ELSEVIER

Journal of International Money and Finance
21 (2002) 1035–1052

Journal of International Money and Finance

www.elsevier.com/locate/econbase

Anticipated foreign military threat, arms accumulation, and the current account in a small open economy

Wen-ya Chang [a,b,*], Hsueh-fang Tsai [a], Ching-chong Lai [c,d,e]

[a] *Department and Graduate Institute of Economics, Fu-Jen Catholic University, Hsinchuang, 242 Taipei, Taiwan*

[b] *Institute of Economics, National Sun Yat-Sen University, 804 Kaohsiung, Taiwan*

[c] *Sun Yat-Sen Institute for Social Sciences and Philosophy, Academia Sinica, Nankang, 115 Taipei, Taiwan*

[d] *Institute for Economics, Academia Sinica, Nankang, 115 Taipei, Taiwan*

[e] *Department of Economics, National Taiwan University, 100 Taipei, Taiwan*

Abstract

This paper examines the effects of an anticipated foreign military threat on consumption, the home weapons stock, and net foreign asset position in a small open economy. If the utility function is separable between butter and guns, the economy decreases both butter and guns when the news arrives, accumulates foreign assets prior to the foreign threat realization, and increases guns as the foreign threat realizes. If the utility function is nonseparable between butter and guns, the economy may have two dynamic responses. The first is similar to the separable case, except that consumption exhibits a discrete jump when the foreign threat realizes. The second is that the economy increases both butter and guns on impact, decumulates foreign assets prior to the foreign threat implementation, but either increases or decreases guns as the foreign threat realizes.

JEL classification: F41; H56

Keywords: Anticipated foreign military threat; Arms accumulation; Net foreign asset position

* Corresponding author. Tel.: 886-2-29031111x2695; fax: 886-2-22093475.
E-mail address: ecos1001@mails.fju.edu.tw (W.-y. Chang).

0261-5606/02/$ - see front matter
PII: S0261-5606(02)00013-X

1. Introduction

This paper examines both the long-run and short-run responses of consumption, the home weapons stock, and net foreign asset position to an anticipated foreign military threat in an intertemporal optimization model of a small open economy.

The study of this issue is well justified for two reasons. First, the literature of competitive arms accumulation based on a dynamic optimization model has in recent years received considerable attention. For example, some models highlight the strategic aspects of arms accumulation in a dynamic game (Brito, 1972; Simaan and Cruz, 1975; Deger and Sen, 1984; Van der Ploeg and de Zeeuw, 1989, 1990), while others examine the economic effect of consumption, military spending, and arms accumulation in the presence of a foreign threat (Deger and Sen, 1983, 1984; Zou, 1995; Chang et al., 1996). However, these studies are restricted to the closed economy. With the increasing integration of the international economy, domestic macroeconomic performance has become more sensitive to foreign shocks, yet we still lack a well-grounded theoretical analysis of the small open economy. This paper thus, attempts to analyze the economic response of a small open economy to competitive arms accumulation.

Second, in the real world a country often faces its enemy with a potential military confrontation rather than with an immediate invasion. For example, as India and Pakistan, respectively insist on developing their nuclear weapons, the general public in both the countries anticipate that military tension will increase in future. The peace talks between Israel and the Arabs have been held repeatedly and a peace agreement has been signed step by step in recent years. This makes people in that region anticipate that a military conflict threat in the Middle East may be lessened in future. However, existing studies on arms accumulation do not reflect these facts, whereby they have not explicitly analyzed the effects of an anticipated foreign military threat. To our knowledge, the issue of an anticipated foreign military threat has been the subject of recent studies by Zou (1995) and Chang et al. (1996). However, in these studies none of the authors have made use of the simple representative-agent infinite-horizon dynamic framework of a small open economy, as is done in this paper. As the analysis of an anticipated foreign threat on economic performance has its practical need in the real world and theoretical interest, this paper makes a first attempt to examine the impact of an anticipated foreign threat in the context of an open economy.

This paper extends the standard framework of Deger and Sen (1983, 1984) and Van der Ploeg and de Zeeuw (1990) to the setting of a small open economy with a perfect world capital market. The assumption of a perfect world capital market not only is in accordance with the literature of international macroeconomics such as Obstfeld (1983); Djajić (1989); Sen and Turnovsky (1989); Turnovsky and Sen (1991) and Brock (1996), but also imparts some realism to the present approach, since it describes the greater degree of integration, that prevails in international asset markets. Such an integrated world capital market plays an important role in facilitating the financing need of a small open economy from abroad. This paper specifically intends to construct an open-economy intertemporal optimization model embodying