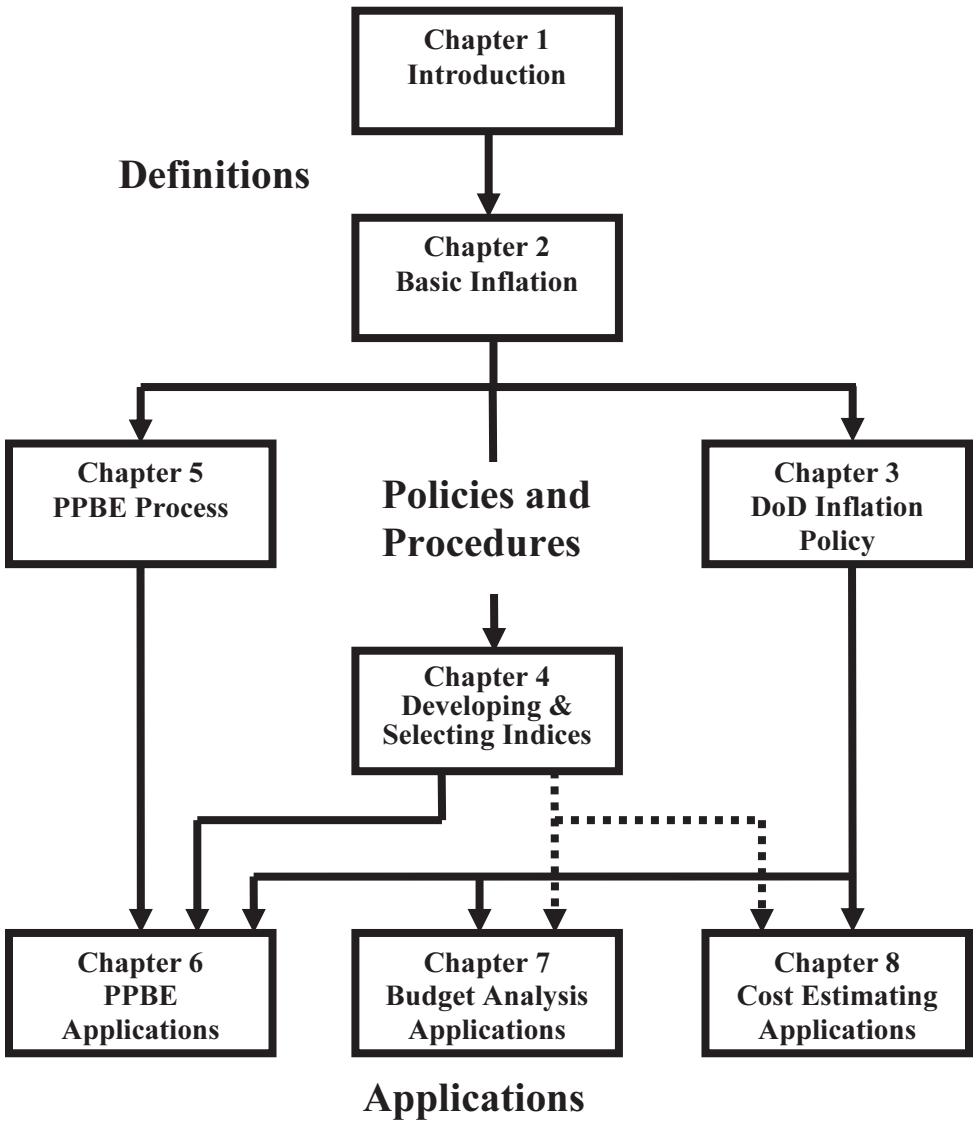
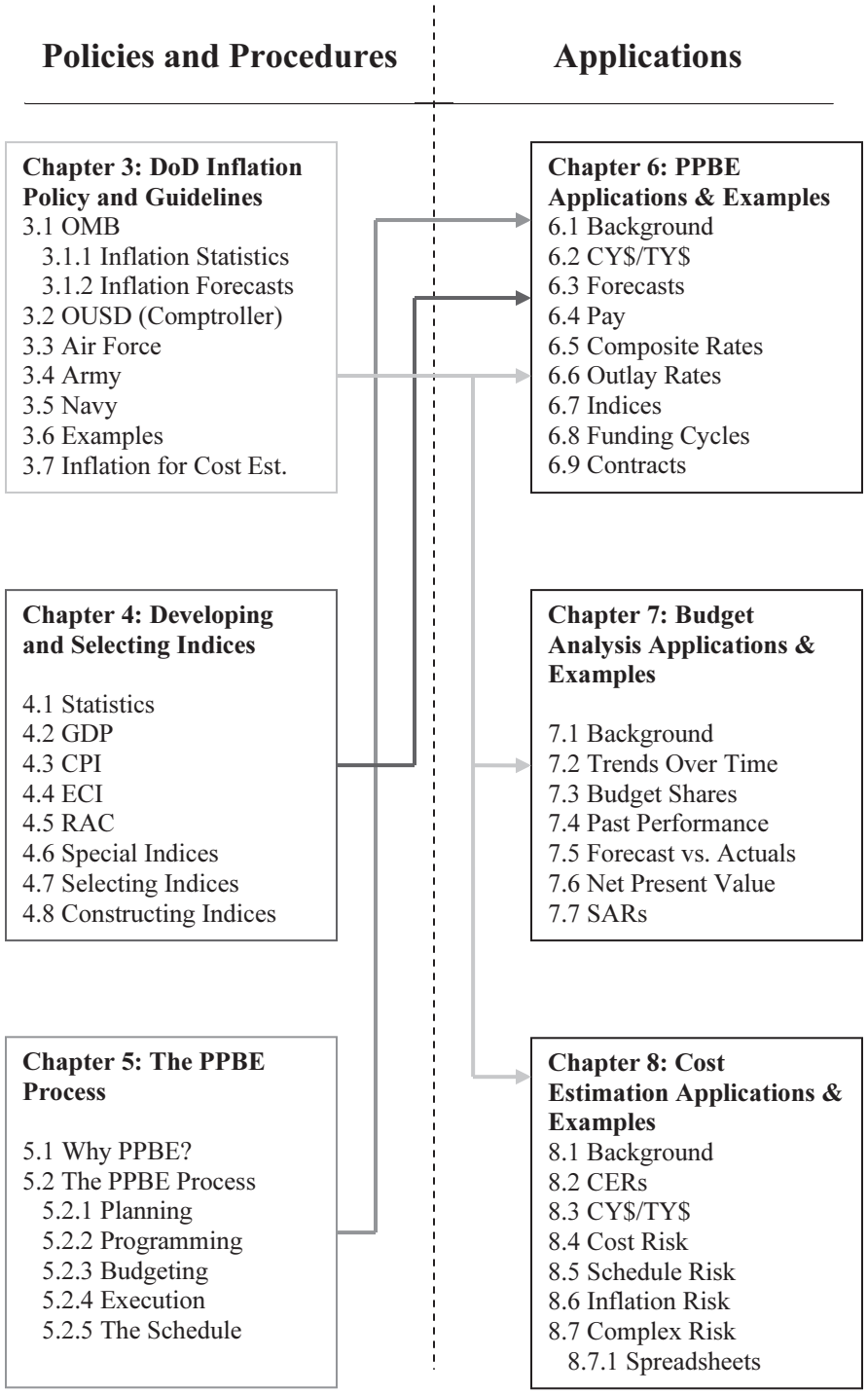
Charts for Using this Handbook



Topic	Equation	Page
Inflation	Inflation = (P2*q/P1*q)-1	Pg. 9
Average Annual Inflation	AAI =(CPI (Year Y) / CPI (Year X))$^{(1/(Y-X))}$ - 1	Pg. 66
Purchasing Power of Then Year Dollars	TY$= (BY$)/(1 + Cumulative Inflation)	Pg. 12
Converting Constant Year Dollars to Then Year Dollars	TY$ = CY$ * (TY Index/CY Index)	Pg 45
Converting Then Year Dollars to Constant Year Dollars	CY$ = TY$ * (CY Index/TY Index)	pg 45
Composite Rate	CR = Rate 1 * Proportion 1 + Rate 2 * Proportion 2 + … + Rate i * Proportion i	Pg 54
Raw Index	$RI_{i+1} = RI_i * (1 + \text{Inflation Rate, Year i})$	Pg 9
Weighted Index	$WI = (1 / (E_1 / I_1 + E_2 / I_2 + \ldots + E_i / I_i))$	Pg 60
CPI(Arithmetic Mean)	CPI (Arithmetic Mean) = (Basket Price (Year i) / Basket Price (Year j))*100	Pg. 65
Inflation (Geometric Mean) (CPI)	Inflation (Geometric Mean) = $(p_1(Y)/p_1(X))^{\text{Price Share 1 (BY)}} * (p_2(Y)/p_2(X))^{\text{Price Share 2 (BY)}} * \ldots * (p_i(Y)/p_i(X))^{\text{Price Share i (BY)}} - 1$	Pg. 67
Consumer Price Index (New Base Year) (Common Market Basket)	CPI (New Base Year) = $(CPI_{OLD} * 100) / CPI_{OLD}$ (New Base Year)	Pg. 70
Nominal GDP	Nominal GDP = $q_1(x) * p_1(x) + q_2(x) * p_2(x) + \ldots + q_i(x) * p_i(x)$	Pg. 73
Real GDP	Real GDP = $q_1(x) * p_1(x-1) + q_2(x) * p_2(x-1) + \ldots + q_i(x) * p_i(x-1)$	Pg. 73
GDP Deflator	Nominal GDP/ Real GDP	Pg. 74
Net Present Value	NPV= Σ(Benefits / Index) – Σ(Costs / Index)	Pg. 84



Typical Problems, Examples, and Concepts

Problem	Discussion/Example	Concept Introduction
Chapter 6		
Current Year / Then Year Dollar Conversions	**Section 6.2, p. 44**	**Sections 2.1**
Applying Indices and Outlays to Budgets	**Section 6.3, p. 47**	**Section 5.2.3**
Applying Revised Inflation Assumptions	**Section 6.3, p. 47**	**Section 5.2.5**
Pay Raise Conversions	**Section 6.4, p. 51**	**Section 4.4**
Composite Inflation Rates	**Section 6.5, p. 53**	**Sections 3.2, 4.7**
Outlay Rates	**Section 6.6, p. 55**	**Section 2.5**
Calculating Outlay Weighted Indices	**Section 6.7, p. 58**	**Sections 2.5**
Calculating CPI (Arithmetic Mean and Geometric Mean)	**Section 6.10.1, p. 64**	**Sections 4.3**
Changing the CPI Basket	**Section 6.10.1, p. 64**	**Sections 4.3**
Calculating GDP	**Section 6.10.2, p. 72**	**Sections 4.2**
Chapter 7		
Normalizing Historical Data	**Section 7.2, p. 76**	**Section 2.1**
Evaluating Budget Shares	**Section 7.3, p. 79**	**Section 5.2**
Comparing Productivity	**Section 7.4, p. 80**	**Section 5.2.4**
Comparing Forecasts and Actuals	**Section 7.5, p. 83**	**Section 5.2.5**
Net Present Value	**Section 7.6, p. 84**	**Section 2.2.1**
Chapter 8		
Cost Estimating Relationships	**Section 8.2, p. 93**	**Section 5.1.1**
Constant Year / Then Year Dollar Conversions	**Section 8.3, p. 95**	**Section 2.1**
Cost Risk	**Section 8.4, p. 97**	**Section 3.1.2**
Schedule Risk	**Section 8.5, p. 98**	**Section 3.1.2**
Inflation Forecast Risk	**Section 8.6, p. 100**	**Section 3.1.2**
Complex Risk	**Section 8.7, p. 101**	**Section 3.1.2**