

NORDIC Model
Application to Society to
Give People a Better Life

A Policy Redesign Guide for
Academics and Decision Makers

Jan Stenis



Scientific Research Publishing

NORDIC Model Application to Society to Give People a Better Life

Published by

Scientific Research Publishing, Inc.

ISBN: 978-1-64997-215-6

<http://www.scirp.org>

**Copyright © 2021 by Scientific Research Publishing, Inc.,
USA.**

All rights reserved.

This work may not be translated or copied in whole or in part without the written permission of the publisher (Scientific Research Publishing, Inc., USA), except for brief excerpts in connection with reviews or scholarly analysis. Use in connection with any form of information storage and retrieval, electronic adaptation, computer software, or by similar or dissimilar methodology now known or hereafter developed is forbidden.

Requests to the Publisher for permission should be addressed to the SRP Copyrights Manager, Scientific Research Publishing, Inc., USA, E-mail: service@scirp.org.

Light-Life-Love

Joyful Universe

Universe is running
with stars up high.
So stunning
in heavenly sky!

Behold and pray
to cosmos great
when you say
in evening late:

Hope for glad
life for all.
Never sad,
but we are small.

Why fighting
in name of Love?
With lighting
from above!

Why limerick
in Universe-valse?
Without mimic
of the false!

Yes, enjoy culture
with all your heart!
Be no vulture,
if you are smart.

Jan Stenis

Hilarious

Abstract

The Naturally Optimised Revenue Demand in Communities NORDIC model is a novel and comprehensive tool. This book describes how the NORDIC model can give people all over the world a better life by providing economic incentives to improve society. The book is based on the six, scientific papers on the NORDIC model published by Dr Jan Stenis 2020-2021.

The present work illustrates how to apply the NORDIC model to the following areas:

1. Society—how to increase the efficiency of the health, school, and care sectors.
2. Reduction of the crime rate—how to decrease criminality and its danger to health.

3. The atmospheric climate—how to improve the climate and reduce natural disasters.

4. The education sector—how to reduce the dropout rate and lower the qualification age.

5. Improved workforce—how to make the workforce healthier and more productive.

6. Immigration issues—how to facilitate the integration of refugees into a nation.

The NORDIC model is applicable to all activities that transform their input into goods. Constructed shadow costs, or shadow prices, are added to the values of economic significance, to improve the efficiency of the resource utilization in the targeted organisations.

The book appeals to academics interested in socioeconomics, and practitioners who want insights into how to best utilize the taxpayers' and industries' money. The paramount objective is to increase the cost-efficiency of material and intangible resources' usage.

The most interesting findings are the method to facilitate managers' policy decisions and their positive impact on the economic development. That is a prerequisite for a sound technology that promotes environmental sustainability.

The benefit of the NORDIC model is that the shadow costs provide management with an instant view of the performance of their business. They are key factors that convey important aspects.

The novelty of the approach is the innovative usage of the shadow cost construct to create the economic incentives for improvement of management systems. The introduction of a single key indicator to simultaneously monitor the aspects of interest for a management system is a highlight.

The NORDIC model can be used where a "black box" system is present. The gain from using the model is a better life for the citizens, due to the strengthened economy. The model shows utility for entities, such as nations. The resulting shadow costs constitutes a versatile support tool.

The model aids managers and practical operators to reduce losses in economic systems and improve the efficiency, based on the well-known concept of shadow costs. The most important conclusions, based on the developed model and the case studies in the six published papers, are as follows.

1) The research is useful for managers to reduce losses in their organisations. 2) Managers obtain an economic instrument to monitor, manage and evaluate. 3) The constructed economic incentives improve the utilization of resources. 4) Cost-effectiveness and equity increase due to the reduced risk of spillages. 5) Managers can apply economic instruments to prevent people's discontent.

The limitation of the introduced methodology is its less specified impact on the targeted entities. In the future, studies could be conducted to determine how the NORDIC model can be applied to larger units. There is potential to apply the model to higher policy analysis organizational levels.

The manual associated with the NORDIC tool is applicable to the schemes in industries. Therefore, practical application of the NORDIC

model is useful for businesses in general. It may also be possible to apply the model to developing countries, subject to training.

Abstract (in Swedish)

Modellen för ett naturligt optimerat intäktskrav i samhällen—The Naturally Optimised Revenue Demand in Communities model, NORDIC-modellen—är ett banbrytande och användbart verktyg. Denna bok beskriver hur NORDIC-modellen kan ge människor över hela världen ett bättre liv genom att ge ekonomiska incitament att förbättra samhället. Boken baseras på sex, vetenskapliga artiklar om NORDIC-modellen publicerade av Dr Jan Stenis 2020-2021. Föreliggande verk visar hur man ska tillämpa NORDIC-modellen inom följande områden:

1. Samhället—hur man ökar effektiviteten inom vård, skola och omsorg.
2. Minskad brottsfrekvens—hur man minskar kriminaliteten och dess hälsofaror.

3. Det atmosfäriska klimatet—hur man förbättrar klimatet och minskar naturkatastrofer.

4. Utbildningssektorn—hur man minskar skolavhoppet och sänker examensåldern.

5. Förbättrad arbetskraft—hur man gör arbetarna friskare och mer produktiva.

6. Invandringen—hur man underlättar integrationen av flyktingar i en nation.

NORDIC-modellen är tillämpbar på alla verksamheter som omvandlar sin input till varor. Fiktiva skuggkostnader, eller skuggpriser, adderas till poster av ekonomisk signifikans, för att förbättra effektiviteten i utnyttjandet av fysiska och immateriella resurser i de aktuella organisationerna.

Boken riktar sig mot akademiker med intresse för socioekonomi och praktiker som önskar insikter i hur man på bästa sätt utnyttjar skattebetalarnas och företagets pengar.

De mest intressanta upptäckterna är metoden att underlätta ledares

politiska beslut och dessas positiva inverkan på den ekonomiska utvecklingen. Detta är en förutsättning för en sund teknologi som främjar miljömässig uthållighet.

Nyttan med NORDIC-modellen är att skuggkostnaderna ger ledningen en omedelbar överblick över deras verksamhets prestanda. Skuggkostnaden är nyckeltal som förmedlar viktiga aspekter.

Nymodigheten med angreppssättet är den innovativa användningen av de fiktiva skuggkostnaderna för att skapa ekonomiska incitament att förbättra ledningssystemen. Lanseringen av en enkel nyckeltalsindikator för att övervaka intressanta aspekter för ett ledningssystem är en höjdpunkt.

NORDIC-modellen kan användas där ett system med en "svart låda" råder. Nyttan med att använda modellen är ett bättre liv för medborgarna till följd av en stärkt ekonomi. Modellen är nyttig för enheter som nationer. De resulterande skuggkostnaderna utgör ett mångsidigt stödverktyg.

Modellen hjälper ledare och praktiker i produktionen att minska

förlusterna i ekonomiska system och förbättrar effektiviteten baserat på det välkända konceptet med skuggkostnader. De viktigaste slutsatserna baserat på den utvecklade modellen är som följer.

1) Forskningen är användbar för ledare för att minska förluster i organisationerna. 2) Ledare får ett ekonomiskt instrument för att övervaka, leda och utvärdera. 3) De fiktiva ekonomiska incitamenten förbättrar resursutnyttjandet. 4) Kostnadseffektiviteten och rättvisan ökar pga. den minskade risken för spill. 5) Ledare kan tillämpa ekonomiska instrument för att förebygga allmänhetens missnöje.

Den lanserade metodens begränsning är dess mindre väl specificerade inverkan på de aktuella objekten. I framtiden kan studier göras för att bestämma hur NORDIC-modellen kan tillämpas på större enheter. Det finns potential att applicera modellen på högre organisatoriska beslutsnivåer.

Manualen som är kopplad till NORDIC-verktyget kan tillämpas på industriella anläggningar. Praktisk tillämpning av NORDIC-modellen är därför användbar för affärsverksamhet i allmänhet. Modellen kan kanske också användas i utvecklingsländer, efter utbildning.

Table of Contents

Joyful Universe.....	III
Abstract.....	V
Abstract (in Swedish).....	XI
Preface.....	XXI
Preface (in Swedish).....	XXV
The Author’s Motivation for Writing This Book.....	XXIX
The Structure of the Work.....	XXXIII
The Fundamentals.....	XXXV
Explanations.....	XXXV
The Book’s Main Themes.....	XXXVI
The Book’s Arguments.....	XXXVI
The Book’s Objectives.....	XXXVII
Introduction: The Basics within the Scientific Fields of Interest.....	1
Acknowledgements of Information Providers.....	3

Scientific Background.....	5
Methodology.....	7
Research Methods.....	7
The Subjects.....	11
The Study Procedures.....	12
Experimental Interventions.....	12
Sampling Procedures, Sample Size and Ethical Considerations.....	12
Measurement Approaches.....	12
The Research Design.....	13
Theory Foundations.....	15
Basic Theory of the NORDIC Model.....	15
Application of the NORDIC Model to Organisations.....	16
Logical Analysis of the Introduced Theory.....	16
Applications of the NORDIC Model to Societal Issues.....	17
Application of the NORDIC Model to Society.....	18
Introduction.....	18
Research Methods.....	19
Theory for Application of the NORDIC Model to Society.....	19
Analysis.....	20

Manual for Practical Application of the NORDIC Model to Society...	20
Benefits of Study Results.....	21
Recommendation.....	21
Application of the NORDIC Model to Criminality.....	22
Introduction.....	22
Research Methods.....	22
Theory for Application of the NORDIC Model to Criminality.....	23
Analysis.....	24
Manual for Practical Application of the NORDIC Model to Criminality.....	24
Benefits of Study Results.....	25
Recommendation.....	25
Application of the NORDIC Model to Climate.....	26
Introduction.....	26
Research Methods.....	26
Theory for Application of the NORDIC Model to Climate.....	27
Analysis.....	28
Manual for Practical Application of the NORDIC Model to Climate....	28
Benefits of Study Results.....	29

Recommendation.....	29
Application of the NORDIC Model to Education.....	30
Introduction.....	30
Research Methods.....	30
Theory for Application of the NORDIC Model to Education.....	31
Analysis.....	32
Manual for Practical Application of the NORDIC Model to Education.....	32
Benefits of Study Results.....	33
Recommendation.....	33
Application of the NORDIC Model to Workforce.....	33
Introduction.....	33
Research Methods.....	34
Theory for Application of the NORDIC Model to Workforce.....	34
Analysis.....	36
Manual for Practical Application of the NORDIC Model to Workforce.....	36
Benefits of Study Results.....	37
Recommendation.....	37

Application of the NORDIC Model to Migration.....	37
Introduction.....	37
Research Methods.....	38
Theory for Application of the NORDIC Model to Migration.....	38
Analysis.....	40
Manual for Practical Application of the NORDIC Model to Migration.....	40
Benefits of Study Results.....	41
Recommendation.....	41
Results and Discussion.....	43
Conclusions.....	51
General Manual for the Practical Application of the NORDIC Model.....	55
Further Research to Develop the NORDIC Model.....	57
General Recommendations.....	59
Summarizing Vision.....	61
The NORDIC Model Articles.....	65
Creativity.....	67

Preface

The Naturally Optimised Revenue Demand in Communities model (the NORDIC model) constitutes the foundation for an array of scientific papers that Dr Jan Stenis started to publish at the beginning of the new decade, with a general analysis (Stenis 2020a) of how to manage immigrants. The same year, four more papers were published on how to optimise the workforce (Stenis 2020b), education (Stenis 2020c), and climate (Stenis 2020d) plus reduce the crime rate (Stenis 2020e) in Sweden where Dr Stenis lives. In 2021, it was shown how the NORDIC model can be applied to optimise society in general, with emphasis on the health, school, and care sectors (Stenis 2021). Thus, the NORDIC model is aimed at socioeconomics to improve societies.

The results of the research show that it is possible to apply the NORDIC model to physical, as well as to intangible issues, to make

the utilisation of resources more efficient and thereby promote the survival of our species and the preservation of human culture. The NORDIC model provides management with an easy-to-use tool to simultaneously monitor, manage and evaluate its activities to transform inputs into utilities.

It has been shown how the NORDIC model can improve the economy, all the way from workers' life, up to the national level. Above all, the application of the NORDIC model promotes equity, also in the global perspective since this model facilitates the equalisation of access to resources.

These scientific findings hence promote our civilisation's chances of survival over the long term, also in space. The NORDIC model is generally applicable to activities that show an inflow of inputs into an administrative unit that are transformed in "the box", which discharges a main flow of goods plus a minor residual flow. Thus, the NORDIC model can optimise any kind of flow that occurs when something is produced in a unit exhibiting an input and an output.

The NORDIC model has been applied across a wide field of usages.

It was successfully applied across an array of scientific specialities and their applications. The ambition is to promote the chances of humans, or their silica-based successors, the robots, to preserve their civilisation, both here on Earth and when mankind in the future will expand into outer space.

The NORDIC model is a powerful and versatile scientific model. Dr Stenis's innovation promotes an increased equity for distributing the assets and resources of Earth and in the cosmos.

Preface (in Swedish)

Modellen för ett naturligt optimerat intäktskrav i samhällen—The Naturally Optimised Revenue Demand in Communities model, NORDIC-modellen—utgör grunden för en lång rad av vetenskapliga artiklar som Dr Jan Stenis började publicera vid början av det nya decenniet med en allmän analys av hantering av immigranter som start (Stenis 2020a). Samma år publicerades fyra artiklar till om hur man ska optimera arbetskraften (Stenis 2020b), utbildningen (Stenis 2020c) och klimatet (Stenis 2020d) samt hur brottsfrekvensen minskas (Stenis 2020e) i Sverige där Dr Stenis bor. År 2021 visades slutligen hur NORDIC-modellen generellt kan optimera samhällen med betoning på vård, skola och omsorg (Stenis 2021). NORDIC-modellen är således inriktad mot socioekonomi för att förbättra samhället.

Forskningsresultaten visar att det är möjligt att tillämpa

NORDIC-modellen på materiella såväl som immateriella ämnesområden för att effektivisera resursutnyttjandet och därigenom främja vår arts överlevnad och bevara den mänskliga kulturen. NORDIC-modellen ger ledningarna ett lättanvänt verktyg för att samtidigt övervaka, styra och utvärdera sina aktiviteter för att omvandla input till nyttigheter.

Det har visats hur NORDIC-modellen kan förbättra ekonomin hela vägen från arbetarnas liv upp till den nationella nivån. Framför allt främjar tillämpningen av NORDIC-modellen rättvisan, även globalt sett, eftersom denna modell underlättar en jämställd tillgång till resurser av många slag.

Dessa vetenskapliga upptäckter gynnar således vår civilisations chanser att överleva på lång sikt, även i rymden. NORDIC-modellen är nämligen generellt tillämpbar på aktiviteter som uppvisar ett inflöde av input till en administrativ enhet, vari inputen omvandlas i "lådan", vilken släpper ut ett huvud-flöde av nyttigheter samt ett mindre flöde av restprodukter. NORDIC-modellen kan optimera alla flöden som uppkommer när något tillverkas i en enhet med en input och ett output.

NORDIC-modellen har applicerats över ett brett fält av användningsområden. Den tillämpades med framgång på en mängd av vetenskapliga specialiteter och deras tillämpningar. Ambitionen är att främja möjligheterna för människor, eller deras kiselbaserade efterföljare robotarna, att bevara sin civilisation, både här på jorden och när mänskligheten i framtiden expanderar till yttre rymden.

NORDIC-modellen är en kraftfull och mångsidig vetenskaplig modell. Dr Stenis uppfinning främjar en ökad rättvisa vid distributionen av tillgångar och resurser på jorden och i kosmos.

The Author's Motivation for Writing This Book

In human life, the aspect of time is of utmost importance. It's not just that *time is money*. No, it's much more comprehensive than that.

Above all, the *scale* of time is important to consider when you perform your duties of life. Nowadays, people probably think a lot more about the wellbeing of the future generations than in the times of, for example, classical Greece or during the Roman Empire. For example, are your actions for yourself with respect to your own lifetime, or for your children and their children, some centuries away from now? Or do you try to work hard to secure the very existence of your own species millions of years from now? Consider the fact that certain species here on Earth have survived 300 million years! However, bear in mind that most species on Earth usually don't survive more than a million

years and we humans already have the hydrogen bomb technology that could be used to destroy ourselves...

Today, some 95% of all species ever having lived on Earth are now extinct by the impact of astronomical cataclysms or other natural causes. Thus, it may be a good idea to think about how to guarantee our own survival, if our existence can be morally justified in the light of our aggressive history? In other words, do enlightened citizens work with reference to their present day-to-day life, or in the geological and perhaps even the astronomical time perspective?!

What is the most important thing to do in life? Well, of course you must live your daily life in collaboration with your fellow beings as an ordinary tribe-related mammal. But being a traditional organism within a traditional ecosystem, the utmost instinct-based task for us to secure is the long-term survival of our own species!

What are the prospects for our survival? Well, studying astronomy can be scary. For example, somewhere out there in outer space, there's a huge rock with the name "Earth" "written" on it. *When* it hits us, our civilisation will end within a week. If something happens to the planet

Jupiter and shakes its orbit a few degrees, the whole planetary system will start oscillating and finally disintegrate. Many more similar events await down the line.

The scariest of all is the largest visible object in sky—the Andromeda galaxy. It is quickly approaching the Milky Way—head on—and in some 30 million human generations it will comfortably swallow our home galaxy, even though it has only existed for 6,000 human generations before us. If we are lucky, Earth will *not* be thrown out into the cold, dark space away from the sun, if we humans, in our present life form or some other shape, have not escaped to other planets by then. If we manage to colonise distant worlds, it doesn't matter what happens to our home planet, in some respects, because some surviving human colonies in space will be able to preserve the culture.

To accomplish this, we must have plenty of physical and intangible resources. Thus, we must utilise our resources efficiently so that we are not stranded on our home planet when disasters occur.

We must learn to exploit the resources, on Earth and on distant worlds, but do it as efficiently as possible. And that's where Dr

Stenis's great innovation, the NORDIC model, enters the arena.

The NORDIC model can promote favourable development, by providing management with tools for decision-making to improve society. This is what the book is all about, to facilitate a glorious future for us humans and our solid-state-based successors, robots, who only require electricity.

The Structure of the Work

This work is divided into six major parts (see Figure 1). Each application of the NORDIC model is given a space of its own.

In the present work, a broad investigation of management options constitutes the basis for an attempt to obtain tools to solve daily management problems in the social sector. A comprehensive review is presented of the previously obtained results, as given by Dr Jan Stenis's articles on the NORDIC model.

The efforts to apply the NORDIC model are, to a large extent, evaluated from an economic perspective. The objective of the work is to make a presentation of the applicability of the NORDIC model (Stenis 2020abcde, 2021) to management issues.

Conclusions are provided and recommendations given. The book

ends with a futuristic statement; a vision of the view presented in this work as regards how to make management systems more efficient to preserve civilisation.

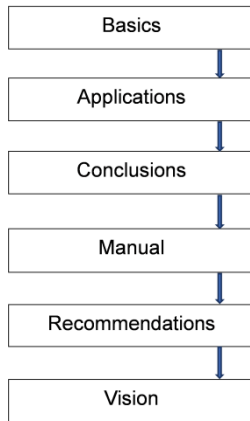


Figure 1. The structure of the work.

The Fundamentals

Explanations

1. “Society” is “an organized group working together or periodically meeting because of common interests, beliefs, or profession”, (Merriam-Webster 2021).

2. “Shadow price” is defined as “a price for a resource, good, or service which is not based on actual market exchanges but is mathematically derived from indirect data obtained from related markets”, (Your Dictionary 2021).

3. “Expense” or “expenditure” is “an outflow of money to another person or group to pay for an item, service, or other category of costs”, (Wikipedia 2021).

The Book's Main Themes

The more input for goods that is transformed into goods delivered, the more money the producing entities make, because dumping wastes is equal to throwing money away. The purchased input that not transformed into goods could potentially have increased profits.

The versatile NORDIC model proposes an effective way, in financial terms, of making society better utilise its input and thereby raising the status of the entities' residual products.

The Book's Arguments

War is often a question of money; the one who spends the most usually wins the battle. Mankind, an ordinary mammal, is constantly waging war with the surroundings. An ecosystem is characterised by everybody's war with everything else.

The universe is a dangerous ecosystem. If mankind is to survive, we need a tremendous amount of advanced knowledge. The NORDIC model contributes to the survival of our species through optimising

societies here on Earth and even in the galactic context. If we have the financial muscle, almost everything can be accomplished.

The NORDIC model contributes to the optimisation of the economy, even throughout universe. This economic instrument promotes universal harmony, characterised by peace and prosperity.

The Book's Objectives

The overruling ambition of the present work is to contribute to the survival of our species by implementing economic theory and models to provide economic incentives for man to efficiently utilise the resources of society. This is accomplished by promoting the work with the goal of maximally spreading the information about how to implement the NORDIC model across as many relevant areas of mankind's societal life as possible.

Optimisation of the exploitation of physical and intangible resources on Earth and in space is emphasised in this work. The reasons for this are that the main objective of this book is to improve society,

and that the author believes that the future of mankind is dependent on our ability to explore space to increase our chances of survival.

Introduction: The Basics within the Scientific Fields of Interest

The ambition is to abolish the misuse of resources in society. Low residuals thinking will also be important in space in lunar modules and when mankind constructs space platforms to facilitate exploration there. In space, the materials namely must be designed to enable reuse, recirculation, and energy utilisation. The natural solution would be to apply Nikola Tesla's findings on free energy out of thin air to everyone. If so, fossil fuels would now be obsolete.

The NORDIC model improves the resource economy through optimising the flow of utilities through any production unit. Several papers have been published showing how the NORDIC model can be applied across, for example, economic optimisation of social sectors,

health improvement, plus how to make authorities work more efficiently and reduce the negative impact of criminality. The NORDIC model is compatible with a circular economy as opposed to linear thinking. The main purpose of the NORDIC model is to reduce mainly intangible residuals at the source and hence promote the circular economy ideal of realising the zero-waste ambition as much as possible.

Primarily, the NORDIC model is intended to improve the economy, technological standards, and environmental conditions. Ideally, the NORDIC model will substantially contribute towards realising the concept of a circular economy, where there are zero losses. Also, ethical aspects are of importance, if a technical solution is profitable, it will be questionable if it hurts the citizens.

Ethical considerations are important to ensure sustainability. Managers who redesign the public and corporate policies must apply a sustainable way of living, in harmony with Mother Earth.

If so, a circular economy will be promoted by the enlightened citizens' daily actions. This enhances a sustainable societal development, which is also beneficial for the economy-dependent welfare.

Acknowledgements of Information Providers

The NORDIC model was developed because of Dr Jan Stenis's personal and sole effort, without any substantial input from external information providers. The proposed theory has been commented upon at academic fora, as well as by people having experience with it.

According to an extensive literature search by the author, a scientific design like the NORDIC model has never been developed anywhere in the world. To the best of the author's knowledge, "very similar research" does not exist.

Therefore, this book's scientific ambition is of a virginal nature, groundbreaking and of a novel character. Thus, no persons are acknowledged.

Scientific Background

The background for this work is the common strive for achieving the wanted results with as limited resources as possible. This general motivation points at the importance of the subject.

The need for ever more cost-effective organisations justifies taking up the study to improve actors' performance. The Naturally Optimised Revenue Demand in Communities NORDIC model is introduced.

The objective is to improve the flow of physical and intangible utilities through entities, such as producing companies and nations. Shadow costs, or prices, constitute the methodology's basis.

Methodology

Research Methods

The design of the scientific work emphasises a logical-historical disposition. It follows the research process that contains, for example, the background, presentation of the problem and theory used, description of the data collection and processing, the analysis of the results and the conclusions and recommendations. Explanative investigations are featured to investigate the causal relationship between the variables in the new model. The investigation is also explorative since the study seeks new knowledge to present in the written form.

The main hypothesis is that the flow of physical and intangible utilities through entities of different kinds can be improved by applying the NORDIC model. The main goal is to facilitate the daily use of the NORDIC model by managers and practical operators. This study

will contribute to improving the economic, environmental, and technological standards for organisations, which also improve the living conditions for related communities. The research gap that this study aims to fill is the need to develop new economic instruments to manage communities and corporations.

The major research contributions are a better understanding of how community and corporate management can be facilitated by the application of economic instruments, and a manual to help the managers and operators who employ the NORDIC model. The method improves the flow of physical and intangible utilities through entities, such as producing companies and nations. Managers are provided with a single, key factor to simultaneously monitor, manage, and evaluate their projects.

The NORDIC model is a tool to monitor, manage and evaluate how the economic, technological, and environmental performance of a firm or a community change over time. The method involves adding so-called shadow costs to economic systems. A shadow cost is commonly referred to as a monetary value assigned to currently unknowable or

difficult-to-calculate costs (Wikipedia). These shadow costs are inserted into the budgets and accounting systems of the entity using the NORDIC tool. The changes that occur over time in the shadow costs provide a versatile tool that enables organisations to reduce the inefficiencies of the flows that these shadow costs are allocated to, one by one, in order of declining importance, or lowering the costs of the flows in question. It is considered that the versatile NORDIC model can be applied to produce robust results, given the inherent logic of the mathematical theories underlying the model.

Mainly, the problem has been analysed from a public perspective. The research approach modifies models and theories. Few parameters are used to move the research frontier ahead.

The research problem is centred around accomplishing a change. The choice of method is centred on stakeholders through case studies. The results are increased knowledge.

An analytical approach is applied to develop theories and models. The hypotheses are analysed and verified. Consequences are explained and the causal relationships are investigated and described.

Information was obtained through public Internet sources and a few, personal E-mail contacts. The obtained results are generalised to enable a continued accumulation of knowledge. Empirical facts are observed to induce theories and deduce predictions to obtain and verify new facts.

When modifying the present economic models, an analytical, economic-logic approach is mainly applied. A descriptive systems theory is used for the model's context. A non-personal approach is chosen that is more positivistic than, for example, humanistic.

An attempt is made to describe and establish as a part of the results and to predict and guide as a part of the discussion. Concrete actions to take are suggested to improve the problem situation in economic, environmental, and technological terms. Recommendations for the suggested and relevant actors are given, based on the statements about the findings, provided in the study.

The sources of information for the study have included relevant literature and articles and database search, the Internet, and some personal E-mail contacts. This data is processed. Thus, trustworthy, sec-

ondary data is used because primary data is new and unprocessed.

The quantitative methodology is prevailing. The passing from theory to empiric encompasses an operationalisation.

Traditional economic modelling constitutes the validity of the methods developed in this study. The use of relevant literature grants the reliability.

The instrument that is developed in this work is based on financial incentives. It is hence an economic instrument (EI) which strengthens the dialogue between different actors.

The concepts presented here contribute to reducing the misuse of resources in society. The external environment will improve by time to enhance the citizens' quality of life.

The Subjects

The approach was tested in realistic case studies. The nation of Sweden was chosen as the study object of the published papers, because it facilitated the obtaining of plenty of relevant data.

The Study Procedures

Experimental Interventions

No direct intervention took place. Only personal computers were used in this study.

Sampling Procedures, Sample Size and Ethical Considerations

Reliable data were collected from public sources. No agreements or payments were made in exchange for this data. The sample size for the scientific papers that this study is based on, was the nation of Sweden. No study participants were recruited to participate in this study.

Measurement Approaches

Data were collected from online sources. Only reliable sources were consulted. The cultural validity was based on the use of impersonal, socio-economic data.

The Research Design

This study outlines the NORDIC model's theory and describes how to use the NORDIC model for societal policy issues. In the peer-reviewed papers on the NORDIC model, case studies were used to illustrate how the NORDIC model can improve the living conditions in the nation of Sweden (Stenis 2021).

Theory Foundations

Basic Theory of the NORDIC Model

The NORDIC model is expressed by Equations (1) and (2).

$$\text{The shadow cost : } S = \left(\frac{X}{Y} \right) * Z * W \quad (1)$$

$$\text{The entity to be optimized : } X = V - C \quad (2)$$

where S represents the positive shadow cost; $X = (V - C)$ represents the net worth of the entity to be optimised, or at least improved, if optimisation is not feasible; V represents the value of X ; C represents the cost of X ; Y represents the sum of the entities to be optimised, or improved; Z represents the value of the activities connected to X , and; W represents the weight factor (without unit, it is a decimal value) for the impact on society by X , per period for an administrative unit that

is studied. Unit: monetary currencies, kilogram, litre, or Joule.

Application of the NORDIC Model to Organisations

The constructed, but useful, shadow cost S is additionally inserted into the profit and loss account of the organisation in question to accomplish monitoring, management, and evaluation of the development of X . The addition of S gives economic incentives to improve the current situation if S is considered as a real phenomenon to be applied.

Logical Analysis of the Introduced Theory

If S is a positive shadow cost and increases, this means that the organisation in question has improved, as regards optimising, or at least improving, X . When S decreases over time, this calls for corrective actions to be taken by management to avoid inefficiencies with a negative impact on the economy. In practice, S is continuously monitored to detect signs of a declining resource economy.

Applications of the NORDIC Model to Societal Issues

This section describes how to apply the NORDIC model to the following topics:

1. Society—how to increase the efficiency of the health, school, and care sectors.
2. Reduction of the crime rate—how to decrease criminality and its danger to health.
3. The atmospheric climate—how to improve the climate and reduce natural disasters.
4. The education sector—how to reduce the dropout rate and lower the qualification age.

5. Improved workforce—how to make the workforce healthier and more productive.

6. Immigration issues—how to facilitate the integration of refugees into a nation.

Application of the NORDIC Model to Society

Introduction

There is a need for more cost-effective organisations to improve communities. A new decision-support tool is provided for authorities, politicians and others interested in redesigning the public policy.

The practical implications of this study are better living conditions for citizens and enhanced opportunities for leaders to logically explain the reasons for initiating certain actions. This study fills the need for providing new economic instruments to manage the misuse of resources in society. The work improves the flows of physical and intangible utilities through various entities, which in turn improves the efficiency of society.

Research Methods

The NORDIC model was adapted to society, with emphasis on the health, school, and care sectors.

Theory for Application of the NORDIC Model to Society

The economic aspect of efficient organisations is highlighted by the NORDIC model. The NORDIC model produces the shadow cost S_{nation} that shows how successful the authorities' public policy is.

By Equations (1) and (2), X represents the nation's health care, education, and social services. X is given by the municipalities and county councils purchases of services. Y represents the state's expenses for education plus health care and social services. Z represents the nation's GDP from public administration. W represents the relative life expectancy in the nation. Period: annually. Unit: monetary currencies.

Table 1 shows the principle for how to use the shadow cost S_{nation} in

practice. Here, S_{nation} is added to the nation's revenues, the parameter Z being an income that has a positive impact.

Table 1. The nation's public budget.

Revenues S_{nation}
Expenses
Public Sector Borrowing Requirement (PSBR)

Analysis

A decreased PSBR, due to a raised S_{nation} , points to a more successful health, school, and care policy. If the PSBR increases over time due to a declined S_{nation} , this calls for public authorities to act.

Manual for Practical Application of the NORDIC Model to Society

1. Estimate the parameters in Equation (1).
2. Calculate the constructed shadow cost S_{nation} .

3. Regularly estimate the parameters in Equation (1).
4. Regularly calculate S_{nation} to follow its development.
5. Take actions if S_{nation} decreases to improve society.

Several authorities should collaborate when using the NORDIC model to improve society. Subsequently, the resource economy can be improved where the NORDIC model is applied.

Benefits of Study Results

- Personal suffering is reduced due to increased GDP.
- Authorities obtain a versatile tool to improve society.
- Methods based on common economic and mathematic theories.

Recommendation

I recommend applying the NORDIC model to nations and employing the NORDIC model to improve the health, school, and care sectors (Stenis 2021).

Application of the NORDIC Model to Criminality

Introduction

Crime is one of the most important social problems, affecting public safety, children's development, and adult's socioeconomic status. A new decision-support tool is provided for authorities, politicians and others interested in redesigning the crime prevention policy.

The practical implications of this study are better circumstances for the inmates and affected citizens and enhanced opportunities for leaders to logically explain the reasons for initiating certain actions. This study fills the need for providing new economic instruments to manage criminality. The work improves the economy, which in turn improves the living conditions.

Research Methods

The NORDIC model was adapted to crime issues, with emphasis on crime prevention.

Theory for Application of the NORDIC Model to Criminality

The economic aspect of criminality is highlighted by the NORDIC model. The NORDIC model produces the shadow cost S_{crime} that shows how successful the authorities' crime policy is.

$$S_{\text{crime}} = (V - C) * AI * RF * BL \quad (3)$$

$$(0 < BL < 100 \text{ percent}) / 100 \quad (4)$$

where, S_{crime} is the Shadow cost for crimes in a nation; $X = (V - C)$; V is the Value of products and services produced by inmates; C is the Cost for prison and probation services; AI is the Average age for the Inmates; RF is the Relapse Frequency for criminals; BL is the citizens' Belief in Law and order as the most important problem, without sort, it is a decimal number. Period: annually. Unit: monetary currencies.

Table 2 shows the principle for how to use the shadow cost S_{crime} in practice. Here, S_{crime} is added to the nation's expenses, the parameter

$X = (V - C)$ being a cost that has a negative impact.

Table 2. The nation's public budget.

Revenues
Expenses S_{crime}
Public Sector Borrowing Requirement (PSBR)

Analysis

A decreased PSBR, due to a lowered S_{crime} , points to a more successful crime policy. If the PSBR increases over time due to a raised S_{crime} , this calls for crime prevention authorities to act.

Manual for Practical Application of the NORDIC Model to Criminality

1. Estimate the parameters in Equation (3).
2. Calculate the constructed shadow cost S_{crime} .
3. Regularly estimate the parameters in Equation (3).

4. Regularly calculate S_{crime} to follow its development.
5. Take actions if S_{crime} increases to reduce criminality.

Several authorities should collaborate when using the NORDIC model to reduce the crime rates. Subsequently, criminality can be lowered where the NORDIC model is applied.

Benefits of Study Results

- Personal suffering is reduced due to the reduced crime rate.
- Authorities obtain a versatile tool to decrease the criminality.
- Methods based on common economic and mathematic theories.

Recommendation

I recommend applying the NORDIC model to crime prevention issues and employing the NORDIC model to reduce the crime rates (Stenis 2020e).

Application of the NORDIC Model to Climate

Introduction

Excessive, volatile weather is a global problem with huge, economic consequences. A new decision-support tool is provided for authorities, politicians and others interested in redesigning the climate policy.

The practical implications of this study are mitigated effects of climate change and enhanced opportunities for leaders to logically explain the reasons for initiating certain actions. This study fills the need for providing new economic instruments to manage climate change. The work improves the societal economy, which in turn improves the living conditions.

Research Methods

The NORDIC model was adapted to climate issues, with emphasis on climate change mitigation.

Theory for Application of the NORDIC Model to Climate

The economic aspect of climate change is highlighted by the NORDIC model. The NORDIC model produces the shadow cost S_{climate} that shows how successful the authorities' climate policy is.

$$S_{\text{climate}} = \left[\frac{(V - C)}{\text{GDP}} \right] * \text{CD} * \text{BC} \quad (5)$$

$$(0 < \text{BC} < 100 \text{ percent}) / 100 \quad (6)$$

where, S_{climate} is the Shadow cost for climate changes in a nation; X is the increased atmospheric carbon, $X = (V - C)$; V is the Value of an increased content of carbon in the atmosphere; C is the Cost for an increased content of carbon in the atmosphere; GDP is the Gross Domestic Product (GDP) of the nation; CD is the costs for Climate-related Disasters such as hurricanes, fires and flooding; BC is the citizens' Belief in Climate changes due to anthropogenic impact, without sort, it is a decimal number. Period: annually. Unit: monetary currencies.

Table 3 shows the principle for how to use the shadow cost $S_{climate}$ in practice. Here, $S_{climate}$ is added to the nation's expenses, the parameter CD being a cost that has a negative impact.

Table 3. The nation's public budget.

Revenues
Expenses $S_{climate}$
Public Sector Borrowing Requirement (PSBR)

Analysis

A decreased PSBR, due to a lowered $S_{climate}$, points to a more successful climate policy. If the PSBR increases over time due to a raised $S_{climate}$, this calls for climate authorities to act.

Manual for Practical Application of the NORDIC Model to Climate

1. Estimate the parameters in Equation (5).
2. Calculate the constructed shadow cost $S_{climate}$.

3. Regularly estimate the parameters in Equation (5).
4. Regularly calculate S_{climate} to follow its development.
5. Take actions if S_{climate} increases to improve the climate.

Several authorities should collaborate when using the NORDIC model to mitigate the effects of climate change. Subsequently, the climate can be improved where the NORDIC model is applied.

Benefits of Study Results

- Citizens' suffering is reduced due to the improved climate.
- Authorities obtain a practical tool to mitigate the climate change.
- Methods based on common economic and mathematic theories.

Recommendation

I recommend applying the NORDIC model to climate change issues and employing the NORDIC model to mitigate the negative impact of

climate change (Stenis 2020d).

Application of the NORDIC Model to Education

Introduction

University dropout is a serious problem, when leaving high school, college or university for practical reasons, necessities, or disillusionment. A new decision-support tool is provided for authorities, politicians and others interested in redesigning the school policy.

The practical implications of this study are better circumstances for the students and enhanced opportunities for leaders to logically explain the reasons for initiating certain actions. This study fills the need for new economic instruments to manage the education sector. The work improves the economy, which in turn improves the living conditions.

Research Methods

The NORDIC model was adapted to education issues, with empha-

sis on redesigning dropout prevention policy.

Theory for Application of the NORDIC Model to Education

The economic aspect of dropping out is highlighted by the NORDIC model. The NORDIC model produces the shadow cost S_{dropout} that shows how successful the authorities' school policy is.

$$S_{\text{dropout}} = \left[\frac{(V - C)}{\text{GDP}} \right] * \text{LE} * \text{AB} \quad (7)$$

where, S_{dropout} is the Shadow cost for dropouts in a nation; X is the students, $X = (V - C)$; V is the economic Value of the students on the labour market; C is the national education budget; GDP is the Gross Domestic Product (GDP) of the nation; LE is the total cost for study Loans in Extraordinary circumstances, after the studies' nominal period of loan; AB is the Average age for passing a Bachelor of Science (BSc). Period: annually. Unit: monetary currencies.

Table 4 shows the principle for the use of the shadow cost S_{dropout} in practice. Here, S_{dropout} is added to nations' expenses, the parameter LE

being a cost that has a negative impact.

Table 4. The nation's public budget.

Revenues
Expenses $S_{dropout}$
Public Sector Borrowing Requirement (PSBR)

Analysis

A decreased PSBR, due to a lowered $S_{dropout}$, points to a more successful education policy. If the PSBR increases over time due to a raised $S_{dropout}$, this calls for school authorities to act.

Manual for Practical Application of the NORDIC Model to Education

1. Estimate the parameters in Equation (7).
2. Calculate the constructed shadow cost $S_{dropout}$.
3. Regularly estimate the parameters in Equation (7).
4. Regularly calculate $S_{dropout}$ to follow its development.
5. Take actions if $S_{dropout}$ increases to decrease the dropout rate.

Several authorities should collaborate when using the NORDIC model to improve education. Subsequently, the dropout rate can be decreased where the NORDIC model is applied.

Benefits of Study Results

- Personal suffering is reduced due to the lowered qualification age.
- Authorities obtain a versatile tool to decrease the dropout rate.
- Methods based on common economic and mathematic theories.

Recommendation

I recommend applying the NORDIC model to education issues and employing the NORDIC model to decrease the dropout rate (Stenis 2020c).

Application of the NORDIC Model to Workforce

Introduction

A high employment-to-population ratio has positive effects on the

Gross Domestic Product, in general. A new decision-support tool is provided for authorities, politicians and others interested in redesigning the labour policy.

The practical implications of this study are better circumstances for the unemployed and enhanced opportunities for leaders to logically explain the reasons for initiating certain actions. This study fills the need for new economic instruments to manage the employment sector. The work improves the economy, which in turn improves the living conditions.

Research Methods

The NORDIC model was adapted to workforce issues, with emphasis on redesigning labour policy.

Theory for Application of the NORDIC Model to Workforce

The economic aspect of unemployment is highlighted by the NOR-

DIC model. The NORDIC model produces the shadow cost $S_{\text{unemployment}}$ that shows how successful the authorities' labour policy is.

$$S_{\text{unemployment}} = \left[\frac{(V - C)}{\text{GDP}} \right] * \text{HU} * \text{AU} \quad (8)$$

where, $S_{\text{unemployment}}$ is the Shadow cost for unemployment in a nation; X is the workforce, $X = (V - C)$; V is the economic Value of the unemployed people on the labour market; C is the Cost for the unemployment; GDP is the Gross Domestic Production (GDP) of the nation; HU is the Health care-cost for the Unemployed; AU is the Average age for the Unemployed. Period: annually. Unit: monetary currencies.

Table 5 shows the principle for the use of the shadow cost $S_{\text{unemployment}}$ in practice. Here, $S_{\text{unemployment}}$ is added to the nation's expenses, the parameter HU being a cost that has a negative impact.

Table 5. The nation's public budget.

Revenues
Expenses $S_{\text{unemployment}}$
Public Sector Borrowing Requirement (PSBR)

Analysis

A Decreased PSBR, due to a lowered $S_{\text{unemployment}}$, points to a more successful labour policy. If the PSBR increases over time due to a raised $S_{\text{unemployment}}$, this calls for labour authorities to act.

Manual for Practical Application of the NORDIC Model to Workforce

1. Estimate the parameters in Equation (8).
2. Calculate the constructed shadow cost $S_{\text{unemployment}}$.
3. Regularly estimate the parameters in Equation (8).
4. Regularly calculate $S_{\text{unemployment}}$ to follow its development.
5. Take actions if $S_{\text{unemployment}}$ increases to improve the employment-to-population ratio.

Several authorities should collaborate when using the NORDIC model to improve the workforce. Subsequently, the employment rate can be improved where the NORDIC model is applied.

Benefits of Study Results

- Personal suffering is reduced due to improved workforce.
- Authorities obtain a versatile tool to lower unemployment.
- Methods based on common economic and mathematic theories.

Recommendation

I recommend applying the NORDIC model to labour issues and employing the NORDIC model to improve the health of the workforce (Stenis 2020b).

Application of the NORDIC Model to Migration

Introduction

The impact of the reception of refugees on the public economy is crucial (Ruist 2018). A new decision-support tool is provided for authorities, politicians, and others interested in redesigning the refugee policy, while considering the humanitarian aspect.

The practical implications of this study are the improved situation for refugees and enhanced opportunities for leaders to logically explain the reasons for initiating certain actions. This study fills the need for new economic instruments to manage migration. The work improves the economy, which in turn improves the living conditions.

Research Methods

The NORDIC model was adapted to migration issues, with emphasis on reception of refugees.

Theory for Application of the NORDIC Model to Migration

The economic aspect of migration is highlighted by the NORDIC model. The NORDIC model produces the shadow cost $S_{\text{migration}}$ that shows how successful the authorities' refugee policy is.

$$S_{\text{migration}} = \left[\frac{(V - C)}{MA} \right] * PI * LI * HT \quad (9)$$

$$(0 < HT < 100 \text{ percent of the citizens in favour of free immigration}) / 100 \quad (10)$$

where, $S_{\text{migration}}$ is the Shadow cost for the immigration to a nation; X is the migrants, $X = (V - C)$; V is the economic Value of the immigration; C is the Cost for the immigration; MA is the cost of the Migration Agency; PI is the value of the Products and services by first generation Immigrants; LI is the Life expectancy for Immigrants, compared to natives; HT is the Human Tolerance, Swedish: medmänsklighet, without sort, it is a decimal value. Period: annually. Unit: monetary currencies.

Table 6 shows the principle for the use of the shadow cost $S_{\text{migration}}$ in practice. Here, $S_{\text{migration}}$ is added to the nation's revenues, the parameter PI being an income that has a positive impact.

Table 6. The nation's public budget.

Revenues $S_{\text{migration}}$
Expenses
Public Sector Borrowing Requirement (PSBR)

Analysis

A decreased PSBR, due to a raised $S_{\text{migration}}$, points to a more successful integration of immigrants. If the PSBR increases over time due to a declining $S_{\text{migration}}$, this calls for migration authorities to act.

Manual for Practical Application of the NORDIC Model to Migration

1. Estimate the parameters in Equation (9).
2. Calculate the constructed shadow cost $S_{\text{migration}}$.
3. Regularly estimate the parameters in Equation (9).
4. Regularly calculate $S_{\text{migration}}$ to follow its development.
5. Take actions if $S_{\text{migration}}$ decreases to improve the integration of immigrants.

Several authorities should collaborate when using the NORDIC model to improve the integration of immigrants. Subsequently, the reception of refugees can be improved where the NORDIC model is applied.

Benefits of Study Results

- Personal suffering is reduced due to immigrants fitting in better.
- Authorities obtain a tool to improve the reception of refugees.
- Methods based on common economic and mathematic theory.

Recommendation

I recommend applying the NORDIC model to migration issues and employing the NORDIC model to optimise national immigration levels (Stenis 2020a).

Results and Discussion

The benefit of the NORDIC model is that the shadow cost (S) provides management with an instant view of the performance of their business. The S conveys important aspects. A better possibility for CEOs to manage well is the major value of knowledge added.

The NORDIC model can be used where a “black box” system is present. The gain from using the model is a better life for the citizens, due to the strengthened economy. The model shows utility for various entities, such as nations. The S constitutes a versatile tool.

The main strength of the model is its generality. The disadvantages are the less good precision when employing the shadow costs, and the difficulties to get access to input data to apply the theory in practice. Further research can develop mathematical algorithms adapted to the public sectors and add relevant factors to the current model-design.

Examination of the S over time shows the changes in the organisational efficiency. The S is a key indicator. If S decreases compared with the previous years, this calls for actions, such as the implementation of measures to improve the performance. Thus, the S constitutes an economic warning signal that managers seriously should consider as their decision basis.

A substantially decreased S , compared with that of the previous year, indicates that major changes are required, whereas a small change may indicate that only small adjustments are required. Management can design its own rules regarding when and how to act, depending on the extent of the changes in S . Different degrees of changes in S give rise to different actions, depending on the changes' size and relative speed of varying.

The shadow cost S increases proportionally with $X = (V - C)$ that is the net worth of the entity to be optimised, where V represents the value of X , and C represents the cost of X . It is unproblematic to apply the launched model to different organisations to provide an improving instrument. The application of the economic instrument can be per-

formed, regardless of the X decreasing or increasing, compared to its original value, due to the linear relationship.

The S in the NORDIC model does not directly show the value of the actors' equipment. Nor does the NORDIC model consider the size of the organisation's assets. The key factor S provides an indicator that indicates how efficiently the actor uses its resources over time to produce utilities. If X denotes an entity of negative value for the actor in question, the negative value of X is to be considered, and inserted constituting a PSBR-raising expenditure.

It cannot be determined what specific actions that should be taken by studying the changes in the S . A decreased S indicates that actions should be carried out, but not exactly which ones. Determining the appropriate actions is a task for the civil servants in consultation with their CEO.

If the S decreases from one year to the next, the management understands that it must act. The NORDIC model alerts management that it must act but leaves the determination of the improvements to the employees and CEO of the organisation. If the S increases from one

year to the next, the NORDIC model tells management that the business has improved, in general terms.

The NORDIC model does not determine in detail which solutions should be implemented. It indicates that when the S decreases, there is a system-issue that requires action. The model does not indicate precisely which solution the CEO will choose. It provides managers with an overview.

This is how economic instruments work in general. The development of the NORDIC model includes a stepwise manual that covers its practical application. This presented manual provides the very step-by-step instructions for application of the launched model. The NORDIC model is based on currency as the dominant unit for the model calculations, rather than physical entities.

The step-by-step manual shows how CEOs should use the NORDIC model in practice. It is not possible to provide detailed suggestions about what actions to take, as part of the model, but CEOs should learn the principles for applying the NORDIC model in practice. When the NORDIC model indicates that measures are required to

increase the efficiency of the organisation, the CEO will approach the organisation's managers to determine the solutions required.

The NORDIC model gives not the very solutions. It provides an economic instrument to monitor, manage and evaluate the performance. The employees design the innovative solutions required when the CEO determines the need to find creative solutions. In the short run, the NORDIC model will not result in zero loss goals being met. By applying the model and the manual instructions, over time the losses can decrease, focusing first on what are of greatest importance to achieve in terms of profitability and environmental impact.

This method will have a positive impact on the private behaviour in minimizing losses. The X in Equations (1) and (2) increases over time when the organisation becomes more resource effective. Thus, when management tries to increase its S , its actions will include encouragement and incentives for reducing losses, and improve the behaviour exhibited by the citizens being affected by the practical implementation of the NORDIC model.

The NORDIC model can assist in achieving an objective. The NORDIC model can guide in making a desired fraction more efficient, by lowering operational costs. Also, the model provides management with a better understanding of the cost-situation for the X factor.

This study shows the viability of the NORDIC model, to improve the performance of the social services. Managers can utilize the shadow cost S to guide their own decisions. S provides a comprehensive key indicator, which summarizes the performance of most organisations also in other sectors than the public.

The S is a constructed entity that is added to the revenue of the organisations that use it. The addition of S to the revenue results in an incentive for management to start increasing the fraction X , or to decrease the total costs C connected to fraction X , if X is a useful fraction.

The manual associated with the NORDIC tool is applicable to the schemes in industries. Therefore, practical application of the NORDIC model is useful for businesses in general. It may also be possible to apply the model to developing countries, subject to training.

The NORDIC model and its related manual promotes the circular economy, a regenerative system in which resource input and waste, emission, and energy leakage are minimized by slowing, closing, and narrowing energy and material loops (Wikipedia). The launched tool namely reduces spillages at the source, by providing economic incentives to achieve that goal (Stenis 2021).

Conclusions

The main hypothesis in this study is that the flows of physical and intangible utilities through entities of different kinds can be improved by applying the NORDIC model. The hypothesis is verified, because the logics of the theory designed support this conclusion, and because the introduced theorems are mathematically correct. The results from the case studies in the references support the main goal of facilitating the daily use of the NORDIC model by civil servants and operators. As more communities adopt the NORDIC model, the objectives of improving the economic, technological, and environmental conditions in the organisations will be supported. The gap is filled in the existing research, regarding novel, economic instruments to manage communities and other organisations needing artifacts like the NORDIC model, which was developed with the very aim to improve society.

The results of the study, and the discussion, provide answers to the

research questions posed, regarding how to use the NORDIC model to improve the efficiency of economic units, such as nations and communities, and how an economic instrument can be designed and modified for this purpose. The provided research contribution involves the development of a versatile, economic tool that enables managers to better understand how their organisations can become more efficient in economic, environmental, and technical terms. Here, this tool has been shown to be useful for public finances, such as the social services, and to help them improve the well-being of actors.

The work contributes to the literature by providing solutions to promote the optimization of the economic efficiency and to assist public managers, and managers in industries, to improve their companies' performance. This improved management situation in the public and the private sector is the major value of knowledge added by this study.

The real finding of the present study is that the NORDIC model represents a versatile theory to improve the situation in various entities, such as nations. The evidence for this statement consists of the realistic results of the performed case studies with real-world data.

The novelty of the approach is the innovative usage of the shadow cost construct to create the economic incentives for improvement of the functionality of management systems. The introduction of a single key indicator to simultaneously monitor most aspects of interest for a management system is a highlight. The most interesting findings are the method to facilitate managers' policy decisions and their positive impact on the economic development that is a prerequisite for a sound technology that promotes environmental sustainability.

The method aids managers and practical operators to reduce losses in economic systems and improve the efficiency, based on the well-known concept of shadow costs. The most important conclusions, based on the developed model and the case study, are as follows.

1) The research is useful for managers to reduce losses in their organisations. 2) Managers obtain an economic instrument to monitor, manage and evaluate. 3) The constructed economic incentives improve the utilization of resources. 4) Cost-effectiveness and equity increase due to the reduced risk of spillages. 5) Managers can apply economic instruments to prevent people's discontent.

The main limitation of the introduced methodology is its less specified impact on the targeted entities. The employed shadow costs namely work on a general level, which mainly gives overall results for the current entities of interest. Therefore, some additional algorithms should be developed, and integrated into the present NORDIC model, to enable a more specific impact on the sub-units that are intended to be improved by the model (Stenis 2021).

General Manual for the Practical Application of the NORDIC Model

Constructed shadow costs are added to the values of economic significance, to improve the efficiency of the resource utilization in the targeted organisations. This procedure increases the shadow costs S if the positive net worth $X = (\text{Value} - \text{Cost})$ of the entity to be optimised is useful, while Y represents the sum of the entities to be optimised, or improved, and Z represents the value of the activities connected to X . The cost development is studied over time to make the phenomenon in question more cost-effective. W represents the weight factor (without unit, it is a decimal value) for the impact on society by X , per period for an administrative unit that is studied. The manual that guides managers, when applying the NORDIC model in practice,

involves the following key steps, with the possible units being monetary currencies, kilogram, litre, or Joule.

1. Determine losses to pinpoint, step by step, by estimating X .
2. Estimate Y , V and C using the organisation's book keepings.
3. Determine Z and/or the breakdown cost from the actor's ledgers.
4. Determine the factor W for the organisation's impact on society.
5. Calculate S and insert it into the accounting system of the entity.
6. Determine S for any item X of commercial or public interest.
7. Re-calculate S to study it to monitor, manage and evaluate X .
8. Take actions to increase the actor's efficiency if S decreases.

Further Research to Develop the NORDIC Model

In the future, studies could be conducted to determine how the NORDIC model can be applied to larger units. There is potential to apply the model to the international context, particularly as regards higher policy analysis organizational levels within major areas of social concern.

General Recommendations

- Apply the NORDIC model to organisations to improve their performance.
- Apply the NORDIC model based on the manual presented in this study.

Summarizing Vision

I believe that society will be better off if the NORDIC model promotes welfare, through imposing economic incentives to perform well. The application of the model contributes to the survival of our species, which is the goal of Homo sapiens, being an organism in the cosmic ecosystem. If mankind has adequate resources, we stand a chance to survive.

According to the saying, *money makes the world go round*, the one who spends most wins most wars. If we have material bodies, matter matters. Life is a prerequisite for unconditional love, which together with the quest for advanced knowledge count as the reasons for living.

One should not strive for a maximisation that is not viable. One could achieve optimal conditions. My NORDIC model can optimise society, for the benefit of mankind.

I envision a bright future where mankind has spread throughout the galaxy, with total control over the energy sources of the distant stars that promotes our victory over the tyranny of time and space. The eons-long dream of our species to become gods ourselves will come true, in the form of conscious light that travels throughout space, independent of time and space. If we do not end our own existence by dependence on irrational feelings, we will reach the goal of freely moving between the many dimensions in the cosmos, which is a prerequisite for our survival.

My own innovation: the NORDIC model, will be applied for many eons to follow, by the various civilisations of the many galaxies to optimise interstellar flows of materials, energy, and currencies. The cosmic sense for equity and fairness will be enhanced by my model, promoting a fair distribution of all resources among the planetary civilisations that will peacefully co-exist.

This reasoning goes for hydrocarbon-based life forms, such as Homo sapiens or silica, as well as machine intelligence. The iconic John Lennon wrote that:

All you need is love.

Hence, the important thing is that the *Love and Knowledge* remain!
All of this ends up in the promotion of my reason for living, summarised in my own life motto:

Love and Knowledge

Jan Stenis

The NORDIC Model Articles

Stenis, Jan. “An Economic Instrument to Improve Migration.” *Applied Economics and Finance* 7, no. 1 (2020a): 15-20.

doi:10.11114/aef.v7i1.4630.

Stenis, Jan. “Application of the Naturally Optimised Revenue Demand in Communities NORDIC Model to Improve the Workforce in Sweden.” *Applied Economics and Finance* 7, no. 2 (2020b): 18-23.

doi:10.11114/aef.v7i2.4711.

Stenis, Jan. “Application of the Naturally Optimised Revenue Demand in Communities NORDIC Model to Improve the Education in Sweden.” *Theoretical Economics Letters* 10, no. 3 (2020c): 523-534.

doi:10.4236/tel.2020.103033.

Stenis, Jan. “Application of the Naturally Optimised Revenue Demand in Communities NORDIC Model to Improve the Climate in Sweden.” *Theoretical Economics Letters* 10, no. 4 (2020d): 758-769. doi:10.4236/tel.2020.104047.

Stenis, Jan. “An Economic Instrument to Improve the Crime Rate in Sweden.” *Archives of Business Research* 8, no. 10 (2020e): 121-130. doi:10.14738/abr.810.9282.

Stenis, Jan. Erratum to “An Economic Instrument to Improve Society.” [Theoretical Economics Letters 9, no. 6 (2019)]. *Theoretical Economics Letters* 11, no. 3 (2021): 447-461. doi:10.4236/tel.2021.113029.

Creativity

The heavens formed
with creation's joy,
but it stormed
like classic Troy

in admiration
and astonished,
with jubilation
that abolished

from deepest sea
to highest sky,
over the tree
without a lie.

Eternal Peace
signed by Lord,
to release
all on board

with altruism
to happy end,
but the schism
devils send ...

So just relax
until you die
and love max
until bye bye!

Jan Stenis

Jubilant



Dr Jan Stenis is Scientific Researcher in Sweden. His research focuses on socioeconomics and the resource economy. He holds a PhD in Engineering from Lund University, Sweden, and an MSc in Management Science from Imperial College, Technology and Medicine, UK, through a scholarship from Chalmers University of Technology, Sweden. He received the Environmental Award from the Swedish Association of Graduate Engineers in 1998. The NORDIC model is an economic instrument invented by Dr Stenis and aimed at socioeconomics to improve society. In 2011, Dr Stenis became full member of The Swedish Writers' Union. He joined The Swedish Haiku Society 2018. Dr Stenis's life motto is *Love and Knowledge*.