

# Computational method of finding optimal structural change in economic systems: an input-output projected-gradient approach

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## Abstract

A method of finding locally optimal structural change in economic systems described by input-output models and aimed to maximization of final product per capita is suggested. The method is based on a projected-gradient. Both projected-gradient and corresponding locally optimal structural change are obtained in explicit form. Numerical examples are provided.

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*Keywords* : *Projected gradient method, optimal-structural change, input output models.*

## 1. Introduction

In this paper a computational method of finding locally optimal structural change in economic systems described by input-output models is suggested. Input-output model, see e.g. Gregory and Stuart (2004), is combined with a special method of factor decomposition developed in Vaninsky (1984) and a projected-gradient method. Suggested method uses a known fact that a projection of a gradient on a plane tangent to a surface is a gradient of the limitation of the original function on the

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