

WARSAW SCHOOL OF ECONOMICS

REAL CHALLENGES OF THE CONTEMPORARY WORLD ECONOMY AND THE ACHIEVEMENTS OF THE NOBEL-PRIZE WINNERS IN ECONOMIC SCIENCES

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INTRODUCTION

By comparison with past centuries, the twentieth and beginning of the twenty first centuries have produced many challenges, even extremes. Of special importance were especially two World Wars, the Cold War, dismantling of the Soviet Empire, decolonialism and emergence of democracy in Eastern Europe with all their consequences. All of these problems have meant challenges for the economists, too. They have tried to cope with these challenges developing many ideas and models. Sometimes they were right and sometimes wrong. Anyway, they have tried as Keynesians, Neo-Keynesians, Monetarists, etc.

In the meantime, really in 1968, the Sveriges Riksbank (Bank of Sweden) instituted the sixth award in memory of Alfred Nobel, and namely Nobel Economic Prize in Economic Sciences. According to the respective Statutes, the Nobel Prize in Economics has to be awarded annually to the person who has carried out a work in economic sciences of the eminent significance expressed in the Will of Alfred Nobel drawn up on November 27, 1895. That has meant that the Economics Prize is not technically a Nobel Prize (as it was not part of the terms of Alfred Nobel's Will), but rather a Nobel Memorial Prize founded by the Bank of Sweden on the basis of the perpetual annuity.

The A. Nobel Prize in Economics has been understood from the very beginning rather as a reward for specific discoveries, achievements or breakthroughs in broadly understood economic sciences than for outstanding and well-know economists. Anyway, the award is given by the Royal Swedish Academy of Sciences according to the same principles as for the other Nobel Prizes that have been awarded since 1901 in Physics, Chemistry, Physiology or Medicine, Literature for the fight for fraternity between nations, for the abolition or reduction of standing armies and for the holding and promotion of peace congresses. Up to now, 42 Nobel Prizes in Economics have been awarded, sometimes yearly to one Laureate, sometimes to two, and sometimes to three of them, mostly Americans or researchers connected with universities located in the United States.

Many students of broadly understood economics have treated achievements of the A. Nobel-Prize Winners in Economics as a specific "think tank." Their achievements were and still are treated as sings and even trajectories to solve many problems of the contemporary world economy. Up till now some of

these students have not been fully satisfied, while others only to a greater or lesser degree, and there are many reasons of such situation and of respective approaches.

The main aim of the presented textbook is to schedule main features of the contemporary world economy with their consequences and then to compare, even confront, achievements of the up-to-date Nobel-Prize Winners in Economics with the real challenges. Therefore, first of all, main features of the contemporary world economy and some their consequences are scheduled. Then, in the second part of the study, a general overview of the up-to-date Nobel-Prize Winners in Economic Sciences is presented. Next follows the presentation of the main ideas of the respective winners in the field of macroeconomics and international economics. The fifth part of the presented study can be treated as the up-to-date discussion regarding Nobel Prizes in Economic Sciences and the real challenges of the contemporary world economy. This part includes some conclusions, which are rather subjective. Therefore, any other suggestions, especially constructive ones, are warmly welcomed.

Main features of the contemporary world economy and their consequences

One of the main tasks of economists is to observe main features and changes in the contemporary world economy understood as the historically generated system of economic connections between various subjects, which are changing in the time and in the geographical terms. It is not an easy task. But it is worthwhile and even necessary.

We have to do with the development of the world economy since the turn of the 18th and 19th centuries when various economic connections between many subjects evidently over crossed national borders of the countries and functioned clearly as a specific, rather complicated unit. Additionally, one can point out some main features of the contemporary world economy. The most important include:

- a) increasing economic dependence and interdependence between countries and nations,
- b) new forms of international economic cooperation,
- c) international business cycles tackling more or less all national economies.

1.1. Increasing economic dependence and interdependence

Nowadays, with new technologies and with the so-called "death of distance," we have to do with increasing international economic dependence and interdependence. But it is not the newest phenomenon (table 1).

Increasing economic dependence and interdependence, usually termed as globalization, started in the mid-19th century. There were at least two episodes of this process, with the first one beginning around 1850 and ending with the

commencement of World War I and continued today, in the aftermath of World War II. Anyway, clear globalization has not been a smooth process.

Table 1. Globalization waves since 1850

World	1850–1913	1950–2007	1950–1973	1974–2007
Population growth	0.8	1.7	1.9	1.6
GDP growth (real)	2.1	3.8	5.1	2.9
Per capita	1.3	2.0	3.1	1.2
Trade growth (real)	3.8	6.2	8.2	5.0
Migration (net) Million				
U.S., Canada, Australia, NZ (cumulative)	17.9	50.1	12.7	37.4
U.S., Canada, Australia, NZ (annual)	0.42	0.90	0.55	1.17
Industrial countries (less Japan) (cumulative)			...	64.3
Global FDI outward stock, year			1982	2006
FDI as % of GDP (world)			5.2	25.3

Source: WTO 2008, p. 15.

There are many reasons of increasing economic dependence difficult to predict even by the prominent economists. These reasons are termed as the main drivers of globalization. One can list among them especially technological innovations, broad political changes as well as liberalization of national and international economic policies.

1.2. New forms of international economic cooperation – relocation of production and trade

Increasing trade liberalization between nations and the rising degree of openness of national economies, which have occurred in the last decades, have been among the most drivers of new forms of international economic cooperation. Development of these forms is connected with the so-called internationalization of production and especially with the outsourcing and offshoring transactions (table 2).

Table 2. New forms of international economic cooperation – relocation of production and trade

• Domestic outsourcing	= Externalization within a country
• Outsourcing abroad	= Externalization abroad
• Off-shoring	= Activity carried on abroad, relocated abroad
• Off-shoring in the strict sense	= Offshore in-house sourcing or cross-border outsourcing to its own affiliates (Partial or complete closure of production unit in the home country and relocation of the same production to its own affiliates abroad)
• Off-shoring in the broad sense	= Offshore outsourcing or outsourcing abroad or subcontracting abroad or cross-border outsourcing to non-affiliates (Partial or complete closure of production unit in the home country and transfer of the same production to a subcontractor abroad)

Source: OECD 2007, p. 22.

Many kinds of international outsourcing and off-shoring transactions are not the only reasons of the more and more complicated picture of the contemporary world economy. Let us add to it changes in production methods which created new tradable products (such as plastics) and new services (e.g. just in time deliveries). Anyway, for an economist it is not easy to take into account all these changes in a simple model or even some of them.

1.3. Business cycles and their international implications

In the developing world economy with increasing dependence and interdependence worldwide “transfers” of business cycles were and are still unavoidable, while rather difficult to predict having especially in mind their consequences. Anyway, the respective problems are additional tasks for economists, especially prominent ones.

Up till now we have had to do with some “positive” business cycles, termed usually as “positive Kondratieff’s cycles” including consequently prosperity, recession, depression, improvement even and/or events. H. Siebert (1999, 2007) includes in the “positive” Kondratieff’s cycles (waves) the following facts and their consequences:

- a) 1800–1850; steam engine and cotton technology,
- b) 1850–1890; railway, steel,
- c) 1890–1950; electrical engineering, chemistry,

- d) 1950–1990; petrochemicals, automobiles,
- e) 1990– ; information technology, internet, biotechnology.

On the other hand, up till now we have had to do with many “negative” business cycles in the world economy, which were observed by many economists, even prominent and termed by them as the “big crises.” The following are worth being noted:

- a) global economic crisis 1929–1933,
- b) worldwide recession 1974–1975 due to oil-supply problems,
- c) worldwide mini recessions in the years 1982–1983, 1992–1993 and 2001–2003,
- d) the newest financial and worldwide economic crisis started in 2007 in the United States of America and not resolved definitely till now.

1.4. Main real challenges of the contemporary world economy

Nowadays, we have in fact to do with various challenges of the contemporary world economy. Normally, the following are especially stressed in the respective literature:

- a) global warming,
- b) poverty and under nutrition,
- c) energy destabilized supplies,
- d) growing international turnover imbalances and debt crisis,
- e) financial crises.

In the meantime, G.C. Hufbauer (2008) has suggested dividing today's challenges into high probability and low probability ones. According to him, high probability challenges are the following:

- a) climate change, including global warming,
- b) financial oversight what needs international surveillance,
- c) eroding world trading system,
- d) unclear rules of the future oil supplies,
- e) growing international labour migrations with only limited number of respective bilateral and multilateral agreements,
- f) political chaos in its various guises (terrorism, civil wars).

According to G.C. Hufbauer (2008), of great importance are additionally the four following probability challenges:

- a) global pandemics (e.g. HIV or pandemic aroused by SARS),
- b) terrorism at sea,
- c) illegal mining of the deep seabed,
- d) killer asteroids exploding the upper atmosphere.

General overview of the achievements of the up-to-date Nobel-Prize Winners in Economic Sciences

The nature, contents and boundaries of economics are clearly changing. It can be observed while examining the choices of The Economics Prize Selection Committee by the Royal Swedish Academy of Sciences.

2.1. The up-to-date Nobel-Prize Winners in Economic Sciences

The Nobel Prize in Economic Sciences was first awarded in 1969. The list of the Winners of this Prize was then extended year by year (table 3).

Table 3. List of the Nobel-Prize Winners in Economic Sciences

Year	Laureate	Field	Prize Citation
1969	Ragnar Frisch Oslo University Jan Tinbergen The Netherland School of Economics	Econometrics	For having developed and applied dynamic models for the analysis of economic processes
1970	Paul A. Samuelson Massachusetts Institute of Technology	Partial and General Equilibrium Theory	For the scientific work through which he has developed static and dynamic economic theory and actively contributed to raising the level of analysis in economic science

Year	Laureate	Field	Prize Citation
1971	Simon Kuznets Harvard University	Economic Growth and Economic History	For his empirically founded interpretation of economic growth which has led to new and deepened insight into the economic and social structure and process of development
1972	Sir John R. Hicks Oxford University Kenneth J. Arrow Harvard University	General Equilibrium Theory	For their pioneering contributions to general economic equilibrium theory and welfare theory
1973	Wassily Leontief Harvard University	Input-Output Analysis	For the development of the input-output method and for its application to important economic problems
1974	Gunnar Myrdal University of Stockholm Friedrich von Hayek University of Freiburg	Macroeconomics and Institutional Economics	For their pioneering work in the theory of money and economic fluctuations and for their penetrating analysis of the interdependence of economic, social and institutional phenomena
1975	Leonid Kantorovich Academy of Sciences, Moscow Tjalling C. Koopmans Yale University	Theory of Optimum Allocation of Resources	For their contributions to the theory of optimum allocation of resources
1976	Milton Friedman University of Chicago	Macroeconomics	For his achievements in the fields of consumption analysis, monetary history and theory and for his demonstration of the complexity of stabilization policy
1977	Bertil Ohlin Stockholm School of Economics James E. Meade Cambridge University	International Economics	For their pathbreaking contribution to the theory of international trade and international capital movements
1978	Herbert A. Simon Carnegie-Mellon University	Administrative (Management) Science	For his pioneering research into the decision-making process within economic organizations
1979	Theodore W. Schultz University of Chicago Sir Arthur Lewis Princeton University	Development Economics	For their pioneering research into economic development, with particular consideration of the problems of developing countries
1980	Lawrence R. Klein University of Pennsylvania	Macroeconometrics	For the creation of econometric models and their application to the analysis of economic fluctuations and economic policies

2.1. The up-to-date Nobel-Prize Winners in Economic Sciences

Year	Laureate	Field	Prize Citation
1981	James Tobin Yale University	Macroeconomics	For his analysis of financial markets and their relations to expenditure decisions, employment, production and prices
1982	George J. Stigler University of Chicago	Industrial Organization	For his seminal studies of industrial structure, functioning of markets and causes and effects of public regulation
1983	Gerard Debreu University of California, Berkeley	General Equilibrium Theory	For having incorporated new analytical methods into economic theory and for his rigorous reformulation of the theory of general equilibrium
1984	Sir Richard Stone Cambridge University	National Income Accounting	For having made fundamental contributions to the development of systems of national accounts and hence greatly improved the basis for empirical economic analysis
1985	Franco Modigliani Massachusetts Institute of Technology	Macroeconomics	For his pioneering analyses of saving and of financial markets
1986	James M. Buchanan, Jr. George Mason University	Public Finance	For his development of the contractual and constitutional bases for the theory of economic and political decision-making
1987	Robert M. Solow Massachusetts Institute of Technology	Economic Growth Theory	For his contributions to the theory of economic growth
1988	Maurice Allais École Nationale Supérieure des Mines de Paris	Partial and General Equilibrium Theory	For his pioneering contributions to the theory of markets and efficient utilization of resources
1989	Trygve Haavelmo University of Oslo	Econometrics	For his clarification of the probability theory foundations of econometrics and his analyses of simultaneous economic structures
1990	Harry M. Markowitz City University of New York Merton M. Miller University of Chicago William F. Sharpe Stanford University	Financial Economics	For their pioneering work in the theory of financial economics
1991	Ronald H. Coase University of Chicago	Theory of Institutions	For his discovery and clarification of the significance of transaction costs and property rights for the institutional structure and functioning of the economy

Year	Laureate	Field	Prize Citation
1992	Gary S. Becker University of Chicago	Microeconomics and Economic Sociology	For having extended the domain of microeconomic analysis to a wide range of human behavior and interaction, including nonmarket behavior
1993	Robert W. Fogel University of Chicago Douglass C. North Washington University, St. Louis	Economic History	For having renewed research in economic history by applying economic theory and quantitative methods in order to explain economic and institutional change
1994	John C. Harsanyi University of California, Berkeley John F. Nash Princeton University Reinhard Selten Rheinische Friedrich- -Wilhelms-Universität, Bonn	Game Theory	For their pioneering analysis of equilibria in the theory of non-cooperative games
1995	Robert E. Lucas, Jr. University of Chicago	Macroeconomics	For having developed and applied the hypothesis of rational expectations, and thereby having transformed macroeconomic analysis and deepened our understanding of economic policy
1996	James A. Mirrlees University of Cambridge William Vickrey Columbia University	Economics of Information	For their fundamental contributions to the economic theory of incentives under asymmetric information
1997	Robert C. Merton Harvard University Myron S. Scholes Stanford University	Financial Economics	For a new method to determine the value of derivatives
1998	Amartya Sen University of Cambridge	Welfare Economics	For his contributions to welfare economics
1999	Robert A. Mundell Columbia University	International Macroeconomics	For his analysis of monetary and fiscal policy under different exchange rate regimes and his analysis of optimum currency areas

2.1. The up-to-date Nobel-Prize Winners in Economic Sciences

Year	Laureate	Field	Prize Citation
2000	James J. Heckman University of Chicago	Econometrics	For his development of theory and methods for analyzing selective samples
	Daniel L. McFadden University of California		For his development of theory and methods for analyzing discrete choice
2001	George A. Akerlof University of California	Economics of information	For their analyses of markets with asymmetric information
	A. Michael Spence Stanford University		
	Joseph E. Stiglitz Columbia University		
2002	Daniel Kahneman Princeton University	Economic psychology and experimental economics	For having integrated insights from psychological research into economic science, especially concerning human judgment and decision-making under uncertainty
	Vernon L. Smith George Mason University		For having established laboratory experiments as a tool in empirical economic analysis, especially in the study of alternative market mechanisms
2003	Robert F. Engle New York University	Econometrics	For methods of analyzing economic time series with time-varying volatility (ARCH)
	Clive W.J. Granger University of California		For methods of analyzing economic time series with common trends (co-integration)
2004	Finn E. Kydland Carnegie Mellon University	Macroeconomics	For their contributions to dynamic macroeconomics: the time consistency of economic policy and the driving forces behind business cycles
	Edward C. Prescott Arizona State University		
2005	Robert J. Aumann Hebrew University of Jerusalem	Game Theory	For having enhanced our understanding of conflict and cooperation through game-theory analysis
	Thomas C. Schelling University of Maryland		
2006	Edmund S. Phelps Columbia University	Macroeconomics	For his analysis of intertemporal tradeoffs in macroeconomic policy

Year	Laureate	Field	Prize Citation
2007	Leonid Hurwicz University of Minnesota Eric S. Maskin Princeton University Roger B. Myerson University of Chicago	Microeconomics	For having laid the foundations of mechanism design
2008	Paul Krugman Princeton University	Macroeconomics	For his analysis of trade patterns and location of economic activity
2009	Elinor Ostrom Indiana University Oliver E. Williamson University of California	Microeconomics	For her analysis of economic governance especially the commons For his analysis of economic governance especially the boundaries of the firm
2010	Peter A. Diamond Massachusetts Institute of Technology Dale I. Mortensen Northwestern University, Evanston Christopher A. Pissarides London School of Economics	Microeconomics	For their analysis of markets with search frictions

Source: http://nobelprize.org/nobel_prizes/economics/articles/lindbeck/table.html.

2.2. Number and classification of Prizes since 1969

Over the period since inception of the Nobel Prize in Economic Sciences 42 Prizes to 67 economists (mainly Americans) have been awarded. Single awards have been made on 22 occasions. In the case of joint awards, the Prize has been shared between two economists on 15 occasions, last in 2010. Elinor Ostrom from Indiana University was the first and up till now the only woman being the laureate of the Prize.

Classification of the Nobel Prize awards was not and is still not an easy task. It is possible to classify the awards in a number of ways. For example, in 1985 A. Lindbeck (1985) adopted a classification involving:

- a) general "basic" economic theory (e.g. P.A. Samuelson),
- b) theoretical contributions concerning specific aspects or sectors of the economy (e.g. M. Friedman),

- c) powerful new methods of economic analysis; their development and application (e.g. W. Leontief),
- d) more nearly "pure" empirical research (e.g. S. Kuznets),
- e) non-formalized innovative thinking (e.g. G. Myrdal and F. von Hayek).

Another interesting classification was presented in Poland by J. Nowicki (1990). He distinguished the following subjects:

- a) theory of economic growth (e.g. S. Kuznets, J.R. Hicks and K.J. Arrow),
- b) theory of national incomes distribution (e.g. T. Koopmans, M. Friedman and G. Debreu),
- c) theory of international economics (e.g. B. Ohlin, J. Meade and P.A. Samuelson),
- d) methodological researches (e.g. R. Frisch, J. Tinbergen, H. Simon and L. Kantorovich),
- e) interdisciplinary researches (e.g. G. Myrdal, F. von Hayek and M. Friedman).

Another classification was presented H.R. Vane and Ch. Mulhearn (2004). They adopted the classification involving:

- a) microeconomics (e.g. J. Stigler),
- b) macroeconomics (e.g. M. Friedman),
- c) economics of the public sector (e.g. J.M. Buchanan),
- d) finances (e.g. R.C. Merton and M.S. Scholes),
- e) economics of development (e.g. A. Lewis and T. Schultz),
- f) international economic relations (e.g. B. Ohlin and J. Meade),
- g) economic growth (e.g. R. Solow),
- h) methods of economic researches (e.g. R. Stone),
- i) macroeconometrics (e.g. L.R. Klein),
- j) econometrics (e.g. J.J. Heckman and D. McFadden),
- k) history of economics (e.g. R.W. Fogel and D.C. North).

In 2007, the newest classification was presented once again by A. Lindbeck stressing that it should be kept in mind that all such classifications are rather arbitrary since the multidimensional nature of scientific contributions makes it difficult to avoid overlaps. According to A. Lindbeck, there has to be selected:

- a) general equilibrium theory (e.g. P.A. Samuelson),
- b) macroeconomics (e.g. M. Friedman),
- c) microeconomics (e.g. G.J. Stigler),
- d) interdisciplinary research (e.g. G. Becker),
- e) new methods of economic analysis (e.g. W. Leontief, R. Stone and R. Selten).

Due to the fact that Nobel Prizes in Economics are awarded to the persons for their specific discoveries, achievements or breakthroughs in the broadly understood economic sciences as well as due to the multidimensional nature of the Winners contributions to the development of the broadly understood

economic sciences and due to the overlapping considerations, any classification of their achievements seems to be rather arbitrary and not convincing enough.¹ Sometimes, however, some additional arguments are used in order to explain the respective classification. For example, H.R. Vane and Ch. Mulhearn (2004) while presenting their classification have written that their views are in line with courses frequently taught within university programs. Another point of view is presented, inter alia, by M. Burda and Ch. Wyplosz (2009) and this view seems worth studying more deeply, having especially in mind the main problems of the contemporary world economy.

¹ See: Nowicki 1990; Lindbeck 1985 and 2007; Misala (ed.) 2010.

Main streams in the contemporary economics and attitudes of the Nobel-Prize Winners in Economic Sciences to the basic problems

3.1. Main streams

Contemporary economics, or rather economic sciences, are developing out of the broader field of political economy in the 19th century and aim to explain how various economic agents and various national economies interact. There are many distinctions being drawn nowadays between various dimensions of economics (e.g. microeconomics versus macroeconomics, positive versus normative economics). Anyway, we have to do with some main streams of the contemporary economics. According to M. Burda and Ch. Wyplosz (2009) they are the following:

- a) the Keynesian Revolution,
- b) the Monetarist Revolution,
- c) the Rational Expectations Revolution,
- d) the Microfoundations of Macroeconomics,
- e) New Keynesian Macroeconomics,
- f) Institutional and Political Economics,
- g) Labour Markets,
- h) Growth and Development.

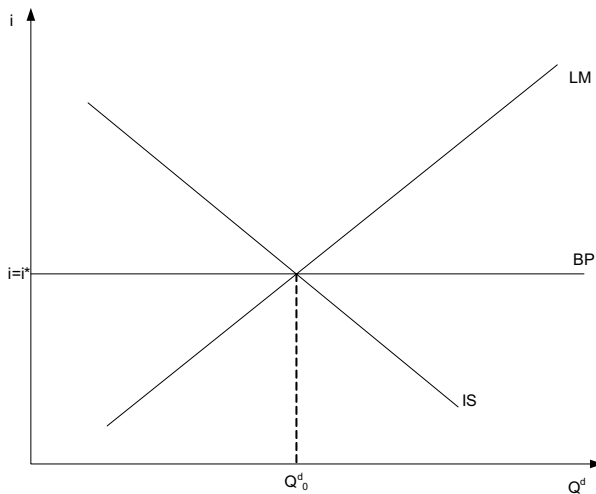
Distinction of the main streams of the contemporary economics suggested by M. Burda and Ch. Wyplosz (2009) is a controversial one. It is used here in order to examine and to show the different ways of thinking of the Nobel-Prize Winners in Economic Sciences. Anyway, such a confrontation seems to be a relatively good way of showing the contributions of them and helpful to draw some conclusions.

3.2. Nobel-Prize Winners' attitudes and suggestions

The Keynesian Revolution is clearly connected and conventionally associated with the J.M. Keynes publication from 1936 "General Theory of Employment and Money" in which he suggested that during economic downturns leading to unemployment and losses of potential output, active policy responses by the public sector (namely respective monetary policy actions by the central bank and fiscal policy by the government) are necessary in order to increase aggregate demand and to stabilize aggregate employment and aggregate output over the economic crisis and/or business cycle.

In the interwar crisis time, and not only, suggestions by J.M. Keynes were influential ones, including H. Schacht, A. Hitler's Finance Minister, with his policy of deficit spending on "public goals" with well-known consequences. Anyway, due to many reasons, J.M. Keynes (1883–1946) was not awarded the Nobel Prize in Economic but, surprisingly, some of the respective Laureates have had still in mind his general ideas. This especially refers to P.A. Samuelson, J.R. Hicks and even J. Tinbergen and J. Meade. For example, J. Tinbergen, from Netherlands, and J. Meade, a student of J.M. Keynes at the Cambridge University, have made some contributions in extending his framework to the small open economy case. The J.M. Keynes' ideas influenced additionally M. Fleming and Nobel-Prize Laureate R. Mundell – the authors of the so-called Mundell-Fleming model, which (known as IS-LM model) was next extended to the so-called IS-LM-BP (see box 1).

The rise of the Keynesian economics prompted many efforts at developing the relevant concepts and preparing the respective data. Among them were, inter alia, such Nobel-Prize Winners in Economic Sciences as S. Kuznets and R. Stone. According to M. Burda and Ch. Wyplosz (2009, p. 506): *once data was available, and with the advent of the first computers, economists have undertaken to build large scale models that were meant to mimic the economy. Following early work by Italian-born Nobel-Prize Laureate Franco Modigliani, these large models have become standard fares in most finance ministries, international organizations, and economic companies, where they are routinely used to produce forecasts and stimulate the effect of political decisions.*

Box 1. IS-LM-BP model; an equilibrium situation in the open economy

Where: LM – Liquidity-Money supply
 IS – Investments-Savings relation
 BP – Balance of Payments in equilibrium
 Q^d – volume of the aggregated demand
 Q^d_0 – aggregated demand in equilibrium
 i – interest rate
 i^* – interest rate in equilibrium

Source: Sachs, Larrain 1993.

The Monetarist Revolution is clearly connected with the name of M. Friedman who has evidently taken into account the ideas of some former Nobel-Prize Winners in Economic Sciences, and especially the ideas of F. von Hayek. These ideas have been lately developed, inter alia, by F. Modigliani, E. Phelps and R.A. Mundell.

F. von Hayek, known for his close association to the heterodox School of Austrian economics (disbanded in the late 1930s when the Nazis took over), moved first to the London School of Economics and then in 1950 to Chicago where he met i.a. M. Friedman with whom he tried to criticize the ideas and suggestions of J.M. Keynes, and not only. He was clearly a fan of liberalism in economic life and consequently attributed policy failures in economic advising to an uncritical unscientific propensity to imitate mathematical procedures used in the physical sciences. He argued that even much-studied economic phenomena, such as labour – market unemployment, are inherently more complex than their counterparts in physical sciences where such methods were earlier formed. According to him, the theory and data are often not precise ones and lend themselves only to the directions of change needed, but not to its size.²

² See: <http://en.wikipedia.org/wiki/Economics>.

Suggestions by F. von Hayek are still of great importance but it was mainly M. Friedman who started to criticize the so-called Keynesian school, established by the late 1940s, which had a strong foothold even in the United States of America, where most of macroeconomic research – and not only – was conducted.³ M. Friedman – alone and then with the so-called “Chicago boys” – put away many ideas, all of which undermined the key building blocks of Keynesian economics. According to M. Burda and Ch. Wyplosz (2009) they were the following:

- a) consequent and unabashed defending of free markets, which J.M. Keynes saw as chronically prone to failures,
- b) confronting and criticizing J.M. Keynes’ view that fiscal policy is a useful tool for macroeconomic stabilization and that monetary policy is useless,
- c) weakening the significance of the Keynesian multiplier and the view that fiscal policy can be a tool for output and employment stabilization,
- d) explaining that the so-called “Philips curve,” still considered as the missing equation linking the short and long run, could and would vanish as soon as the authorities attempted to exploit the output – inflation trade-off.

Mainly, but not only, due to M. Friedman monetarism became the new and widely accepted wisdom between academicians first and then among policy makers. It is to note, however, that we have still to do with many exceptions. For example, as M. Burda and Ch. Wyplosz (2009, p. 508) underline: *Nobel Laureate Edmund Phelps (b. 1933), from New York’s Columbia University, who had reached the same result as Friedman and at roughly the same time, regarded himself as a Keynesian. Phelps essentially foreshadows the eclectic future of modern macroeconomics, (...), which accepts the expectations – augmented Philips curve as the missing equation, even if it means that there is no lasting trade-off between output and inflation.* On the other hand, R. Mundell, born in Canada, when he was in Chicago, trained a generation of other “Chicago boys,” mainly international macroeconomists who developed, inter alia, the so-called “monetary approach to the exchange rate.”

The Rational Expectations Revolution is to be seen as another attack, even blow, on Keynesian economics. This revolution is presently connected with Nobel-Prize Laureate R.E. Lucas Jr., *notabene* a student of M. Friedman. But it is worth noting that R.E. Lucas was clearly inspired by some other Nobel-Prize Winners in Economics, especially by E. Prescott and F. Kykland. They argued that in the contemporary world economy we have to do with the so-called rational expectations of the various economic subjects and that if the forward-looking component dominates and if their expectations are not systematically biased, the so-called Philips curve is always vertical, in the short as well as in the long run. Their general message was that macroeconomic policies should not be used on and off with complete discretion. Such an attitude has never been very popular among scientists and especially among policy makers. Anyway, it is worth being noted.

³ See more: Burda, Wyplosz 2009, p. 507 and the following.

The Microfoundations of Macroeconomics is another important stream in the contemporary economics initiated by some other Nobel-Prize Winners and especially by F. Kykland and E. Prescott who were awarded for their work in 2004. Generally speaking, they have started with the assumption that if it is possible to accept that economic expectations are rational, then why shouldn't all other economic decisions be rational? In such a way they have tried to explain international real business cycles as phenomena being based mainly in microeconomics.

According to A. Lindbeck (2007, p. 4) F. Kykland and E. Prescott, further developing of the insights of R. Lucas and R. Solow: (...) *showed that economic policies are often plagued by problems of time consistency. More specifically, if economic policy makers are not able to commit their policy measures in advance to a specific policy rule, later on they initially regarded as the best one. For instance, national economies may become trapped in high inflation even though price stability is the stated objective of monetary policy. Kykland and Prescott's contribution has made the issue of the credibility and political feasibility of economic policy a main issue in economic research. Another result of this contribution is a shift of the discussion of economic policy away from isolated policy measures towards the institutional setup of policy making. Kykland and Prescott have also combined the analysis of short-term macroeconomic fluctuations with analysis of long-term economic growth – two research areas that were earlier regarded as separate fields. In particular, they emphasized the role of productivity disturbances ("supply shocks") not only when analyzing economic growth, but also in studies of short-term macroeconomic fluctuations.* There is to add that earlier mentioned E. Phelps, awarded by the Royal Swedish Academy of Sciences in 2006, supplied a number of other important, previously missing pieces to the macroeconomic puzzle. He deepened especially the knowledge concerning relations between the short-run and long-run economic policy, and – in particular – the long-run rate of unemployment is probably not affected by aggregate demand management and inflation but mainly – if not only – by the structure, and hence by functioning of the labour market.

New Keynesian Macroeconomics is another important stream of the contemporary economics represented i.a. by the some Nobel-Prize Winners in Economic Sciences. They are eager to prove that the so-called Keynesians are not dead and that they should be extended by the contemporary achievements of other sciences. In this context it is worth referring to many works by G. Akerlof, J. Stiglitz, G.J. Stigler, G.S. Becker, J.C. Harsanyi, J.E. Nash and R. Selten. Generally, the New Keynesians try to produce a new synthesis of economic events in the world, which fully rests on rational behavior of various economic subjects with taking into account some traditional Keynesian approaches and results. The effect is a specific theory and policy "mix" accepted nowadays by some theoreticians and policy-makers.

Institutional and Political Economics has started with the prominent works of Classics, especially A. Smith and D. Ricardo, but one should also mention some reflections and achievements of the Nobel-Prize Winners of Economic Sciences. First of all, it is worth underling all the above described ideas of F. von Hayek, P. Samuelson, M. Friedman and E. Phelps. However, to the group of institutional and political economists one can add such Nobel-Prize Winners in Economics as J. Buchanan, R. Coase, G. Becker, R. Fogel and D. North.

J. Buchanan got the Nobel Prize in Economics in 1986 especially for his research on the boundary between economics and political science and more precisely for founding the so-called “public choice school,” which analyzes the driving forces behind political decisions and tries to endogenize political behavior in models of national economies. Then R. Coase, and not only he, showed a borderline between economics and law and organization, and in particular which factors determine the size of the firms. Next, G. Becker investigated the borderline between economics and sociology and additionally marked rather different behaviours of such economic subjects as families and enterprises with regard to labour supply, production, consumption etc., stressing various “social interactions” between individuals outside the market system what is reflected in the respective Nobel Prize citation. Then we have R. Fogel and D. North who cleared up the boundary between economics and history. The Swedish Royal Academy of Sciences explained the respective awards for them in a following way: *for having renewed research in economic history by applying economic theory and quantitative methods in order to explain economic and institutional change.*⁴ In this context, one should add valuable earlier achievements of R. Frisch, J. Tinbergen, P.A. Samuelson, S. Kuznets, J.R. Hicks, K.J. Arrow and H. Simon.

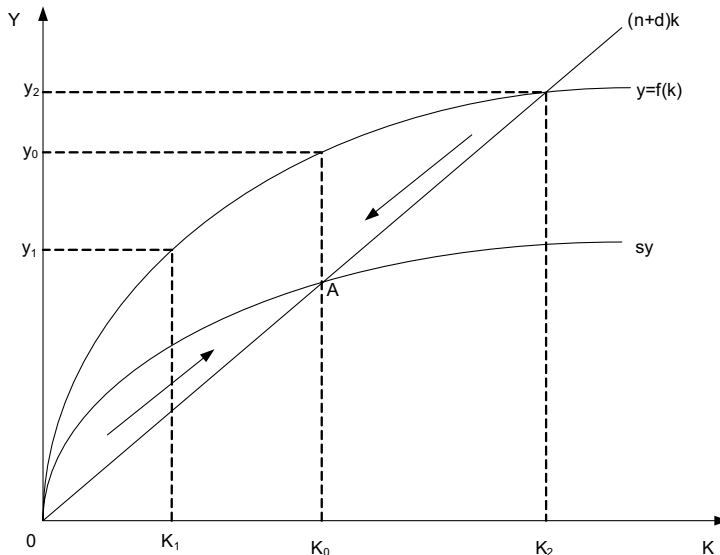
Labour Markets, more precisely a mechanism of their functioning, have never been of the greatest importance for the up-to-date Nobel-Prize Winners in Economic Sciences; what does not mean that they omitted the respective problems seen by majority of them, starting from R. Frisch and J. Tinbergen. Economics of labour market has been developed, inter alia, especially by P.A. Samuelson, G.S. Becker, A.K. Sen, D. Kahnemann, E. Ostrom, O.E. Williamson, and recently by the newest Nobel-Prize Winners in Economic Sciences P.A. Diamond, D.J. Mortensen and Ch.A. Pissaridies who received the respective award especially for their analysis of markets with special regard to labour markets with the so-called search frictions (see table 3). Anyway, their general conclusion is that the root of big and sometimes increasing unemployment are labour markets’ rigidities. Let’s add to this that this assessment is not much disputed today but was initially rejected by Keynesian and Neo-Keynesian economists who are blaming restrictive demand management policies. According to M. Burda and Ch. Wyplosz (2009, p. 513): *one way of simplifying the debate is whether the problem lies in a high unemployment rate (the case of rigidities)*

⁴ See: table 3.

or whether actual unemployment is kept above its equilibrium rate. Interestingly, monetarists always took the view that the unemployment rate had risen. Anyway, the respective problems seem still to be open.

Growth and Development have been searched by most Nobel-Prize Winners in Economics starting from R. Frisch and J. Tinbergen. Quite surprisingly, these kinds of research were and continue to be connected nowadays mainly with R.M. Solow awarded in 1987 by the Swedish Royal Academy of Sciences for his contribution to the theory of economic growth.⁵ It has been surprising taking for example into account that in the so-called Solow model of economic growth external economic relations of the national economies are treated as a specific, not precisely defined residual, *notabene* among many other factors (see box 2).

Box 2. Basic model of economic growth according to R.M. Solow



Where: Y – national income
 $y_0 \dots y_n$ – output income per worker
 K – national disposable capital
 $K_0 \dots K_n$ – capital per worker
 sy – savings rate
 n – population growth rate
 d – depreciation of capital per worker

while macro-production function is:

$$Y = AK^\alpha \cdot L^{1-\alpha}$$

Where L is Labour and α is a respective elasticity.

Source: Solow 1956.

⁵ See: table 3.

The so-called R.M. Solow exogenous growth model, also known as the neo-classical growth model, predicts that an economy will always converge towards a steady state rate of growth, which depends only on the rate of technological progress and the rate of labour force growth. The next prediction is that the income levels of poor countries will tend to catch up with or converge towards the income levels of rich countries as long as they have similar characteristics – like for instance saving rates. However, empirical evidence offers only mixed support for the predictions of the therefore for the model. Main limitations of the model include its failure to take account of external economic relations and of entrepreneurship, as well as strength of institutions which facilitate economic growth.

All these failings have led to the development of the growth theory. Respective problems have been studied, inter alia, by the later Nobel-Prize Winners in Economic Sciences, and especially by R.E. Lucas in his rational expectations theory and by F. Modigliani. As R. Lindbeck (2007, p. 3) underlines: *Franco Modigliani (awarded in 1985) developed two important building blocks in macroeconomic models, namely submodels of private consumptions and the financial sector. In particular, in his life cycle theory of saving Modigliani studied the consequences for household saving of changes in demography and economic growth. Together with Merton Miller he also laid the foundation for the field of "corporate finance." The Modigliani-Miller theorem states the conditions under which the value of a firm in the stock market is influenced (or not influenced) by the dividend policy of the firm, and the way the firm finances its investment, e.g., via equity capital or borrowing.* To this one should add the earlier discussed so-called Mundell-Fleming model, many works by A. Sen concerning welfare economics, as well as by A. Lewis, T. Schultz or even J. Heckman, who has treated investments in families as so important as investments in industry or services.

Main ideas of the Nobel-Prize Winners in Economic Sciences regarding macroeconomics and international economics

In connection with the main subject of the paper it seems worthwhile to study more deeply main ideas of the Nobel-Prize Winners in Economic Sciences regarding macroeconomics and international economics. Respective considerations are divided into four parts.

4.1. Achievements of R. Frisch, J. Tinbergen and W. Leontief

4.1.1. R. Frisch (1895–1973)

Alphabetically, R. Frisch was the first Nobel-Prize Winner in Economic Sciences, however, awarded together in 1969 with J. Tinbergen in *econometrics for having developed and applied models for the analysis of economic processes*. He was the author of many books and articles concerning economic growth and regional economic integration after World War II and cooperated closely i.a. with J. Tinbergen. In his autobiography from 1969 R. Frisch wrote very warmly: *when I think of the long list of problems of which I have in vain tried to find the solution, and think of the honors that have nevertheless been bestowed upon me, I understand with deep thankfulness to Whom all this is due: to the Lord Who has steered my steps over the years,*

*and Who has been me refuge in the superior matters which no science can ever reach.*⁶ Anyway, these words were really to be treated as the good signs for the awarded later on.

4.1.2. J. Tinbergen (1903–1994)

Sometimes J. Tinbergen's achievements are described very briefly in such a way: awarded in 1969 (with R. Frisch) for pioneering works on econometric model building, i.a. the integration of economic theory and statistical methods. While R. Frisch developed general methods of dynamic and econometric analyses, J. Tinbergen pioneered in applying such methods empirically. He has formulated the idea of the convergence of processes between the so-called socialist and capitalist countries or, rather, between countries with differently organized economies. It is true, but it is not the wholly truth, what was underlined by i.a. L.R. Klein (2003).

J. Tinbergen was evidently one of the pioneers in building econometric models of national economies' functioning (firstly of the Dutch economy but then also some others and even their groups) and of the methods to testify them using various methods. J. Tinbergens mode of research, his treatment of respective data in the interest of scientific research replication, his graphics of estimated equations, his clear explanations have been specific suggestions for many future respective researchers.

Having experiences in econometric modeling J. Tinbergen turned after World War II toward policy formation for the Central Planning Bureau of the Netherlands but not only. He defined concepts for economic policy measures and how they can and should be used in setting policy approaches. Additionally, he divided national and international policy magnitudes into instruments and targets and then formulated his well-known principle of necessary coincidence between targets and instruments in economic policy (see box 3).

Box 3. J. Tinbergen's concept of national and international policies' construction and development

According to J. Tinbergen various economic policies have two magnitudes – targets and instruments. The instruments should be set in order to reach respective targets (target values). And additionally, the number of instruments should not be greater than the number of targets and if there is a surplus of instruments, the policy makers should decide which instruments to use. The basic assumptions of the J.A. Tinbergen's model of economic policies are as follows:

⁶ See: Lindbeck (ed.) 1992.

General assumptions	E	T	C	N
Possible solutions	F, U	R, S	A, P	i, j
Where: E	– global equilibrium in the economy			
F	– full exploitation of resources			
U	– rate of unemployment			
T	– applied technology			
R	– constant technological norms			
S	– changing technological norms			
C	– quality of products			
A	– products not dependent technologically on others			
P	– products dependent technologically on others			
N	– number of products			
i, j	– kinds of products			

Source: own computation based on Tinbergen 1965; Sulmicki 1977.

Next, a very important platform of J. Tinbergen's scientific interests was international economic integration presented in a respective book published in 1965. Many were and still are excited with his valuable considerations considering theory and practice of the regional integration in the world and especially in Europe. Studying international economic integration J. Tinbergen clearly showed its targets and instruments in the free trade area, customs union, free market and even – to some extend – in the monetary union.

4.1.3. W. Leontief (1905–1999)

W.W. Leontief, born in 1905 in Munich (Germany), unquestionably belongs to the most prominent economists working in order to develop ideas aimed i.a. towards improvements in the international economy. He studied in this country (i.a. at the world-known Institute of World Economics), next in China and at the end in the United States where he won in 1973 Nobel Prize in Economic Sciences for *the development of the input-output method and for its application to important economic problems*. One should add that three of his doctoral students (namely P.A. Samuelson, R. Solow and V. Smith) have been also awarded the respective Prize.

W. Leontief is primarily associated with the development of the linear activity model of general equilibrium model. This gave rise to his famous input-output model and respective analyses (see box 4).

Box 4. The simplified version of W. Leontief's input-output model

Total production of branches	Interindustry flows				Final production
	X_1	X_2	X_3	Exports	
X_1	x_{11}	x_{12}	x_{13}	EX_1	X_1
X_2	x_{21}	x_{22}	x_{23}	EX_2	X_2
X_3	x_{31}	x_{32}	x_{33}	EX_3	X_3
Imports	Im_1	Im_2	Im_3	TB	X

Where: $X_{1,...,n}$ – branches or sectors
 $EX_{1,...,n}$ – exports of branches or sectors
 $Im_{1,...,n}$ – imports of branches or sectors
 TB – balance of external trade turnover
 X – total final production (gross domestic product)

Source: own compilation.

W. Leontief's contribution to the world economics is not only to be seen by his input-output tables and respective analyses regarding, inter alia, international trade flows.⁷ He has also made contributions in other areas. He has done, inter alia, a lot to make quantitative data more accessible and more indispensable to the study of economics and therefore one can find here a parallel to achievements of J. Tinbergen to make macroeconomic theory more empirically operational. Anyway, both of them, and not only, have never managed to introduce the full spectrum of dependency relations in a market economy and – or even more – between market economies. Consequently, respective consistency analyses were and still are necessary and awaited.

4.2. Ideas of J. Meade, B. Ohlin and P.A. Samuelson

J. Meade, B. Ohlin and P.A. Samuelson are three prominent Nobel-Prize Winners in Economic Sciences with their own valuable accounts. Anyway, one can find some common attitudes and ideas, which can be treated as specific linkages between them.

4.2.1. J. Meade (1907–1995)

It was J. Meade who has observed with great caution the development of the interwar and postwar (after the World War II) economics (its theory and policy)

⁷ Respective problems will be discussed later on, especially the so-called Leontief paradox.

and his achievements were taken into account in 1977 by the Swedish Royal Academy of Sciences. In that year he was awarded (with B. Ohlin) for pathbreaking contribution to the theory of international trade and international capital movements. His interest in economics grew from an influential postgraduate year at Trinity College, Cambridge (1930–1931) where he held frequent discussions with leading economists of the time including J.M. Keynes. He has analyzed especially trade policy in the world with various market distortions, hence anticipating the theory of “second best” allocations of resources. He was also a pioneer in the field of the theory of open-economy macroeconomics. Of particular importance was his analysis of the relation between internal and external balance, and the relation between targets and instruments of economic policy. He has suggested to the International Monetary Fund the division of the balance of payments, used till now and always treated as a specific passport of national economies whose content is to study very deeply and with the appropriate knowledge (see box 5).

Box 5. Balance of payments according to J. Meade and International Monetary Fund

Balance of payments is a politically sensitive list (record and accounting) of a country’s international transactions in goods, services and money with other countries and with various international institutions for a given time, usually one year. A country’s balance of payments has generally two accounts; current and capital, while by definition the two must be balanced. On the current account there appear mostly visible and invisible trade, private transfers and official transfers. On the capital account there appear mostly long-term and short-term capital flows, changes in foreign exchange reserves, borrowing from (or lending to) international institutions and balancing items, while balancing is not an easy task.

Source: own compilation.

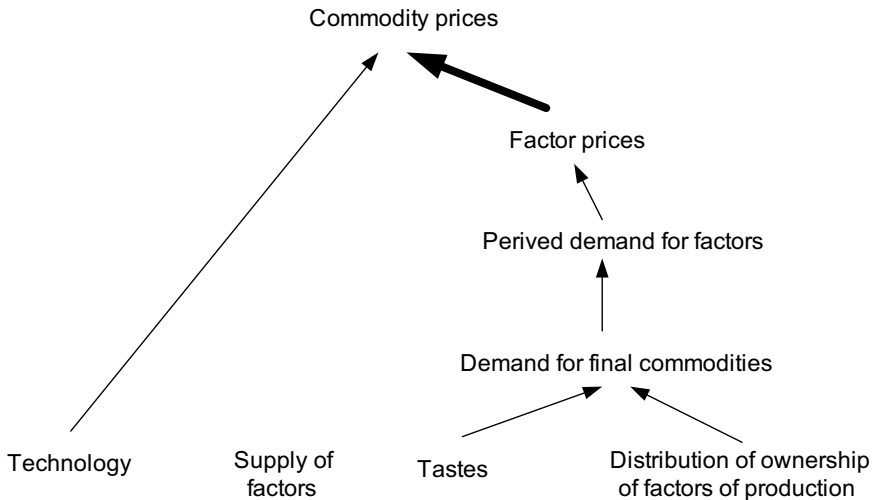
J. Meade analyzed consequently trade policy in a world with various market distortions and therefore anticipated the theory of “second best” allocation of resources. Additionally, he made a lot with regard to interactions between internal and external balances as well as – like J. Tinbergen – between targets and instruments of economic policy.

4.2.2. B. Ohlin (1899–1979)

Ohlin’s name is connected with the neoclassical theory of interregional and international trade (prepared with his teacher E. Heckscher) designed to explain

both the causes and the consequences of trade – known as the Heckscher-Ohlin theory (see box 6).

Box 6. General equilibrium framework of the Heckscher-Ohlin theory



Source: Salvatore 1983, p. 102.

The Heckscher-Ohlin (H-O) theorem was a breakthrough comparing with the classical theorem of comparative advantages and being based on the different model or clearly on 2 x 2 x 2 model (two countries, two goods and two production factors, namely labour and capital) and many strict assumptions (e.g. free trade, labour and capital do not move between the two countries, lack of the transportation costs). The major statements of the H-O theorem are the following:

- a) trade between countries (also regions) is in the free market conditions in proportion to their relative abundance of capital and labour,
- b) countries (regions) with a relative abundance of capital (where its price – interest rate – is relatively lower than price of labour that means wage rate) should specialize in production and exports of capital-intensive products; countries (regions) with a relative abundance of labour should do the reverse.⁸

⁸ W.W. Leontief, using results of his input-output tables with regard to the U.S. economy in the late 50s of the last century, made a study of the H-O theorem that seemed to invalidate it (the so-called Leontief paradox). He noted that the United States, relatively well endowed with capital were specialized in exports of labour intensive products. In the light of the contemporary international trade theory "Leontief paradox" was only a paradox in itself. There are many useful explanations of it, which can be found in the respective economic literature dealing with the contemporary world economy.

The H-O theorem, especially its assumptions, is nowadays widely criticized. Yet, however, the main framework is still a useful framework to understand the development of international (also interregional) trade. This is the essence of H-O theorem and more precisely – of the principle of relative factor endowments being a foundation of the contemporary international trade theory, *notabene* developed, inter alia, by P.A. Samuelson and his students.

4.2.3. P.A. Samuelson (1915–2009)

Awarded in 1970 for the scientific work through which he has developed static and dynamic economic theory and actively contributed to raising the level of analysis in economic science. Well known as a “father of modern economics” including modern international economics with his extension of the H-O model of international trade (see box 7). He was the author of the best-selling economics textbook of all time “Economics: An Introductory Analysis,” first published in 1948. He is sometimes considered as the “foremost academic economist of the 20th century.” Known as an eager adviser of the Keynesian economics and a critical opponent of M. Friedman and monetarist perspective.

Due to his factor-price equalization theorem P.A. Samuelson has made the H-O-S theory a dynamic one being today a foundation of international trade policy. This is additionally due to the fact that P.A. Samuelson (together with M.F. Stolper) presented in the meantime the so-called dynamic Stolper-Samuelson theorem (see box 8). According to this theorem, the real return to the nation’s scarce factor of production will raise with the introduction of some economic policy instruments, for example with the imposition of a tariff on certain products or subsidizing them.

P.A. Samuelson’s achievements in economic sciences are clearly not to underestimate. However, they are today rather studies from the so-called “second-hand.” It is a great mistake and even great pity.

Box 7. Factor-price equalization theory

It was P.A. Samuelson who formalized the H-O theory and added to it the factor-price equalization theorem and for these reasons the common term of the Heckscher-Ohlin-Samuelson theory (the H-O-S theory, for short) is used nowadays. According to the factor-price theorem in rigorous circumstances, especially in the free market conditions, international trade will and can bring equalization in the relative and absolute prices of homogenous production factors across nations (in the relative and absolute returns to these factors). As such, international trade is in the theory a substitute for the international mobility of factors of production and the respective mechanisms are the following:

Partners	Country A (e.g. Poland)	Country B (e.g. Germany)
Relative abundance of labour (L) and capital (C)	$L > C$	$L < C$
Relative prices of labour (w) and capital (r)	$w < r$	$w > r$
Exports' and imports' structures of countries	Exports of labour-intensive products Imports of capital-intensive products	Exports of capital-intensive products Imports of labour-intensive products
Effects of international trade: a) changes in abundance: - Labour (L) - Capital (C) b) changes in prices: - Wage (w) - Interest rate (r)	\downarrow (Decrease) \uparrow (Increase) \uparrow (Increase) \downarrow (Decrease)	\uparrow (Increase) \downarrow (Decrease) \downarrow (Decrease) \uparrow (Increase)
End effect of international trade	Equalization of the relative and absolute prices of production factors and returns to them	

Source: own compilation explained more deeply in Misala 2007.

Box 8. Mechanism of interrelations according to the Stolper-Samuelson theorem assuming growth of labour attractiveness in the country A due to economic policy measures (e.g. imposition of a tariff in Poland on labour-intensive product)

First impulse and the end result	Intertemporal effects
First impulse – e.g. increase of linen price in Poland due to imposition of tariff on its imports	Change of internal price relations in favour of linen being a labour-intensive commodity. Increase of the linen production and of labour (L) attractiveness. Magnificated inflow of L in order to produce linen from the capital-intensive sectors. Intertemporal distortions on the labour (L) and capital (C) markets. Change of relations between prices of L ($w = \text{wage}$) and of capital ($r = \text{rents}$) in favour of wages (w) in the gross domestic product (GDP). Greater increase of the total earnings (nominal and real) of „L-owners” than of „C-owners”
End result – increasing and even magnificating specialization of a country A in production and exports of labour-intensive product with all possible implications	

Source: own compilation explained more deeply in Misala 2007.

4.3. R. Mundell (b. 1932) as the Nobel-Prize Winner

Awarded in 1999 for his analysis of monetary and fiscal policy under different exchange rate regimes and for his analysis of optimum currency areas. He has helped to restart the movement initiated by J. Schumpeter and known as the supply-side economics.

R. Mundell belongs to the main constructors of today's theory of open-economy macroeconomics, and especially of the so-called Mundell-Fleming model (see box 1). More precisely, R. Mundell introduced foreign trade and international capital movements into Hick's IS-LM model (Investment, Savings – Liquidity, Money) for an open economy. Then he showed the effects of monetary and fiscal policy hinging crucially on international capital and labour mobility. All this has led him to formulate the theory of optimum currency areas, which deals with the advantages and disadvantages of such areas for countries of relinquishing their monetary sovereignty in favour of a common currency. In such a way R. Mundell – through his pioneering works – laid the groundwork for the introduction of the Eurozone and consequently – euro as international currency (see box 9).

Box 9. Stages of the regional economic integration according to J. Tinbergen, B. Balassa, R. Mundell and some others

Stages of integration	Elimination of trade barriers in mutual trade	Commons external trade policy	Free movement of production factors	Harmonization of monetary and fiscal policies	Full coordination of fiscal and monetary policies	Unification of all economic policies	Common policies of the integrating countries
Free trade area	x						
Customs union	x	x					
Common market	x	x	x				
Monetary union	x	x	x	x			
Economic union	x	x	x	x	x		
Political union	x	x	x	x	x	x	
Full regional integration	x	x	x	x	x	x	x

Source: Bożyk, Misala 2003, p. 38.

R. Mundell won the Nobel Prize in Economic Sciences for his many achievements (included in brilliant lecture "A Reconsideration of the Twentieth Century") and he has not told the last word in it. Anyway, in this lecture he has stated clearly that *the international monetary system depends only on the power configuration of the countries that make it up*.⁹ Observing developments in the contemporary world economy there is almost nothing to add. There is rather only the problem to understand the respective issues in a right way what is for some people a rather difficult task.

⁹ See: Mundell 1999.

4.4. P. Krugman's (b. 1953) achievements in economic sciences

P. Krugman was awarded in 2008 the Prize in Economic Sciences for his research on international trade and economic geography. By having shown the effects of economies of scale on trade patterns and on the location of economic activity, his ideas have given rise to an extensive reorientation of the research on these issues. He has proposed a new model of international turnover, which provided a better explanation for the observed patterns.

According to P. Krugman, for a long time, the analysis of foreign trade has been on a classical and neo-classical theory explaining international exchange of goods, services and production factors. In the meantime, the situation has changed and P. Krugman observed it very deeply. In his own research and many publications he has shown that the solution is to clarify all the problems in terms of economic geography. He has tried consequently to explain what goods are produced and where. Consequently, he has also attempted to specify the forces whereby labour and capital become located in certain and not other places.

A clear achievement of P. Krugman is the integration of the economies of scale into general equilibrium model. He has additionally deepened the understanding of the main determinants of trade and the location of economic activity, showing, inter alia, that present comparative advantages of a country A can and should be changed into competitive ones (see box 10).

Box 10. Main reasons of the comparative advantages which are possible to be changed into competitive ones due to reasonable economic policies

- factors endowment (factors abundance),
- technology,
- tastes,
- size of national economy and external markets,
- markets' structures (internal and external),
- location of production with trade costs,
- other conditions of initial production and exports (the so-called agglomeration effects).

Source: own compilation based on studies presented in Misala 2011.

Many achievements of P. Krugman are to be seen as instrumental to economic policy-makers today. Their response to the P. Krugman's suggestions (and not only) are warmly welcomed by many. As it seems, in the contemporary world economy this is to a great extent only a "wishful thinking." Anyway, a lot is to be done, also for economists.

Nobel Prizes in Economic Sciences and the real challenges of the contemporary world economy

Many real challenges of the contemporary world economy are rather well-known to professional economists and there is additionally to assume that probably – first of all – to the up-to-date Nobel-Prize Winners in Economic Sciences. They even formulated a lot of suggestions to overcome many of the respective problems, which are sometimes not fully understood, or misinterpreted. On the other hand, there is a lot of controversies surrounding even the award of the Nobel Memorial Prize in Economics and it seems necessary to show some of them.

5.1. Main controversies surrounding the Nobel Prizes in Economic Sciences

There are still many controversies over the Nobel Prizes in Economic Sciences. One can divide them into three main groups, and mainly:

- a) controversies raised by some members of the Swedish Royal Academy of Sciences,
- b) controversies raised by some Nobel Prize Winners in Economic Sciences,
- c) other controversies.

The first controversies were raised by some members of the Swedish Royal Academy of Sciences who stated that *economics is a "soft" social science, not scientific enough to be awarded a prize by the Academy on par with the "hard" natural sciences like Physics, Chemistry or Medicine*. Additionally, objections

were raised that economics does not fulfill enough the Will of Alfred Nobel in the sense that it does not contribute enough to the *benefit of mankind*. By the way, this attitude was strongly supported additionally, inter alia, by Peter Nobel, a Swedish human rights lawyer, a grandnephew of Alfred Nobel. He himself and some others argued that *economics is not the "hard" or even "true" science, as science is a process of formulating models that predict outcomes in a natural system under certain conditions, and that testing them to see if the future predictions agree, which is not possible in economics.*¹⁰

Controversies concerning Nobel Prizes in Economic Sciences were raised even by some of their Winners. For example, G. Myrdal (awarded in 1974) maintained in 2003 that this kind of Prize should be abolished and additionally based his opinion on the fact that it had been given to such *reactionaries* as F. von Hayek and M. Friedman. The first of them was not in a position and the second one did not want to continue *respective discussion*. On the other hand, there should be stressed that many Nobel-Prize Winners in Economic Sciences were great friends and often underlined their cooperation (e.g. J. Tinbergen with R. Frisch or J. Harsanyi with R. Selten).

Some other controversies are important, too. According to H.R. Vane and Ch. Mulhearn they are the following:

- a) the Prize Committee of the Nobel Prizes in Economic Sciences has shown a bias towards and favoured the so-called Chicago School of neoclassical economics (see table 3 and box 11),
- b) awarding for the pathbreaking works is overlooking great achievements of many great economists of our times (e.g. of J.M. Keynes or – even perhaps – M. Kalecki and J. Robinson),
- c) the Nobel Prize in Economics has become so famous and influential that it is giving special status and prestige to the awarded and their universities.

Box 11. Suggestions of H.R. Vane and Ch. Mulhearn to be Nobel Prize aspirant in Economic Sciences

There is to:

- be a U.S. citizen,
- be affiliated to an American university,
- more specifically, be an affiliate of a member of an elite group of eleven universities with track record of employing laureates at the time of their elevation,
- have doctoral training at one of 13 selected universities,
- first win a prestigious award like John Bates Clark Medal,
- be affiliated to the University of Chicago or "train there."

Source: Vane, Mulhearn 2004, p. 169.

¹⁰ See: Vane, Mulhearn 2004 and the literature cited there.

Up till now only some of the 67 well-known economists – Laureates of Nobel Prize in Economic Sciences – have received their award without meeting the criteria specified in box 11, what seems to be a specific phenomenon. However, this is a plain truth. The exemptions were, inter alia, J.R. Hicks, F. von Hayek, L. Kantorowicz and R. Selten. On the other hand, it was not possible to catch “the train to Chicago” for such prominent economists as M. Kalecki, J.M. Keynes, J. Robinson, R. Kann, N. Kaldor, H. Giersch or R. Dornbusch. Quite surprisingly, it was also too late to catch the specific “train to Chicago” for many well-known professors of economics from Central Europe like J. Kornai or L. Balcerowicz.

5.2. Problems and challenges for the future Nobel-Prize Winners in Economic Sciences

Basic problems and challenges of the contemporary world economy are rather well-known. They are clearly multidimensional and it is one of the important reasons that the up-to-date Nobel Prizes in Economic Sciences were awarded to some scholars making important scientific contributions also in neighbouring disciplines as psychology or sociology.

All the awarded contributions – even these on the borderline between pure economics, political science, sociology and history – seem to be of great importance. Nevertheless, the basic problems of the contemporary world economy are still not solved. This is also due to the prominent but still relatively limited theoretical background formulated by the Nobel-Prize Winners in Economic Sciences even overlooking criteria for respective awards. Anyway, some “ways” are clearly open. This is also due to the fact that the Selection Committee and even Swedish Royal Academy of Sciences have not treated up-to-date respective awards as a chance to influence properly the direction of new research in economics or – more – in economic sciences. The winners are obviously not living in the poorest countries of the contemporary world economy and the world as a whole.

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