Supplementary Material

# Supplementary Data

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| year | prov | region | EC | SIZE | TECH |
| 2010 | 110000 | Eastern region | 0.27062 | 21.88332 | 0.695297 |
| 2011 | 110000 | Eastern region | 0.241544 | 22.01821 | 0.65926 |
| 2012 | 110000 | Eastern region | 0.225903 | 22.23054 | 0.717181 |
| 2013 | 110000 | Eastern region | 0.214506 | 22.24837 | 0.791739 |
| 2014 | 110000 | Eastern region | 0.181585 | 22.32964 | 0.82311 |
| 2015 | 110000 | Eastern region | 0.122341 | 22.56377 | 0.817408 |
| 2016 | 110000 | Eastern region | 0.087531 | 22.81461 | 0.754505 |
| 2007 | 120000 | Eastern region | 0.567458 | 21.1209 | 0.901714 |
| 2008 | 120000 | Eastern region | 0.529076 | 21.40262 | 0.919735 |
| 2009 | 120000 | Eastern region | 0.500957 | 21.52266 | 0.865051 |
| 2010 | 120000 | Eastern region | 0.503586 | 21.9764 | 0.867722 |
| 2011 | 120000 | Eastern region | 0.49466 | 22.51656 | 0.86706 |
| 2012 | 120000 | Eastern region | 0.461057 | 22.92862 | 0.850724 |
| 2013 | 120000 | Eastern region | 0.478375 | 23.01935 | 0.883504 |
| 2014 | 120000 | Eastern region | 0.440882 | 23.24137 | 0.898372 |
| 2015 | 120000 | Eastern region | 0.389721 | 23.66311 | 0.889007 |
| 2016 | 120000 | Eastern region | 0.374053 | 23.77325 | 0.916713 |
| 2006 | 130000 | Eastern region | 0.700067 | 22.80182 | 0.70559 |
| 2007 | 130000 | Eastern region | 0.74749 | 22.98072 | 0.749668 |
| 2008 | 130000 | Eastern region | 0.717142 | 23.75684 | 0.778927 |
| 2009 | 130000 | Eastern region | 0.745128 | 23.86932 | 0.768603 |
| 2010 | 130000 | Eastern region | 0.712577 | 24.06537 | 0.854418 |
| 2011 | 130000 | Eastern region | 0.745621 | 24.37758 | 0.872908 |
| 2012 | 130000 | Eastern region | 0.740482 | 24.43362 | 0.789772 |
| 2013 | 130000 | Eastern region | 0.762442 | 24.46941 | 0.847468 |
| 2014 | 130000 | Eastern region | 0.721987 | 24.47565 | 0.874905 |
| 2015 | 130000 | Eastern region | 0.72957 | 24.59565 | 0.830313 |
| 2016 | 130000 | Eastern region | 0.700801 | 24.65815 | 0.822184 |
| 2006 | 140000 | Central region | 1.449314 | 22.9314 | 0.481985 |
| 2007 | 140000 | Central region | 1.357319 | 23.09584 | 0.569983 |
| 2008 | 140000 | Central region | 1.292892 | 23.45216 | 0.618015 |
| 2009 | 140000 | Central region | 1.273154 | 23.71735 | 0.627995 |
| 2010 | 140000 | Central region | 1.269193 | 23.94074 | 0.7548 |
| 2011 | 140000 | Central region | 1.305686 | 24.25104 | 0.779224 |
| 2012 | 140000 | Central region | 1.276391 | 24.38552 | 0.890315 |
| 2013 | 140000 | Central region | 1.324298 | 24.44304 | 0.902267 |
| 2014 | 140000 | Central region | 1.351694 | 24.43205 | 0.905536 |
| 2015 | 140000 | Central region | 1.647166 | 24.54269 | 0.801806 |
| 2016 | 140000 | Central region | 1.640102 | 24.57806 | 0.757702 |
| 2007 | 150000 | Western region | 1.040214 | 21.88888 | 0.595058 |
| 2008 | 150000 | Western region | 1.126737 | 22.03011 | 0.648199 |
| 2009 | 150000 | Western region | 1.119492 | 22.46315 | 0.654957 |
| 2010 | 150000 | Western region | 1.146768 | 22.62336 | 0.779803 |
| 2011 | 150000 | Western region | 1.322226 | 22.71973 | 0.87997 |
| 2012 | 150000 | Western region | 1.322049 | 22.84586 | 0.79269 |
| 2013 | 150000 | Western region | 1.410571 | 23.26463 | 0.808539 |
| 2014 | 150000 | Western region | 1.422669 | 23.29374 | 0.791133 |
| 2015 | 150000 | Western region | 1.379748 | 23.33459 | 0.706887 |
| 2016 | 150000 | Western region | 1.348719 | 23.34161 | 0.695258 |
| 2010 | 210000 | Eastern region | 0.576597 | 21.13888 | 0.795569 |
| 2011 | 210000 | Eastern region | 0.567787 | 21.14237 | 0.780834 |
| 2012 | 210000 | Eastern region | 0.553159 | 21.19077 | 0.854842 |
| 2013 | 210000 | Eastern region | 0.5963 | 21.33547 | 0.866534 |
| 2014 | 210000 | Eastern region | 0.589782 | 21.36148 | 0.772765 |
| 2015 | 210000 | Eastern region | 0.569383 | 21.54313 | 0.548436 |
| 2016 | 210000 | Eastern region | 0.580558 | 21.61218 | 0.456935 |
| 2006 | 220000 | Central region | 0.838726 | 22.06336 | 0.498005 |
| 2007 | 220000 | Central region | 0.796497 | 22.52893 | 0.557302 |
| 2008 | 220000 | Central region | 0.827663 | 22.73349 | 0.791365 |
| 2009 | 220000 | Central region | 0.796991 | 23.19769 | 0.640975 |
| 2010 | 220000 | Central region | 0.824953 | 23.43468 | 0.699509 |
| 2011 | 220000 | Central region | 0.865897 | 23.5534 | 0.784184 |
| 2012 | 220000 | Central region | 0.838352 | 23.54106 | 0.831526 |
| 2013 | 220000 | Central region | 0.860444 | 23.81073 | 0.84261 |
| 2014 | 220000 | Central region | 0.866117 | 23.86779 | 0.86959 |
| 2015 | 220000 | Central region | 0.878325 | 23.92292 | 0.867127 |
| 2016 | 220000 | Central region | 0.86609 | 24.15103 | 0.877923 |
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| 2007 | 310000 | Eastern region | 0.385804 | 24.15186 | 0.760762 |
| 2008 | 310000 | Eastern region | 0.382359 | 24.64396 | 0.789569 |
| 2009 | 310000 | Eastern region | 0.36552 | 24.59731 | 0.678375 |
| 2010 | 310000 | Eastern region | 0.374684 | 24.45213 | 0.746941 |
| 2011 | 310000 | Eastern region | 0.389267 | 24.38097 | 0.752761 |
| 2012 | 310000 | Eastern region | 0.358528 | 24.47562 | 0.763795 |
| 2013 | 310000 | Eastern region | 0.357666 | 24.56144 | 0.72999 |
| 2014 | 310000 | Eastern region | 0.315476 | 24.73076 | 0.740046 |
| 2015 | 310000 | Eastern region | 0.308966 | 24.79346 | 0.698482 |
| 2016 | 310000 | Eastern region | 0.293905 | 24.80285 | 0.691816 |
| 2006 | 320000 | Eastern region | 0.701201 | 21.3935 | 0.677613 |
| 2007 | 320000 | Eastern region | 0.690039 | 21.6173 | 0.746148 |
| 2008 | 320000 | Eastern region | 0.66625 | 21.8444 | 0.800071 |
| 2009 | 320000 | Eastern region | 0.632767 | 22.17513 | 0.654804 |
| 2010 | 320000 | Eastern region | 0.640214 | 22.85743 | 0.798193 |
| 2011 | 320000 | Eastern region | 0.708471 | 23.82298 | 0.774942 |
| 2012 | 320000 | Eastern region | 0.687366 | 23.89121 | 0.77227 |
| 2013 | 320000 | Eastern region | 0.683509 | 23.93444 | 0.794639 |
| 2014 | 320000 | Eastern region | 0.643729 | 24.26083 | 0.796022 |
| 2015 | 320000 | Eastern region | 0.639872 | 24.61756 | 0.785312 |
| 2016 | 320000 | Eastern region | 0.641935 | 24.9023 | 0.79255 |
| 2006 | 330000 | Eastern region | 0.612472 | 21.97709 | 0.578752 |
| 2007 | 330000 | Eastern region | 0.640529 | 22.33376 | 0.605997 |
| 2008 | 330000 | Eastern region | 0.616616 | 22.96788 | 0.586012 |
| 2009 | 330000 | Eastern region | 0.609188 | 23.14921 | 0.523968 |
| 2010 | 330000 | Eastern region | 0.590822 | 23.40376 | 0.619983 |
| 2011 | 330000 | Eastern region | 0.592042 | 23.89205 | 0.576493 |
| 2012 | 330000 | Eastern region | 0.568004 | 23.98286 | 0.615799 |
| 2013 | 330000 | Eastern region | 0.542671 | 24.05715 | 0.635119 |
| 2014 | 330000 | Eastern region | 0.524527 | 24.25533 | 0.63594 |
| 2015 | 330000 | Eastern region | 0.503619 | 24.40437 | 0.599117 |
| 2016 | 330000 | Eastern region | 0.491389 | 24.53253 | 0.617534 |
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| 2007 | 340000 | Central region | 0.901343 | 20.84275 | 0.87904 |
| 2008 | 340000 | Central region | 0.976125 | 21.26204 | 0.928222 |
| 2009 | 340000 | Central region | 1.017054 | 21.37939 | 0.871679 |
| 2010 | 340000 | Central region | 0.984306 | 21.55359 | 0.913079 |
| 2011 | 340000 | Central region | 0.95441 | 22.37282 | 0.933909 |
| 2012 | 340000 | Central region | 0.924733 | 22.45948 | 0.931038 |
| 2013 | 340000 | Central region | 0.9567 | 22.6888 | 0.93228 |
| 2014 | 340000 | Central region | 0.938859 | 22.90721 | 0.91015 |
| 2015 | 340000 | Central region | 0.910135 | 23.34325 | 0.919118 |
| 2016 | 340000 | Central region | 0.88596 | 23.68238 | 0.905758 |
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| 2011 | 350000 | Eastern region | 0.584292 | 21.51901 | 0.81883 |
| 2012 | 350000 | Eastern region | 0.54185 | 21.63731 | 0.834217 |
| 2013 | 350000 | Eastern region | 0.51569 | 21.72705 | 0.853574 |
| 2014 | 350000 | Eastern region | 0.483571 | 22.0517 | 0.811569 |
| 2015 | 350000 | Eastern region | 0.461224 | 22.26296 | 0.807064 |
| 2016 | 350000 | Eastern region | 0.405132 | 22.63877 | 0.805759 |
| 2007 | 370000 | Eastern region | 0.801017 | 23.80136 | 0.760367 |
| 2008 | 370000 | Eastern region | 0.803551 | 24.06358 | 0.835166 |
| 2009 | 370000 | Eastern region | 0.766626 | 24.25975 | 0.830289 |
| 2010 | 370000 | Eastern region | 0.766016 | 24.67711 | 0.854678 |
| 2011 | 370000 | Eastern region | 0.748706 | 24.84795 | 0.856895 |
| 2012 | 370000 | Eastern region | 0.738791 | 24.87812 | 0.814588 |
| 2013 | 370000 | Eastern region | 0.761278 | 25.02963 | 0.89274 |
| 2014 | 370000 | Eastern region | 0.773984 | 25.42953 | 0.887419 |
| 2015 | 370000 | Eastern region | 0.790283 | 25.3867 | 0.891167 |
| 2016 | 370000 | Eastern region | 0.750291 | 25.67864 | 0.844552 |
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| 2007 | 410000 | Central region | 0.928218 | 22.47911 | 0.788817 |
| 2008 | 410000 | Central region | 0.898415 | 22.51288 | 0.748716 |
| 2009 | 410000 | Central region | 0.884064 | 22.49635 | 0.764786 |
| 2010 | 410000 | Central region | 0.867979 | 23.06802 | 0.82739 |
| 2011 | 410000 | Central region | 0.878828 | 23.38193 | 0.864364 |
| 2012 | 410000 | Central region | 0.762416 | 23.31757 | 0.799272 |
| 2013 | 410000 | Central region | 0.816972 | 23.81074 | 0.855718 |
| 2014 | 410000 | Central region | 0.756736 | 23.91673 | 0.870091 |
| 2015 | 410000 | Central region | 0.775384 | 24.1038 | 0.874496 |
| 2016 | 410000 | Central region | 0.757156 | 24.31038 | 0.856683 |
| 2006 | 420000 | Central region | 0.640651 | 22.86043 | 0.42403 |
| 2007 | 420000 | Central region | 0.6348 | 23.06252 | 0.508963 |
| 2008 | 420000 | Central region | 0.567008 | 23.12878 | 0.534633 |
| 2009 | 420000 | Central region | 0.578397 | 23.20757 | 0.508212 |
| 2010 | 420000 | Central region | 0.635614 | 23.28422 | 0.568435 |
| 2011 | 420000 | Central region | 0.680957 | 23.32718 | 0.707101 |
| 2012 | 420000 | Central region | 0.638498 | 23.20828 | 0.762084 |
| 2013 | 420000 | Central region | 0.553441 | 23.16452 | 0.747488 |
| 2014 | 420000 | Central region | 0.520311 | 23.5126 | 0.761389 |
| 2015 | 420000 | Central region | 0.509295 | 23.47744 | 0.751351 |
| 2016 | 420000 | Central region | 0.48257 | 23.40842 | 0.771609 |
| 2006 | 440000 | Eastern region | 0.391577 | 24.79899 | 0.548724 |
| 2007 | 440000 | Eastern region | 0.399637 | 25.08053 | 0.529482 |
| 2008 | 440000 | Eastern region | 0.404618 | 25.30703 | 0.542137 |
| 2009 | 440000 | Eastern region | 0.395407 | 25.49824 | 0.489076 |
| 2010 | 440000 | Eastern region | 0.424301 | 25.67958 | 0.576376 |
| 2011 | 440000 | Eastern region | 0.462474 | 25.89374 | 0.533933 |
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| 2013 | 440000 | Eastern region | 0.429051 | 25.97444 | 0.580832 |
| 2014 | 440000 | Eastern region | 0.410668 | 26.09557 | 0.589986 |
| 2015 | 440000 | Eastern region | 0.39341 | 26.31666 | 0.570795 |
| 2016 | 440000 | Eastern region | 0.369275 | 26.49151 | 0.593251 |
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| 2007 | 500000 | Western region | 0.613762 | 21.32791 | 0.699544 |
| 2008 | 500000 | Western region | 0.581907 | 21.38022 | 0.769055 |
| 2009 | 500000 | Western region | 0.587481 | 21.44791 | 0.716087 |
| 2010 | 500000 | Western region | 0.581668 | 21.53215 | 0.780366 |
| 2011 | 500000 | Western region | 0.584088 | 21.68346 | 0.876037 |
| 2012 | 500000 | Western region | 0.51965 | 21.76957 | 0.809988 |
| 2013 | 500000 | Western region | 0.514224 | 21.84093 | 0.842821 |
| 2014 | 500000 | Western region | 0.506717 | 23.41911 | 0.880067 |
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| 2012 | 510000 | Western region | 0.412159 | 22.89018 | 0.595868 |
| 2013 | 510000 | Western region | 0.434207 | 22.97121 | 0.59684 |
| 2014 | 510000 | Western region | 0.396887 | 23.15709 | 0.496887 |
| 2015 | 510000 | Western region | 0.344326 | 23.28412 | 0.637077 |
| 2016 | 510000 | Western region | 0.322493 | 23.39225 | 0.597665 |
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| 2016 | 650000 | Western region | 0.843293 | 24.71943 | 0.728363 |