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In the Middle of the Fight

An Assessment of Medium-Armored Forces in Past Military Operations

David E. Johnson • Adam Grissom • Olga Oliker

Prepared for the United States Army

Approved for public release; distribution unlimited



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The research described in this report was sponsored by the United States Army under Contract No. W74V8H-06-C-0001.

Library of Congress Cataloging-in-Publication Data

Johnson, David E., 1950 Oct. 16—

In the middle of the fight : an assessment of medium-armored forces in past military operations / David E. Johnson, Adam Grissom, Olga Oliker.

p. cm.

Includes bibliographical references.

ISBN 978-0-8330-4413-6 (pbk. : alk. paper)

1. United States. Army—Armored troops. 2. United States. Army—Armored troops—History. I. Grissom, Adam. II. Oliker, Olga. III. Title.

UA30.J62 2008

358'.18—dc22

2008029010

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Published 2008 by the RAND Corporation

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Summary

The purpose of this study is to draw insights about medium-armored forces from past operations to help inform decisions about U.S. Army transformation and the design of the Future Force. The study is a qualitative assessment of the employment of medium-armored forces in the 20th century and it relies on a multicase, comparative historical approach. We assess U.S. and foreign experiences to analyze how medium forces performed across the range of military operations in complex terrain and against different types of opponents, as shown in Table S.1.

Tasks

The project's sponsor specified three central questions for the study:

- What unique capabilities have medium-armored forces brought to past conflicts, and where along the spectrum of operations have they been most valuable?
- How have medium-armored forces performed in complex terrain in the past?
- What advantages has the rapid deployment capability of medium-armored forces provided to operational commanders in the past?

Methodology

We used historical research, mainly as supplied in secondary sources, to select and develop the cases studied in this report. At the sponsor's request, we assessed each case from several perspectives:

Table S.1
Case Studies

Case	Complex Terrain	Point in the Range of Military Operations	Type of Operation	Types of Armored Vehicles and Other Forces
Armored warfare during the Spanish Civil War (1936–1939)	Broken and mountainous; urban	High	Major operations (civil war with external support to both sides)	German and Italian medium-armored vs. Soviet Union heavy
U.S. armored divisions in France and Germany during World War II (1944–1945)	Urban; hedgerows; forests	High	Major operations	U.S. medium-armored vs. German heavy
Armored cavalry and mechanized infantry in Vietnam (1965–1972)	Jungle	High	Major operations; counterinsurgency operations	U.S. medium-armored and heavy vs. Viet Cong and North Vietnamese light
Soviet airborne operations in Prague, Czechoslovakia (1968)	Urban	Middle	Strike (regime change)	Soviet Union medium-armored and heavy vs. Czechoslovakian light (mainly civilian forces)
South Africa in Angola (1975–1988)	Close; undeveloped infrastructure	Middle	Major operations; raids	South African medium-armored vs. Angolan heavy
Soviet Union in Afghanistan (1979–1989)	Urban; mountains; undeveloped infrastructure	Middle	Strike (regime change); counterinsurgency operations	Soviet Union medium-armored and heavy vs. Afghan light
Operation Just Cause, Panama (1989)	Urban	Middle	Strike (regime change)	U.S. medium-armored vs. Panamanian medium and light

Table S.1—Continued

Case	Complex Terrain	Point in the Range of Military Operations	Type of Operation	Types of Armored Vehicles and Other Forces
1st Marine Division light armored vehicles (LAVs) in Operations Desert Shield and Desert Storm, Southwest Asia (1990–1991)	Desert; limited visibility	High	Major operations	U.S. (Marine Corps) medium-armored vs. Iraqi heavy and medium
Task Force Ranger in Mogadishu, Somalia (1993)	Urban	Low	Raid	U.S. light and coalition (Malaysian and Pakistani) medium-armored vs. Somali light
Russia in Chechnya I (1994–1996) and II (1999–2001)	Urban; mountains	Middle	Counterinsurgency operations; combating terrorism	Russian medium-armored and heavy vs. Chechen light
Australia and New Zealand in East Timor (1999–2000)	Urban; jungle; undeveloped infrastructure	Low	Peace operations	Australian and New Zealand medium-armored vs. rebel light
SBCTs in Operation Iraqi Freedom (OIF) (2003–2005)	Urban	Middle	Counterinsurgency operations; combating terrorism	U.S. medium-armored vs. indigenous Iraqi and foreign fighter light

- How were medium-armored forces employed, and why does this monograph define them as “medium-armored”?
- What doctrine, organization, training, materiel, leadership and education, personnel, and facilities (DOTMLPF) insights emerge?¹
- What are the battlefield operating system (maneuver, fire support, air defense, command and control, intelligence, mobility/counter-mobility/survivability, and combat service support) implications?
- Which operational characteristics that the U.S. Army expects of a transformed force (i.e., responsiveness, deployability, agility, versatility, lethality, survivability, and sustainability) surfaced, or did not?
- How did the medium-armored force under examination perform in the case environments (i.e., complex terrain)?
- What key insights emerge?

Finally, the sponsor asked us to describe any overarching insights that are common among cases.

Key Findings

Several cases examined in this study show the critical difference that even small numbers of medium-armored forces can make, particularly in augmenting light forces or when operating independently in raids or strikes. In Somalia, Malaysian and Pakistani armor provided the protected mobility and firepower required to extricate cutoff elements of Task Force Ranger. Similarly, U.S. medium-armored forces in Panama during Operation Just Cause provided a needed edge to light forces, and even the modest number of deployed M551 Sheridans provided an important capability at crucial moments in the early stages of the campaign. U.S. Marine Corps LAV units were an important economy-of-force and reconnaissance element during Operation Desert Storm. Medium-armored forces gave Australia and New Zealand the capability

¹ The facilities aspects of DOTMLPF are not addressed in this monograph, however.

to range widely and rapidly across East Timor with protected mobility sufficient to meet the threat. Furthermore, SBCTs were able to provide rapid response across a large operational area in Iraq, with greater survivability than light forces. Finally, medium-armored forces are more able to operate in areas with less-developed infrastructure. This was the case in Panama, where M551 Sheridans could cross bridges that could not support U.S. main battle tanks.

Having the capacity to rapidly deploy medium-armored forces (by air or sea) may be an important national capability. This was apparent in operations by the South African Army (SAA) in Angola and in the Australian response to East Timor. Rapidly deployable medium-armored forces were also an important capability in the coup de main operations conducted by the Soviet Union in Czechoslovakia and Afghanistan. Currently, the U.S. Army does not have a forced-entry, medium-armor capability. Although the air-droppable M551 Sheridan armored reconnaissance vehicle provided this capability in Panama, the vehicle has since been retired from the inventory. Stryker medium-armored vehicles are not air-droppable and, with their add-on armor, can only be deployed by C-17 or C-5 transport aircraft. This likely limits their movement by air to any but secure locations.

Medium-armored forces highlight the fundamental defense-planning challenge of balancing predictability and adaptability. Peacetime choices about future capabilities, rooted in judgments about likely adversaries and environments, matter greatly because most wars are “come as you are” in many respects. Medium-armored forces have experienced the majority of their difficulties when conditions on the ground differed significantly from the predictions used to prepare those forces. This phenomenon is most apparent in the case of the U.S. Army in World War II, when U.S. medium-armored forces were obliged by strategic and operational circumstances to directly engage German heavy-armored forces that possessed significant survivability and lethality advantages. U.S. Army doctrine had explicitly rejected this contingency, and this conceptual error resulted in unnecessary losses for many U.S. armor units. Similarly, while SAA medium-armored forces enjoyed great success against Angola’s Soviet-supplied heavy forces in the late 1980s, the unexpected arrival of heavy armor on South Africa’s

doorstep led Pretoria to hedge against a future recurrence by fielding its own heavy forces.

The primary implication of this study is that the development of the U.S. Army's Future Force should be framed by a broad conceptual paradigm that embraces the complexity and diversity of the types of military operations that the nation may call upon that force to execute. In future conflict environments, the U.S. Army may face—as it has in the past—adversaries who operate in complex terrain and are equipped with heavy armor and highly lethal weaponry. In some circumstances, therefore, the materiel employed by U.S. medium-armored forces will be inherently less survivable and less lethal than the materiel fielded by their adversaries. Even if digitally enhanced situational awareness lives up to expectations, such circumstances will be very challenging, and medium-armored forces will need to compensate with sophisticated combined-arms tactics that exploit enduring U.S. advantages in artillery and air support (as did U.S. Marine Corps LAV units during Desert Storm and U.S. Army forces during World War II).

Given the breadth of cases examined in this study, we can draw an even more pointed conclusion: Medium-weight forces are useful only when deployed under one or more of the following conditions:

- by air in a way that preempts an effective enemy response (as in Czechoslovakia and Afghanistan)
- against an enemy who lacks the capability to deal with any mobile armor (as in Panama, Somalia, and East Timor)
- in circumstances where other friendly assets—e.g., close air support, artillery, a significant training differential—offset enemy capabilities (as in Desert Shield and Desert Storm, Angola, and OIF).

In short, this monograph suggests that medium-weight armor enjoys only four clear advantages over heavy armor: rapid deployability (particularly with air-droppable vehicles), speed over roads, trafficability in infrastructure not suited to heavy armor, and lower logistical demands. It furthermore suggests that these advantages are exploitable only in conditions where the resulting diminution of combat power can be

accepted or compensated for by other means. Because the U.S. Army cannot expect all future operations to occur in such circumstances, it would be prudent to maintain a mix of heavy, medium-armored, and light forces that can be task-organized and employed in conditions that best match their attributes. Medium-armored forces have much to offer in such a mix.