**Agrarian dynamics, CO2 balance and deforestation in the Brazilian Amazon:**

**A sustainable development approach based on structural heterogeneity**

Francisco de Assis Costa

**Supplementary Material**

*Table S-1. Evolution of areas used in the agicultural economy of the North region by trajectory (model estimates in ha).*

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Trajectory | Year | Annual Crops | Capital-Capoeira | PerennialCrops | Reserve-Capoeira | Pasture | Scrap-Capoeira | Forest | Total1 | Deforested Area Required by the Level of Economic Activity () | Successional Area with Permanent Cover2 |
| PeasantT1 (Intensive Agriculture) | 1990 | 319,057 | 212,047 | 370,655 | 579,234 | 1,737,237 | 177,034 | 5,934,502 | 9,329,766 |  3,395,264  | 1,445,980 |
| 1991 | 357,701 | 227,636 | 353,945 | 567,171 | 1,881,452 | 190,041 | 5,751,827 | 9,329,773 |  3,577,946  | 1,445,980 |
| 1992 | 332,076 | 242,528 | 346,460 | 550,860 | 2,013,104 | 203,072 | 5,641,663 | 9,329,763 |  3,688,100  | 1,450,107 |
| 1993 | 389,963 | 232,679 | 352,932 | 565,259 | 2,191,799 | 203,407 | 5,393,735 | 9,329,774 |  3,936,039  | 1,461,464 |
| 1994 | 420,418 | 243,668 | 363,020 | 546,039 | 2,315,800 | 213,535 | 5,227,290 | 9,329,770 |  4,102,480  | 1,473,449 |
| 1995 | 409,682 | 256,504 | 365,053 | 543,337 | 2,552,542 | 224,141 | 4,978,505 | 9,329,764 |  4,351,259  | 1,496,222 |
| 1996 | 470,566 | 218,993 | 548,042 | 682,244 | 2,721,071 | 171,857 | 4,516,997 | 9,329,770 |  4,812,773  | 1,728,323 |
| 1997 | 473,946 | 238,624 | 543,037 | 646,574 | 2,784,998 | 170,790 | 4,471,804 | 9,329,773 |  4,857,969  | 1,728,323 |
| 1998 | 474,674 | 245,985 | 554,026 | 668,076 | 2,951,527 | 164,628 | 4,270,850 | 9,329,766 |  5,058,916  | 1,762,013 |
| 1999 | 499,771 | 268,098 | 660,397 | 729,755 | 2,990,693 | 167,214 | 4,013,846 | 9,329,774 |  5,315,928  | 1,954,762 |
| 2000 | 474,036 | 297,627 | 714,797 | 774,121 | 3,038,877 | 172,568 | 3,857,748 | 9,329,774 |  5,472,026  | 2,088,411 |
| 2001 | 454,039 | 308,707 | 720,241 | 785,311 | 3,250,138 | 170,549 | 3,640,791 | 9,329,776 |  5,688,985  | 2,114,106 |
| 2002 | 445,550 | 337,427 | 670,364 | 765,061 | 3,640,686 | 174,653 | 3,296,029 | 9,329,770 |  6,033,741  | 2,114,106 |
| 2003 | 491,908 | 395,324 | 794,659 | 893,948 | 4,010,901 | 189,484 | 2,553,539 | 9,329,763 |  6,776,224  | 2,440,016 |
| 2004 | 510,564 | 416,406 | 730,867 | 847,028 | 4,432,426 | 192,103 | 2,200,373 | 9,329,767 |  7,129,394  | 2,440,016 |
| 2005 | 509,596 | 472,464 | 710,225 | 863,713 | 4,571,207 | 201,440 | 2,001,138 | 9,329,783 |  7,328,645  | 2,501,454 |
| 2006 | 490,375 | 488,316 | 699,480 | 878,316 | 4,470,309 | 196,558 | 2,106,418 | 9,329,772 |  7,328,645  | 2,516,282 |
| 2007 | 478,722 | 488,051 | 699,331 | 895,024 | 4,213,487 | 190,829 | 2,364,327 | 9,329,771 |  7,328,645  | 2,526,847 |
| 2008 | 445,018 | 493,785 | 576,138 | 938,763 | 4,331,285 | 196,595 | 2,348,177 | 9,329,761 |  7,344,785  | 2,526,847 |
| 2009 | 435,783 | 491,381 | 589,799 | 970,113 | 4,488,743 | 198,695 | 2,155,261 | 9,329,775 |  7,537,715  | 2,571,554 |
| 2010 | 397,294 | 484,432 | 604,726 | 954,370 | 4,609,447 | 198,559 | 2,080,944 | 9,329,772 |  7,612,029  | 2,571,554 |
| 2011 | 407,735 | 487,996 | 637,282 | 1,006,920 | 4,739,883 | 201,620 | 1,848,327 | 9,329,763 |  7,844,637  | 2,663,285 |
| PeasantT2(Agrpforestry) | 1990  | 175,295 | 211,800 | 164,732 | 265,695 | 320,374 | 63,595 | 1,807,914 | 3,009,405 |  1,201,491  | 669,317 |
| 1991 | 179,071 | 212,895 | 170,619 | 261,191 | 326,919 | 63,864 | 1,794,853 | 3,009,412 |  1,214,559  | 672,064 |
| 1992 | 172,389 | 221,702 | 155,901 | 246,905 | 333,735 | 66,270 | 1,812,516 | 3,009,418 |  1,214,559  | 672,064 |
| 1993 | 187,980 | 241,239 | 155,717 | 245,043 | 354,238 | 72,512 | 1,752,688 | 3,009,417 |  1,274,386  | 695,797 |
| 1994 | 195,064 | 245,985 | 116,331 | 141,128 | 361,377 | 74,692 | 1,874,838 | 3,009,415 |  1,274,386  | 695,797 |
| 1995 | 195,131 | 254,831 | 110,835 | 146,607 | 371,445 | 77,517 | 1,853,055 | 3,009,421 |  1,296,175  | 707,451 |
| 1996 | 271,467 | 167,719 | 332,692 | 375,728 | 376,774 | 65,406 | 1,419,638 | 3,009,424 |  1,729,595  | 1,059,206 |
| 1997 | 279,221 | 177,409 | 320,068 | 355,471 | 368,987 | 65,160 | 1,443,087 | 3,009,403 |  1,729,595  | 1,059,206 |
| 1998 | 284,899 | 181,943 | 316,726 | 353,753 | 375,547 | 64,387 | 1,432,159 | 3,009,414 |  1,740,534  | 1,059,206 |
| 1999 | 320,845 | 216,594 | 288,772 | 269,567 | 368,031 | 66,464 | 1,479,138 | 3,009,411 |  1,740,534  | 1,059,206 |
| 2000 | 322,525 | 227,267 | 294,590 | 278,473 | 367,162 | 66,032 | 1,453,368 | 3,009,417 |  1,766,310  | 1,084,171 |
| 2001 | 332,684 | 226,684 | 270,991 | 268,652 | 400,585 | 70,298 | 1,439,511 | 3,009,405 |  1,780,155  | 1,084,171 |
| 2002 | 329,970 | 239,290 | 363,282 | 323,482 | 417,446 | 73,612 | 1,262,316 | 3,009,398 |  1,957,343  | 1,247,212 |
| 2003 | 342,023 | 258,570 | 407,131 | 358,023 | 456,603 | 85,369 | 1,101,677 | 3,009,396 |  2,117,980  | 1,356,639 |
| 2004 | 333,206 | 298,759 | 426,237 | 400,940 | 494,722 | 95,686 | 959,837 | 3,009,387 |  2,259,811  | 1,469,168 |
| 2005 | 405,163 | 297,084 | 414,487 | 395,786 | 507,961 | 95,300 | 893,639 | 3,009,420 |  2,326,042  | 1,469,168 |
| 2006 | 374,243 | 301,214 | 435,550 | 427,003 | 504,362 | 95,750 | 871,282 | 3,009,404 |  2,348,383  | 1,526,028 |
| 2007 | 372,898 | 285,570 | 434,115 | 417,965 | 508,673 | 107,735 | 882,457 | 3,009,413 |  2,348,383  | 1,526,028 |
| 2008 | 360,541 | 319,918 | 387,634 | 440,315 | 533,789 | 116,038 | 851,158 | 3,009,393 |  2,379,662  | 1,544,548 |
| 2009 | 344,546 | 292,492 | 402,593 | 448,431 | 547,439 | 117,857 | 856,052 | 3,009,410 |  2,379,662  | 1,544,548 |
| 2010 | 303,639 | 284,167 | 416,221 | 451,686 | 565,120 | 120,132 | 868,461 | 3,009,426 |  2,379,662  | 1,555,381 |
| 2011 | 320,337 | 291,633 | 465,256 | 494,173 | 588,390 | 129,522 | 720,093 | 3,009,404 |  2,528,008  | 1,663,759 |
| PeasantT3 (Cattle) | 1990 | 242,697 | 78,371 | 79,159 | 332,967 | 2,420,712 | 253,347 | 3,400,894 | 6,808,147 |  3,407,253  | 908,170 |
| 1991 | 220,918 | 82,075 | 60,873 | 221,751 | 2,519,037 | 261,955 | 3,441,536 | 6,808,145 |  3,407,253  | 908,170 |
| 1992 | 237,285 | 86,758 | 58,128 | 210,103 | 2,584,329 | 273,557 | 3,357,986 | 6,808,146 |  3,490,804  | 910,062 |
| 1993 | 258,889 | 89,091 | 64,407 | 215,389 | 2,760,550 | 293,968 | 3,125,861 | 6,808,155 |  3,722,938  | 944,371 |
| 1994 | 274,898 | 94,377 | 60,855 | 202,840 | 2,808,313 | 304,260 | 3,062,607 | 6,808,150 |  3,786,187  | 944,371 |
| 1995 | 286,703 | 99,906 | 66,704 | 205,485 | 2,895,643 | 315,611 | 2,938,116 | 6,808,168 |  3,910,696  | 969,745 |
| 1996 | 337,855 | 124,016 | 159,029 | 235,632 | 2,945,923 | 291,111 | 2,714,588 | 6,808,154 |  4,134,210  | 1,091,827 |
| 1997 | 360,771 | 129,825 | 153,134 | 214,479 | 2,850,127 | 283,693 | 2,816,131 | 6,808,160 |  4,134,210  | 1,091,827 |
| 1998 | 393,153 | 135,679 | 160,918 | 245,308 | 2,769,991 | 276,835 | 2,826,261 | 6,808,145 |  4,134,210  | 1,129,436 |
| 1999 | 426,935 | 141,682 | 176,952 | 249,157 | 2,707,470 | 273,417 | 2,832,549 | 6,808,162 |  4,134,210  | 1,151,904 |
| 2000 | 450,181 | 153,143 | 172,471 | 252,103 | 2,756,512 | 279,559 | 2,744,180 | 6,808,149 |  4,222,566  | 1,167,972 |
| 2001 | 406,337 | 174,152 | 159,954 | 235,745 | 2,876,059 | 283,653 | 2,672,242 | 6,808,142 |  4,294,497  | 1,167,972 |
| 2002 | 402,439 | 185,856 | 160,373 | 226,412 | 2,853,038 | 297,334 | 2,682,694 | 6,808,146 |  4,294,497  | 1,184,443 |
| 2003 | 411,462 | 225,276 | 172,483 | 239,895 | 2,829,469 | 316,223 | 2,613,339 | 6,808,147 |  4,363,853  | 1,268,345 |
| 2004 | 407,413 | 232,684 | 140,009 | 233,116 | 2,939,858 | 322,035 | 2,533,036 | 6,808,151 |  4,444,160  | 1,268,345 |
| 2005 | 489,153 | 245,538 | 153,467 | 233,548 | 2,857,614 | 327,477 | 2,501,354 | 6,808,151 |  4,475,842  | 1,300,531 |
| 2006 | 448,662 | 251,076 | 155,306 | 231,670 | 2,705,280 | 318,303 | 2,697,860 | 6,808,157 |  4,475,842  | 1,300,531 |
| 2007 | 394,854 | 419,393 | 143,752 | 237,468 | 2,637,808 | 362,089 | 2,612,795 | 6,808,159 |  4,560,909  | 1,506,878 |
| 2008 | 431,624 | 432,957 | 148,760 | 236,045 | 2,684,396 | 376,138 | 2,498,230 | 6,808,150 |  4,675,465  | 1,538,076 |
| 2009 | 413,579 | 440,818 | 140,668 | 203,125 | 2,730,172 | 386,085 | 2,493,704 | 6,808,151 |  4,679,992  | 1,538,076 |
| 2010 | 404,462 | 446,958 | 115,647 | 195,920 | 2,809,492 | 396,655 | 2,439,025 | 6,808,159 |  4,734,679  | 1,538,076 |
| 2011 | 422,617 | 463,373 | 115,275 | 208,508 | 2,857,966 | 408,269 | 2,332,141 | 6,808,149 |  4,841,553  | 1,578,321 |
| Enterprise T4 (Cattle) | 1990 | 166,372 | - | 111,913 | 327,018 | 12,117,995 | 980,867 | 13,392,780 | 27,096,945 |  13,704,165  | 1,586,170 |
| 1991 | 174,062 | - | 70,682 | 352,335 | 13,326,919 | 1,014,272 | 13,211,060 | 28,149,330 |  14,938,270  | 1,603,661 |
| 1992 | 207,684 | - | 81,727 | 360,895 | 14,160,701 | 1,168,464 | 13,703,940 | 29,683,411 |  15,979,471  | 1,777,458 |
| 1993 | 214,779 | - | 75,254 | 402,093 | 15,684,530 | 1,330,939 | 12,889,546 | 30,597,141 |  17,707,595  | 1,974,658 |
| 1994 | 224,359 | - | 79,987 | 378,938 | 16,096,974 | 1,369,556 | 12,415,704 | 30,565,518 |  18,149,814  | 1,994,853 |
| 1995 | 242,510 | - | 86,246 | 376,092 | 16,665,541 | 1,421,081 | 12,100,528 | 30,891,998 |  18,791,470  | 2,049,791 |
| 1996 | 196,655 | - | 82,599 | 286,268 | 15,695,765 | 1,238,403 | 10,908,447 | 28,408,137 |  18,791,470  | 2,049,791 |
| 1997 | 202,726 | - | 80,215 | 271,966 | 14,891,999 | 1,151,343 | 12,087,295 | 28,685,544 |  18,791,470  | 2,049,791 |
| 1998 | 184,435 | - | 86,526 | 260,099 | 13,608,859 | 1,035,956 | 10,941,318 | 26,117,193 |  18,791,470  | 2,049,791 |
| 1999 | 200,312 | - | 100,704 | 306,831 | 13,220,259 | 1,030,667 | 11,762,603 | 26,621,376 |  18,791,470  | 2,105,412 |
| 2000 | 233,294 | - | 103,755 | 331,041 | 13,897,164 | 1,051,333 | 12,405,057 | 28,021,644 |  19,549,284  | 2,153,339 |
| 2001 | 190,676 | - | 106,306 | 333,599 | 13,965,659 | 1,060,203 | 11,315,975 | 26,972,418 |  19,589,140  | 2,167,318 |
| 2002 | 193,888 | - | 95,348 | 313,977 | 14,112,456 | 1,058,308 | 11,439,573 | 27,213,550 |  19,706,674  | 2,167,318 |
| 2003 | 205,891 | - | 104,140 | 339,163 | 13,576,078 | 1,096,553 | 10,378,607 | 25,700,432 |  19,706,674  | 2,239,541 |
| 2004 | 247,931 | - | 101,105 | 329,827 | 14,166,682 | 1,086,981 | 9,398,544 | 25,331,070 |  20,317,375  | 2,239,541 |
| 2005 | 305,302 | - | 109,776 | 358,666 | 14,148,729 | 1,088,911 | 10,327,260 | 26,338,644 |  20,396,233  | 2,278,981 |
| 2006 | 275,410 | - | 110,972 | 374,148 | 13,636,262 | 1,016,988 | 11,315,960 | 26,729,740 |  20,396,233  | 2,278,981 |
| 2007 | 239,241 | - | 109,180 | 350,851 | 12,659,259 | 944,025 | 11,349,442 | 25,651,998 |  20,396,233  | 2,278,981 |
| 2008 | 225,572 | - | 108,887 | 370,300 | 12,381,501 | 908,028 | 10,924,027 | 24,918,315 |  20,396,233  | 2,278,981 |
| 2009 | 190,219 | - | 101,308 | 319,119 | 12,128,747 | 857,173 | 10,475,022 | 24,071,588 |  20,396,233  | 2,278,981 |
| 2010 | 226,477 | - | 104,127 | 345,716 | 13,277,374 | 993,786 | 10,040,594 | 24,988,074 |  21,747,147  | 2,445,010 |
| 2011 | 236,044 | - | 110,632 | 367,046 | 13,744,108 | 1,077,856 | 9,467,190 | 25,002,876 |  22,335,353  | 2,556,915 |
| EnterpriseT7 (Annula crops) | 1990 | 106,009 | - | 72,418 | 93,486 | 2,396,471 | 222,554 | 1,927,327 | 4,818,265 |  2,890,938  | 494,467 |
| 1991 | 76,804 | - | 23,041 | 66,534 | 2,461,365 | 247,332 | 1,585,983 | 4,461,059 |  2,890,938  | 494,467 |
| 1992 | 78,422 | - | 10,330 | 40,705 | 2,012,881 | 162,196 | 1,044,467 | 3,349,001 |  2,890,938  | 494,467 |
| 1993 | 70,087 | - | 19,601 | 19,409 | 1,083,409 | 103,651 | 922,587 | 2,218,744 |  2,890,938  | 494,467 |
| 1994 | 78,272 | - | 20,467 | 16,826 | 1,174,295 | 105,329 | 791,837 | 2,187,026 |  2,989,970  | 494,467 |
| 1995 | 75,362 | - | 30,884 | 21,880 | 1,183,597 | 125,961 | 716,837 | 2,154,521 |  3,032,465  | 530,570 |
| 1996 | 88,221 | - | 28,342 | 58,730 | 1,525,971 | 173,807 | 2,347,464 | 4,222,535 |  3,469,852  | 612,724 |
| 1997 | 88,891 | - | 17,853 | 47,248 | 1,794,254 | 193,437 | 1,698,347 | 3,840,030 |  3,736,464  | 612,724 |
| 1998 | 156,102 | - | 34,923 | 118,089 | 2,857,350 | 264,854 | 3,183,389 | 6,614,707 |  5,026,099  | 772,052 |
| 1999 | 175,701 | - | 35,772 | 104,020 | 2,861,180 | 240,112 | 2,755,333 | 6,172,118 |  5,026,099  | 772,052 |
| 2000 | 149,670 | - | 34,175 | 77,849 | 2,119,769 | 211,762 | 2,203,145 | 4,796,370 |  5,026,099  | 772,052 |
| 2001 | 173,561 | - | 39,864 | 101,609 | 2,453,743 | 240,956 | 3,069,409 | 6,079,142 |  5,442,607  | 830,695 |
| 2002 | 189,883 | - | 37,891 | 100,284 | 2,454,724 | 262,901 | 2,489,532 | 5,535,215 |  5,478,557  | 849,342 |
| 2003 | 261,524 | - | 42,998 | 121,580 | 3,176,263 | 296,906 | 3,097,146 | 6,996,417 |  6,332,145  | 909,750 |
| 2004 | 342,335 | - | 42,023 | 125,968 | 3,500,330 | 367,990 | 2,797,265 | 7,175,911 |  6,811,520  | 984,247 |
| 2005 | 361,616 | - | 42,502 | 126,591 | 3,226,918 | 372,472 | 2,275,008 | 6,405,107 |  6,811,520  | 989,831 |
| 2006 | 298,952 | - | 43,054 | 116,516 | 2,832,074 | 368,295 | 1,941,719 | 5,600,610 |  6,811,520  | 989,831 |
| 2007 | 303,138 | - | 44,737 | 131,206 | 3,177,159 | 363,292 | 2,453,522 | 6,473,054 |  7,172,161  | 1,001,201 |
| 2008 | 369,217 | - | 62,735 | 141,027 | 3,653,714 | 410,283 | 2,857,303 | 7,494,279 |  7,789,605  | 1,076,011 |
| 2009 | 373,700 | - | 48,148 | 149,356 | 4,188,495 | 512,658 | 3,194,895 | 8,467,252 |  8,424,986  | 1,172,128 |
| 2010 | 370,097 | - | 39,212 | 114,589 | 3,522,600 | 444,631 | 3,070,378 | 7,561,507 |  8,424,986  | 1,172,128 |
| 2011 | 400,775 | - | 41,896 | 111,213 | 3,280,102 | 402,802 | 2,995,287 | 7,232,075 |  8,424,986  | 1,172,128 |
| EnterpriseT5 (Plantation) | 1990 | 29,079 | - | 163,619 | 311,191 | 1,213,709 | 47,642 | 1,705,690 | 3,470,930 |  1,765,240  | 551,531 |
| 1991 | 19,490 | - | 154,457 | 198,310 | 697,212 | 50,119 | 1,656,185 | 2,775,773 |  1,765,240  | 551,531 |
| 1992 | 17,649 | - | 144,536 | 172,382 | 641,203 | 37,850 | 1,340,135 | 2,353,755 |  1,765,240  | 551,531 |
| 1993 | 23,302 | - | 151,617 | 174,998 | 903,044 | 40,697 | 1,276,617 | 2,570,275 |  2,045,278  | 564,075 |
| 1994 | 24,545 | - | 71,124 | 169,535 | 700,529 | 52,577 | 1,615,295 | 2,633,605 |  2,045,278  | 564,075 |
| 1995 | 24,837 | - | 68,115 | 149,785 | 716,551 | 39,359 | 1,340,993 | 2,339,640 |  2,045,278  | 564,075 |
| 1996 | 25,799 | - | 177,154 | 229,697 | 792,610 | 33,493 | 1,496,733 | 2,755,486 |  2,305,384  | 747,160 |
| 1997 | 31,179 | - | 170,598 | 215,504 | 805,560 | 32,367 | 1,605,368 | 2,860,576 |  2,305,384  | 747,160 |
| 1998 | 25,492 | - | 168,371 | 212,748 | 793,388 | 30,758 | 1,423,488 | 2,654,245 |  2,305,384  | 747,160 |
| 1999 | 26,940 | - | 96,510 | 208,988 | 771,363 | 29,480 | 1,459,377 | 2,592,658 |  2,305,384  | 747,160 |
| 2000 | 25,129 | - | 98,930 | 210,378 | 771,917 | 28,292 | 1,433,508 | 2,568,154 |  2,306,749  | 749,782 |
| 2001 | 24,553 | - | 110,569 | 207,742 | 845,690 | 25,360 | 1,120,651 | 2,334,565 |  2,386,017  | 755,853 |
| 2002 | 27,624 | - | 124,900 | 257,470 | 940,825 | 31,570 | 1,254,996 | 2,637,385 |  2,554,492  | 826,122 |
| 2003 | 32,728 | - | 135,468 | 279,359 | 1,011,065 | 31,987 | 1,198,681 | 2,689,288 |  2,662,710  | 858,996 |
| 2004 | 43,218 | - | 167,728 | 305,226 | 1,066,846 | 38,576 | 1,257,575 | 2,879,169 |  2,793,697  | 923,712 |
| 2005 | 43,542 | - | 173,693 | 301,046 | 1,076,907 | 30,997 | 1,016,219 | 2,642,404 |  2,798,288  | 923,712 |
| 2006 | 40,831 | - | 183,972 | 317,020 | 1,068,888 | 29,841 | 1,005,589 | 2,646,141 |  2,812,655  | 948,809 |
| 2007 | 36,595 | - | 188,269 | 337,378 | 995,666 | 28,330 | 1,265,226 | 2,851,464 |  2,812,655  | 971,953 |
| 2008 | 28,582 | - | 173,043 | 348,651 | 1,012,336 | 32,024 | 969,274 | 2,563,910 |  2,821,053  | 971,953 |
| 2009 | 29,830 | - | 200,899 | 384,484 | 1,076,853 | 32,805 | 1,122,465 | 2,847,336 |  2,951,288  | 1,036,423 |
| 2010 | 28,414 | - | 186,303 | 346,212 | 1,090,495 | 30,523 | 1,154,620 | 2,836,567 |  2,951,288  | 1,036,423 |
| 2011 | 27,027 | - | 205,058 | 392,007 | 1,095,926 | 31,654 | 1,083,653 | 2,835,325 |  3,021,013  | 1,102,104 |
| Total | 1990 | 1,038,509 | 502,218 | 962,496 | 1,909,591 | 20,206,498 | 1,745,039 | 28,169,107 | 54,533,458 |  26,364,351  | 5,655,635 |
| 1991 | 1,028,046 | 522,606 | 833,617 | 1,667,292 | 21,212,904 | 1,827,583 | 27,441,444 | 54,533,492 |  27,092,048  | 5,655,635 |
| 1992 | 1,045,505 | 550,988 | 797,082 | 1,581,850 | 21,745,953 | 1,911,409 | 26,900,707 | 54,533,494 |  27,632,787  | 5,655,635 |
| 1993 | 1,145,000 | 563,009 | 819,528 | 1,622,191 | 22,977,570 | 2,045,174 | 25,361,034 | 54,533,506 |  29,172,472  | 5,864,208 |
| 1994 | 1,217,556 | 584,030 | 711,784 | 1,455,306 | 23,457,288 | 2,119,949 | 24,987,571 | 54,533,484 |  29,545,913  | 5,864,208 |
| 1995 | 1,234,225 | 611,241 | 727,837 | 1,443,186 | 24,385,319 | 2,203,670 | 23,928,034 | 54,533,512 |  30,605,478  | 5,979,073 |
| 1996 | 1,390,563 | 510,728 | 1,327,858 | 1,868,299 | 24,058,114 | 1,974,077 | 23,403,867 | 54,533,506 |  31,129,639  | 6,674,101 |
| 1997 | 1,436,734 | 545,858 | 1,284,905 | 1,751,242 | 23,495,925 | 1,896,790 | 24,122,032 | 54,533,486 |  31,129,639  | 6,674,101 |
| 1998 | 1,518,755 | 563,607 | 1,321,490 | 1,858,073 | 23,356,662 | 1,837,418 | 24,077,465 | 54,533,470 |  31,174,190  | 6,775,894 |
| 1999 | 1,650,504 | 626,374 | 1,359,107 | 1,868,318 | 22,918,996 | 1,807,354 | 24,302,846 | 54,533,499 |  31,174,190  | 6,856,459 |
| 2000 | 1,654,835 | 678,037 | 1,418,718 | 1,923,965 | 22,951,401 | 1,809,546 | 24,097,006 | 54,533,508 |  31,380,039  | 7,025,572 |
| 2001 | 1,581,850 | 709,543 | 1,407,925 | 1,932,658 | 23,791,874 | 1,851,019 | 23,258,579 | 54,533,448 |  32,218,406  | 7,096,451 |
| 2002 | 1,589,354 | 762,573 | 1,452,158 | 1,986,686 | 24,419,175 | 1,898,378 | 22,425,140 | 54,533,464 |  33,051,861  | 7,295,101 |
| 2003 | 1,745,536 | 879,170 | 1,656,879 | 2,231,968 | 25,060,379 | 2,016,522 | 20,942,989 | 54,533,443 |  34,533,991  | 7,979,845 |
| 2004 | 1,884,667 | 947,849 | 1,607,969 | 2,242,105 | 26,600,864 | 2,103,371 | 19,146,630 | 54,533,455 |  36,330,362  | 8,096,600 |
| 2005 | 2,114,372 | 1,015,086 | 1,604,150 | 2,279,350 | 26,389,336 | 2,116,597 | 19,014,618 | 54,533,509 |  36,462,428  | 8,210,489 |
| 2006 | 1,928,473 | 1,040,606 | 1,628,334 | 2,344,673 | 25,217,175 | 2,025,735 | 19,867,503 | 54,123,824 |  36,462,428  | 8,234,654 |
| 2007 | 1,825,448 | 1,193,014 | 1,619,384 | 2,369,892 | 24,192,052 | 1,996,300 | 20,927,769 | 54,123,859 |  36,462,428  | 8,373,896 |
| 2008 | 1,860,554 | 1,246,660 | 1,457,197 | 2,475,101 | 24,597,021 | 2,039,106 | 20,448,169 | 54,123,808 |  36,941,977  | 8,413,370 |
| 2009 | 1,787,657 | 1,224,691 | 1,483,415 | 2,474,628 | 25,160,449 | 2,105,273 | 20,297,399 | 54,533,512 |  37,502,451  | 8,483,313 |
| 2010 | 1,730,383 | 1,215,557 | 1,466,236 | 2,408,493 | 25,874,528 | 2,184,286 | 19,654,022 | 54,533,505 |  38,145,821  | 8,483,313 |
| 2011 | 1,814,535 | 1,243,002 | 1,575,399 | 2,579,867 | 26,306,375 | 2,251,723 | 18,446,691 | 54,217,592 |  39,037,239  | 8,858,732 |

Source: Author’s estimates using the methodology presented in the text.

Notes: 1 – Total estimated by the model.

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