Summary of Gasoline and Diesel Demand Studies in Dahl Energy Demand Databasse (DEDD)

Gasoline Demand
I have found 247 studies for gasoline demand with 2365 estimates for around 80 countries and some cross-section time-series of countries. Summary statistics are shown in Table 1. DEDD median elasticities are well behaved and show less elastic long-run price elasticities than in the residential sector. Histograms of all studies follow.

Table 1 DEDD Summary Statistics for Gasoline Demand

<table>
<thead>
<tr>
<th></th>
<th>Psr</th>
<th>Pir</th>
<th>Plr</th>
<th>Ysr</th>
<th>Yir</th>
<th>Ylr</th>
</tr>
</thead>
<tbody>
<tr>
<td>G Avg</td>
<td>-0.18</td>
<td>-0.57</td>
<td>-1.61</td>
<td>0.28</td>
<td>0.51</td>
<td>1.57</td>
</tr>
<tr>
<td># Studies Median</td>
<td>-0.15</td>
<td>-0.34</td>
<td>-0.55</td>
<td>0.24</td>
<td>0.57</td>
<td>0.79</td>
</tr>
<tr>
<td>247 Std</td>
<td>0.16</td>
<td>2.06</td>
<td>6.37</td>
<td>0.34</td>
<td>2.75</td>
<td>5.38</td>
</tr>
<tr>
<td># Estimates Min</td>
<td>-1.65</td>
<td>-44.80</td>
<td>-61.11</td>
<td>-2.63</td>
<td>-79.89</td>
<td>-40.00</td>
</tr>
<tr>
<td>2365 Max</td>
<td>0.63</td>
<td>21.77</td>
<td>5.89</td>
<td>3.00</td>
<td>5.54</td>
<td>38.89</td>
</tr>
<tr>
<td>Count</td>
<td>1080</td>
<td>1116</td>
<td>1152</td>
<td>1013</td>
<td>1092</td>
<td>1100</td>
</tr>
</tbody>
</table>

Histograms are shown in Figure 1

Figure 1: Histograms of Elasticities for Gasoline Demand (G)
Diesel Demand

I have found 63 studies for diesel demand with 343 estimates for around 62 countries and some cross-section time-series of countries. Summary statistics are shown in Table 2. DEDD median elasticities are well behaved and show less elastic price response than for gasoline and more elastic income response. Histograms of all studies follow.

Table 2 DEDD Summary Statistics for Diesel Demand

<table>
<thead>
<tr>
<th></th>
<th>Psr</th>
<th>Pir</th>
<th>Plr</th>
<th>Ysr</th>
<th>Yir</th>
<th>Ylr</th>
<th>Qt-1</th>
</tr>
</thead>
<tbody>
<tr>
<td>D</td>
<td>Avg</td>
<td>-0.11</td>
<td>-0.23</td>
<td>-0.65</td>
<td>0.53</td>
<td>1.06</td>
<td>1.56</td>
</tr>
<tr>
<td># Studies</td>
<td>Median</td>
<td>-0.10</td>
<td>-0.16</td>
<td>-0.33</td>
<td>0.33</td>
<td>1.00</td>
<td>1.29</td>
</tr>
<tr>
<td></td>
<td>63</td>
<td>Std</td>
<td>0.30</td>
<td>0.82</td>
<td>1.85</td>
<td>0.60</td>
<td>0.52</td>
</tr>
<tr>
<td>-----</td>
<td>----</td>
<td>------</td>
<td>------</td>
<td>------</td>
<td>------</td>
<td>------</td>
<td>------</td>
</tr>
<tr>
<td># Estimates</td>
<td>Min</td>
<td>-0.94</td>
<td>-4.06</td>
<td>-20.00</td>
<td>-0.93</td>
<td>-0.49</td>
<td>-1.40</td>
</tr>
<tr>
<td></td>
<td>Max</td>
<td>2.13</td>
<td>4.03</td>
<td>2.29</td>
<td>3.32</td>
<td>3.27</td>
<td>18.62</td>
</tr>
<tr>
<td></td>
<td>Count</td>
<td>144</td>
<td>131</td>
<td>148</td>
<td>144</td>
<td>114</td>
<td>180</td>
</tr>
</tbody>
</table>

Figure 2 Histograms of Elasticities for Diesel Demand
Bibliography of Gasoline and Diesel Demand Studies


Ahua, A., 1983. La structure de la demande énergétique de la Côte d'Ivoire: modèle et prévisions. M.A., Université Laval, Quebec, Canada.


Arimany, L., 1977. Estudio de la demanda de gasolina en el caso Espanol, part III. Oil Gas, Noviembre, 81-95.


Castro, N., 1985. Produço, distribuiçao, consumo e a demanda derivada por transporte e energia. Trabalhos Apresentado Ao Viencontro Brasileiro De Econometria, Sociedade Brasileira De Econometria, Río De Janeiro, Brazil, 4-6.


Donnelly, W.A., 1981. The demand for petrol in Australia, working paper. Australian National University, Canberra, Center for Resources and Environmental Studies.


Galindo, L., Salinas, E., 1997. La demanda de gasolinas en México, la condición de exogeneidad y el comportamiento de los agentes económicos. Dirección General De Regulación Ambiental, Instituto Nacional De Ecología, Mexico.


Kriegsmann, K., 1980. Rises of energy costs and sectoral economic change as determinants of final energy consumption. Die Weltwirtschaft, 1, 100-120.


Pindyck, R. S., 1979a. The structure of world energy demand. MIT Press, Cambridge, MA.


