

Chapter 4

G-20 Countries

ABSTRACT

This chapter applies the ψ model to the G-20 countries. The model suggests that the group is not homogenous. Some G-20 countries are economically efficient, while others are not. The jurisdictional footprints of these countries help explain the efficiency differences. The chapter introduces an evolutionary construct, the Red Queen Effect (RQE) to further explain the evolutionary stability of the world-system. The chapter also provides a brief analysis of the efficiency relativities of European countries.

INTRODUCTION

The ψ model reveals important differences in the economic performance of the countries of the Group of Twenty (G-20). While the group was officially formed in 1999, the Group's performance is analyzed based on member states' level of economic efficiency from 1990.¹ Table 1 provides a snapshot of the scores at the beginning and at the end of the observation period.²

Figures in parentheses are for negative scores. A detailed analysis of the economic signature of each country can be found in the appendix to this chapter.

The differences in the ψ scores do not only suggest a quantitative difference. When analyzed over the observation period (from 1990 to 2015), they indicate qualitative differences as well. One important observation when comparing the sink and source groups within the G-20 is in relation to the size of the

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Table 1. The G-20 countries divided into two groups of sources and sinks

G-20 Sink Countries				G-20 Source Countries			
Country	ψ 1990	ψ 2015	Difference	Country	ψ 1990	ψ 2015	Difference
China	(4.94)	0.07	5.01	Argentina	(3.22)	(1.57)	1.65
France	4.02	2.42	(1.60)	Australia	(2.99)	(3.05)	(0.06)
Germany	3.21	2.97	(0.24)	Brazil	(3.09)	(1.60)	1.49
Italy	1.62	2.34	0.72	Canada	(2.49)	(2.75)	(0.26)
Japan	3.42	2.88	(0.54)	India	(4.50)	(1.54)	2.96
Mexico	(2.05)	0.29	2.34	Indonesia	(3.82)	(1.27)	2.55
South Korea	(0.11)	2.77	2.88	Russia	(0.52)	(2.74)	(3.26)
Turkey	(2.51)	0.71	3.22	Saudi Arabia	(2.11)	(0.66)	1.45
United Kingdom	2.30	2.89	0.59	South Africa	(2.26)	(0.67)	1.59
United States	2.28	1.91	(0.37)				

geopolitical footprint exhibited by each group. Notice how source countries are much larger than those in the sink group, with the notable exception of China and the United States, which are discussed further in the appendix. The interesting question is whether there is a relationship between the ψ efficiency score and the size of jurisdictional footprints (as area). This is what we will explore in this chapter.

The ψ model divides the G-20 into sink countries and source countries. In 2015 there were ten sinks and nine sources.³ In 1990, the total sum of all ψ scores of these 19 countries was $\sum \psi_{1990} = -17.78$, compared to a 2015 score of $\sum \psi_{2015} = 3.39$. Over the twenty-five-year period from 1990 to 2015, four countries changed their status from source to sink. In descending order (in terms of improvement), these countries are: China, Turkey, South Korea, and Mexico. These countries exhibit substantial increases in their ψ scores. On the other hands, so far, no sink country switched its classification into a source. However, from among the other six sink countries in 2015, we find four that have reduced their ψ score over the observation period. In descending order, these countries are: Germany, the United States, Japan, and France. Only Italy and the United Kingdom were able to improve their sink status between 1990 and 2015. France stands out as the worst performing sink country, losing almost 40 percent of its ψ score during the observation period.

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