

POWER INDEX	INFORMATION	REFERENCES
<p>Clifford German 1960</p>	<p>Clifford German developed an index which consists of twenty variables and is famous for its complexity of calculation. It is mainly used for simple indexes and calculations, because there are high correlations between German's index and other indexes as well as GDP/GNP.</p> <p>Nowadays, some variables could be replaced by more comprehensive ones, for instance coal, oil or hydroelectricity by energy production; but the idea of adding a qualitative dimension to territory through population density and rail density is still recognised.</p>	<p>GERMAN Frank Clifford: A Tentative Evaluation of World Power. In: Journal of Conflict Resolution, Vol. 4 (1960), 138-144.</p>
<p>Wilhelm Fucks 1965</p>	<p>Wilhelm Fucks' book "Formeln zur Macht" was quite successful, not only in Germany but also in the United States. Fucks' power formula is still mentioned ubiquitously whenever it comes to measuring power.</p> <p>As a professor of physics, Fucks has given fresh and valuable impetus to the field of international relations. His formula for measuring national power is assembled from the variables <i>total population, steel production and energy production</i>.</p> <p>An advantage of Fucks' formula is its parsimony. Its construction and validation are, however, contested.</p>	<p>FUCKS Wilhelm: Formeln zur Macht: Prognosen über Völker, Wirtschaft, Potentiale, Stuttgart 1965.</p>

<p>David J. Singer</p>	<p>The Composite Index of National Capability (CINC) was developed within the Correlates of War project founded by J. David Singer in 1963. The CINC comprises three dimensions: attributes that can be used to influence other states in the short, medium and long term. Within the formula, the short-term capability is reflected by military strength (<i>military expenditure, military personnel</i>), the medium-term capability by industrial activity (<i>iron and steel production, energy consumption</i>), and the long-term capability by demographic factors (<i>total population, urban population</i>).</p> <p>The Correlates of War project set new standards in quantitative international politics. The CINC is still among the best-known and most accepted methods for measuring national capabilities.</p>	<p>SINGER, Joel David: The Correlates of War. Testing some Realpolitik Models. New York: The Free Press, 1980.</p>
<p>A.F.K. Organski/ Jacek Kugler 1980</p>	<p>A.F.K. Organski and Jacek Kugler basically suggest using the GNP to measure national capabilities. According to Organiski and Kugler, a major deficiency of all power indices is, however, the lack of a political dimension, i.e., the ability of a government to effectively mobilise the capabilities measured by the index. They therefore incorporate <i>real tax ratio, tax capacity, and foreign aid</i> into their formula.</p>	<p>ORGANSKI, A.F.K./ KUGLER, Jacek: The War Ledger. Chicago (u.a.): The University of Chicago Press, 1980.</p>

<p>Comprehensive National Power (CNP)</p>	<p>Chinese academic institutions and universities have developed various power indices to measure CNP (<i>zonghe guoli</i>) since 1984. The intention of CNP is to measure a country's national power comprehensively and from all angles.</p> <p>“Military might no longer describe the pivotal factor of strength.” Furthermore, elements such as economies, science and technology have increasingly become important.</p> <p>The Chinese academic debate about CNP is utilised both “qualitatively, in discussions about country strengths and weakness” and “quantitatively through the use of formulas which describe the numerical values of CNP”.</p>	<p>For further information about CNP: http://www.fas.org/nuke/guide/china/doctrine/pills2/part08.htm http://irchina.org/en/xueren/china/pdf/mhh3.pdf</p>
<p>CASS Index Framework</p>	<p>The Office of Statistics and Analysis at the Institute of World Economics and Politics (IWEPI) published <i>Comparative Studies of the Comprehensive National Power of the World's Major Nations</i> in 1996.</p> <p>The underlying principles on which the authors of these studies based their choice of eight major areas of CNP are as follows:</p> <ul style="list-style-type: none"> • Material Power (concrete factors such as economics, military affairs, etc.) and “spirit power” (intangible factors, such as international relations, politics, etc.) should both be included. • CNP is not just characterised by “actual power”; therefore, “potential power” plays a contributing role (for instance, 	<p>http://www.fas.org/nuke/guide/china/doctrine/pills2/part08.htm</p>

	<p>the findings of scientific and technological research, before being applied; natural resources that have not been developed; etc.).</p> <ul style="list-style-type: none"> • The “time” aspect of CNP should be recognised. Indicators of CNP have changed throughout history; therefore, new aspects should be integrated (for instance, the increasing significance of information). 	
<p>Academy of Military Science (AMS) Index Framework by Colonel Huang Shuofeng</p>	<p>The AMS CNP index system is divided into four major index subsystems: “the material power (hard) index subsystem, the spirit power (soft) index subsystem, the coordinated power index subsystem, the environmental index subsystem”.</p> <p>For each of these major subindices Huang developed a detailed sub-subindex, and together this combination of subsystems created a CNP appraisal index system.</p> <p>An example for the material power index subsystem is the political power subsystem, which consists of the following indicators:</p> <p>National strategy goals; political stability; policy level; the nation’s leadership, organisation, and decision-making capability; national embodiment power.</p>	<p>http://www.fas.org/nuke/guide/china/doctrine/pills2/part08.htm</p>