The author read and approved the final version of the manuscript.

Translated by V. Timonina