Fact or Fiction – How Much Truth Do We Have in Economics?

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The field of economics has its own fair share of disputes regarding the validity of research-based policy recommendations. Ultimately, however, there is no objectively "correct" answer to the question of which economic responses to unemployment, trade deficits, public debt and other phenomena are the right ones. There are many reasons for this: They range from issues with assessments and unclear causalities to the confounding of factual claims and value judgments. For this reason, it is impossible for economists to deliver statements or recommendations that are objectively and indisputably true and correct.

I How True Are Economic Statements?

Disagreements about the veracity of economic theories have dogged the field of economics since its inception. If you pose one question to two economists, chances are you will get three answers – or maybe more. Even economic theories that are considered established knowledge are often challenged or criticized.

Since the forefather of economics, Adam Smith (1723–1790), published the first standard reference work on economics entitled *An Inquiry into the Nature and Causes of the Wealth of Nations* in 1776, the international division of labor and associated global trade have been viewed as the source of material wealth for the national economies that participate in the economic system. In recent years, this conviction – hardly questioned for more than 200 years – has increasingly come under scrutiny. For example, Donald Trump is of the opinion that many other countries are exploiting the USA by undercutting wages, manipulating the exchange rate and erecting unfair trade barriers. Critics of globalization in industrialized western countries are convinced that economic globalization only benefits company owners, not the working population. Consequently, they are in favor of economically isolating their country, which contradicts the principle of the international division of labor.

There is also disagreement regarding the question of how to reduce unemployment in a given country, for instance. There are demands to reduce wages, on the one hand, and to increase wages, on the other – and the list of these types of contradictory recommendations could continue ad infinitum.

II Why Are There Different Assessments of the Economic Reality?

In my view, there are essentially two reasons for the differences of opinion among economists regarding the assessment of the economic reality and the political responses potentially required: disagreements about the data and about causal economic relationships.

1. Disagreements about the Data

Even when it comes to how to describe the current economic situation, economists don't always agree. This became particularly clear in summer 2018, when the question arose as to whether or not the USA had a current account deficit with Europe. Donald Trump was convinced that his country had a trade deficit with the European Union (EU). He primarily based his assertion on trade in material goods: In 2017, the USA had a deficit of hundreds of billions in bilateral trade with the EU in this area. Trump took this as an opportunity to impose punitive tariffs on products from the EU.

However, if we consider all the economic transactions between the USA and the EU (they are reported in the current account), the figures look very different. The US government agency Bureau of Economic Analysis reported that the USA maintained a current account surplus of approximately $14 billion against the EU in 2017.[1] The EU came up with quite a different calculation, however: The European Statistical Office determined that the EU maintained a current account surplus of approximately $180 billion against the USA in 2017. The discrepancy between the two figures is far from trivial: The difference is equivalent to the economy of Romania. As to the question of which figures are correct, professor of economics Jens Südekum came to a sobering result. The honest answer is: No one knows.[2]

The actual unemployment rate in a given country is also frequently a subject of debate. In Germany, the Bundesagentur für Arbeit (Federal Employment Agency) is the official source for unemployment figures. The definition of an "unemployed" person in a statistical sense is defined by law.[3] The only people statistically categorized as unemployed are those who have registered as unemployed with an official government agency, who are seeking employment of at least 15 hours per week, and who are actually available to the labor market (meaning that they are willing and able to work and have permission to do so). Consequently, many people are left out of the statistics: for example, people who never register with the authorities because they have no claim to unemployment benefits or do not expect the Bundesagentur für Arbeit to help them find a job. People who do not have a job but are currently participating in measures to help them return to the labor market (further education or training, for example) also are not included in the statistics. The same holds true for people who only want to work for less than 15 hours per week or are only capable of working less than 15 hours per week, and for people 58 years of age or older who have been receiving unemployment benefits for 12 months or longer. Finally, people who hamper their own return to the labor market are not included in the statistics, either: people who do not report to the Bundesagentur für Arbeit as requested, people who refuse to participate in recommended training programs, and people who are unwilling to accept a reasonable job when it is offered to them, for example.

These sorts of differences in the definition of macroeconomic indicators and the impact they have on the associated data generally result in disagreements regarding the assessment of the current economic situation and whether policy measures are required as a response to the status quo.

2. Disagreements about Causal Economic Relationships

While such serious discrepancies in the data generally only occur rarely, there are numerous fundamental differences among economists when it comes to the search for causal relationships to explain certain undesirable economic developments. Here are two examples of highly relevant societal phenomena impacted by these differences: trade deficits and unemployment.

A country is said to have a trade deficit when it exports less than it imports. There are a number of different explanations as to why this occurs:

1. As previously mentioned, Donald Trump believes that unfair competitive practices by foreign countries are primarily responsible for the American trade deficit. He is convinced that low wages abroad, exchange rate manipulation and discriminatory tariffs on US

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1 Felbermayr, Gabriel. Beobachtungen zur US-Leistungsbilanz. ifo Schnelldienst Vol. 71, 2018, p. 31–33.

2 Südekum, Jens. Hat Trump falsch gerechnet?" Die Zeit No. 26/2018 from June 21, 2018.

3 Bundesagentur für Arbeit. Glossar der Statistik der Bundesagentur für Arbeit (BA) – February 2019. Nuremberg, p. 6.

products are the main culprits. As a result, the USA can export fewer goods and services to the rest of the world and, consequently, the USA imports more than it exports.

2. The USA's excessive consumption is equally relevant here. The USA consumes more goods and services than it produces. In that sense, American society is living beyond its means and has to import what it needs from the rest of the world – as a result, the country imports more than it exports.

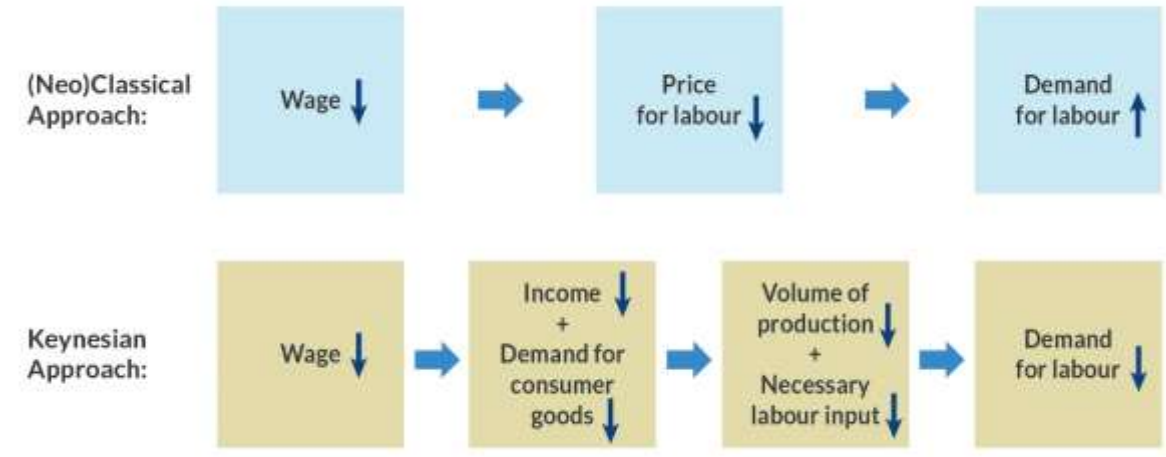
These different explanations for the existence of a trade deficit are decisive in shaping the economic policy responses to the deficit. If we follow Trump's argumentation, punitive tariffs and tariffs preventing the undercutting of wages are an appropriate response to unfair competitive practices by foreign countries. However, if high domestic demand is responsible for the US trade deficit, tariffs will be ineffective. As long as American demand remains $500 billion higher than the total volume of goods and services produced in the USA, the products the country lacks will have to be imported from abroad, leading to an American trade deficit of $500 billion (cf. Petersen 2016).

Likewise, there is no consensus among economists regarding the causes of unemployment.

1. On the one hand, some economists believe that higher wages are a primary cause of unemployment. When companies pay high wages, they have high production costs, which leads to high prices for their products. As a result, the companies become less competitive, and there is less demand for the products they produce. The companies adapt to this lower demand for goods, meaning that they have a lower demand for workers – and the consequence is high unemployment (the so-called classical or neoclassical approach).

1. Economists with close ties to trade unions, on the other hand, believe that lower wages are the cause of high unemployment, not the solution. If workers are paid low wages, they only have minimal purchasing power, which, in turn, suppresses consumer demand. The result is that domestic companies produce less and need fewer workers (the so-called Keyensian approach).

Disagreement on the Impact of Wage Cuts on Employment Levels



Source: Author.

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The consequence of these different explanations is obvious: diametrically opposed approaches to reducing unemployment (see Figure “Disagreement on the Impact of Wage Cuts on Employment Levels”).

III Why Can’t Economists Agree on Causal Economic Relationships?

Experts disagreeing about causality is a phenomenon that is not unique to the field of economics. In most academic and scientific fields, disagreements about causal relationships are generally resolved by developing theoretical models and subsequently subjecting them to empirical testing.

A scientific model is a concept for presenting a simplified version of a segment of reality (for the following statements.[4] The objective of a model is to describe and explain complex phenomena that occur in the real world. The associated causal relationships are then used as the basis for making projections about the future behavior of the modeled object. Examples include models of the solar system for predicting the paths of planets, atomic models in physics, modeling of ecosystems in biology, and business cycle and growth models for predicting future economic development.

All of these models operate based on assumed causal relationships between different variables. These relationships are fleshed out using observed data and mathematical methods. If, for example, a model compares the data on real wage increases in a country (real wages are wages adjusted for inflation) with the amount of labor required by companies over the course of many years, econometric estimates might come to the following conclusion: Between 1995 and 2015, real wages in Germany (measured in euros per hour of work) increased by five percent, which led companies’ demand for workers (volume of work measured in hours of work per year) to decrease by an average of two percent. Assuming that the relationship between wage levels and employment levels calculated in the past will remain valid in the future, the model can predict how companies’ demand for labor will change if wages increase by three percent. This method can also be applied to the labor supply behavior of the working-age population.

If companies’ expected reaction to a wage increase is combined with the predicted behavior of private households, estimates can be made regarding the resulting unemployment rate if certain wage increases are implemented. The quality of the model can be assessed after the fact, based on whether the resulting unemployment rate is as predicted or not. However, it is precisely this type of empirical assessment of models that poses severe problems in economics.

In the natural sciences, it is possible to test the causal relationships posed by various models in the context of laboratory experiments under consistent conditions (known as “ceteris paribus” conditions). However, this approach is impossible to apply to economic phenomena that occur in the context of a constantly changing society. For example, in order to empirically test whether reducing wages would also reduce unemployment in Germany, wages would need to be reduced while ALL other factors remained constant: the size of the working-age population; prices for oil, steel, energy, etc.; the exchange rate of the euro against all other currencies; all other countries’ demand for German products; and so on.

Of course, it is impossible to set up an experiment of this nature. A reduction in wages is always accompanied by a range of other changes in the economic environment. In that sense, a change in the unemployment rate cannot be solely or directly traced back to a reduction in wages. Even if

[4] Hausser, Frank, and Yury Luchko. Mathematische Modellierung mit MATLAB. Heidelberg, 2018, p. 3-10.

an econometric calculation indicates a clearly quantifiable connection, the possibility of a spurious correlation cannot be ruled out – other factors could in fact be responsible for the reduction in unemployment. A statistically significant correlation between wage levels and the unemployment rate does not indicate causality.

The fundamental problem with economic analyses and the policy recommendations based on them is that economics is not an exact science – in the sense that it is impossible to test economic hypotheses in the context of experiments under "ceteris paribus" conditions. These conditions are the heart and soul of laboratory experiments. The consequences of this shortcoming are far-reaching: It is impossible to clearly prove whether a hypothesized causal economic relationship actually exists or not. Consequently, economists work with a range of hypothesis-based theoretical models that come to different conclusions. And again, it is impossible to prove which model is the correct one. By implication, economists cannot agree on the empirical validity of theoretically based causal economic relationships and, accordingly, on how the economy functions. Because of this shortcoming, multiple empirical studies focusing on the same issue may come to entirely different results.

In fact, contradictory research findings are part of the standard practice in economic research (cf. Müller 2019). One subject currently under heated discussion is whether high or rising income inequality is a boon or a hindrance to a country's economic growth. The empirical research on this subject is comprehensive – and contradictory.

1. Especially in the 1950s and 1960s, the prevailing opinion was that rising income inequality would have a range of incentivizing effects, triggering economic growth. Economists like Kristin Forbes looked at 45 countries in the period between 1966 and 1995 and came to the conclusion that there was a positive correlation between the level of income inequality in a country and that country's economic growth.[5]

2. However, as early as the 1990s, there were studies that came to the opposite conclusion. For example, Markus Knell evaluated his own studies and studies conducted by other experts and determined that between 1960 and 1985, rising income inequality reduced the long-term annual economic growth rate in a given country.[6]

3. The OECD and the International Monetary Fund (IMF) published two studies in 2014 that generated a great deal of attention. They found that income inequality had a negative impact on economic growth.[7] These findings triggered a heated debate around the world. In Germany, for example, Marcel Fratzscher, president of the German Institute for Economic Research in Berlin, supported the findings of the OECD and IMF. He also shared in their assessment that, as a result of increased income inequality since the 1990s, German economic performance is six percent lower today than it would be if income inequality had remained stable.[8]

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5 Forbes, Kristin J. A Reassessment of the Relationship Between Inequality and Growth. In: The American Economic Review, Vol. 90, 2000, p. 869–887.

6 Knell, Markus. Income inequality und Wachstum. In: Economics and Society. 1998, No. 24, p. 443–474.

7 Ostry, Jonathan D., Andrew Berg and Charalambos G. Tsangarides. Redistribution, Inequality, and Growth. IMF Staff Discussion Note. Washington, D.C., 2014.

Cingano, Federico .Trends in Income Inequality and Its Impact on Economic Growth. OECD Social, Employment and Migration Working Papers, No. 163, 2014, Paris.

8 Fratzscher, Marcel. Deutschlands hohe Ungleichheit verursacht wirtschaftlichen Schaden. Wirtschaftsdienst, 2016, Vol. 96, Sonderheft, p. 7.

4. Other authors took this study as an opportunity to conduct their own research on this causal relationship. Some of these studies came to conclusions that directly contradicted the OECD and IMF studies. Galina Kolev and Judith Niehues from the German Economic Institute in Cologne found that their research clearly contradicted the conclusion that income inequality in Germany is a negative growth driver.[9] A report from the ifo Institute for Economic Research in Munich also used empirical analysis to demonstrate that there is a positive correlation between inequality and growth in high-income countries.[10]

Given this wide range of extremely different results, it is ultimately impossible to use these economic studies as a reliable basis for making economic policy recommendations. Additionally, rather than providing clarification, these sorts of results only further complicate the public discourse.

IV Value Judgements Exacerbate Economic Discourse

The vehemence with which politicians and the public discuss or argue about economic issues is only exacerbated by the fact that every economic decision automatically produces winners and losers. Here are just two examples of this phenomenon:

1. When the government of a country increases child benefits, it helps families with children. However, financing these benefits either means that some form of tax will need to be raised, or that the government will have to cut expenditures somewhere else.

2. Imposing punitive tariffs on steel imported to the USA helps US steel companies and the people they employ. However, this tariff harms all companies in the USA that use steel in their manufacturing processes. They are paying to protect domestic steel companies by seeing their own production costs increase and, consequently, losing some of their global competitiveness. This also decreases the employment opportunities of the affected employees. Additionally, all American consumers who purchase products that require steel to produce will have to pay higher prices for those products.

Given these conflicts over economic distribution, it is understandable that the potential winners and losers of planned political decisions would look for academic experts whose models support their position. And since neither side can claim to possess the one true and universally accepted economic model, there are no clear winners in the resulting debates between experts. Both sides have evidence-based recommendations to back up their arguments that cannot be disproven by other research.

The situation becomes particularly problematic when empirically proven assertions are intermingled with value-based policy recommendations. By way of an example, we can look at the question of whether a rising inflation rate should be combated or not.[11]

1. The question of whether the inflation rate in a country is increasing can be answered by taking a look at official statistics – as long as there are no doubts about the methodology that the government agencies used to record price development statistics.

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[9] Kolev, Galina, and Judith Niehues. Ist Ungleichheit schlecht für das Wirtschaftswachstum?. In: IW Report No. 14/2016. Cologne, p. 16.

[10] Fuest, Clemens, Florian Neumeier and Daniel Stöhlker. Ungleichheit und Wirtschaftswachstum: Warum OECD und IWF falsch liegen. ifo Schnelldienst, 2018, Vol. 71, Issue 10, p. 22–25.

[11] The following example is taken from Wagner, Gert G.. Effektive Politikberatung. Wirtschaftsdienst, 2011, Vol. 91, p. 150–151.

2. However, whether diagnosed inflation (fact-finding) should be combated or not depends on value judgments and subjective interests. And there can be major differences here: Someone who is saving money in a bank account would prefer a lower inflation rate, because it would secure the purchasing power of his or her savings. A property owner who has taken out a loan to purchase a house, however, would prefer a higher inflation rate. It would increase the value of his or her property and reduce the real value of the borrowing costs (repayment of the principal and interest payments). Each of these economic actors has a different answer to the question of whether measures to reduce inflation are necessary.

V What Should Be Done?

First, despite all the valid criticism of economic analyses, we must note that there are many causal relationships in economics that are not in doubt, or about which there are only very minimal doubts. On the whole, consumers in a country respond to a price hike for a given product with lower demand for that product. People also generally respond to other monetary incentives. If, for example, doing extra work or expanding employment would not pay off because the available income people earned would not increase, people generally will not work harder.

However, there are also the uncertainties and contradictory causal relationships previously mentioned. They complicate the public discourse and political discussions. This makes it easier for economic policy recommendations based on faulty information to still earn majority support, particularly in an age of rising populism.[12] And even given all the uncertainty surrounding the subject, it is generally undeniable that while punitive tariffs can help a protected industry, this assistance comes at the expense of the entire economy. Both theoretical models and historical experience prove this point.[13] And yet, this has not prevented the USA from taking a protectionist approach recently.

So how can economic policy and economics as an academic field respond to the insecurity and disagreement regarding causal economic relationships? There are three approaches that I believe are particularly promising:

1. In terms of disagreements about the data, **international standards providing consistent definitions of central economic parameters** would be a step in the right direction. They would lead to greater agreement regarding the question of how high a given country's trade deficit or unemployment rate actually is.

2. When we talk about **causal economic relationships**, it is important **not to overstate the reliability** of the correlations involved. Any findings or statements that support a possible causal relationship are just one possible explanation, but they are not the one and only true explanation. Economists should also exercise a certain degree of humility regarding the relevance of their own research findings. A **greater variety of methods** would be helpful, as well. If various analyses apply different models and methods and still come to more or less the same conclusion (or the causal relationships discovered seem to generally point in the same direction), it is an indicator that the findings are reliable. Approaches have already existed in this area for some time; it is now important to expand on them. For

[12] Buch, Claudia M. et al. Verstehen – Entwickeln – Testen – Verbessern: Rahmenbedingungen für evidenzbasierte Politik. Wirtschaftsdienst Vol. 99, No. 2, 2019, p. 106.

[13] e.g. Petersen 2016 and the examples listed there.

example, numerical models are now being applied alongside the traditional static models, as are surveys and laboratory and field experiments.[14]

3. The **value judgments** underpinning economic policy recommendations **must be disclosed** when the policy recommendations are drawn up. This means, for example, that economic advisers who generally give the market preference over the state would need to disclose this preference. Naturally, the same also holds true for experts who have ideological reservations about the free market.[15] Acknowledging these ideological stances makes it easier to classify economic policy recommendations, even when they are based on empirical evidence.

These three measures cannot solve the underlying problem that a country's economy does not deterministically follow a path defined by the laws of nature, however. As understandable as the desire for clear, irrefutable economic truths might be, it is a desire that must go unfulfilled. Economists, politicians, and society as a whole will have to learn to live with this uncertainty.

[14] Bachmann, Rudi. Erkennen, was Quatsch ist. brand eins, Vol. 17, No. 11, 2015. 86–89.

Heise, Arne. Pluralismus in den Wirtschaftswissenschaften – Klärung eines umstrittenen Konzepts. IMK Study 47. Düsseldorf, 2018.

[15] Badinger, Harald. Faktenbasierte oder ideologische Wirtschaftspolitik: Welche hat größere Erfolgsaussichten?, 2019. Published on March 19, 2019 in the economics blog of Der Standard.

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