Chapter 6
Impact of Military Expenditure on Domestic Economy: A CGE Modelling Approach for India

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ABSTRACT
Military expenditure in the recent past has been escalated noticeably owing to the nuclear testing and arms race between India and Pakistan and has the prudent prospect of further boost up in the coming years. In this chapter, India’s military expenditure has been modelled in a computable general equilibrium framework in order to analyze its impacts over the macro economy. Alternative policy option has been suggested to finance it and to reduce the social cost of the higher defense expenditure.

INTRODUCTION
According to Stockholm International Peace Research Institute (SIPRI) yearbook 2009, India ranks among the top 10 in the world in terms of its military expenditure which has accounted for US $24,716 million in constant 2005 price. However, it is still among the developing countries and the per capita adjusted PPP gross national income for India was international $2,960 which is 155th among 210 countries (World Development indicator database, 2001) in the same year. Thus in the one side India is facing many problems, such as poverty, poor infrastructure and poor health status, even though it is one of the fastest growing economy since the 1990’s. On the other side, India does spend a huge amount on military expenditure which turns out to be scarce resource and curtail down growth lading expenditures such as health and education expenditure and also might stimulate economic growth by spin-off effect. In particular, since the trade-off takes place first, at the government budget level military spending may curtail other types of government expenditure which has direct and bigger productivity effects. Thus there is a potential problem and trade-off between military security and human security.

Empirical works on the impacts of defence expenditure on the developing economies, like the work of Emile Benoit in the early 1970’s confirmed that there are positive effects of higher military expenditure.

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on the economic growth of the developing countries. We have to check whether these positive channels are strong enough to compensate for the negative effects. In addition, national security and protection of property rights are the mandatory aspects and considered to be non-economic development, without which no economic institution can transform a poor country in a developed one.

Aspect of scale economy is also relevant in this regard. Alensia and Spolare (2008) claim that there is economics of scale in the production of public goods. The per capita cost of many public goods is lower in larger countries where tax payers pay for them. The large countries both in terms of population and national product are less subject to foreign aggression. Thus safety of the country is a public good that increases with country size. Smaller country on the contrary may have to spend proportionately more for defence than the larger countries given the presence of economies of scale in defence spending. Thus a larger country may derive economies of scale from military expenditures which protects itself. This is the one explanatory factor behind lesser defence expenditure in the larger developing economies which are often termed as BRICS countries, Brazil, Russia, India, China and South Africa.

However, India seems to have suffered due to high military expenditure which has been substantial part of overall government spending which intern has depleted resources from government on health, education and infrastructure. The reason behind India’s high defence expenditure could be attributed to the long standing of arms race between the India and its neighbour Pakistan. In the other hand, military spending is also affected in the short run by various temporary economic and political factors. Defence spending thus turns out to be a negative externality and analysed as a “developmental failure” Therefore we have to analyse the issue of India’s defence expenditure so as to reconcile the twin claim of security and development.

The purpose of the present chapter is to examine the impact of increased military expenditure on the Indian economy. We have applied Computable General equilibrium modelling as our relevant methodology. Simulation experiments have been performed to study the impacts if increased military expenditures financed by raising tax base through indirect taxes. Outline of the chapter is as follows: A short description of the military expenditure has been delineated in the second section followed by a brief literature review on the relevant methodology and the subject concern. Description of the Social Accounting Matrix and Mathematical structure of the CGE model have been described in the next two sections. Estimation and Calibration of the model parameters is described in the next section followed by the section describing simulation experiment results. Chapter ends with concluding remarks.

MILITARY EXPENDITURE IN INDIA

Defence expenditure is one of the most important areas of public expenditure that captures substantial proportion of government budget every year. With the expansion of India’s GDP share of military expenditure out of the total public expenditure has also been raised. In 1977-78 defence expenditure has accounted for .0159% of the total government expenditure while in 2010-11 it has recorded 1.59% of the total Government expenditure. Following table depicts expenditure in defence sector in comparison of total public expenditure in different years.