

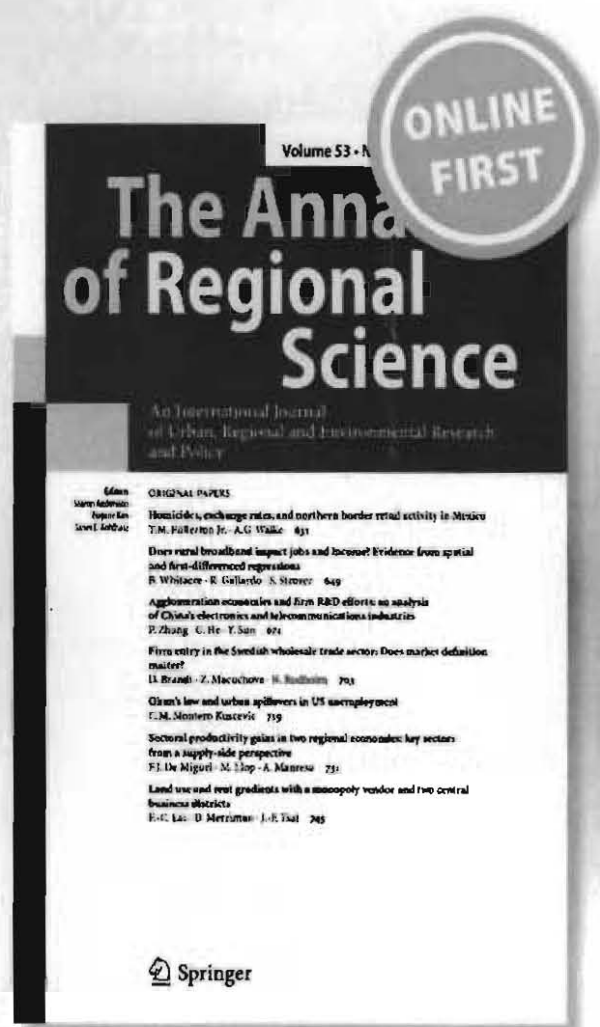
Determining optimal location of new growth centers based on LGP-IRIO model to reduce regional disparity in Indonesia

Didit Okta Pribadi, Andi Syah Putra & Ernan Rustiadi

The Annals of Regional Science
An International Journal of Urban,
Regional and Environmental Research
and Policy

ISSN 0570-1864

Ann Reg Sci
DOI 10.1007/s00168-014-0647-8



Determining optimal location of new growth centers based on LGP-IRIO model to reduce regional disparity in Indonesia

Didit Okta Pribadi · Andi Syah Putra ·
Ernan Rustiadi

Received: 2 December 2013 / Accepted: 28 October 2014
© Springer-Verlag Berlin Heidelberg 2014

Abstract Development policy that mainly focuses on economic growth has triggered increasing regional disparity in Indonesia, exacerbated by the concentrated development of growth centers that generate backwash effects rather than spillover effects. Balanced regional development is needed and can be initiated through a spatial system approach, where the growth centers and their hinterlands are developed simultaneously as an integrated system. The aim of this research is to define new growth centers that can stimulate the optimal utilization and interaction between regional resources for generating more balanced and efficient development. Three interrelated models are developed to address this: (1) an inter-regional input–output (IRIO) optimization model to generate optimal resource use and improve development performances, (2) a transport model to determine an optimal inter-regional input–output network, and (3) a P-median model to define new growth centers and their hinterland areas. Results from the first model show that setting land resource limitations, demand compliance, and goals to increase economic growth, people's income, and government tax can create higher and equally distributed value of total output. The second model indicated that

D. O. Pribadi (✉) · A. S. Putra · E. Rustiadi
Center for Regional Systems Analysis Planning and Development (CRESTPENT/P4W) Bogor
Agricultural University, Jalan Pajajaran, Bogor 16143, Indonesia
e-mail: diditpribadi@yahoo.com

A. S. Putra
e-mail: andi_syp@yahoo.com

D. O. Pribadi
Indonesian Institute of Science, Jalan H. Ir. Juanda No. 13, Bogor 16003, Indonesia

E. Rustiadi
Department of Soil Sciences and Land Resources, Bogor Agricultural University,
Jalan Meranti, Bogor 16680, Indonesia
e-mail: eman@indo.net.id

Your article is protected by copyright and all rights are held exclusively by Springer-Verlag Berlin Heidelberg. This e-offprint is for personal use only and shall not be self-archived in electronic repositories. If you wish to self-archive your article, please use the accepted manuscript version for posting on your own website. You may further deposit the accepted manuscript version in any repository, provided it is only made publicly available 12 months after official publication or later and provided acknowledgement is given to the original source of publication and a link is inserted to the published article on Springer's website. The link must be accompanied by the following text: "The final publication is available at link.springer.com".