

# Oil Sector Reforms in Downstream Segment: A Study of its Compatibility with National Economic Reforms

## CONTENTS

<u>Sec.</u>	<u>Sub sec.</u>	<u>Heading</u>	<u>Page</u>
<b>Chapter I : Introduction</b>			<b>1</b>
		<b>Backdrop</b>	<b>1</b>
		<b>Need for the Study</b>	<b>2</b>
		<b>Objectives</b>	<b>3</b>
		<b>Hypotheses</b>	<b>4</b>
		<b>Methodology</b>	<b>4</b>
		<b>Conclusions</b>	<b>7</b>
		<b>Chapter Scheme</b>	<b>8</b>
<b>Chapter II : The Indian Oil Sector – An Overview A Select Review of Literature and Emerging Issues</b>			<b>10</b>
<b>2.1</b>		<b>India's Energy Scene</b>	<b>11</b>
	2.1.1	Energy Consumption	11
	2.1.2	Projections of India's Energy Demand	13
	2.1.3	Conventional Supply Options	15
	2.1.4	Renewable Energy Resources	18
	2.1.5	Supply Scenario of Renewable Energy Resources	24
	2.1.6	Reforms in the Energy Sector	25
	2.1.7	Energy Policy	25
<b>2.2</b>		<b>Energy Consumption and Economic Growth: Empirical Evidences</b>	<b>27</b>
<b>2.3</b>		<b>Indian Oil Industry in a Growing Economy</b>	<b>31</b>
<b>2.4</b>		<b>Oil Industry and India's Balance of Payment</b>	<b>33</b>
<b>2.5</b>		<b>India's External Sector Development and Oil Industry</b>	<b>34</b>
	2.5.1	Globalization and National Inflation	35
	2.5.2	Phases of India's External Sector Development	37
	2.5.3	How did India Deal With Successive Oil Shocks?	39
	2.5.4	Impact of Increase in Oil Prices on Inflation and Output in India	44

2.6		<b>Consumption of Petroleum Products</b>	<b>46</b>
	2.6.1	Changes in Oil Consumption during Reform Period (1991-92 to 1996-97) – Analysis with Input Output Model	<b>47</b>
	2.6.2	Reasons for the Changes in Energy Consumption	<b>48</b>
<b>Chapter III : Commodity Balance of Petroleum Products in India</b>			<b>56</b>
3.1		<b>Discovery and Commercial Production in Off-shore Bombay High Oil Fields</b>	<b>58</b>
3.2		<b>Enhancement of Refining Capacity in the Country</b>	<b>60</b>
	3.2.1	Stylized Facts on the Material Balance in Oil Sector in India	<b>61</b>
3.3		<b>Managing Surplus</b>	<b>67</b>
3.4		<b>Import of Petroleum Products</b>	<b>72</b>
3.5		<b>Oil Security for India</b>	<b>74</b>
	3.5.1	The Deficit Context of Oil Security	<b>74</b>
	3.5.2	External Dimension of Oil Security	<b>76</b>
	3.5.3	Asian Premium	<b>76</b>
	3.5.4	Global & Neighborhood Concern for Oil Security	<b>78</b>
	3.5.5	Associated Measures for Oil Security	<b>83</b>
	3.5.6	Energy Efficiency & Management	<b>84</b>
<b>Chapter IV : India's Development Perspective</b>			<b>92</b>
4.1		<b>Features of India's Development Plan</b>	<b>93</b>
	4.1.1	Objective of Development	<b>93</b>
	4.1.2	Features of Development Strategy	<b>94</b>
	4.1.3	Role of Private Sector	<b>94</b>
	4.1.4	Control & Protection Measures	<b>95</b>
4.2		<b>Oil Sector in India's Industrial Policy</b>	<b>96</b>
	4.2.1	Industrial Policy Resolutions	<b>96</b>
	4.2.2	Oil Sector was an Exception	<b>98</b>
	4.2.3	India's Oil Policy Began in III Five Year Plan	<b>99</b>
	4.2.4	Government's Conflict with Multinational Oil Companies	<b>102</b>
4.3		<b>Development Consequence &amp; Outlook</b>	<b>103</b>
	4.3.1	1950 to 1970	<b>103</b>
	4.3.2	1980 Beginning	<b>104</b>
	4.3.3	1984 onwards	<b>107</b>
	4.3.4	Outlook – Infrastructure & Skill Building	<b>109</b>

<b>4.4</b>		<b>Beginning of Reforms</b>	<b>111</b>
	4.4.1	Reforms in 1980s	111
	4.4.2	Reforms in 1990s	111
	4.4.3	Immediate Results of Reforms	111
	4.4.4	Decentralized Pattern of Development	113
<b>4.5</b>		<b>Economic Reforms in Progress</b>	<b>116</b>
	4.5.1	Objectives of Development Revisited	116
	4.5.2	Public Private Participation	116
	4.5.3	Conditions Preceding Reforms of 1991	118
	4.5.4	Objectives of Reforms in Oil Sector	120
<b>4.6</b>		<b>Quick Results of Reforms</b>	<b>120</b>
<b>4.7</b>		<b>Growth Strategy in X Five Year Plan: 2002-2007</b>	<b>125</b>
<b>4.8</b>		<b>Performance of Economy from 2004 onwards</b>	<b>126</b>
<b>4.9</b>		<b>Energy Needs of a Growing Economy (IX Five Year Plan: 1997-2002)</b>	<b>127</b>
<b>4.10</b>		<b>Priority Areas for Oil Sector in Successive Five Year Plans</b>	<b>129</b>
	4.10.1	Eighth Five Year Plan (1992-1997)	129
	4.10.2	Ninth Five Year Plan (1997-2002)	132
	4.10.3	Tenth Five Year Plan (2002-2007)	137
<b>Chapter V : Downstream Oil Sector Reforms In India – a Historical Perspective</b>			<b>140</b>
<b>5.1</b>		<b>APM Era – Its Use and Abuse</b>	<b>141</b>
<b>5.2</b>		<b>Phased Deregulation of Hydrocarbon Sector (downstream)</b>	<b>145</b>
<b>5.3</b>		<b>Reforms on Pricing Front</b>	<b>147</b>
	5.3.1	Administered Pricing Mechanism	147
	5.3.2	Sundararajan Committee – 1995	148
	5.3.3	'R' Group Recommendation - 1996	149
	5.3.4	Post APM Budgetary Scheme	153
	5.3.5	Post APM – Policy in Practice	155
	5.3.6	Rangarajan Committee – 2006	159
	5.3.7	The Latest on Pricing of Petroleum Products (6 <sup>th</sup> June 2006)	160
	5.3.8	Pricing of Value Added Products	161
<b>5.4</b>		<b>De-canalization of Crude Oil Import</b>	<b>161</b>
<b>5.5</b>		<b>Entry of Private Players in Retailing</b>	<b>166</b>

5.6		<b>Merger &amp; Acquisition (Opening up and diversification of domain)</b>	169
	5.6.1	Entry of Overseas Firms mostly through Joint Venture route	169
	5.6.2	Entry of Private Sector to PSU Domain, through Joint Venture	171
	5.6.3	PSU Oil Firms to Adopt Forward and Backward Integration	173
	5.6.4	Privatize PSU Firms by Disinvestment or Selling to Strategic Partners	176
	5.6.5	Merger & Cross Holding Amongst PSU Firms	178
5.7		<b>Foreign Investment Policy in Oil Sector</b>	179
<b>Chapter VI : Select Areas of Reforms In Downstream Oil Sector and their Implications</b>			184
6.1		<b>Oil Sector's Contribution to Fiscal Affairs</b>	185
6.2		<b>Oil Sector's Impact on Country's Forex Reserves</b>	190
6.3		<b>Oil Sector's Linkage with Inflation</b>	198
6.4		<b>Oil Sector's Role in Industrial Performance</b>	208
<b>Chapter VII : Alignment of Oil Sector Reforms with National Agenda</b>			214
7.1		<b>Integrated Reforms in Economic Growth, Energy &amp; Environment</b>	215
	7.1.1	Supply Security	215
	7.1.2	Renewable Sources of Energy	218
	7.1.3	Nuclear Energy as Compared to Fossil Fuel	220
7.2		<b>Taxonomy of Economic Reforms</b>	220
	7.2.1	Business Expectations	223
	7.2.2	External Sector & Corporate Sector Performance	224
	7.2.3	External & Financial Sectors	227
7.3		<b>Taxonomy of Reforms in Oil Sector</b>	227
7.4		<b>Alignment / Misalignment of Reforms in Oil Sector with those in National Economy</b>	229
	7.4.1	Industrial Reforms	230
	7.4.2	Pricing	241
	7.4.3	Market Scene	245
	7.4.4	Trade	247
	7.4.5	Fiscal	253
7.5		<b>Growth with Social Justice</b>	262
7.6		<b>Degree of Congruence</b>	263

<b>Chapter VIII : Roadmap for Downstream Oil Sector</b>			<b>269</b>
<b>8.1</b>		<b>What is Medium Term Outlook for the Oil Sector?</b>	<b>270</b>
<b>8.2</b>		<b>Challenges for Oil Industry in XI Five Year Plan</b>	<b>277</b>
<b>8.3</b>		<b>Recommendations</b>	<b>287</b>
<b>Chapter IX : Summary and Concluding Remarks</b>			<b>296</b>
<b>9.1</b>		<b>Summary</b>	<b>296</b>
<b>9.2</b>		<b>Concluding Remarks</b>	<b>322</b>