Available online at www.sciencedirect.com

SCIENCE DIRECT®

ELSEVIER

Explorations in Economic History 42 (2005) 381–413

Explorations in Economic History

www.elsevier.com/locate/eeh

Intra- and international commodity market integration in the Atlantic economy, 1800–1913[☆]

David S. Jacks*

Department of Economics, Simon Fraser University, 8888 University Drive, Burnaby, BC, Canada V5A 1S6

Received 13 May 2003
Available online 2 December 2004

Abstract

In this paper, the course of intra- and international market integration in the nineteenth century Atlantic economy is investigated. The most fundamental contribution of the paper is in consistently sketching the course of commodity market integration over the long run. Additionally, this study suggests that the nineteenth century has been somewhat misread in terms of the development of markets as the evidence, especially on price convergence, points to dramatic improvements in intra- and international market integration in the years prior to the mid-century. A collective task for economic historians, then, is to link these developments with the revolutionary commercial and technological developments of the post-1850 period.

Keywords: Globalization; Commodity market integration; Wheat markets

☆ The author especially thanks Greg Clark, Peter Lindert, and Alan Taylor for their unstinting support and advice. I also thank the editor and the paper's two referees for offering very helpful comments and suggestions. For help in locating and securing the data underlying this project, I am indebted to Liam Brunt, J.A. Chartres, Ola Grytten, Michael Kopsidis, and Chris Meissner. Finally, I gratefully acknowledge financial support from the Institute for Humane Studies, the Office of Graduate Studies and the Agricultural History Center at UC Davis, the All-UC Group in Economic History, and the Social Science Research Council's Program in Applied Economics. All those implicated above, of course, are absolved of any remaining errors.

* Fax: +1 604 291 5944.
E-mail address: djacks@sfu.ca.

doi:10.1016/j.eeh.2004.10.001

1. Introduction

What this paper sets as its task is to investigate the course of both intra- and international commodity market integration for a sample of 10 countries—namely Austria–Hungary, Belgium, France, Germany, Italy, Norway, Russia, Spain, the United Kingdom, and the United States—which participated in the Atlantic economy of the long nineteenth century from 1800 to 1913. Along the way, market integration is divided into two separate but related sub-processes, that of price convergence (roughly, the size of price differentials and their diminution over time) and price adjustment (roughly, the speed at which profitable price differential are arbitraged away). On this basis, a set of two criteria are formulated and then put to work as a means to assess the course of intra- and international market integration on a country-by-country basis.

The most fundamental contribution of the paper is in consistently sketching the course of commodity market integration over the long run. Additionally, this study suggests that the nineteenth century has been somewhat misread in terms of the development of markets as the evidence, especially on price convergence, points to dramatic improvements in intra- and international market integration in the years prior to the mid-century. A collective task for economic historians, then, is to link these developments with the revolutionary commercial and technological developments of the post-1850 period.

2. Motivation

As has been noted many times before, the process of market integration (generally explored under the aegis of the law of one price) has proven to be an area of abiding theoretical and empirical interest. Naturally, for the nineteenth century as well, no small number of scholarly works have been published in this vein which can be split into two distinct lines of inquiry: intra- and international.

In regards to the intranational line, there is an abundance of case studies to lead the way for us, the most informative of which are those for Austria–Hungary (Good, 1981; Szabad, 1961), the Benelux countries (Buyst et al., 2000; Dejongh et al., 2000; Griffiths, 1982), France (Chevet and Saint-Amour, 1991, 1992; Ejrnæs and Persson, 2000; Roehner, 1994), Germany (Fremdling and Hohorst, 1979; Gerhard and Engel, 2000; Kopsidis, 2002; Kuczynski, 1960), Norway (Hodne and Gjølberg, 1981), Italy (Sereni, 1947, 1966; Zamagni, 1983), Russia (Metzer, 1974, 1977; Milov, 1995), Spain (Barquín Gil, 1997; Gómez Mendoza, 1987; Peña and Sánchez-Albornoz, 1984), the United Kingdom (Chartres, 1995; Gourvish, 1970; Paterson and Shearer, 2001), and the United States (Coelho and Shepherd, 1974; Jue, 1999; Slaughter, 2001). However, while sharing a common unit of analysis—the nation-state—none of these studies presents comparable results, conclusions, or most importantly, methodologies. The primary contribution of this paper, then, is the application of a consistent set of criteria for commodity market arbitrage, in order to arrive at the most salient cross-country features of intranational market integration.