

Economics, conflict and war

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Introduction

With the end of the Cold War the international security environment changed fundamentally. The removal of the superpower conflict saw an initial wave of hope and cuts in military spending, but it quickly became clear that the world was still a dangerous place, and war and conflict remained endemic in many parts of the world. Conflicts had changed; in general they were intra rather than interstate, and there was a resurgence of interest in the role of economic forces in civil wars. In fact the discipline of economics has always included the study of conflict and war. At first its theories were global, focusing upon the role of inter-state war in economic development and then later became more focussed, offering partial analyses of conflicts. This partly reflected the changing nature of international relations over time, as modern nations were formed in an environment of international conflict. But it also reflected a change in the nature of the dominant paradigm, a move from political economy to neoclassical economics.

Early mercantilist theories explained war as predation, allowing enrichment and ensuring the supply of raw materials by conquest and imperialism. Later, in the 19th century after the Napoleonic Wars, the development of trade was characterized by relatively peaceful international relations; and a liberal perspective, which saw war as a fetter on the development of trade, had more influence. The growth of industrialisation created social conflicts that became the focus of economists' research, particularly Marx who gave little time to the study of international issues. But when the survival of capitalism was threatened by competing systems (notably Communism), the volume of economic studies focussing on issues of militarism and conflict increased enormously. This was true of Marxists, but also Institutionalist and Keynesian economists, who in some cases integrated war into their general perspective on the functioning of the capitalist system.

The development of nuclear weapons radically changed the international order, with a new balance of power (the balance of terror) and the limitation of international conflicts to peripheral zones. New economic analyses of conflict have then been developed to explain these changes, favoured by the progress in economic techniques. These studies were much focused on strategic concerns, economic issues taking only second place. Therefore, the economic discourse on conflict became depoliticized, except for a few heterodox works, in particular Marxist ones.

Today economic analysis has to deal with a renewal of economic problems in current conflicts, whether internal or international. The supply of raw materials, internal inequalities generating new demands, changes in the world economic hierarchy, development of asymmetrical conflicts... To deal with these new aspects of international relations, current economic theory presents partial and very sophisticated analyzes, in contrast to the global character of former economic theories. Furthermore, liberal orthodoxy dominates most studies devoted to defence economics. This has not decreased the importance of the issues or the debate, but it has moved them from the arena of economics into the more general arena of the social sciences, particularly international relations, politics, international political economy and development studies.

This paper provides a brief overview of how the understanding of conflict and war has changed over the years. Section I looks at the global perspectives that developed from liberal, mercantilist and Marxist schools of thought. Section II then examines the less general analysis of international conflict, in the form of arms races and the development of the theory of civil conflicts. Finally, Section III draws some conclusions

I - Global analyses of military conflict

The history of economic thought reveals three main economic explanations of international conflicts: one, that they are the result of State failure; two, that they are the result of the quest for power and wealth; and, three, that they are a result of the nature of capitalism. There are, however, few works in economics that have been entirely devoted to the war and peace issues.

I.1. Conflicts as State failure: the liberal creed

Kant (1795) argued that the progress of civilization tended to bring peace at the global level. He described wars as morally reprehensible, but also as a way to reach an ideal state of civilization, a world federation characterized by a universal and lasting peace. Fukuyama (1993) provides a recent example of this belief, arguing that the political changes of the late 1980's and the spread of democracy and liberalism, meant that war would become less and less probable. Many 'liberal' economists were also ready to announce the end of international conflicts thanks to the spread of civilization and, in particular, the spreading of free market economies. To them the costs of war are clear, namely the destruction of resources, the interruption of trade and the burden of debt when war is financed by loans. Thus, wars are considered to be counterproductive and cannot be justified by the benefits of predation and territorial expansion, since the surest way to increase the national economic growth is through the development of trade with prosperous neighbours. This leads to a denial the legitimacy of wars, which are seen as resulting from a perversion of the political process, with the State undertaking military actions to serve particular interests.

This analysis was already developed in the work of Adam Smith (1776), where the State is a place of conflicts and the decision to make war, or peace, depended on political processes, on the balance of power between the different social classes. The merchant class was seen as responsible for involving the country in useless colonial conquests and other military conflicts that were beneficial to them as a group. The founder of the British Classical School was inspired by the utilitarianism of Locke, according to whom universal peace was part of a law of nature. Man is naturally social and so war results from imperfections in human nature, in particular of ambition, and as such it can be only a temporary phenomenon. This theory directly inspired the liberal economic theories, which see the economy as governed by an "invisible hand", a natural order in which the State should not intervene (Coulomb, 1998).

Other economic analyzes of militarism and wars are even more hard-hitting. Pareto (1897) violently criticized the rise in military expenditure of his time, denouncing it as a regressive government policy that was leading to growing state economic control. For Pareto wars were of no economic use for contemporary civilized societies and could only be explained as resulting from the megalomania of leaders and the use by governments of

external threats to ensure social cohesion and to cover up corruption in executive circles¹. He also denounced military expenditures because they led to tax increases. This concern with vested interests continued, with the term “military industrial complex” being used by US President Eisenhower in 1961, to warn against the potential threats of the coalition of interests between defence industries, military and all those who benefited from increased military spending and, as a result, conflicts. This was taken up by J.K. Galbraith (1992) to explain why the rise of the American military budget was not subject to democratic control. The existence of an external threat and the continuation of international conflicts reinforced the military sector’s power and guaranteed the perpetuation of advantageous contracts for many companies, engineers, scientists, academics and other researchers. This type of analysis has been used beyond the liberal perspective, most notably in the contemporary Marxist analysis of militarism (Dunne, 1990).

I.2. Conflicts necessary for power: the mercantilist perspective

During the 17th century, while the Physiocrat theory defended the concept of a “natural order” in the economic sphere, political theory developed in the opposite direction. In the *Leviathan*, Hobbes (1651) presented international relations as anarchic, with a nation’s survival depending on its management of a permanent state of war. Peace was then the absence of war and as such perceived in a negative way, as an artificial temporary state. Such ideas have influenced the “realist” school of thought in international relations and politics and some economics have also echoed these ideas. Prior to capitalism, the dominant mercantilist perspective considered the nation state as needing to produce wealth in the form of gold and this required running trade surpluses – encouraging exports and discouraging imports in a world in which trade volumes were considered fixed. This was one of the first instances of significant government intervention in the economy and it encouraged wars in Europe and imperialism beyond, as the powers fought over available markets. It meant that creating wealth required military strength which in turn required economic strength. In such a system economic openness would need hegemony to provide the collective goods of security and stability.

In the 19th century, the Historical School (notably as developed in Germany and the UK) saw the maintenance of strong national defence as an important component of economic prosperity and rejected the idea of disarmament. Wars and military values were considered useful for the government, as they developed the population’s will to participate in the reinforcement of the national power. Thus strong interventionist policies were needed to promote national economic development. F. List (1841) went even further in emphasising the importance of economic patriotism and justifying wars as reinforcing national power on the world scene.

More recently a ‘neo mercantilist’ perspective has linked the realist and mercantilist theories, seeing countries and states as being motivated primarily by the desire for military and economic power, rather than ideals or ethics. War is seen as an irreducible human trait in earlier works but a curable one in more modern ones, and conflict is inevitable unless there is some dominant hegemonic force –Pax Britannica, or more recently the US.

¹ In fact such ideas were not new. In the 16th century, Machiavelli presented militarism as a remedy for civil war or internal disputes.

I.3. Militarism and the survival of the capitalist system

Another economic approach to conflict is based on a global explanation of the functioning of capitalism, as evidenced by the Institutionalist and Marxist approaches. Indeed, Schumpeter (1942) argued that capitalism would probably disappear because of middle-class disinterest in foreign policy and of the lack of charismatic political leaders able to gain national adhesion, while Veblen (1915) distinguished various types of capitalism, the Anglo-Saxon one being more peaceful than the Dynastic one. This distinction was used in the 1980's to explain Japanese and German commercial success as due to the specific nature of their societies, which were argued to be more prone to economic patriotism.

The Marxist approach saw international conflict as a consequence of class war. In the capitalist mode of production, internal contradictions related to overproduction and the resulting fall in the profit rate are temporarily solved by exports and imperialism. Some Russian pre-revolution theories, such as Lenin's (1916), predicted an increase in military conflicts between capitalist countries at the stage of imperialism, because of their competing ambitions on the world market. This did not occur, however, and later Marxist analyses focussed on explaining capitalism's post World War II survival and prosperity by its high level of militarism, which as wasteful expenditure provided a solution to endemic overproduction (Howard and King, 1992). Military Keynesianism also presented military expenditure as a way to solve the economic crisis, but in this case it was just like other public expenditures (Smith, 1977).

II. Economic models of conflict

Advances in econometrics and modelling since the second world war have been applied to the economic study of strategic issues, such as arms race, international alliances, or the economic consequences of military expenditure. The growing sophistication of the mathematical and statistical techniques has opened the way to many improvements on the basic models. Intriligator (1982) listed 64 possible combinations between the 8 existing types of possible analytical approaches (differential equations, decision theory, control theory, game theory, bargaining theory, uncertainty and stability theory, action-reaction models, and organization theory) and 8 subjects of studies. This list is much larger today, as mathematical techniques applied to economics have become even more numerous and sophisticated, for example the application of chaos theory. This section considers how the economic analyses of international conflicts and civil conflicts have developed.

II.1. Economic analysis of international conflicts

In the 1960's, arms race models became a popular way to explain governmental strategic decisions in the field of defence. The founding model from Richardson (1960) was based on three equations representing political, strategic and economic factors. The model accounts for the armaments of two rival countries through an action-reaction process, with capability, m_1 and m_2 , related at time t by the equations:

$$\frac{dm_1(t)}{dt} = a_1 + b_1 m_2(t) - c_1 m_1(t)$$
$$\frac{dm_2(t)}{dt} = a_2 + b_2 m_1(t) - c_2 m_2(t)$$

Where a_i are exogenous 'grievance' terms, b_i are 'reaction' terms, whereby each country responds to the military capability of the other, and c_i are 'fatigue' terms, usually representing some internal limitations on a country's military spending/capability. Interestingly, this approach was not welcomed by the US government in the Cold War environment as it implied that arms races had no 'good' and 'bad' guy but were simply the result of one reacting to the other.

During the US-Soviet arms race, numerous arms race models were developed and improved to simulate the strategic interactions between the superpowers (Brito & Intriligator, 1995). These included the explicit modelling of rational economic decision-making, different dynamic specifications, game theory approaches, and empirically with the use of approaches such as co-integration. The search for clear empirical evidence of 'arms races' has, however, met with rather limited success, with even the apparently obvious example of the Cold War superpower arms race proving ambiguous and very much dependent on model specification². Certainly, these models were more strategic than economic, as they did not integrate the economic characteristics of the countries. And yet, the political collapse of the Soviet Union and the end of the cold war was at least partly due to the burden of military expenditure on the Soviet block during the cold war's revival in the 1980's.

Since the end off the cold war the popularity of arms races has waned. Their focus on strategic comparable competition between two powers, had seemed less relevant as asymmetric conflicts between countries with high technology weapons and those without became much more likely. Several examples, like African conflicts or the attacks of September 11, show that technological superiority does not guarantee safety nor victory in the event of war. Asymmetric arms race models have to specify not only the protagonists and their strategic objective but also their cost constraint and the internal decision-making process (Dunne et al, 2006).

Recent work has considered arms races, but in a more general perspective. Dunne and Perlo-Freeman (2003a and 2003b) and Collier and Hoeffler (2004), sought to generalise the concept of an arms race by looking at the demand for military expenditure across a large group of countries, using either cross-section or panel data, incorporating a range of economic, political and security variables, and including variables for the aggregate military expenditure of neighbours and rivals. These models have typically shown that a country's military expenditure is significantly and positively influenced by that of those around them³.

² India and Pakistan provides one of the few examples where researchers have been able to provide consistent evidence of a Richardsonian arms race. But even here, Oren (1994) has offered an alternative approach, based on hostility levels between the two countries, under which the apparent arms race disappears. Numerous attempts have been made to estimate arms races for Turkey and Greece, using a variety of theoretical and econometric models, without clear evidence of an arms race emerging. (E.g. Dunne, Nikolaidou and Smith (2003))

³ Dunne and Perlo-Freeman (2003a) develop an attempt by Rosh (1988) to deal with general strategic effects by using the concept of a security web, instead of dyadic relationships between neighbours and other countries (such as regional powers). Rosh calculates the degree of militarisation of a nation's

Dunne and Perlo-Freeman (2003b) break this down, finding that the significant positive influence comes through the military spending of 'Potential Enemies'. They suggest that this indicates, if not an arms race as such, then at least arms race-like effects, or spillover effects, where there is some tendency towards an action-reaction pattern of military spending between hostile nations (Murdoch and Sandler, 2004; Dunne and Smith, 2007).

Beside arms race models, another economic theory of conflicts has been developed during the 1990's, the Conflict Success Function (CSF). In these models, the inputs are the investments in fighting efforts of the two sides and the outputs are their relative degree of success in the conflict: either the probability of winning or the share of the pie that goes to each side⁴. While there is a vast military literature on success in battle, there is relatively little econometric work on conflict success functions⁵. One problem with this type of analysis is that it either treats aggregate military strength as a single aggregate, or distinguishes only between labour and capital, members of the armed forces and their equipment. In fact determining the optimal force structure involves four main choices for both labour and capital. The first choice is the number of varieties of types of forces: army, navy, air force, each made up of specialised types of soldiers, sailors and airmen, each with distinct roles and associated equipment. There is some substitution between these; a target may be destroyed by a tank shell, a bomb dropped from an aircraft or a cruise missile launched from a submarine. The second choice is the quality of those forces, determined by R&D for equipment and training for labour. The third choice is the quantity of each. The final choice is whether they are obtained domestically or from abroad. This choice is primarily important for equipment, where security of supply for spares in case of conflict is often important, but does also occur for labour for those countries that use foreign soldiers (Dunne et al, 2006).

More generally, economic models such as CSF are in the tradition of ultra-liberal economists (Gary Becker), which associate all human activities, including criminal ones, with an economic calculation. The relevance of such cost-benefit analyses can be questioned, however, particularly when the conflict is atypical, as it is in the case of terrorism. Indeed, rationality has limited value in explaining terrorism, as for example it is difficult to see what the economic rationality of suicide attacks is, particularly to the individual bomber. There have in fact been relatively few economic analyses of terrorism, with the work of Todd Sandler the best known. In Enders and Sandler (2002) a model is developed to highlight cycles of transnational terrorism (with periods of weak activity alternating with periods of strong activity) to deduce some recommendations for the political authorities at various periods of the cycle. But such conclusions may appear less than straightforward, given the sophistication of statistical method used.

II.2. The theory of civil conflicts

While the end of the Cold War, with its proxy wars and superpower involvement in local conflicts, may have reduced the intensity of conflict, it certainly did not reduce the

Security Web by averaging the military burdens of those countries in the web, finding it to have a significant positive effect on a country's military burden.

⁴ There are two main functional forms used in which success depends either on the ratio of the forces or the difference of the forces. Hirschleifer (2000) provides a discussion of CSF, with many military and non-military examples, which captures the spirit of the literature.

⁵ An exception is Rotte and Schmidt (2003), who use a data set of 625 battles 1600-1973 to estimate an equation to explain victory by the attacker in battle: a zero to one dependent variable.

number. Civil or intra state wars became prevalent and the 'new' wars were considered by Kaldor (1999) to be very different to the 'old' and only understandable within the context of political, economic and military globalisation. Although local, the wars tended to have a transnational connection, often through diaspora, and there was a blurred distinction between war and organised crime. There were few real military battles, with skirmishes more likely, and a tendency for militias to target civilians. New war economies were seemingly based upon plunder and black-marketeering, sometimes supported by aid, and sustained through continued violence. This was not helped by the tendency of the 'international community' to work with the protagonists to broker peace deals rather than the civil society that existed outside of the conflict (Kaldor, 2006). A harder look at the endemic and continuing conflicts in Africa was particularly challenging, and it started to become clear that the continuing struggles needed some source of income, that this was often natural resources and that it was possible that the resources' control had become the object of the struggle overtaking any previous goals. It was not a breakdown of the system but a way of creating a new system of income and profit and power (Cramer, 2006).

While these new characteristics of conflicts were being taken on board by areas in social science other than economics, often using realist state-centred theory, economists have generally ignored them. Instead economists developed models which formalized the liberal idea, based on methodological individualism, that public action results from the balance of power between various interest groups. Non-cooperative game theory was then used to build explanatory models of governmental decisions, which when combined with macroeconomic factors, provided a better understanding of internal factors determining the State propensity to conflict or militarism. Thus, economic analyzes developed during the 1990's rejected ethnic rivalry as the main explanation of civil wars, and emphasised the role of the economic and of internal political determinants. One of the pioneer contributions was Grossman (1991), who presents the choice of the level of military expenditure by a government as determined by the probability of an insurrection. This study gave rise to many analyzes of internal political conflicts likely to lead to civil wars, using Conflict Success Functions (Skarpedas 1992; Hirschleifer 1995). These analyzes have since been subject to many improvements, in particular aiming at showing that the nature of the political regime and of its economic policy can influence the outbreak and the nature of an insurrection (Azam, 2001).

Whereas Hirschleifer (2000) assimilates rebellion and search for profit (greed), implying that the only motivation of rebels is their personal enrichment, Collier & Hoeffler (2004) have more recently moved to a more nuanced approach that sees civil wars as arising from a complex arbitration between greed and grievance. Denying the importance of the ethnic factor in civil wars, Collier underlines the role of economic and institutional determinants. His models and econometric applications aim at explaining the various actors' rationality and the outbreak of civil wars. Africa especially is studied. In Collier's theory, any rebel movement needs to have a business activity to ensure sufficient resources to go into war and these resources come from the exploitation and sale of raw materials. Thereafter, the rebels' motivation for ending a conflict may be diminished by the fact that the war economy works well for them and provides a good living. According to Collier, this situation explains the importance in the number of civil wars in the poorest countries and the existence of "conflict traps" (Collier, 2007).

Collier's works have been much criticized, notably on technical issues: problems of data sample, of periodic divisions, etc. But a more fundamental criticism of this approach is

that under the guise of being apolitical it inevitably presents rebel groups in a negative way. It means believing that any government, however corrupt, must be maintained in power rather than allowing a civil war to start. With this approach, the worst predation which can be exerted on the population is that rising from the military burden; the legal predation (notably by the tax system) by a corrupted government is preferable to a state of civil war. Collier's analysis shows the difficulty that social scientists face in remaining objective. Although economic rationality does not explain all conflicts, by reinstating the economic dimension in the analysis of civil wars, Collier's theory contributes to a better understanding of these phenomena⁶.

III Conclusion: The triumph of liberal neoconservatism?

Although as this paper has shown, economics has always included the study of conflict and war, it has tended to remain a diversion from the discipline's main focus. Nevertheless, an impressive literature has been developed that has influenced research in other subject areas, such as international relations and political science. The early theories were global, focusing upon the role of inter state war in economic development, but more recently they have become much more focussed and have reached an unprecedented level of technical sophistication. While this has led to important insights, it is still possible to question whether significant progress has been made in improving our understanding of conflicts, international or civil. The models are somewhat partial and abstract and one really needs to ask whether the modelling of Conflict Success Function provides a means of understanding international conflict, even if economic factors are central. It certainly begs a number of important questions, such as how the fact that a State's bellicosity may be motivated by a will to reinforce its internal control or to support the military industrial complex contrary to the general interest, may be introduced, or how the influence of long-term political changes at world level, such as described by political analysts, for example with the "power transition" theory, may be taken into account.

Certainly the analyses of conflict that use microeconomic methods remain partial, when compared with global explanations developed in the 19th and 20th centuries by the Marxist, Institutional, Keynesian, or even Classical economists. The rise of scientificity in social sciences fundamentally altered the analysis of conflict, and the search for a rationalization of the causes and consequences of war led to an apparent depoliticisation of economics discourse. Yet these theories are not politically neutral. The theory of the "diffusion of the democracy" is an example of imposition of neoconservative dogmas under scientific cover of neutrality. It is the theory of democratic peace with globalisation added to it, suggesting a role for multi layered governance structures to deal with weak states with anti-capitalist and anti-liberal attitudes which were reinforcing their backwardness in a globalising world. But more recently this has been replaced by the US hegemony pursuing democracy within states and protecting democracy from external aggression.

This new orthodoxy brings together neoclassical analysis of conflict and the general neoliberal perspective of the new realists in international relations. This sees war as a result of pre or anti-capitalist sentiments and groups, sees the solution to conflict as a global neo-liberal system and accepts that military action might be needed in the shorter run to create the

⁶ It is also interesting that it provides an instance where neoclassical rather than Marxist economics introduces a materialist interpretation of a phenomena..

right conditions (dealing with rogue states and terrorists). As a result the need to maintain the basis to produce the means of destruction through high military spending can be justified as can the hegemonic role of the US. Such a world view is certainly not what was expected at the end of the Cold War and is certainly not uncontested⁷. It represents a limited view of the world that is being brought into question with the continuing problems in Iraq and Afghanistan. The challenge for economics is to develop an alternative to the new orthodoxy that will support initiatives that strive for peace and security, a challenge that has been taken up by the creation of Economists for Peace and Security⁸.

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⁷ It was not demilitarisation that followed the cold war but remilitarisation with closer integration of the civil and the military, through homeland security and the privatisation of defence functions (Wulf, 2005).

⁸ See www.epsusa.org for more information.

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