ARGUMENTA
OECONOMICA
CRACOVIENSIA

No 14 • 2016
ISSN 1642-168X
AOC, 2016; 14: 9–28
DOI: 10.15678/AOC.2016.1401

Andrzej Jędruchniewicz

THE METHODOLOGY OF THE AUSTRIAN SCHOOL OF ECONOMICS

Abstract

The aim of this paper is to discuss and evaluate the main problems in the research methodology of the Austrian school of economics. This methodology is considerably different from the mainstream approach. Representatives of the Austrian school claim that research methods cannot be transferred from the natural sciences to the economic sciences. They advocate, therefore, the application of praxeology. Research should be done by means of deductive reasoning, beginning with accepted axioms. The Austrians reject the use of mathematical formalism. Instead, they propose that research should be based on realistic assumptions, verbal logic, and cause-and-effect relationships. Furthermore, they reject precise, quantitative prediction in favour of general, qualitative prediction.

Keywords: Austrian school, methodology, deduction, empirical analysis, prediction.
JEL Classification: B41, B53, C18.

1. Introduction

As a result of the huge amount of empirical research conducted in contemporary economics, methodological questions have retreated into the background of most scholars' interests. They are, however, of key importance in applying the correct methods for discovering universal economic laws and forming a proper theory based on them. The majority of economists now employ a methodology derived from the mainstream schools, which is based on rigid principles that often lack formal precision and are too remote from economic reality. Econometric modelling in the form, for example, of structural models, VAR models, and Bayesian analysis, is the most important method of conducting research and presenting results.

Andrzej Jędruchniewicz, Warsaw University of Life Sciences – SGGW, Department of Economics and Economic Policy, Nowoursynowska 166, 02-787 Warszawa, Poland, e-mail: jedruchniewicz@o2.pl.

The Austrian school, which concentrates on employing deduction to create a logically cohesive theory of human action, offers alternative methods of economic research. The economists of the Austrian school use cause-and--effect relationships and verbal logic to try to discover the laws governing economic processes, which by their nature are complex and changing.

The chief objective of this theoretical contribution is to discuss and evaluate the major assumptions of the research methodology of the Austrian school of economics. Contained within a clear structure that will help to achieve this objective, the paper begins with an examination of the school's research paradigm before turning to the central elements of methodology: the differences between the economic and natural sciences, the role of education and empirical data, and the importance of prediction.

2. The Characteristics of the Austrian School

The Austrian school, which owes its present dynamism to its capacity to offer alternative explanations and solutions for economic problems (see Mises 2007; Rothbard 2007, 2008; Huerta de Soto 2010), does not belong to mainstream economics. It is believed to have been founded by Carl Menger, and to have originated when his *Principles of Economics* was published in 1871. It was this work, along with William Stanley Jevons' *The Theory of Political Economy*, also published in 1871, that marked the beginning of the subjectivist-marginal revolution.

The economists of the Austrian school, who include Menger, Böhm--Bawerk, Wieser, Mises, Hayek, Rothbard, Hazlitt, Machlup, Lachman, Salerno, Kirzner and Huerta de Soto, see the origins of their theory in the works of the fifteenth century and sixteenth century Spanish scholastics at the University of Salamanca, who included Francisco de Vitoria, Domingo de Soto, Juan de Medina and Luis de Molina. Influenced by the thought of St. Thomas Aquinas, they attempted to solve problems related to private property, price, monetary systems, percentages, work and remuneration (Schumpeter 1986; Chafuen 2007). Other works of importance to the Austrian school published before Menger include: *Essay on the Nature of Trade in General* (1755) by Richard Cantillon, *Value and Money* (1769) by Anne Robert Turgot, *A Treatise on Political Economy* (1803) by Jean Baptiste Say and *Economic Harmonies* (1848) by Frédéric Bastiat (Kwaśnicki 2000).

The main issue to consider when describing an economic school of thought is its definition of the subject. In the nineteenth century the definition followed Adam Smith's idea of economics as a science of nature

and a cause of the wealth of nations: "Political economy (…) proposes to enrich both the people and the sovereign" (Smith 2007, p. 7). However a growing understanding of the importance of subjectivist issues meant that this definition came to be regarded as excessively narrow. In the first half of the twentieth century Lionel Robbins, a representative of the Austrian school, offered a new definition of economics as: "(…) the science which studies human behaviour as a relationship between ends and scarce means which have alternative uses" (Robbins 1932, p. 15). Though this definition, is accepted by economists from all schools, they interpret it in very different ways.

Austrian school economists stress that theirs is a science concerned with how people pursue their aims. An idea that Mises, for whom economics is "a science of human action. The basis of every human decision is choice" (Mises 2007, p. 3), applied assiduously. Austrian economists therefore give just as much prominence to the ends and motives of individuals as they do to means. Economics, which itself is part of the more general science of praxeology, studies the relationships between the choices we make in coordinating our goal-directed actions. Mainstream economists have interpreted Robbins' definition of economics as a theory of decision-making focused on the optimal allocations of resources to realise given objectives.

For economists of the Austrian school, economics is a purely positive science that does not seek to judge human actions as good or bad: "It is true that economics is a theoretical science and refrains from evaluating judgments. Its task is not to show people which goals they should pursue. It is a science studying which means should be used to meet certain goals, and not defining the goals to be set" (Mises 2007, p. 8). In sharp contrast to other strands of economic thought, the Austrian school thus refrains from advocating particular goals to be realised by economic policy.

Despite differences of emphasis and narrower and broader interpretations, the main features of the Austrian school are accepted by all of its representatives. It has received perhaps its clearest exposition in the work of Fritz Machlup (2004), who distinguishes six basic and two supplementary aspects:

1) Methodological individualism. In the explanation of economic phenomena we have to return to the action (or inaction) of individuals. Groups or "collectives" cannot act except through the actions of individual members.

2) Methodological subjectivism. In explaining economic phenomena we have to return to the judgments and choices made by individuals based on whatever knowledge they have, or believe to have, and whatever expectations

they entertain regarding external developments and – especially – the consequences of their own intended actions.

3) Tastes and preferences. Subjective valuations of goods and services determine the demand for them. This means that their prices are influenced by actual and potential consumers.

4) Opportunity costs. The costs incurred by economic actors and producers when making one decision means foregoing the benefits of another. If factors of production are employed for one purpose, other uses have to be sacrificed.

5) Marginalism. In all economic designs, the values, costs, revenues and productivity are determined by the significance of the last unit.

6) The time structure of production and consumption. Decisions reflect "time preferences" regarding consumption in the immediate, distant, or indefinite future, and investments are made in view of larger outputs expected to be obtained if more time-consuming production processes are undertaken.

The additional, typically "Misesian" elements include:

7) Consumer sovereignty. Consumers influence the effective demand for goods and services and, through the price signals which result in free competitive markets, the production plans of producers and investors. This is attainable only where governments do not interfere with the markets and place no restrictions on the freedom of sellers and buyers to follow their own judgment.

8) Political individualism. Only when individuals are given full economic freedom will it be possible to secure political and moral freedom. Restrictions on economic freedom sooner or later lead to an extension of the coercive activities of the state, which undermine and eventually destroy the essential individual liberties of capitalist societies.

If we analyse these features we can see that they are no longer only characteristic of the Austrian school (cf. Machaj 2013) and therefore cannot be treated as markers of difference from other schools. Mainstream economists also accept methodological individualism, methodological subjectivism, the influence of utility on demand and prices, marginalism and opportunity costs. Jesus Huerta de Soto (1998, p. 83) states: "Many authors believe that it would not be very difficult to incorporate it [the subjective nature of costs – AJ] into the mainstream neoclassical paradigm. However, the neoclassicals only include the subjective nature of costs rhetorically and, in the final analysis, although they mention the importance of the concept

of cost of opportunity, they always incorporate it into their models in an objectivized form".

Mateusz Machaj (2013) provides a more apt view of how contemporary Austrian school economics differs from the mainstream approach. He lists the six characteristics that in his considered opinion represent the most valuable features of the school: (1) the realistic synthesis of microeconomics and macroeconomics; (2) the theory of money and central banking; (3) the analysis of the socialist economy; (4) the role of economic calculation and the theory of entrepreneurship; (5) the heterogenisation of economic data; (6) the limitations of measurement and prediction in economics.

Though these are no doubt vital elements in any definition of the school, there are two important features that must be emphasised. The first is capital theory (Skousen 2007). For the Austrian school, capital is the market value of capital goods, which they stress are heterogeneous and stand, in the form of intermediate goods, at different degrees of remoteness from the goods that reach consumers. It follows that production also has a time structure that entails stages ordered according to the technological process of the manufacture and sale of the final good. This process uses both the primary production factors of work and land and the capital formed at each stage of production. Its structure, though, is ultimately the result of the decisions people make to consume or to save. The view that the production of consumer goods takes place over time and should always be considered in this context is starkly different from the theory of capital held by mainstream economics, which views it as a homogenous resource barely influenced by time. The second is the assertion that the market and competition involve the discovery and learning of dispersed knowledge. From the very beginning, the Austrian school economists saw the free market, and particularly the price mechanism, as the most effective way of coordinating human actions. Friedrich A. von Hayek (1988), who introduced a new perspective consistent with the individualist approach, claimed that because knowledge in society is dispersed and goals are individual, the market and competition are not the best vehicles for achieving our goals. The Austrian school does not regard knowledge as objective and available to all in equal measure, but as a subjective and practical quantity that we continuously generate and utilise in the course of our activities. Contrary to the ordoliberals, Hayek and his followers therefore believe that social systems should develop spontaneously (Pysz 2008). In this way new ideas and solutions must take account of individual expectations, and development cannot advance without the continuous discovery of the needs of recipients. The Austrian school

therefore rejects the assertion made by mainstream economics that the free market is afflicted by asymmetry of information. For Thomas DiLorenzo (2011, p. 250) "(…) asymmetric information is essentially another way of saying 'the division of labor', the whole basis of trade and exchange and the success of markets". DiLorenzo concludes the abstract of his paper with the contention that asymmetric information is a source of government failure, not market failure.

3. The Economic and Natural Sciences

Are research methods universal or should each area of study develop a unique approach? Karl Popper, who is generally regarded as one of the twentieth century's greatest philosophers of science, drew a distinction between a general and a specific approach. It was Popper's claim that research methods are identical for all disciplines at a general level, where they have four characteristic features: (1) the problem is identified; (2) the problem needs to be solved using some more or less abstract theory; (3) the theory is subjected to critical discussion in scientific circles; (4) critical discussion refines a theory and stimulates new developments. This is a methodology that permits us to identify new problems and new solutions (Popper 1997). The specific approach, meanwhile, introduces a distinction between the social sciences, including economics, and the natural sciences: "(…) the Newtonian method of explaining and predicting singular events by universal laws and initial conditions is hardly ever applicable in the theoretical social sciences. They operate by the method of constructing typical situations or conditions (…) the idea of a social situation is the fundamental category of the methodology of social sciences" (Popper 1997, p. 187).

Austrian school economists would fully endorse this view as, in general terms, would other schools of economic thought. The former, though, would differ where the specific point of view is concerned and argue that, because of its particularities and different subject matter, economics should not make direct use of the methods applied in the natural sciences – and especially not of those applied in physics (Hayek 1952; Nozick 1977). We are dealing here with methodological dualism, an approach that highlights the particular traits of economics as a social science rather than as a natural science.

That it is the science of human actions, of the choice of the means to realise certain ends, is the major difference between economics and the natural sciences, or even more broadly, between economics and the

mathematical and natural sciences. Economics studies the choices made by human beings with free will who, in pursuit of maximum utility, set themselves goals and seek the proper means by which they can be achieved (Eabrasu 2011). Men and women are thinking creatures in possession of subjective knowledge who, according to Mises and his followers, always act rationally. Though we may be creative actors in the world that surrounds us, we are not entirely free to act because of the physical, institutional or social forces that restrain and constrict us. However real they may be, though, these social forces are insufficient to nullify the purposeful action of people, which is the essence of economic research. How different this is from the natural sciences, in which the behaviour of the subject of study is very nearly always determined by external factors. Man does not have free will and is not oriented towards purposeful and creative activity (Blaug 1995). His position and behaviour can be described by means of functional and stochastic (probabilistic) dependency.

The subjects studied by economics and the natural sciences behave in different ways, which is what gives rise to the fundamental difference between them. This leads us to the problem of category measurement, on which the Austrian school laid a great deal of stress. While in the natural sciences data is precisely defined and can thus be measured objectively and completely, economics is confronted by the serious problems of the incompleteness of data and the subjectivity of human behaviour (White 1984; Kirzner 1992). These are important arguments in the assessment of research methods. We would be wise to take full notice of them and adopt a cautious stance to the uncritical transfer of economic methods to other sciences.

Austrian school economists have not been the only ones to point out the differences between economics and the natural sciences. Economics possesses the following characteristic features: (1) the phenomena studied are complex; (2) the sciences are not extensively applied; (3) the use of a common language; (4) incomplete objectivity (Stachak 1997). The last characteristic, which is particularly interesting, refers to the problem of the researcher's attitude: "In formulating certain claims he might follow an ideology, class solidarity, peer solidarity or his own interests. But with sufficient intellectual experience (criticism) and ethical research values there should be no errors in terms of lack of objectivity" (Stachak 1997, p. 40).

Jesus Huerta de Soto (2009) tackled the differences between economics and the natural sciences using the example of fractional-reserve banking, whereby banks cannot loan all of the money they have on deposit. Instead they hold reserves to protect them against the risk of all depositors

withdrawing their money at the same time. Banks assume that this risk can be quantified and employ the rule of large numbers to estimate the level of reserves they need to hold to protect themselves against it. According to De Soto, however, the risk cannot be reliably estimated because – unlike in the natural world – economic phenomena depend on human actions. The outcomes cannot be estimated with a specific probability because they are connected not with risk but with uncertainty. Table 1 sets out the idea of risk, which this approach applies to the natural sciences, and the idea of uncertainty which, as it is connected with the creative action of people, can be applied in economics.

Table 1. Risk (Natural Sciences) and Uncertainty (Economic Sciences)

Natural Sciences	Economic Sciences
1. Class probability: the behaviour of classes is known or can be known as opposed to the behaviour of individuals.	1. "Probability" of a unique case or event: there is no class, and even if some factors influencing unique events are known, others are not. An action itself may trigger or cause a certain event.
2. It is placed in the situation of risk insurance.	2. The creative nature of human activity results in uncertainty having a permanent character. Uncertainty cannot be insured.
3. Probability can be expressed in mathematical categories.	3. Probability cannot be expressed in mathematical categories.
4. Probability can be assessed by means of logic and empirical studies. Bayes' theorem allows class probability to be estimated as new information appears.	4. Probability can be discovered through intuition, understanding, and the estimates of entrepreneurs. Each new piece of information modifies anew the map of convictions and beliefs (the concept of surprise).
5. The concept of probability is the object of study of natural scientists.	5. Probability concepts are usually used by enterprises or historians.

Source: Huerta de Soto (2009, p. 293).

Frank H. Knight (1933), who drew a clear distinction between uncertainty and risk, is the reference point for mainstream economists in their analyses of these two factors. In Knight's view, the crucial point is whether or not it is possible to calculate the probability that an event will occur. Risk arises where events or the outcomes of behaviour are governed by a probability distribution and can be quantified, whereas uncertainty is present when we are faced with changes whose probability cannot be estimated.

Though economists of the Austrian school focus on the notion of uncertainty in management, they do not dismiss the problem of risk. Their approach is therefore nowhere near as radical as that of Huerta de Soto. The Austrian school understands risk in terms of the insurance a given entity arranges in case of an unfavourable event. This does not need to be accurately estimated; it is sufficient to allow for the possibility of the event occurring. The quantitative estimation of the probability of an event occurring is performed by insurance companies, who thereby increase the certainty of human actions and protect people against unforeseen and costly events. Risk, which occurs in the process of management but in essence is a characteristic of the sciences, therefore refers to random events whose probability is known in advance.

"The technical-economic reason it is impossible to insure uncertainty stems basically from the fact that human action itself brings about or creates the events which an attempt is made to insure" (Huerta de Soto 2009, pp. 293–94). Human actions do not take place in stable, solely external conditions. All individuals determine their goals subjectively and choose the appropriate means to secure them. The environment and the human factor mean that the uncertain nature of the future can never be completely eliminated. Building the future means creating a subjectively--determined reality by cooperating with other people, which requires us to apply information that is dispersed, individually interpreted and continually being created. Given the speed at which new information appears, then, people are highly likely to change their views and in some cases to change their views radically. They are thus forced to confront a series of unforeseen circumstances in rapid succession. It is for this reason that uncertainty cannot be expressed as a calculated and objective probability. Probability is calculated by firms: "(…) The conclusion to be drawn is that of the impossibility of talking about subjective probabilities that tend to objective probabilities. The dimensions are not on the same footing but cover different levels of knowledge" (Wubben 1995, p. 116). It is for these reasons that economic thought concerning human action refers to uncertainty, that is, to changes whose probability is unknown.

4. Deduction and Empiricism in Economics

The selection and assessment of the research methods applied in economics is a factor that distinguishes the Austrian school from mainstream schools that follow the traditional, neoclassical approach:

"The neoclassical paradigm is based on modelling, refers to positivism and empiricism and makes extensive use of mathematics, while the Austrian school applies a cause-and-effect approach, *a priori* deduction (clearly determining the correct, non-theoretical role of empirical data) and verbal logic" (Wiśniewski 2012, p. 1). Let us restate our question: should the discipline use only deduction to discover economic laws or should it use both induction and the statistical analysis of empirical data for this purpose?

The Austrian school is decidedly and unanimously in favour of deduction as the method for discovering the truth in economics. In this respect it has maintained the methodological tradition of Jean-Baptiste Say and William Nassau Senior (Rothbard 1995; Landreth & Colander 2012), who are both associated with the neoclassical school. In their view, the primary focus should be on developing the terminology and enhancing the logical contents of economic theories. Nassau, in particular, while giving less weight to empirical data, has stressed the importance of *a priori* theory-formation based on real theorems whose negation would lead to logical contradictions.

In 1883 Carl Menger entered into a famous dispute over methodology with Gustav von Schmoller, who was a representative of the Younger German Historical School. The points at issue were the nature of the discipline and the research methods to be used in it. Schmoller, who considered economics to be an idiographic discipline which should apply the method of induction, claimed that Menger was attempting to detach German economics from its English and French counterparts (Landreth & Colander 2012). If there were no objective economic laws, which was Schmoller's view, what possible purpose could be served by attempting to discover them? Economics was instead to focus on microscopic analysis of historical factors and on the empirical presentation of the state's contemporary economic achievements. Menger, for whom economics was a nomothetic science that should rest on deduction, rejected this approach utterly: the task of economists is to form logically coherent structures of thinking based *a priori* on simple and true formulations that best explain real processes. Such an approach fulfils the aim of the discipline, which is to understand the world as it is.

Rather than accept an approach involving either the detection of errors in economic research using experimental methods, where observation in isolation is possible, or their detection by historical methods, where any interpretation is possible, Mises elaborated a science of human action: "Praxeology – and consequently economics too – is a deductive system. It draws its strength from the starting point of its deductions, from the category of action" (Mises 2007, p. 58). In this way the formulation of economic

theory is based not on human experience, but on understanding the essence of human action and how to analyse it logically (Rothbard 2005). This basic knowledge is something all are born with and possess: "The fact that man does not have the creative power to imagine categories at variance with the fundamental logical relations and principles of causality and teleology enjoins upon us what may be called methodological apriorism" (Mises 2007, p. 30). The method proposed by Mises was accepted by the Austrian school and is still being used effectively. Though it requires substantial intellectual commitment to apply it deeply, the effort is rewarded by the positive effects it brings about. Reasoning in the categories of human action brings economic theory closer to reality (Eabrasu 2011) and renders it internally coherent and understandable as a consequence.

The debate between the Austrian and historical schools was in fact a rather brief affair. Though it was exacting for both sides, it was the former school that expended the greatest amount of time and energy opposing the mainstream view that economic laws are universal and objective. The role of empirical research in discovering laws and constructing economic theories is still being discussed today.

In the second half of the 20th century the debate within economics became dominated by advocates of the prime role played by empirical data (Caldwell 1994; Blaug 1995; Mayer 1996). More recently, though, two parallel approaches have come to prevail. In the first, economists refer to accepted axioms and employ deduction to formulate hypotheses which they then attempt to verify (less frequently falsify) with figures, while in the second they begin by analysing empirical data and proceed to establish relationships between economic categories (cf. Kuhn 1968; Lakatos 1970). Both methodological approaches have attracted the critical attention of the Austrian school.

The similarities between the Austrian approach and that of the mainstream schools go no further than the latter's acceptance of deducing hypotheses *a priori*. The Austrian school raises several objections to the foundations of the proposed hypotheses as well as to their empirical verification. The first involves the condition of the economy. In the mainstream schools (neoclassical economics; real business-cycle theory) economic processes are analysed as if they were in a state of general equilibrium. In this way all markets establish a price at which they clear and all entities have accomplished their aims. For the Austrians, who claim that the economy can never be in equilibrium because its natural state is dynamic rather than static, this Walrasian perspective detaches economic processes

from reality and evades the question of entrepreneurship. Entrepreneurship is the force coordinating human action and is the way in which a market economy strives for equilibrium (Kirzner 1992; Rothbard 1992). What is more, entrepreneurship uses and continuously creates information, which is thus never known or available at the beginning of the process. The Austrian approach is more convincing than the mainstream approach because it confronts this state of flux and seeks to comprehend it more deeply. To accept the equilibrium argument would mean focusing on the formal and mathematical analysis of what is in fact an economic fiction.

The second complaint concerns the methods used to analyse economic processes. The majority of the models the mainstream schools now use are based on mathematical formalism (cf. Hoover 2001; Jurek 2013; Czerwiński 2002), according to which models are rigid, strict and act as a "mechanical imitation of the economy" (Lucas 1980, p. 697). The mainstream schools are thus content to adopt the methods used in the natural sciences. The Austrian school, though, along with many others, rejects the application of mathematical models and methods in economics (Huerta de Soto 1998; Rothbard 1992) and raises the following objections: (1) individual utility, which is the basic category of human action, cannot be measured objectively; (2) a world peopled by creative and free people is by nature complex and changing, which means that there are no stable quantitative relations between categories in an economy; (3) models often ignore the problem of sequential processes in time: "In essence, there is an immanent and more or less disguised fiction at the heart of mathematical equilibrium theories. That is, they bind together non-simultaneous magnitudes operative in genetic-causal sequence in simultaneous equations as if these existed together at the same time. A state of affairs is synchronised in the 'static' approach, whereas in reality we are dealing with a process" (Mayer 1994, p. 20); (4) hypotheses that are either obvious or devoid of economic sense are often modelled, which suggests a lack of reflection on the part of mainstream economists; (5) the models cannot include all of the variables important to analysing a given economic problem; 6) there are no objective functions of a continuous nature in economics (Wiśniewski 2012; White 1984; Mayer 1996; Leszek 2013). The Austrian school advocates the use of verbal logic and cause-and-effect relationships in economic analyses rather than mathematical and functional methods. If adopted, they permit a more cautious and deeper investigation of the general laws governing complex economic processes.

The third objection concerns the realism of the assumptions made when studying economic reality (see Long 2006; Hardt 2012). The mainstream

schools, and the non-Keynesian ones in particular, construct models relying on the "as if" idea set out by Milton Friedman in *The Methodology of Positive Economics* (1953) which, in Hayek's view, is in many respects just as dangerous as Keynes' *The General Theory of Employment, Interest and Money* (1936). The "as if" idea allows mainstream economists to disregard unrealistic and illogical assumptions in their models and instead to focus on securing high predictive power, which might in any case simply be a matter of luck (Long 2006). This approach is unacceptable to the economists of the Austrian school, for whom the discipline's most important feature is to provide the world with: "(…) knowledge of the indirect, hidden consequences of the different forms of human action" (Rothbard 2008, p. 438). It is impossible to give an accurate account of reality based on unrealistic assumptions. While it is acceptable to simplify the world around us for the sake of model building, it is unacceptable to include in them elements that have little in common with reality and treat that as a platform for formal mathematical research (cf. McCloskey 1991).

The fourth objection concerns the empirical verification of hypotheses: "The fact that the 'observing' scientist cannot obtain the practical information which is being constantly created and discovered in a decentralized way by the 'observed' actors-entrepreneurs explains the theoretical impossibility of any time of empirical verification in economics" (Huerta de Soto 1998, p. 9). The complete rejection by some Austrians of the need for verification of their theorems would appear to be the most unconvincing of all the methodological postures adopted by this school. Austrian school economists believe that the use of data to test logically--deduced regularities is unnecessary and advance the following objections to deduction: (1) it is impossible to measure several categories; (2) measurement errors: "Rubbish in – rubbish out" (*Wywiad*… 2012); (3) aggregating data; (4) incorrect testing: "(…) this is explained by the fact that without such faulty procedures it would be much more difficult to prove hypotheses and thus lay claim to the role of explorers" (Mayer 1996, p. 187). While it is surely true that all researchers using data must bear these criticisms in mind, there is a significant advantage in testing hypotheses. Negative verification forces us to seek errors in deductive reasoning and to specify the reasons why the relationships under investigation have been disrupted. Positive verification, meanwhile, though not conclusive, offers further confirmation that our reasoning is correct. It is for this reason that some economists of the Austrian school have used empirical hypothesis testing in their work (Wainhouse 1982; Hughes 1997; Mulligan 2006; Fisher 2013). It is necessary

when testing hypotheses – which do not have to be in econometric form – to remain alert to the hazard of drawing simple conclusions and making unambiguous interpretations. Precise, statistically proven statements can be especially misleading to those without expert economic knowledge. The subject of our studies should always be referred to the logic of human action and viewed from the perspective of the economic system as a whole.

The second approach to the discovery of economic laws, which is to begin by analysing empirical data, is methodologically incorrect according to the Austrian school: "(…) Since any given set of data is highly likely to be compatible with many mutually exclusive hypotheses, we need a cohesive theory in order to separate the wheat from the chaff and choose the version that is most reasonable. Without such a theory the scientist will face interpretation error unable to answer the question of, for example, whether the USA emerged from the Great Depression thanks to the New Deal or in spite of it, or whether the operation of central banking mitigated, intensified (or even caused) the business cycles that took place in the 20th century" (Wiśniewski 2012, pp. 5–6). In the absence of any solid theory, the analysis and interpretation of data is tantamount to making random and accidental statements. Much as in the maxim "If you torture the data long enough, it will confess" (Coase 1982, p. 27), we are then free to use numbers to attempt to prove any relationship or make any evaluation.

5. The Role of Predictions

As economics is expected to offer precise forecasts of changes in time and quantity to its professional protagonists, prediction has a primary role in the discipline. Indeed, predicting changes is the main, if not the only, purpose of economics for many mainstream economists, public institutions, commercial banks and other enterprises.

Though Austrian school economists assert that it is impossible to make precise quantitative predictions about the economy, mainstream economists have not been prevented from using econometric models to do just that. For the Austrians, though, quantitative models are contrary to the logic of human action and hence inconsistent with the real course taken by economic processes (White 1984; Hoppe 1995). Models ignore the lack of stable quantitative tendencies in the economy and omit numerous important variables. What is more, they disregard the temporal structure of many processes and are based on data that may not be fully reliable. If its models are prone to such fundamental errors, how can economics be expected to

yield precise predictions for specific categories and entire processes? We should be persuaded by these arguments and agree with the Austrian school that it is impossible to make detailed predictions about economic matters, which are the result of people's creativity, subjectivity and ever-changing decisions. For quantitative prediction to make sense, people would have to be robots working under stable conditions. The insistence of mainstream economists that the discipline can yield precise predictions is an attempt to prove that economics has a capacity that, by definition, it does not in fact possess (see Phillips 2007).

Where prediction is concerned the Austrians also draw attention to the problem of information: "The events of tomorrow cannot be scientifically known today, since they depend mainly on knowledge and information which have not yet been entrepreneurially generated and cannot yet be known" (Huerta de Soto 1998, p. 9). Predicting the value to be achieved by a certain category always concerns a definition of time: in three months, in a year or in five years. This means that predictions made at a given time must omit all information and changes that will have taken place between the moment of prediction and the moment it relates to. For example, precise and quantitative predictions as to what will happen in an economy one year from now omit the influence of the information created during the year in which the prediction is made. It is therefore no surprise if the quality of the prediction suffers. Events may occur in the course of a year that will radically change our evaluations. It is therefore ineffective to improve models or to build new, more mathematically advanced ones. The problem lies not in the calculation technique, but in faulty methodology that ignores the changing nature of social and economic processes and phenomena: "(…) This failure of economists to guide policy more successfully is closely connected with their propensity to imitate as closely as possible the procedures of the brilliantly successful physical sciences" (Hayek 1978, p. 23). If they wish to approach their profession seriously, economists predicting the economic future should remember the case of Irving Fisher who, several days prior to the stock market crash of 1929, ventured the following prognosis in the New York Times: "Stock prices have reached what looks like a permanently high plateau (…) I expect to see the stock market a good deal higher than it is today within a few months".

Austrian school economists do not claim that economics is incapable of making predictions. They do think, however, that predicting the future of economic and social issues is exclusively a qualitative issue. Relying on deduction, axioms and realistic assumptions, they thus create logically

coherent theories that serve to interpret reality. So it is that instead of making perfectly precise predictions, the Austrian school takes account of the changing and complex world to produce fairly general forecasts that highlight certain tendencies. As Machaj wryly observed: "The predictions of any economist can be summed up with the words: 'Tomorrow it will rain, unless it doesn't', or 'the value of these assets will fall, unless they rise'. In fact, economics is in some respects a set of tautological theses concerning the operation of economic reality. Applying them to precise prediction leads to uncertainty" (Machaj 2008). Their adoption of realistic assumptions means that the Austrian school is able to make predictions that – imprecise as they are – describe the future more appropriately than those of the mainstream schools whose predictions are based on formalism and mechanical economics.

Why did precise predictions become so popular? There are two major reasons. The first was the desire of companies to predict the future more accurately so that they could increase the efficiency and profitability of their businesses. The second was the impetus to increased interventionism provided by the theories of Keynes. If governments wish to have an accurate idea of the results of their policies, they need to predict how business cycles change. However, since it is impossible to obtain specific predictions, new problems tend to arise. Under these sorts of conditions economists become social engineers whose task is to put state economic policy into effect. This issue has been aptly summarised by the Nobel laureate: "The curious task of economics is to demonstrate to men how little they really know about what they imagine they can design." (Hayek 1988, p. 76).

6. Conclusion

The methodology applied by the Austrian school in its economic research methods is markedly different from that of the mainstream schools. The Austrians state unanimously that, since their subjects of study are so different, it is impossible for economics to adopt the research methods of the natural sciences. Economics is concerned with human action, that is, the choice of means to meet subjective ends. It is for this reason that praxeology offers the best foundation for our studies. According to the Austrian school, any attempts at discovering universal laws should be made by deductive reasoning and derive from accepted axioms. Emphasising the creativity of human action and the complexity and changing nature of the economic world, the Austrian school rejects the application of mathematical formalism.

Instead it advocates for research based on realistic assumptions, verbal logic, and cause-and-effect relationships, while renouncing quantitative and precise predictions in favour of general and qualitative ones.

The challenges Austrian school economists face today include nihilism and methodological pluralism. Prompted by their failure to explain and predict economic changes, mainstream economists have responded to continued criticism from the Austrian school by attempting to incorporate all methodological approaches into their armoury and acknowledge all as correct. All that is required is simply to select the best method to analyse a given economic problem. Such an approach is an anathema to the Austrian school, whose methodology stresses the primacy of economic theory over empirical analysis and enables human action to be studied under real conditions. This is the key to its greater richness and superior productivity. Attempts to combine the two research approaches are viewed by the Austrian school as the mainstream's way of defending its own paradigm.

Bibliography

Blaug, M. (1995) *Metodologia ekonomii* [The methodology of economics]. Warsaw: PWN.

Caldwell, B. (1994) *Beyond Positivism: Economic Methodology in the Twentieth Century*. London: Routledge, http://dx.doi.org/10.4324/9780203565520.

Chafuen, A. A. (2007) *Wiara i wolność. Myśl ekonomiczna późnych scholastyków* [Faith and freedom. The economic thought of the late scholastics]. Warsaw: Arwil.

Coase, R. H. (1982) *How Should Economists Choose?* Washington: The American Enterprise Institute for Public Policy Research.

Czerwiński, Z. (2002) *Moje zmagania z ekonomią* [My struggles with economics]. Poznań: Wydawnictwo Uniwersytetu Ekonomicznego w Poznaniu.

DiLorenzo, T. (2011) "A Note on the Canard of 'Asymmetric Information' as Source of Market Failure". *Quarterly Journal of Austrian Economics* 14 (2): 249–55.

Eabrasu, M. (2011) "A Praxeological Assessment of Subjective Value". *Quarterly Journal of Austrian Economics* 14 (2): 216–41.

Fisher, E. A. (2013) "Monetary Policy and Capital-Based Macroeconomics: An Empirical Examination for the United States (1963–2012)". *Quarterly Journal of Austrian Economics* 16 (1): 45–74.

Friedman, M. (1953) "The Methodology of Positive Economics" in *Essays in Positive Economics*. Chicago: University of Chicago Press, http://dx.doi.org/10.1017/CBO9780511819025.010.

Hardt, L. (2012) "Problem realistyczności założeń w teorii ekonomii" [The problem of realistic assumptions in economic theory]. *Ekonomista* 1: 21–40.

Hayek, F. A. (1952) *The Counter-Revolution of Science: Studies in the Abuse of Reason*. Illinois: Free Press of Glencoe.

Hayek, F. A. (1978) "The Pretence of Knowledge. Nobel Memorial Lecture" in *New Studies in Philosophy, Politics, Economics and History*. Chicago: University of Chicago Press.
Hayek, F. von (1988) *Fatal Conceit. The Errors of Socialism*. Chicago: University of Chicago Press.
Hoover, K. D. (2001) *The Methodology of Empirical Macroeconomics*. Cambridge: Cambridge University Press, http://dx.doi.org/10.1017/CBO9780511613050.
Hoppe, H. H. (1995) *Economic Science and the Austrian Method*. Auburn: The Ludwig von Mises Institute.
Huerta de Soto, J. (1998) "The Ongoing Ethodenstreit of the Austrian School". Journal des Economistes et des Etudes Humaines 8 (1): 75–113.
Huerta de Soto, J. (2009) *Pieniądz, kredyt bankowy i cykle koniunkturalne* [Money, bank credit, and economic cycles]. Warsaw: Instytut Ludwika von Misesa.
Huerta de Soto, J. (2010) *Szkoła austriacka. Ład rynkowy, wolna wymiana i przedsiębiorczość* [The Austrian School. Market order, free trade, and entrepreneurship]. Warsaw: Fijorr Publishing.
Hughes, A. M. (1997) "The Recession of 1990: An Austrian Explanation". *Review of Austrian Economics* 10 (1): 107–23, http://dx.doi.org/10.1007/BF02538145.
Jurek, W. (2013) "O matematycznym podejściu do problemów ekonomicznych" [On a mathematical approach to economic problems]. *Studia Oeconomica Posnaniensia* 1 (1)(250): 28–39.
Kirzner, I. M. (1992) *The Meaning of the Market Process: Essays in the Development of Modern Austrian Economics*. London: Routledge, http://dx.doi.org/10.4324/9780203004456.
Knight, F. H. (1933) *Risk, Uncertainty and Profit*. London: London School of Economics.
Kuhn, T. S. (1968) *Struktura rewolucji naukowych* [The structure of scientific revolutions]. Warsaw: Polska Akademia Nauk.
Kwaśnicki, W. (2000) *Historia myśli liberalnej* [The history of liberal thought]. Warsaw: PWE.
Lakatos, I. (1970) "Falsification and the Methodology of Scientific Research Programmes" in I. Lakatos and A. Musgrave (eds) *Criticism and the Growth of Knowledge*. Cambridge: Cambridge University Press, http://dx.doi.org/10.1017/CBO9781139171434.009.
Landreth, H. and Colander, D. C. (2012) *Historia myśli ekonomicznej* [The history of economic thought]. Warsaw: PWN.
Leszek, P. (2013) "Matematyka: język fizyki w dobrej służbie ekonomii?" [Does the language of physics serve the economy well?]. *Studia Ekonomiczne* 1 (LXXVI): 133–46.
Long, R. T. (2006) "Realism and Abstraction in Economics: Aristotle and Mises versus Friedman". *Quarterly Journal of Austrian Economics* 9 (3): 3–23.
Lucas, R. E. (1980) "Methods and Problems in Business Cycle Theory". *Journal of Money, Credit and Banking* 12 (4): 696–71, http://dx.doi.org/10.2307/1992030.
Machaj, M. (2008) "Gram w zielone" [I play green], http://mises.pl. Accessed: 3 December 2014.
Machaj, M. (2013) "Szkoła austriacka w poszukiwaniu tożsamości" [The Austrian School in the search for identity] in R. Ciborowski, R. Kargol-Wasiluk and M. Zalesko (eds) *Idee liberalne w ekonomii. 20 lat po śmierci Friedricha Augusta von Hayeka* [Liberal

ideas in economics. Twenty years after the death of Friedrich August von Hayek]. Białystok: Wydawnictwo Uniwersytetu w Białymstoku.
Machlup, F. (2004) "Ludwig von Mises: The Academic Scholar Who Would Not Compromise", http://mises.org/daily/. Accessed: 8 November 2014.
Mayer, H. (1994) "The Cognitive Value of Functional Theories of Price: Critical and Positive Investigations Concerning the Price Problem" in I. M. Kirzner (ed.) *Classics in Austrian Economics: A Sampling in the History of a Tradition*. London: William Pickering.
Mayer, T. (1996) *Prawda kontra precyzja w ekonomii* [Truth versus precision in economics]. Warsaw: PWN.
McCloskey, D. N. (1991) "Economic Science: A Search Through the Hyperspace of Assumptions?", *Methodus* 3: 6–16.
Mises, L. von (2007) *Ludzkie działanie. Traktat o ekonomii* [Human action. A treatise on economics]. Warsaw: Instytut Ludwika von Misesa.
Mulligan, R. F. (2006) "An Empirical Examination of Austrian Business Cycle Theory". *Quarterly Journal of Austrian Economics* 9 (2): 69–93.
Nozick, R. (1977) "On Austrian Methodology". *Synthese* 36 (3): 353–92.
Phillips, P. J. (2007) "Mathematics, Metaphors and Economic Visualisability". *Quarterly Journal of Austrian Economics* 10 (4): 281–99.
Popper, K. R. (1997) *Mit schematu pojęciowego. W obronie nauki i racjonalności* [The myth of the framework. In defence of science and rationality]. Warsaw: Książka i Wiedza.
Pysz, P. (2008) *Społeczna gospodarka rynkowa. Ordoliberalna koncepcja polityki gospodarczej* [The social market economy. An ordoliberal understanding of economic policy]. Warsaw: PWN.
Robbins, L. (1932) *An Essay on the Nature and Significance of Economic Science*. London: Macmillan.
Rothbard, M. N. (1992) *The Present State of Austrian Economics*, http://mises.org. Accessed: 12 November 2014.
Rothbard, M. N. (1995) *Classical Economics. An Austrian Perspective on the History of Economic Thought*. Volume II. Auburn: Ludwig von Mises Institute.
Rothbard, M. N. (2005) *Prakseologia: metodologia Szkoły Austriackiej* [Praxeology: the methodology of the Austrian School], http://mises.pl. Accessed: 12 November 2014.
Rothbard, M. N. (2007) *Ekonomia wolnego rynku* [The economics of the free market]. Volumes 1 and 2. Warsaw: Fijorr Publishing.
Rothbard, M. N. (2008) *Ekonomia wolnego rynku* [The economics of the free market]. Volume 3. Warsaw: Fijorr Publishing.
Schumpeter, J. (1986) *History of Economic Analysis*. Oxford: Oxford University Press.
Skousen, M. (2007) *The Structure of Production*. New York: New York University Press.
Smith, A. (2007) *Badania nad naturą i przyczynami bogactwa narodów* [An inquiry into the nature and causes of the wealth of nations]. Warsaw: PWN.
Stachak, S. (1997) *Wstęp do metodologii nauk ekonomicznych* [An introduction to the methodology of the economic sciences]. Warsaw: Książka i Wiedza.
Wainhouse, C. E. (1982) *Hayek's Theory of the Trade Cycle: The Evidence from the Time Series*. New York: New York University Press.
White, L. H. (1984) *The Methodology of the Austrian School Economists*. Auburn: The Ludwig von Mises Institute.

Wiśniewski, J. B. (2012) *Metodologia austriackiej szkoły ekonomii: obecny stan wiedzy* [The methodology of the Austrian School of economics: the current state of knowledge], http://mises.pl. Accessed: 20 November 2014.
Wubben, E. (1995) "Austrian Economics and Uncertainty" in G. Meijer (ed.) *New Perspectives on Austrian Economics*. Abingdon: Routledge.
Wywiad z Robertem Higgsem: Dlaczego Austriacy? (2012) [Interview with Robert Higgs. Why the Austrians?], http://mises.pl. Accessed: 28 November 2014.

Abstract

Metodologia austriackiej szkoły ekonomii

Celem opracowania jest omówienie i ocena głównych zagadnień metodologii badań austriackiej szkoły ekonomii. Jej metodologia znacząco różni się od podejścia szkół głównego nurtu. Przedstawiciele szkoły austriackiej twierdzą, że nie można przenosić sposobów badań z nauk przyrodniczych do ekonomicznych. Proponują używanie prakseologii. Badania powinny być prowadzone za pomocą rozumowania dedukcyjnego, wychodząc od przyjętych aksjomatów. Austriacy odrzucają stosowanie formalizmu matematycznego. Zamiast tego proponują, aby badania oprzeć na realistycznych założeniach, logice werbalnej oraz zależnościach przyczynowo-skutkowych. Wyrzekają się również ilościowego, precyzyjnego prognozowania na rzecz przewidywania ogólnego i jakościowego.

Słowa kluczowe: szkoła austriacka, metodologia, dedukcja, analiza empiryczna, prognozowanie.