

The Embargo and the Iraqi Military

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Brief Analysis

With the prospect of 100,000 more U.S. troops in the Gulf and a heightened chance of war, some argue that the anti-Iraq embargo will reduce Baghdad's fighting ability. Unfortunately, this is wishful thinking. Any loss is likely to be far smaller than expected.

In addition to stopping Iraq from acquiring new weapons, the embargo aims to keep Iraq from obtaining spare parts for its existing arsenal. The objective is to weaken Iraqi effectiveness against U.S. troops by making it difficult to keep weapons operational.

Modern military equipment is fragile and needs frequent maintenance and new parts. Yet Iraq can do a lot to minimize the embargo's damage. Cutting back on routine use of equipment lowers consumption of spare parts: aircraft can be flown less; wear and tear on tank engines and treads can be reduced by limiting tank training. Iraq can also defer certain routine maintenance, using worn components beyond their normal life. Finally, equipment can be sent into action even though some components are not working properly.

There will be some reduction in operational readiness and combat effectiveness. But by taking such actions Iraq can reduce demand for spare parts.

Iraqi Production Capabilities

Iraq can also meet some of the demand for spare parts from its own production capabilities. Although Iraq still relied on imports of military equipment prior to the invasion of Kuwait, its dependence on foreign sources of munitions dropped considerably during the past few years.

Iraq developed an extensive arms industry during the Iran-Iraq war, employing up to 100,000 people. Iraq spent billions of dollars to import dozens of factories filled with modern production tools. It even acquired electronics facilities capable of designing integrated circuits and building circuit boards.

The acquisition of these facilities has made it possible for Iraq to manufacture hundreds of end-items -- products as diverse as air-search radars, field artillery, and aircraft bombs. By the end of the war, Iraq was producing virtually all of its own ammunition. Extensive investments during the past two years have further strengthened these production capabilities. As a result, even before the imposition of the embargo, Iraq had reduced significantly its dependence on imported hardware.

Moreover, Iraq has made independence from external supplies a major priority. For example, artillery shells are cast in Iraqi factories using steel made at Iraqi mills, and relying only on imported raw materials -- coal and iron. At least some of these facilities possess inventories of spare parts for imported machinery sufficient to last up to six months under normal use.

The Iraqi defense industries have an important role to play under current circumstances. Iraqi factories can produce components needed to keep its existing arsenal in service. Although production of spare parts in limited quantities may not be cost-effective, the factories probably had surplus capacity even before imposition of the embargo. At

present, precedence is almost certainly being give to production of spare parts, not of new equipment.

It should not be difficult for factories to produce a wide variety of components. Iraq already appears to manufacture many of the parts needed to make some end-items, making it a simple matter to divert the production for spares. In other cases, it will be necessary to adapt existing tooling to make new items, but with modern automated design and production systems of the types available to Iraq, this should not be a difficult task.

Equally important, the production facilities make possible field expedients to keep equipment at least partially operational. Iraq has gained considerable experience in repairs and applying ingenuity during the eight years of war with Iran. This may result in a loss in capability, but it also ensures the availability of equipment that otherwise would have to be sidelined.

The creation of the Iraqi arms industry depended to a large extent on foreign technical assistance. Factories and equipment were designed and developed by engineers and technicians from Europe or Latin America. As a result of the embargo, Iraq cannot rely on outside assistance. Despite demands that workers fulfill contracts before leaving Iraq, many of the foreign engineers have left. Although Iraq has trained its own people to replace many of the foreign technicians, it cannot replace those with specialized skills. Hence, the absence of the foreigners will hurt the defense industries.

Evading the Embargo

By reducing needed strategic imports to a minimum, Iraq can focus on a smaller number of items for which it must find alternative suppliers and transport space. Iraq can evade the embargo and import by air high-value spare parts from friendly countries. Libya, Yemen, and North Korea all use Soviet-style equipment and may be willing to supply items to Iraq. Similarly, Libya operates some French equipment similar to that available to Iraq and could transfer high-value spare parts for aircraft and helicopters. In addition, it is possible that arms traders may be able to obtain components on the black market for eventual surreptitious transfer to Iraq. Iraqis and their agents have acquired considerable experience in such smuggling in their efforts to obtain equipment for nuclear and chemical weapons.

It will also be possible to import critical raw materials needed to produce some military components. For example, it should not be difficult for Iraq to acquire many off-the-shelf electronics components necessary for the production of circuit boards. As a result, the defense industries may not run out of raw materials needed in only small quantities.

In some instances, it may be impossible either to manufacture or to import particular components. Thus, Iraq will be forced to cannibalize some of its hardware to keep the rest operating. This will reduce the size of the active inventory of equipment, but will make sure that at least the best units remain armed with usable weapons.

By reducing consumption of spare parts -- and through a judicious combination of indigenous production, cannibalization, and imports -- Iraq can minimize the impact of the embargo on the operational effectiveness of its military forces. Although readiness will drop over time, it will not be a sudden or dramatic shift. As time passes, reduced training will undermine Iraqi fighting effectiveness. At the same time, the ability of Iraq to fight a long war will decline.

W. Seth Carus, a fellow at The Washington Institute, was the John M. Olin Foundation Fellow at the Naval War College Foundation for 1989-90. He is author of the Institute studies **The Poor Man's Atomic Bomb: Biological Weapons in the Middle East** (<http://www.washingtoninstitute.org/templateC04.php?CID=77>) and **The Genie Unleashed: Iraq's Chemical and Biological Weapons Programs** (Policy Paper #14, 1989). He is co-author, with Hirsh Goodman, of **The Future Battlefield and the Arab-Israeli Conflict** (Transaction Books, 1990) and, with Patrick Clawson, of **Iraq's Economic and Military Vulnerabilities** (Policy Focus #14, October 1990). ♦

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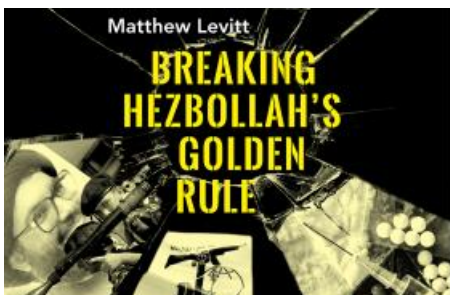
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