

**Comparison of the STEEPLE Strategy Methodology and the Department of
Defense's PMESII-PT Methodology**

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Abbreviations

PMESII-PT: Political, Military, Economic, Social, Information, Infrastructure, Physical Environment, and Time

STEEPLE: Social, Technological, Environment, Economic, Political, Legal, and Ethical

TRADOC: US Army Training and Doctrine Command

Executive Summary

As a result of problems encountered in Iraq and Afghanistan, the United States Department of Defense adopted an analysis methodology known as PMESII-PT to help analyze the external environment in order to develop better strategies. PMESII-PT looks at the external environment factors of Political, Military, Economic, Social, Infrastructure, Information, Physical Environment, and Time. A quick look at this methodology would lead one to believe that this is a purely military technique.

On the surface this methodology appears to be dramatically different from the commercially used STEEPLE (Social, Technological, Economic, Environmental, Political, Legal, and Ethical) external analysis tool. This paper compares the aspects of the two external environment analysis techniques for similarities and differences.

According to the Sagacious Think website STEEPLE analysis allows businesses “to anticipate future trends by considering the macro environment in which a company operates, enabling it to determine the factors that will influence it in the coming years” (Conner 2010). STEEPLE analysis has been compared with and pored with Strengths, Weaknesses, Opportunities and Threats (SWOT) analysis and Political, Economic, Social and Technical (PEST) analysis.

The acronym PMESII-PT contains the aspects of political, military, economic, social, information, infrastructure, physical environment, and time aspects of the external environment of an operational theater. PMESII-PT was developed by the Department of Defense and the US Army as an analysis tool to look at external environments. “PMESII operations are complex, with unpredictable effects and interactions” (Hillson n.d.).

The aspects of Society, Economic and Political are common to the two methodologies. The Political aspect is similar to the Military analysis of the PMESII-PT methodology. At the same time, the analysis of the opposing military is similar to an analysis of the competition in the commercial world. While STEEPLE looks at the environment and the impacts of operations on the environment, the PMESII-PT analysis looks at the environment as well while as the natural resources of an area which are important from a commercial aspect when developing strategy.

The Technology in the commercial analysis is similar to the infrastructure analysis in the PMESII-PT analysis. The Infrastructure analysis takes it a little farther by looking at the buildings, road networks and facilities in the area which should be important from the commercial analysis as well.

Just as military environments are complex and multidimensional, so are commercial operating environments. The analysis of this paper shows that the PMESII-PT technique can be easily modified for use by commercial firms and may provide a much more comprehensive look at a company's external environment. A more comprehensive look at the external environment may help a company develop a more comprehensive and successful strategy to provide the company with a sustainable competitive advantage.

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What is strategy? According to Merriam-Webster strategy is “the science and art of employing the political, economic, psychological, and military forces of a nation or group of nations to afford the maximum support to adopted policies in peace or war” (Merriam-Webster 2011). This definition would lead to the conclusion that strategy is a purely military concept. Based on this definition linking the concept of strategy to the military, this paper will compare the military’s latest methodology for assessing the external environment with the STEEPLE commercial strategy tool used to assess a company’s external environment.

Background

The Department of Defense uses a methodology known as PMESII-PT as the basis for analyzing operational environments in order to form strategy and strategic actions for a theater of operations. According to the US Army’s Operations Field Manual, PMESII-PT is an acronym for the external aspects of an area or theater (Field Manual 3-0, Operations 2011). The acronym PMESII-PT looks at the aspects of political, military, economic, social, information, infrastructure, physical environment, time aspects of the theater.

Commercial business analysts use the acronym STEEPLE as a memory reminder for a technique to analyze companies and markets in order to develop strategy and strategic actions for a company. STEEPLE is an acronym for the social, technological, environmental, economic, political, legal and ethical considerations and aspects of a company or industry.

This paper will compare the two analysis methodologies for analyzing the external environment used to help develop a strategy for a company or organization. By explaining each aspect of the two methodologies this paper will compare and contrast the methodology of the

Department of Defense and one of the accepted analysis methodologies of commercial industry to identify similarities and differences.

STEEPLE

According to the Sagacious Think website STEEPL analysis allows businesses “to anticipate future trends by considering the macro environment in which a company operates, enabling it to determine the factors that will influence it in the coming years” (Conner 2010). This website caveats the analysis with “It is important to note that these factors change by country and even region, so the user should not make sweeping assumptions with this tool.” (Conner 2010).

The STEEPL analysis looks at the operational environment of a company or industry. According to *Business Environment: Managing in a Strategic Context*, an environment is defined as: “anything outside an organization which may affect an organization’s present or future activities. Thus, the environment is situational – it is unique to each organization” (Kew and Stredwick 2005). The STEEPL analysis is one of the common tools in used by commercial businesses to analyze this environment. STEEPL analysis has been frequently compared with and paired with the Strengths, Weaknesses, Opportunities and Threats (SWOT) analysis.

PMESII-PT

The initial military actions following the terrorist attacks of September 11, 2001, revealed the need for a new tool to analyze external environments. This paper will look at the possibility of using this new framework for assessing and gaining a situational awareness in commercial

industries. *A Military Guide to Terrorism in the Twenty-First Century* states, “To understand the complex interactions of the Operational Environment, a framework of “systems” assists in assessing and gaining situational awareness. Joint doctrine uses systems of Political, Military, Economic, Social, Infrastructure, and Information to shape and conduct missions” (TRADOC 2007).

PMESII-PT was developed by the Department of Defense and the US Army as an analysis tool to replace the previous tool known as METT-TC. The previous analysis tool looked at the mission (mission analysis of what the company is supposed to accomplish), the enemy (in commercial terms this would be the competition), the terrain (physical terrain to include weather which could also describe the business terrain), troops (how many workers and equipment is available), time considerations and any civilian considerations (what are the impacts on the civilians in the area from a proposed course of action?).

The realization that certain actions were not covered by the previous methodology led one analyst to state, “PMESII operations are complex, with unpredictable effects and interactions” (Hillson n.d.). A comprehensive commercial strategy development also involves considering the aspects of complex environments. The PMESII-PT and STEEPLE comparison will look at the applications of PMESII-PT as a tool for analyzing the complex commercial business environment.

Comparison of PMESII-PT and STEEPLE

In a monograph prepared for the US Army’s School of Advanced Military Studies, Major Brian Ducote wrote, “complex environments exhibit characteristics of openness, purposefulness, multidimensionality, emergence, and counter intuitiveness. Therefore, any form of inquiry

designed to understand such an environment must address such aspects to convey meaning” (Ducote 2010). Just as military environments are complex and multidimensional, so are commercial operating environments. In a 2008 memorandum, General J. N. Mattis wrote, “operations in the future will require a balance of regular and irregular competencies” (Mattis 2008). Commercial operations in the future will face the same challenge of current competencies and new (and possibly currently unknown) competencies in order to compete in future markets. The goal of this comparison is to analyze two different approaches to analyzing external environments in order to develop operational strategies for competing in future markets. Figure 1 shows the aspects of the two methodologies.

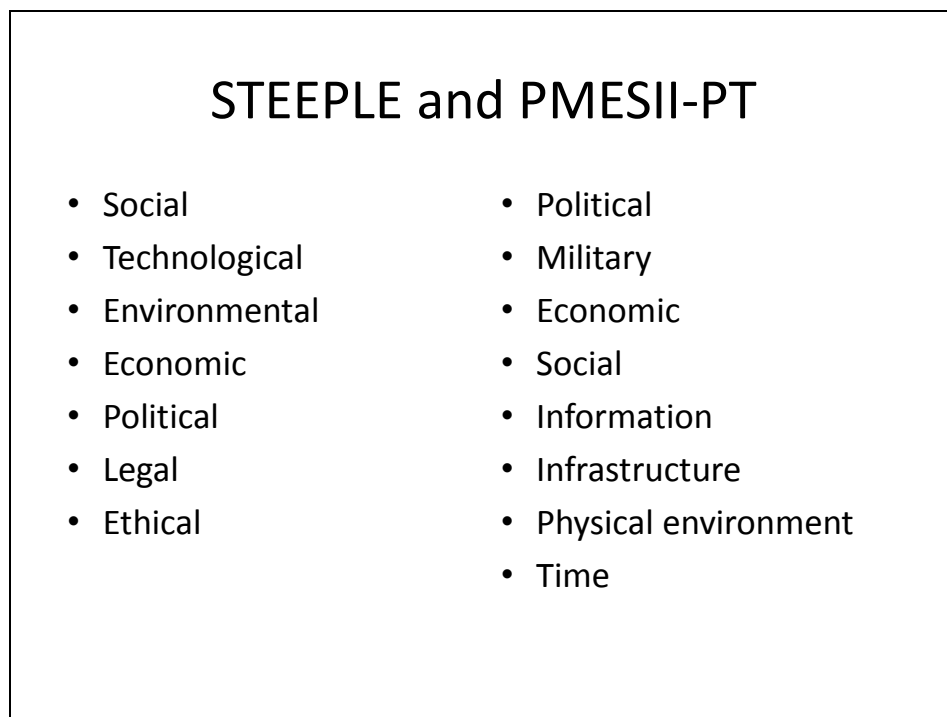


Figure 1: STEEPLE and PMESII-PT Elements

Comparison and Analysis

Society

The easiest part of the comparison between these two strategy analysis and development tools is the comparison of the parts of the tools with the same names. The social aspect of the STEEPLE analysis looks at aspects such as demographics, education levels, income levels and perhaps the age distribution of the population or customer base. The society in STEEPLE could be the stakeholders of the company. In the PMESII-PT analysis the focus is also on demographics. However, this analysis also looks at the religious backgrounds of the society.

In the PMESII-PT analysis the society is “is a population whose members are subject to the same political authority, occupy a common territory, have a common culture, and share a sense of identity” (Field Manual 3-0, Operations 2011). The military strategy development process realizes that the society helps shape the values of the population which helps to influence the actions of the people.

This definition could be modified to the STEEPLE analysis as: a population whose members are potential customers, share a common need for a product, and may be impacted by the actions of a company. In both methodologies the use of society is similar and could be used by companies to assist in analyzing their external environments.

Economic

The next common aspect is the economic component of the analyses. In STEEPLE the economic analysis looks at such aspects of the external environment as tax rates, monetary exchange rates, economic growth, and perhaps the consumer confidence index. These aspects are used to help define the economic impacts from the economy on the external environment of the company.

In PMESII-PT the economic aspect includes “individual and group behaviors related to producing, distributing, and consuming resources” (Field Manual 3-0, Operations 2011). This includes monetary policies just like the STEEPLE analysis and looks at government aid or assistance. This aspect of the analysis should be added to the STEEPLE analysis in the form of the question: Does the competition have any government support? An example of this would be the airline industry in many foreign countries being subsidized by the government helping to make them more competitive.

Political/Military

According to the US Army Field Manual, *FM 3-0, Operations*, the political environment includes “the distribution of responsibility and power at all levels of governance” (Field Manual 3-0, Operations 2011). The military aspect of the environment is “the military capabilities of all armed forces in a given operational environment. For many states, an army is the military force primarily responsible for maintaining internal and external security” (Field Manual 3-0, Operations 2011). In his book *On War*, Karl von Clausewitz states that the war is an extension of politics. Therefore, an analysis of the military is also an analysis of the political climate of a country and should not necessarily be separated from the political analysis. In some countries there is no separation from the military and political aspects and could be rolled into one aspect of the analysis.

The innovation wiki website states that the political analysis under the STEEPLE technique includes election results (Innovation Wiki 2011). The political analysis could also include environmental or safety regulations such as are present in California. A political analysis could also involve looking at the stability of the local government. Both analytical techniques

should have identified problems for companies that are or may have been considering doing business in Egypt, Syria and Libya this year.

In an external assessment of a company's environment the military aspect may not be important. In an analysis in preparation for developing a military strategy, a careful analysis of the political and military aspects of a country is critical. Another part of the "military" analysis is an analysis of the leadership and resources of the opposing militaries. A good external analysis for a commercial company should also consider the leadership of the rival companies and the resources both human and financial of the competition.

The analytical aspects of society and economics are similar in both the STEEPLE and PMESII-PT methodologies. The political aspect appears radically different in the PMESII-PT analysis when coupled with the military aspect of the analysis. However, if the analysis from the commercial perspective changes the military to the competition or rivals, the analysis has commercial applications and is useful in carefully analyzing the external environment.

Another aspect of the political analysis that should be compared comes from The Army Operations Smart Book. This handbook states "understanding political implications requires analyzing all relevant partnerships" (Wade 2009). A good commercial external analysis should look at the relevant partnerships of the rivals or competition. The Smart Book goes on to say "This analysis captures the presence and significance of external organizations and other groups" (Wade 2009). A good commercial external environment must also consider the influence of external organizations such as political action groups, environmental groups, or union activities when considering the company's external environment.

The remaining aspects of the two methodologies appear on the surface to be different. The remainder of this paper will look at those aspects for comparison and contrasts.

Environmental/Physical Environment

On the surface these two aspects of the external analysis would appear to be similar. Both appear to deal with the environment. In the STEEPLE analysis the environmental aspect looks at some areas that are similar to some of the political analysis. A detailed analysis could blur the lines between the political attitude toward the environment and the environmental regulations that could impact a company. For example, in the distribution industry companies are starting to move into Nevada from California based on the environmental regulations that the companies perceive to be a hindrance to operations. The move to Nevada allows distribution companies to continue servicing customers in California without being subject to California's environmental rules and regulations. This could be a political or environmental assessment.

In the PMESII-PT analysis the physical environment takes a different look at the external influences. In this methodology, the physical environment is "the geography and manmade structures" (Field Manual 3-0, Operations 2011). When looking at manmade structures from a military analysis perspective, facilities such as mosques, churches, and historical shrines must be considered as part of the strategy development process. If this aspect is converted to a commercial analysis it may look very similar to an infrastructure analysis both internal and external to the company and could provide both opportunities and threats in the form of areas that need to be improved or infrastructure deficiencies such as a lack of a rail siding for transportation deliveries or a truck delivery dock to receive truck shipments.

The physical environment in the PMESII-PT analysis also considers the natural resources and hydrology of the area. In a commercial analysis using this methodology, a company looking at international expansion may consider the availability of natural resources or water availability

in a region being considered and the impacts that those factors may have on the operations of the company if they expanded into that region.

Technological/Infrastructure

A strategic analysis of the external environment of a company requires looking at the technology currently in use in the industry and inside the company. Does the company have the latest technology in use in the industry or is the company an industry follower? Has the industry left the company behind? Another aspect of the technology analysis has to consider technology innovation within the company and the industry. Another aspect of the technology analysis may look at improvements in the competitive environment and local aspects of the competition – for example, is the competition located in Kansas City, Kansas with access to the new Google super speed wide-band internet system? Does an area have a good education base to support a high technology company?

A strategic analysis from the military perspective looks at the infrastructure of the area. This includes power plants, water treatment facilities, roads, and buildings used for support functions in the area being analyzed. Just as the military infrastructure considers facilities in a potential theater of operations, a comprehensive commercial external assessment should consider the infrastructure and facilities of the rival companies. This assessment may help the company decide if an expansion into a new country or market is feasible based on the resources and facilities of the competition. A well-established (good infrastructure) competitor may have the advantage in a potential “theater of operations” in the commercial world just as a well-entrenched military opponent may hold the advantage in a good external analysis. In a supply chain company this modification of the analysis may look at the location and numbers of distribution centers or the number of trucks and trailers in the competitor’s distribution network.

Legal

What rules and laws is the company subject to? Some of this may come from the previously discussed aspects of the analysis. The environmental analysis will reveal some of the laws impacting a company. The analysis of the society and economy may also reveal some of the legal impacts and constraints. From a military aspect, this part of the STEEPLE analysis should be added to the PMESII-PT to look at the laws of the countries being analyzed.

Ethics

The last aspect of the STEEPLE analysis is ethics. According to Dr. Ray Dick ethics: “involves applying general ethical principles and standards to business behavior (Dick 2011).” Any analysis of a business environment, both internal and external, must include a look at ethics. Hopefully, in the strategy continuum and strategy development the values of a company are consistent with ethical values. Although not part of the PMESII-PT analysis, any consideration of military strategy has to be consistent with ethical standards.

Information

According to Joint Publication 3-13, *Joint Doctrine for Information Operations*, information considerations for strategy development includes “the aggregate of individuals, organizations, and systems that collect, process, disseminate, or act on information” (Joint Publication 3-13, *Joint Doctrine for Information Operations* 1998). From a military perspective this means any system, activity or person that processes information about the military operations. When modifying the PMESII-PT to commercial operations, these activities may include the competition’s benchmarking operations, the marketing activities of the competition or even consumer reports analysis of the company’s products. These areas of market information should be a concern and consideration of the company when analyzing the external environment.

Included in the assessment should be an analysis of the security of the company's information systems – is there an opportunity for someone to hack in to the company's systems and impact the security of the information or the continuity of operations for the company? Knowing as much about the competition, their flow of information, and the competition's plans should be part of the external analysis.

Time

From a military perspective, time could be how much time is available for the preparation for an operation or the capability of the enemy to conduct protracted warfare. This aspect is not part of the STEEPLE analysis. If this aspect or the PMESII-PT is converted to a commercial analysis, time could be how quickly the competition can introduce a competitive product. The time analysis from a commercial perspective may also look at the ability of the competition to conduct long term operations or is the competition strapped for cash and looking at moving out of the market or industry. This could be a critical piece of information and analysis when looking at external factors impacting a company's operations and strategy development.

Conclusions

Commercial companies use the STEEPLE analysis methodology to look at the external factors that could impact the company's operations and help the company to develop a strategy for the future. The elements of the STEEPLE analysis are incorporated into the analysis process to provide a company with a comprehensive analysis of their external environment to complement a SWOT analysis. This technique is similar in nature to the US Department of Defense's PMESII-PT analysis of a theater of operations used to help develop military strategy for a region or country.

Properly conducted, both methodologies can provide a sound analysis and foundation for looking at the external environment and its impact on a company's or a country's operations. Both methodologies require a detailed analysis. The differences between the two methodologies on the surface appear to be great. However, when comparing and contrasting the two methodologies it is clear from this paper that the two methodologies are similar in nature and could easily be adapted to use by commercial and military strategy developers. The PMESII-PT methodology appears to be military unique in nature but as this paper shows with a little work could be adapted to use for analyzing the external environment of commercial firm and may provide a more detailed analysis or at least an analysis from new perspectives when aspects such as marketing (information), time and resources, competition capabilities (military), and the competitive infrastructure are added to the external analysis.

Which technique is best? Sun Tzu tells us that we have to get on the ground and see what is going on to determine what reality really is. For a strategy analyst to determine which methodology provides the most comprehensive analysis and clear picture of the external environment, he/she must get on the ground and look around and then compare the results of the two techniques to determine which one provides that particular company with the clearest picture of the external impacts on that particular company.

While not recommending one methodology over the other, this comparison analysis does show that with a little modification, the military's PMESII-PT tool to analyze the operational environment for developing military strategy can also assist commercial firms in analyzing their operational environments as a tool for strategy development.

Perhaps the best method for analyzing the external environment for the military and commercial operations would be a new methodology that combines the best of PMESII-PT and

STEEPLE. This new methodology could use the acronym PCESII-LET. This acronym would reflect the aspects of Political, Competition/Leadership, Environment/Physical Environment, Social, Infrastructure and Technology, Information, Legal, Ethical, and Time. This combination would provide strategy makers with a comprehensive analysis of any external environment.

Bibliography

Clausewitz, Karl Von, and John and Peter Paret edited by Howard. *On War*. Princeton, NJ: Princeton Press, 1988.

Conner, LouAnn. *Sagacious Think*. May 10, 2010.
<http://blog.sagaciousconsulting.com/2010/05/another-strategy-tool-steeple-analysis/>
(accessed September 29, 2011).

Dick, Ray. "EMGT 821 ." *What is Business Ethics Class Notes*. Overland Park, KS : University of Kansas, September 2011.

Field Manual 3-0, Operations . Fort Leavenworth, KS : US Army , 2011.

Hillson, R. "The DIME/PMESII Model Suite Requirements Project." *Simulation, Computing and Modeling*, n.d.

Innovation Wiki. 2011. <http://innovationwiki.brighton.ac.uk/index.php/STEEPLE> (accessed September 30, 2011).

Joint Publication 3-13, Joint Doctrine for Information Operations. Washington, DC: United States Department of Defense, 1998.

Kew, John, and John Stredwick. *Business Environment: Managing in a Strategic Context*. McGraw Hill, 2005.

Merriam-Webster. *Strategy*. 2011. <http://www.merriam-webster.com/dictionary/strategy>
(accessed November 3, 2011).

TRADOC. *A Guide to Terrorism in the Twenty-First Century*. Fort Monroe, VA: US Army Training and Doctrine Command, 2007.

Wade, Norman M. *US Army Operations SMARTBook*. The Lightning Press, 2009.