

---

## macroeconomía del desarrollo

# **T**owards development in landlocked economies

Rodrigo Cárcamo-Díaz



NACIONES UNIDAS



Santiago, Chile, February 2004

This document was prepared by Rodrigo Cárcamo, Economic Affairs Officer of the Economic Development Division, Economic Commission for Latin America and the Caribbean. This paper is based on the document “El desarrollo de las economías sin costa marítima” prepared by the author for the Regional Meeting of Landlocked and Transit Developing Countries on Transit Transport Cooperation held in Asuncion, Paraguay, on 12 and 13 March 2003. The author gratefully acknowledges the comments and suggestions of Reynaldo Bajraj, Ricardo Carciofi, Simone Cecchini, Hubert Escaith, John G. Goddard, Manuel Marfán, Andrés Solimano and other colleagues. Noelia Paéz provided valuable research assistance.

The views expressed in this document, which has been reproduced without formal editing, are those of the author and do not necessarily reflect the views of the Organization.

---

United Nations Publication  
ISSN printed version: 1680-8843  
ISSN online version: 1680-8851

ISBN: 92-1-121437-8  
LC/L.2075-P  
Sales No.: E.04.II.G.18  
Copyright © United Nations, February 2004. All rights reserved  
Printed in United Nations, Santiago, Chile

---

Applications for the right to reproduce this work are welcomed and should be sent to the Secretary of the Publications Board, United Nations Headquarters, New York, N.Y. 10017, U.S.A. Member States and their governmental institutions may reproduce this work without prior authorization, but are requested to mention the source and inform the United Nations of such reproduction.

## Contents

---

<b>Abstract</b>	5
<b>I. Introduction</b>	7
<b>II. Economic development in landlocked countries: the empirical evidence</b>	9
1. Total transport costs in landlocked countries	9
1.1. Empirical evidence	9
1.2 Transport costs and terms of trade	11
2. International trade and investment in landlocked countries: a theoretical analysis under uncertainty	13
2.1 The model when there is just one transit country	15
2.1.1 Basic scenario: an exporter that does not import inputs	15
2.1.2 Other scenarios: an importer, and an exporter using imported inputs	18
2.2 The benefits of diversification: there is more than one possible transit country	19
<b>III. General policy implications</b>	21
1. Transport policy	21
1.1 The benefits of investing in transport infrastructure	21
1.2 Financing investment in transport infrastructure	22
2. Regional integration	24
<b>Conclusions</b>	27
<b>References</b>	29
<b>Appendix</b>	31
<b>Serie macroeconomia del desarrollo: issues published</b>	33



## **Abstract**

---

This paper sets out with three objectives. Firstly, it reviews the theoretical and empirical literature on the relationship between the condition of being a landlocked developing country and the degree of economic development attained, measured by per capita income. Secondly, it contributes to the theoretical literature on the subject by suggesting a new possible reason why landlocked countries may have a low level of development: the greater relative uncertainty to which landlockedness gives rise may have a negative effect on investment incentives in the tradable sector of such countries. Thirdly, it suggests that development policy for landlocked countries should focus on investment in transport infrastructure and on regional integration.



## I. Introduction

---

International trade barriers can have a substantial effect on the income level and economic growth rate of a small country. Obstacles to international trade often include tariffs, quotas and phytosanitary restrictions, among others, but transport costs can also be a major obstacle to international trade. Although the literature analysing the impact of transport costs on development is of long standing, the specific case of the high transport costs faced by landlocked developing countries (United Nations, 2002) has been largely overlooked in both the theoretical and the empirical literature.

The empirical evidence gathered in a number of studies indicates that landlocked **developing**<sup>1</sup> countries are usually among the world's poorest: according to MacKellar, Wörz and Wörgötter (2000), nine of the world's twenty poorest countries are landlocked, while the United Nations (2002) states that sixteen<sup>2</sup> of the thirty one landlocked developing countries in the world are classified among the "least developed". According to the United Nations Office of the High Representative for the Least Developed Countries, Landlocked Developing Countries and Small Island Developing States, the thirty one landlocked developing countries are: Afghanistan, Armenia,

---

<sup>1</sup> This study excludes landlocked countries with higher per capita income levels, namely Andorra, Austria, Belarus, the Czech Republic, the Holy See, Slovakia, Hungary, Liechtenstein, Luxembourg, San Marino and Switzerland.

<sup>2</sup> These sixteen countries are Afghanistan, Bhutan, Lao People's Democratic Republic and Nepal in Eurasia, and Burkina Faso, Burundi, Central African Republic, Chad, Ethiopia, Lesotho, Malawi, Mali, Niger, Rwanda, Uganda and Zambia in Africa.

Azerbaijan, Bhutan, Kazakhstan, Kyrgyzstan, Lao People's Democratic Republic, the Former Yugoslav Republic of Macedonia, Moldova, Mongolia, Nepal, Tajikistan, Turkmenistan and Uzbekistan in Eurasia; Botswana, Burkina Faso, Burundi, the Central African Republic, Chad, Ethiopia, Lesotho, Malawi, Mali, Niger, Rwanda, Swaziland, Uganda, Zambia and Zimbabwe in Africa; and Bolivia and Paraguay in South America.

A number of previous studies have sought to establish the possible relationships between geographical conditions (such as distance to and from markets) and economic development. Within this literature (Gallup, Sachs and Mellinger, 1998; Radelet and Sachs, 1998; Venables and Limão, 2001 and 2002; and MacKellar, Wörz and Wörgötter, 2000), only a few studies have sought to test empirically whether landlocked countries as such suffer in terms of development, and if so, to understand the theoretical reasons behind this. The present study pursues this effort in three ways. Firstly, it reviews the theoretical and empirical literature on the subject with a view to synthesizing what is known about the implications that a landlocked situation has for a country's development level. Secondly, it contributes to the debate about the possible conceptual relationships involved, analysing the way in which incentives to invest in export industries oriented towards non-neighbouring countries might be affected by the greater relative uncertainty created by a country's landlocked position. Thirdly, it suggests general economic policy measures organized along two major lines, the aim being to minimize the impact that being landlocked has on a country's development<sup>3</sup>.

The study is organized as follows. Section II shows how being landlocked may affect a country's economic development. Section II.I summarizes the arguments used to show how the higher transport costs faced by landlocked countries may adversely affect them. Possible effects of this kind on development are considered to include lower investment in the landlocked country and lower trade. Section II.II presents a theoretical model in which incentives to invest in a landlocked country in the current period are reduced by higher relative uncertainty about future transport costs, something that affects future international trade and economic development. Section III proposes two major lines of economic policy designed to reduce the impact of a landlocked situation. Section III.I discusses the importance of designing and implementing an appropriate transport policy that is properly financed and takes account of the "coordination failures" which may arise in multinational infrastructure projects. Section III.II sets forth the advantages of regional integration as a second axis in official strategies to minimize the problems faced by landlocked countries. Section IV concludes.

预览已结束，完整报告链接和二维码如下：

[https://www.yunbaogao.cn/report/index/report?reportId=5\\_2767](https://www.yunbaogao.cn/report/index/report?reportId=5_2767)

