

The initiative by Jan Tinbergen in 1990 for a nomination of Roefie Hueting for the UNEP Sasakawa prize – which became the UNEP Global 500 Award

Hueting archive ¹
May 2 2019

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1. Introduction

In 1990 Jan Tinbergen took the initiative to nominate Roefie Hueting for the UNEP Sasakawa prize. ² It is not clear whether the nomination was actually done, and Hueting did receive the UNEP Global 500 Award in 1994. ³

It is still informative to see the recommendations that Tinbergen collected in 1990.

Tinbergen did no active research on environmental economics at the same level of recognition as Goodland, Daly, Barney, Ekins, Potma and Hueting. This collection does not contain a recommendation by himself. Very likely he felt that this would be irrelevant.

PM. Tinbergen's contact in 1990 with Goodland and Daly at the World Bank resulted in an invitation by the World Bank that he and Hueting would write a joint article for an edited collection. This became Tinbergen & Hueting (1991), "*GNP and Market Prices: Wrong Signals for Sustainable Economic Success that Mask Environmental Destruction*". ⁴ Tinbergen appreciated that Hueting knew much more of the topic than he himself. Hueting wrote say 85% of the article. The authors however decided that the article would receive more attention when Tinbergen was first author because of his international recognition.

¹ With thanks to dr. Hueting for the use of his archive

² <https://www.unenvironment.org/about-un-environment/awards-and-prizes/sasakawa-highlights>

³ <http://www.global500.org/index.php/thelaureates/online-directory/item/208-roelof-hueting>

⁴ <http://www.sni-hueting.info/EN/Publications/1991-Tinbergen-Hueting-GNP-and-market-prices.pdf>

2. Robert Goodland

Recommendation for the Sasakawa Environmental Prize

Re: Dr. Roefie Hueting

Dear Dr. Tinbergen,

I am delighted to respond to your request for a recommendation for the Sasakawa Prize for: Dr. Roefie Hueting. I have worked with Dr. Hueting for almost one decade, although fundamentally influenced by his work long before then.

As I expect you will be receiving many recommendations on different aspects of Dr. Hueting's outstanding contributions to environmental economics, I shall restrict myself only to one aspect. This is the paradigm shift of economic policy away from increasing growth of quantitative throughput production, and towards conserving planetary life-support systems and qualitative improvement in societal well-being. This is inextricably related to Hueting's interdisciplinary capacity for building bridges between economists and environmentalists, and at the same time being able to influence decision-makers. In addition, Dr. Hueting has successfully focussed on the economic/environmental interface in developing countries.

Dr. Hueting's seminal 1980 book "New Scarcity and Economic Growth" laid out the fundamentals, which are becoming followed by an increasing number of economic and environmental policy makers. Since then, Dr. Hueting has influenced an increasing number of decision makers on specific elements of this paradigm shift as he tailors it to the issue under consideration. I know first hand he has achieved this successfully in Indonesia, Ecuador, Taiwan, Philippines and Kenya.

The specific example (of many) I would like to cite concerns UNEP/World Bank cooperation. It is no exaggeration to claim, as I do, that the most influential and productive collaboration between UNEP and the World Bank stems from Hueting's leadership - combined with persistence in the face of adversity -- on SNA Environmental accounting. This was initiated by UNEP's Dr. Yusuf Ahmad in the early 1980's, supported by me for the World Bank, and with the technical economic underpinnings by Hueting.

In spite of several years of strong institutionalized and individualized resistance, Dr. Hueting (with Dr. Ahmad of UNEP), managed to persist until the theme is almost becoming a bandwagon. Integration of natural resources, depletion and regrettably necessary environmental and defensive expenditures into the System of National Accounting is becoming enormously influential in environmental economics and economic development in developing countries. Hueting built the economic/environmental bridge. I recommend him unreservedly.

Robert Goodland
Special Adviser, Environment Department,
The World Bank, Washington DC, 20433
U.S.A.

22 October 1990

3. Herman Daly

October 22, 1990

Professor Jan Tinbergen:

This is a brief note to enthusiastically recommend Dr. Roefie Hueting for the Sasakawa International Environment Prize. He was a pioneer in both theory and policy for integrating environmental values into economic thinking and accounting. His book New Scarcity and Economic Growth was a landmark and provided the clear conceptual basis for further contributions by himself and others. Dr. Hueting was a key figure in the World Bank/UNEP Workshops on Environmental Accounting. He has also been very active in helping to found the International Society for Ecological Economics and its journal Ecological Economics (Elsevier). I know that Dr. Hueting has a long and distinguished career in The Netherlands' Central Bureau of Statistics, and as a consultant to many governments on economic/environmental policy. My contact with him over the past ten years has been in his role as a pioneering thinker and as a helpful consultant to the World Bank. His contributions richly deserve the recognition of the Sasakawa prize.

Sincerely,

Herman E. Daly
Senior Economist
Policy and Research Division
Environment Department

4. Gerald O. Barney

15-98 THU 09:05 WINROCK INTL DC

P.02

November 13, 1990

United Nations Environment Programme
Secretariat for the Sasakawa
International Environment Prize
P.O. Box 30552
Nairobi
Kenya

To the judging panel for the Sasakawa International
Environment Prize:

It is my pleasure to write you in support of the
nomination of Dr. Roefie Hueting from the Netherlands
Central Bureau of Statistics.

I recommend Dr. Hueting in large part because he was
one of the first to recognize virtually all of the major
problems of traditional economics as it relates to the
environment. His observations include:

In the early 1960s: That the traditional system of
national accounts does not take into account losses of
welfare provided by natural areas; that as a result,
indicators based on the system of national accounts
give wrong indications about the performance of
national economies; and that market prices, because
they do not place a value on the goods and services
provided by the environment, provide misinformation
about the relative scarcity of economic goods and as a
result lead to the misallocation of resources.

In the mid-1960s: That new methods were needed and were
available to value nature in both physical and monetary
terms, to measure national income, and to calculate
shadow prices for goods and services provided by the
environment.

In the 1970s: That the economic concepts he had
developed over the preceding decade could be combined
into a coherent theory, which he published under the
title, "New Scarcity and Economic Growth;" that the
principal tool of economic decision making--the cost-
benefit study--was fundamentally flawed because of its
failure to value the goods and services provided by
nature; and that the welfare of a nation might be

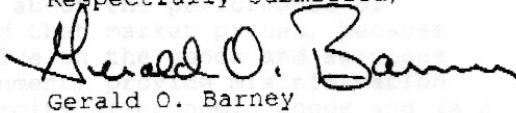
significantly increased by a policy that shifted the goal of development from rapid growth to protecting the environment and conserving resources.

In the 1980s: That, from the analysis of national account data, it is apparent that those activities that make the greatest contribution to the traditional concept of economic growth are in fact the very activities that do the most damage to the environment; that the use of market discount rates with present value theory implies that societies place zero value on the sustainable use of the environment; that a solution to the problem of the unknown demand curve for environmental goods and services might be solved by using a demand curve that is simply a vertical line representing sustainable use.

I can also testify that, although he is by nature somewhat shy, Dr. Hueting courageously presents his ideas and challenges others at meetings and conferences. He has also shown a willingness to visit impoverished peoples around the world. Finally, he has not abandoned his second love--music--and uses his skills as a jazz piano player to relax and build bonds of friendship and respect after a hard day of debating how best to alter economic theory and practice to protect the environment.

Dr. Hueting's contributions to economics relating to the environment make him eminently qualified to receive the Sasakawa International Environment Prize. In fact, awarding the Prize to Dr. Hueting would contribute to the distinguished reputation of the Prize.

Respectfully submitted,


Gerald O. Barney
Executive Director

In the mid-1960s: That new methods were needed and were available to value nature in both physical and monetary terms, to measure national income, and to calculate shadow prices for goods and services provided by the environment.

5. Paul Ekins

COMMENDATION OF ROEFIE HUETING

24 .10.90

FOR THE SASAKAWA PRIZE

To: THE HONOURABLE JURY OF THE SASAKAWA PRIZE I would like to focus on his intellectual incisiveness and acuity of observation which led him to formulate the concept of environmental function; and his intellectual honesty and rigour which has led him to emphasise the full implications of environmental conservation for economic growth and lifestyles generally.

The environmental function concept is, quite simply, the key to understanding the contribution of the environment to the economy and how it is that the environment is now under such stress, due to human activities. This concept has all the rigour necessary to fit into a positive neoclassical framework (unlike, for example, the more nebulous notion of 'sustainable development'), while being non-reductionist and non-compromising in its assessment of environmental issues. By the

Re. Nomination of Roefie Hueting

environmental/economic issues. Alternative approaches of externality analysis or shadow pricing, while making use of these tools where appropriate. The environmental function approach should become

I am pleased to append my commendation of this outstanding environmental economist for your prestigious Award.

when a major new issue, such as environment, first hits the public agenda, the inevitable political reaction is to hope (or assume) that it can be accommodated with minimal interference to current

Yours sincerely,

been heard proclaiming that the environmental debate was in fact an opportunity for a new era of economic growth or 'green growth'. This along with this view has definite career advantages for the environmental economist. Hueting, however, has always seen clearly the inevitable trade-off between growth and environment, and, in

PAUL EKINS

Research Director

First, he has distinguished between economic growth (increase in welfare) and production growth (increase in production). Second he has modelled the growth/environment relationship (in the UK scenario) in an entirely convincing way, to clarify precisely the trade-off. Third, he has pointed out that production growth was, in at least, overstated in the GNP figures, and he is currently engaged in revising these figures for the Dutch economy. This promises to be pathbreaking work of great relevance to other countries.

in conclusion Hueting's contribution stands out among environmental

COMMENDATION OF ROEFIE HUETING

24.10.90

FOR THE SASAKAWA PRIZE

In commending Roefie Hueting for the Sasakawa Prize I would like to focus on two qualities: his intellectual incisiveness and acuity of observation which led him to formulate the concept of environmental function; and his intellectual honesty and rigour which has led him to emphasise the full implications of environmental conservation for economic growth and lifestyles generally.

The environmental function concept is, quite simply, the key to understanding the contribution of the environment to the economy and how it is that the environment is now under such stress, due to competition between functions. This concept has all the rigour necessary to fit into a positive neoclassical framework (unlike, for example, the more nebulous notion of 'sustainable development'), while being non-reductionist and non-compromising in its assessment of environmental values. It captures far more fully the environment/economy interaction than the alternative approaches of externality analysis or shadow-pricing, while making use of these tools where appropriate. The environmental function approach should become the cornerstone in teaching about environmental economics.

When a major new issue, such as environment, first hits the public agenda, the inevitable political reaction is to hope (or assume) that it can be accommodated with minimum inconvenience to current expectations and vested interests. Thus many influential voices have been heard proclaiming that the environmental crisis was in fact an opportunity for 'a new era of economic growth' or 'green growth'. Going along with this view has definite career advantages for the environmental economist. Hueting, however, has always seen clearly the inevitable trade-off between growth and environment, and, in articulating this trade-off he has been characteristically rigorous. First, he has insisted on distinguishing between economic growth (increase in welfare) and production growth (increase in production). Second he has modelled the growth/environment relationship (in the CE Scenario) in an entirely convincing way, to clarify precisely the trade-off. Third, he has pointed out that production growth was, in any case, overstated in the GNP figures, and he is currently engaged in revising these figures for the Dutch economy. This promises to be pathbreaking work of great relevance to other countries.

In conclusion, Hueting's contribution stands out among environmental economists as being theoretically fundamental, intellectually unassailable, morally unwavering, and practically most useful. He fully deserves the Sasakawa Prize for the environment.

PAUL EKINS

Research Fellow, Dept. of Economics, Birkbeck
College, University of London
Research Director, Right Livelihood Award

24.10.90

6. Theo Potma

To: UNEP Secretariat of the
Sasakawa Prize
P.O. Box 30552
Nairobi
Kenya

1-11-1990

Recommendation for the Sasakawa Environmental Prize

Contribution of Dr. R. Hueting to a better environment

In the early sixties Hueting realized that an effective environmental policy is practically impossible without a change in the priorities set in our economic policy. He focussed primarily on the way the G.N.P. is measured and used as an indicator of economic success. He also realized that a change in economic priorities requires many years of concentration and scientific work in a critical and sometimes hostile social environment, with which the pioneer usually is confronted.

Hueting spent a lifetime of hard work to incorporate the value of nature in economic calculations. By neglecting or underestimating these values economic science legitimates the on-going destruction of environmental richness. The important contribution of Hueting to a better environment is that he raised questions in the minds and hearts of his opponents on an issue that was (and still is) taken for granted, but that urgently needs attention, reconsideration and change.

Hueting made his important contribution by creating an aura of integrity, quality, persistence and patience. This allowed him to communicate with even the fiercest opponents of his ideas and his work.

The contribution of Hueting should be honoured not only because of its scientific value, which is impressive, but even more because of the combination of an independent mind, scientific quality, friendliness and dedication to his cause, which he managed to create. This combination is rare and at the same time urgently needed in our time of important transformations.

Ir. Theo Potma
Director and founder of the CE institute in Delft
Oude Delft 180
2611 HH Delft
Netherlands

7. Addresses of persons who are willing to provide information

Prof. dr. Otto Soemarwoto
Director Institute of Ecology
Padjadjaran University

October 1990

List of people who are willing to provide information on dr.
Roefie Hueting's work on environmental economics and statistics

Indonesia
tel: (0)22-84982

Germany

Prof. dr. Ernst Ulrich von Weizsäcker
Director Institute für Europäische
Umweltpolitik (Institute for European
Environmental Policy)
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5300 Bonn
B.R.D.
tel: (0)228-213.810

Prof. dr. W. Bagoer
Director General Central Bureau of Statistics
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Dr. Vendana Shiva
Director Science, Technology and Natural
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Indonesia

Dr. Iwan Jaya Azis
Director Inter University Centre
University of Indonesia
Faculty of Economics
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21-333177 (university)

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Prof. dr. Otto Soemarwoto
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Director Institute for Energy Saving
and Clean Technology
Netherlands

His Royal Highness Prince Bernhard
of The Netherlands
Former President of the World Wildlife Fund
Paleis Soestdijk
Soest
Netherlands
tel: (0)2154-12841

Prof. dr. W. Begeer
Director General Central Bureau of Statistics
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2270 AZ Voorburg
Netherlands
tel: (0)70-369.4341

Dr. W.F. Duisenberg
President Nederlandsche Bank (Governor Central Bank)
President Bank for International Settlements,
Basle, Switzerland
Former Minister of Finance
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Dr. L. Ginjaar
Chairman National Council for Environmental
Protection (NCEP)
Chairman Health Council
Former Minister of Health and Environmental
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Drs. R.J. van Schaik
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of The Netherlands to the United Nations
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Dr. J.C. Terlouw
Former Vice Prime Minister and Minister of
Economic Affairs
Secretary General of the European Conference of
Ministers of Transport
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United Kingdom

Ir. Paul Ekins
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Author of The Global 2000 Report to the President
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Lester Brown
Director Worldwatch Institute
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Prof. dr. Herman E. Daly
Author of Steady-State Economics
Senior Economist Environment Department
The World Bank
1818 H Street, N.W.
Washington, DC 20433
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Dr. Robert Goodland (Canadian)
The First Ecologist hired by the World Bank
Drafted practically all the Bank's Environmental
Policies. Now: Special Advisor on environmental
assessment. Author of 14 tropical ecology books
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Prof. dr. Eugene Odum
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Athens, Georgia 30602
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8. Curriculum vitae, Hueting 1990

October 1990

Curriculum vitae dr. Roefie Hueting

Born 16 December 1929 in The Hague, Netherlands. Having finished gymnasium A in 1948 and B in 1949, he took a sort of sabbatical year to make up his mind whether to choose a scientific career or a career in music, in combination with writing. Prof. Jan Pen stimulated him to study economics, which he did from 1951 to 1959, earning his living as a musician. After a short career as an assistant public accountant he got a job in the field of his main interest, labour market research, first at the Ministry of Social Affairs and later at the Ministry of Housing and Physical Planning.

In the early sixties he observed that children could no longer play in their neighbourhoods and he read in medical literature that this could lead to motoric disturbances and decreased learning capacity. Medical treatment and the building of playgrounds were the recommended solutions. It then struck him that this important loss of welfare was not written off in the System of National Accounts (SNA), whereas medical treatment and the playgrounds were included. He also observed that the values added of building roads were entered in the SNA, but not the loss of nature areas, peace and quiet and recreational facilities.

After a study of literature on biology, ecology and nature conservation he concluded that current market prices are giving wrong signals about the relative scarcity of economic goods, leading to misallocation of resources, while the figures of national income are giving wrong signals about society's economic success.

In the mid sixties he started publishing about these topics, mainly in *Economisch-Statistische Berichten*. A collection of these articles was published in January 1970 under the title "Wat is de natuur ons waard" (What is the Value of Nature).

In 1969 he founded the Department for Environmental Statistics at the Netherlands Central Bureau of Statistics, a multi-disciplinary team which he has lead ever since. The department produces statistics on the whole field of the environment, including species and resources, both in physical and monetary terms, and attempts to construct alternative national income figures, corrected for environmental losses, alongside the current figures.

For both the economic and statistical part of this research he introduced the concept of possible uses of our physical surroundings, named environmental functions or simply: functions. When a function is used at the expense of another function, or threatens to do so in the future, the environment has an economic aspect. In this way the link between economics and ecology is made. In order to find shadow prices for environmental functions an attempt was made to construct a supply and a demand curve. It was possible to construct the supply or elimination cost curve, but only by way of exception a complete demand curve, based on individual preferences.

In the early seventies he assisted the Ministers of Health and Environment dr. Roelof Kruisinga and Irene Vorrink by providing economic arguments for the first environmental legislation in The Netherlands, introducing the "the polluter pays principle".

In 1974 he received a (cum laude) doctors degree on the thesis "Nieuwe schaarste en economische groei". An updated version in the English language has been published in 1980 under the title "New Scarcity and Economic Growth".

In 1974 he criticised the assumptions made in a cost-benefit analysis (CBA) of the construction of a polder in the Waddensea, an estuary of international importance. The advice to go ahead with the construction, made in the Report of the Waddensea Committee ('s-Gravenhage, 1974), was based on this CBA. The criticism led to the set up of a new CBA in which he participated, published in *Een haven op het Balgzand?* (Rotterdam, Arnhem, 1978), and ultimately to the abandoning of the entire polderplan.

In 1976 and 1977 he participated in a study of the Netherlands Scientific Council for Government Policy, furnishing the data and prognoses in the area of nature and the environment. The results were published in the report *The Next Twenty-Five Years* (The Hague, 1978).

By the end of the seventies he initiated, together with Ir. Th.G. Potma, a scenario study estimating the consequences on the production and employment levels of an economic policy that shifts its priority from production growth to saving the environment and natural resources. In the scenario a shift in the direction of environment saving activities is brought about by applying technical measures on polluting activities and by introducing levies and physical measures. Simultaneously the incomes were decreased, in proportion to the costs of the measures taken. The scenario was elaborated with the aid of the SECMON-C model of the University of Amsterdam. The results were published in the report "*Het CE-Scenario, een realistisch alternatief*" (The CE Scenario, a Realistic Alternative) (Centrum voor Energiebesparing, Delft, 1983). The outcome: production growth is checked in comparison with a traditional growth scenario, employment is raised and environmental decay is slowed down, but not completely stopped because the measures taken appeared not to be strong enough. For a description in English see: R. Hueting, *An Economic Scenario that Gives Top Priority to Saving the Environment, Ecological Modelling*, Volume 38, nos 1/2, September 1987.

According to Hueting the following facts explain the results of the scenario study. First, from his analysis of the basic material of the National Accounts (SNA) in the early eighties it emerges that by far the greatest contribution to growth of national income is generated by precisely those activities that harm the environment most, by their use of space, soil and resources or by the pollution they generate, in production and consumption. Secondly, in terms of the SNA, environment saving activities represent a smaller volume than environment burdening. Thus a bicycle-kilometer, a sweater, an extra blanket, beans and a holiday by train represent a smaller volume than respectively a car-kilometre, a high room temperature, heating the whole house, meat and holiday flights. This is mainly due to the fact that the exhaustion of the environment and of natural resources is not charged to national income as costs. Thirdly, saving the environment requires extra input of labour for non-market goods. The production and consumption of the same amount of goods requires more labour time with conservation of the environment than without. If the opposite were true, that is if labour productivity (measured in market terms) would increase by producing in a clean manner, no environment problem would exist. The market mechanism then would bring about this situation "automatically".

In the late eighties he took part in the Taiwan 2000 study. The results of this study were published in: Taiwan 2000. Balancing Economic Growth and Environmental Protection, The Steering Committee Taiwan 2000 Study (ed.), Taipei, 1989.

Besides his work on statistics and the relation between production growth and the conservation of nature and natural resources, he has published in the field of cost-benefit analyses of individual projects that include environmental costs and benefits. He argues that when long term environmental costs and benefits are involved, the use of the market interest as the discount rate implies that society's preferences for sustainable use of the environment amount to zero, which is a strong assumption, the correctness of which cannot be proven. Nevertheless most cost-benefit analyses, such as those of The World Bank, are based on this assumption. See for instance R. Hueting, The Use of the Discount Rate in a Cost-Benefit Analysis for Different Uses of a Humid Tropical Forest Area, (SNA), Ecological Economics, 1990 (forthcoming).

From 1983 through 1986 he attended and contributed to the UNEP-Working Group on Environmental Accounting. This group focused mainly on incorporating the exhaustion and depletion of environment and natural resources in national income, notably in developing countries. The results were published in Environmental Accounting for Sustainable Development, The World Bank, Washington, DC, 1989.

He frequently visited developing countries as a consultant. There too he tried to supplement his knowledge by observing the causes and consequences of environmental problems in the field. Thus he observed the desertification process in Northern Darfur (Sudan), the deforestation and subsequent erosion and flooding in South India, Java (Indonesia) and Cebu (Philippines), the deterioration and destruction of the mangroves in Ecuador, the richness of the tropical rain forests in North Sumatra (Indonesia) and of the savannahs in Kenia. Furthermore he slept in the villages and in the slums of the big cities, and experienced what it is to drive the betjah and the riksja by replacing the driver. By doing so he learned that the poorest people in developing countries are well aware of the causes and consequences of environmental decay, of which they are mainly the victims. He observed that these people sometimes tried in vain to stop this process and that cheap solutions such a bicycling, family planning and sustainable use of forests are conceived by them as necessary and acceptable. According to the people he met, such solutions are hampered by the lack of means, lack of influence on the decision-making process, (religious) traditions and the subordinate position of women.

Part of his work originated in developing countries. Thus his proposal to replace the unknown demand curve for environmental functions (see above) by a perpendicular on a point of the abscissa representing a standard for sustainable use, was first made during his visit to Jakarta in 1986, on invitation of the Minister of Population and Environment. (See R. Hueting, Correcting National Income for Environmental Losses: A Practical Solution for a Theoretical Dilemma, paper prepared for the Conference of Ecological Economics of Sustainability, The World Bank, Washington D.C., 1990).

English language has been published in 1980 under the title "New Concepts and Economic Growth"