Questions for Peace Economics: A Research Agenda
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About a decade ago, the Ford Foundation funded an ECAAR project with the objective of assembling a Global Register of Experts on the Economics of Military Affairs (GREEMA). Not wishing to merely produce an exalted telephone directory, part of the project involved small-scale workshops held in East-Central Europe, Asia, Africa, and Latin America to identify regional research agendas as determined by scholars who actually lived and worked in the regions. Recently, we updated this agenda.

The basic idea goes back to mathematician David Hilbert who at the Second International Mathematics Congress in Paris in 1900 presented a famous list of 10 unsolved mathematical problems. This list helped stimulate subsequent research by inviting mathematicians to try out their skills on difficult problems. The purpose of our research agenda is to pose, like Hilbert, a set of questions that we hope will stimulate research. The full set of questions, and assorted literature, is forthcoming in Defence and Peace Economics. Here we present a much abbreviated summary of some of our questions.

1. What, actually, is security and how do we measure it?
Oddly, there is surprisingly little research on this, the "mother of all questions." To measure security by military expenditure, as researchers currently do, is like measuring health by medical expenditure. And just as medical expenditure measures illness, rather than health, so military expenditure measures insecurity rather than security. So, what is security? And how do we usefully measure it? Is, for example, a high scoring on the Human Development Index (HDI) a good proxy measure of security?

2. Are there feasible alternative security arrangements?
Security must be provided from a stock of capabilities. This might include the men and machines of war but might also include non-military alternatives - such as diplomatic skill. But even among the military options, one could either favor offensive or retaliative arrangements or favor primarily defensive provisions. Clearly, at least in theory, there are alternatives to the predominant offensive-capabilities mode of much current military thinking. If a country adopts a defensive military posture its own security is increased without threatening that of others. What are the economic characteristics of a defensive military posture? What are the relative costs compared with offensive military postures, or deterrent postures that seek to prevent aggression through the threat of retaliation? Can economists design superior, feasible, and viable security systems?

3. What is the contribution of security to labor, capital, and economic development?
The question is not what is the contribution, if any, of military expenditure to labor, capital, and economic growth but what is the contribution of military expenditure to security which, in turn, would then permit investment in human, physical, and social capital. Indisputably, security is necessary for human betterment. A related but entirely different question, especially for developing nations, is whether we should not switch the focus from economic growth to human development indicators. On this, too, far too little work has been done.

4. What is the full opportunity cost of the military sector?
Opportunity costs are foregone benefits, namely the benefits that could have been derived had resources used for one purpose been employed elsewhere. There is a substantial, if generally dated, literature on this but a relatively unstudied area is that of the opportunity cost of conscription, of special relevance for developing nations. If a government drafts its young, they are compelled to forego whatever else they would have done voluntarily. Their nation thereby foregoes the benefits of whatever education its young might have acquired, or whatever level of
work experience they might have gained, and therefore of whatever subsequent economic contribution they would have made. Foregone earnings are not accounted for in military budgets, and it would be worthwhile to conduct a few country studies to obtain a "handle" on the order of magnitude of just how large the opportunity cost of conscription is. There are, of course, many other areas where opportunity costs occur: military spending competes with civilian spending for infrastructure, education, health care, environmental protection and much more.

5. What are causes and consequences of military expenditure inertia?
It should concern economists that the level of next year's military budgets can be predicted better by simple time-series analysis and extrapolation than by the variety of structural, explanatory models we have built. This is especially worrisome when military expenditure does not actually appear to buy any defensive or protective capabilities, as many have convincingly argued (e.g., Argentina, South Africa, even the EU as demonstrated in the Balkan Wars fiasco). Can we really not get a better handle on the determinants of military expenditure?

6. What are the economic consequences of war?
Surprisingly, one of the least studied aspects concerns the economic consequences of violent conflict. Some forty years of civil war in Angola, Colombia and Sudan, and twenty years in Sri Lanka surely have negatively affected their economic fortunes and prospects. Hacking limbs off children creates a generation of disabled people whose economic contribution to the future of their societies will be minimal. Interminable fighting that closes schools, damages health clinics, and destroys live-stock keeps generations of people in perpetual poverty. Economists can make a contribution with an economic accounting of the cost of war. Few attempts have been made. For instance, what is the reduction in average life expectancy in sub-Saharan Africa in war-ravaged countries relative to those not affected by war? "Natural experiments" of this sort should provide us with at least proximate answers.

7. How can markets be used to resolve conflicts?
One important aspect of a market system is that it makes the orderly arbitration of conflicting interests possible. Given some widely accepted and enforced rules of the games, markets contain and channel conflict. Without resort to violence, auctions allocate scarce resources to the highest bidder, who is likely to put them to productive use. The market mediates between sellers who prefer high prices and buyers who prefer low prices to find an equilibrium. How can such principles be applied to conflict resolution? Why is there no ready market for peace?

8. How can economic incentives become an effective method to deter aggression and violations of international law?
Small countries have on occasion been able to deter aggression not by assembling military forces that were superior to those of a potential adversary, but by providing a useful service that would naturally be lost in case of war. Can that strategy be developed and made more effective? What lessons can be learned from countries that have long been able to avoid war? Economists are experts on the role and function of incentives. Can we come up with clever and feasible incentive schemes that prevent violent conflict and promote non-violent alternative dispute resolution?

9. How do austerity measures, shock therapy, and bad policy increase social tensions?
When at the World Bank, Joseph Stiglitz famously made the case that harsh adjustment measures may precipitate conflict (e.g., in Indonesia and East Timor). Indeed, critics of the IMF and World Bank have long argued that their respective policies may contribute to conflict and warfare but surprisingly little research exists to ferret out the pathways by which this may have happened, or could be circumvented. On a related matter, it turns out that the world has no contingency plans for peace. For example, the US had detailed plans how to obliterate the Soviet
Union in case of a nuclear war, but had no plan whatsoever how it could assist it if it chose to make a transition to democracy and a market economy. Much the same has happened in Africa. During the cold war era it was a contested continent. Now it has become a forgotten continent, left to its own (insecure) devices.

10. What can economists do?
Plenty. Health economists surely have learned something about measuring health (rather than medical expenditure). What they have learned may usefully inform us about how to go about measuring security (rather than military expenditure). Labor economists should be of help measuring the opportunity cost of conscription. International trade economists can make contributions to the study of arms trade. Development economists now increasingly realize that personal and societal security is a necessary (if not sufficient) condition for economic and human development. Budget experts can help redo government accounts to figure out how much we actually spend on military and security functions (rather than how we officially account for it). Energy and environmental economists can help to figure out, at least in terms of orders of magnitude, not only the nuclear-weapons legacy costs in the US but the approximate actual cost to countries such as Pakistan and India.

Our questions may have no easy answers, but if we avoid tackling them nobody may be left to address easier and more pleasant questions. We hope that students, especially, will take any one of these "Hilbert-like" questions as a challenge and devote themselves to the production of answers.

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