APPENDIX

Table A1: Linear Probability Model Regressions Results for Exit

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Without Sales and Capital** | **Without Sales** | **Without Capital** | **Full Model** |
| **Notation** | **Estimates** | **Estimates** | **Estimates** | **Estimates** |
| **Intercept** | 1.239\*\*\*1 | 1.274\*\*\* | 1.163\*\*\* | 1.183\*\*\* |
|  | (0.004)2 | (0.004) | (0.004) | (0.004) |
|  |  |  |  |  |
| ***Operator Characteristics*** | | | | |
| Age of Operator(s) (years) (Base - Age 35-54) | | | | |
| Age<35 | 0.008\*\*\* | 0.005\*\* | 0.012\*\*\* | 0.011\*\*\* |
| (0.002) | (0.002) | (0.002) | (0.002) |
|  |  |  |  |  |
| Age>55 | 0.120\*\*\* | 0.116\*\*\* | 0.096\*\*\* | 0.096\*\*\* |
| (0.001) | (0.001) | (0.001) | (0.001) |
|  |  |  |  |  |
| Age<35&35-54 | -0.013\*\*\* | -0.011\*\*\* | -0.003. | -0.004. |
| (0.003) | (0.003) | (0.003) | (0.003) |
|  |  |  |  |  |
| Age<35&>55 | -0.011\*\*\* | -0.009\*\* | 0.001. | 0.001. |
| (0.004) | (0.004) | (0.004) | (0.004) |
|  |  |  |  |  |
| Age35-54&>55 | 0.028\*\*\* | 0.031\*\*\* | 0.029\*\*\* | 0.030\*\*\* |
| (0.002) | (0.002) | (0.002) | (0.002) |
|  |  |  |  |  |
| Age<35&35-54&>55 | -0.016\*\*\* | -0.009. | 0.001. | 0.001. |
| (0.006) | (0.006) | (0.006) | (0.006) |
| Gender of Operator(s) (Base - Male) | | | | |
| Female | 0.114\*\*\* | 0.108\*\*\* | 0.082\*\*\* | 0.081\*\*\* |
| (0.002) | (0.002) | (0.002) | (0.002) |
|  |  |  |  |  |
| Both | -0.018\*\*\* | -0.020\*\*\* | -0.016\*\*\* | -0.016\*\*\* |
| (0.001) | (0.001) | (0.001) | (0.001) |
| Multigenerational (Base - MultiGen) | | | | |
| NoMultiGen | 0.009\*\*\* | 0.002. | 0.000. | -0.001. |
| (0.003) | (0.003) | (0.003) | (0.003) |
| ***Farm Characteristics*** | | | | |
| Farmland | -0.016\*\*\* | -0.009\*\*\* | -0.006\*\*\* | -0.005\*\*\* |
| (0.000) | (0.000) | (0.000) | (0.000) |
|  |  |  |  |  |
| Capital |  | 0.000\*\*\* |  | 0.000\*\*\* |
|  | (0.000) |  | (0.000) |
|  |  |  |  |  |
| Capital Square |  | 0.000\*\*\* |  | 0.000\*\*\* |
|  | (0.000) |  | (0.000) |
| Sales Category (Base - Sales250-499) | | | | |
| Sales<10 |  |  | 0.261\*\*\* | 0.249\*\*\* |
|  |  | (0.002) | (0.002) |
|  |  |  |  |  |
| Sales10-24 |  |  | 0.161\*\*\* | 0.150\*\*\* |
|  |  | (0.002) | (0.002) |
|  |  |  |  |  |
| Sales25-49 |  |  | 0.109\*\*\* | 0.099\*\*\* |
|  |  | (0.002) | (0.002) |
|  |  |  |  |  |
| Sales50-99 |  |  | 0.065\*\*\* | 0.057\*\*\* |
|  |  | (0.002) | (0.002) |
|  |  |  |  |  |
| Sales100-249 |  |  | 0.022\*\*\* | 0.016\*\*\* |
|  |  | (0.002) | (0.002) |
|  |  |  |  |  |
| Sales500-999 |  |  | -0.008\*\*\* | 0.001. |
|  |  | (0.003) | (0.003) |
|  |  |  |  |  |
| Sales1000-1999 |  |  | -0.024\*\*\* | -0.001. |
|  |  | (0.004) | (0.004) |
|  |  |  |  |  |
| Sales>2000 |  |  | -0.022\*\*\* | 0.027\*\*\* |
|  |  | (0.005) | (0.006) |
| Farm Type (>50% of sales) (Base - Grain) | | | | |
| Dairy | -0.089\*\*\* | -0.085\*\*\* | -0.044\*\*\* | -0.046\*\*\* |
| (0.002) | (0.002) | (0.002) | (0.002) |
|  |  |  |  |  |
| Beef | -0.032\*\*\* | -0.041\*\*\* | -0.065\*\*\* | -0.067\*\*\* |
| (0.001) | (0.001) | (0.001) | (0.001) |
|  |  |  |  |  |
| Hog | -0.011\*\*\* | -0.002. | 0.030\*\*\* | 0.026\*\*\* |
| (0.003) | (0.003) | (0.003) | (0.003) |
|  |  |  |  |  |
| Poultry | 0.052\*\*\* | 0.049\*\*\* | 0.039\*\*\* | 0.033\*\*\* |
| (0.003) | (0.003) | (0.003) | (0.003) |
|  |  |  |  |  |
| Sheep | 0.059\*\*\* | 0.044\*\*\* | -0.021\*\*\* | -0.024\*\*\* |
| (0.005) | (0.005) | (0.005) | (0.005) |
|  |  |  |  |  |
| OtherLivestock | 0.045\*\*\* | 0.034\*\*\* | -0.020\*\*\* | -0.023\*\*\* |
| (0.002) | (0.002) | (0.002) | (0.002) |
|  |  |  |  |  |
| Vegetable | 0.023\*\*\* | 0.028\*\*\* | 0.022\*\*\* | 0.020\*\*\* |
| (0.004) | (0.004) | (0.004) | (0.004) |
|  |  |  |  |  |
| Fruit | 0.023\*\*\* | 0.015\*\*\* | -0.012\*\*\* | -0.015\*\*\* |
| (0.003) | (0.003) | (0.003) | (0.003) |
|  |  |  |  |  |
| Greenhouse | 0.049\*\*\* | 0.042 | 0.027\*\*\* | 0.021\*\*\* |
| (0.003) | (0.003) | (0.003) | (0.003) |
|  |  |  |  |  |
| OtherCrop | 0.086\*\*\* | 0.073\*\*\* | 0.011\*\*\* | 0.008\*\*\* |
| (0.002) | (0.002) | (0.002) | (0.002) |
| ***Regional Characteristics*** | | | | |
| PopnDen | 0.012\*\*\* | 0.028\*\*\* | 0.023\*\*\* | 0.028\*\*\* |
| (0.004) | (0.004) | (0.003) | (0.003) |
|  |  |  |  |  |
| MedIncome | -0.001\*\*\* | 0.000\*\*\* | 0.001\*\*\* | 0.001\*\*\* |
| (0.000) | (0.000) | (0.000) | (0.000) |
| Provinces (Base - Quebec) | | | | |
| Newfoundland and Labrador | 0.021\*\* | 0.020\*\* | 0.003. | 0.002. |
| (0.010) | (0.010) | (0.010) | (0.010) |
|  |  |  |  |  |
| Prince Edward Island | 0.015\*\*\* | 0.021\*\*\* | 0.022\*\*\* | 0.023\*\*\* |
| (0.006) | (0.006) | (0.006) | (0.005) |
|  |  |  |  |  |
| Nova Scotia | -0.009\*\* | -0.008\* | -0.021\*\*\* | -0.021\*\*\* |
| (0.004) | (0.004) | (0.004) | (0.004) |
|  |  |  |  |  |
| New Brunswick | 0.010\*\* | 0.012\*\* | -0.002. | -0.002. |
| (0.005) | (0.005) | (0.005) | (0.005) |
|  |  |  |  |  |
| Ontario | -0.004\*\* | 0.008\*\*\* | 0.000. | 0.004\*\* |
| (0.002) | (0.002) | (0.002) | (0.002) |
|  |  |  |  |  |
| Manitoba | 0.042\*\*\* | 0.045\*\*\* | 0.054\*\*\* | 0.053\*\*\* |
| (0.002) | (0.002) | (0.002) | (0.002) |
|  |  |  |  |  |
| Saskatchewan | 0.039\*\*\* | 0.035\*\*\* | 0.047\*\*\* | 0.045\*\*\* |
| (0.002) | (0.002) | (0.002) | (0.002) |
|  |  |  |  |  |
| Alberta | 0.024\*\*\* | 0.037\*\*\* | 0.041\*\*\* | 0.045\*\*\* |
| (0.002) | (0.002) | (0.002) | (0.002) |
|  |  |  |  |  |
| British Columbia | 0.021\*\*\* | 0.036\*\*\* | 0.001. | 0.007\* |
| (0.003) | (0.003) | (0.002) | (0.003) |
| ***Time Effect*** | | | | |
| Year Dummy (Base - 2011) | | | | |
| Year - 1996 | -0.051\*\*\* | -0.073\*\*\* | -0.072\*\*\* | -0.078\*\*\* |
| (0.001) | (0.001) | (0.001) | (0.001) |
|  |  |  |  |  |
| Year - 2001 | -0.085\*\*\* | -0.101\*\*\* | -0.092\*\*\* | -0.097\*\*\* |
| (0.001) | (0.001) | (0.001) | (0.001) |
|  |  |  |  |  |
| Year - 2006 | -0.081\*\*\* | -0.091\*\*\* | -0.083\*\*\* | -0.087\*\*\* |
| (0.001) | (0.001) | (0.001) | (0.001) |
|  |  |  |  |  |
| ***Model Information*** | | | | |
| R-Square | 0.059 | 0.064 | 0.090 | 0.090 |
| Number of Observations Used | 758738 | | | |

1: \*: Significant at 10% level; \*\*: Significant at 5% level; \*\*\*: Significant at 1% level; .: P value > 10 % (insignificant)

2: Standard Errors are in parentheses

Table A2: Linear Probability Model Regressions Results for Entry-Exit

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | | | | |
|  | **Without Sales and Capital** | **Without Sales** | **Without Capital** | **Full Model** |
| **Notation** | **Estimates** | **Estimates** | **Estimates** | **Estimates** |
| **Intercept** | 3.482\*\*\*1 | 3.500\*\*\* | 3.399\*\*\* | 3.415\*\*\* |
|  | (0.010)2 | (0.010) | (0.011) | (0.011) |
|  |  |  |  |  |
| ***Operator Characteristics*** | | | | |
| Age of Operator(s) (years) (Base - Age 35-54) | | | | |
| Age<35 | -0.055\*\*\* | -0.056\*\*\* | -0.046\*\*\* | -0.046\*\*\* |
| (0.003) | (0.003) | (0.003) | (0.003) |
|  |  |  |  |  |
| Age>55 | 0.112\*\*\* | 0.111\*\*\* | 0.104\*\*\* | 0.104\*\*\* |
| (0.003) | (0.003) | (0.003) | (0.003) |
|  |  |  |  |  |
| Age<35&35-54 | -0.025\*\*\* | -0.025\*\*\* | -0.019\*\*\* | -0.019\*\*\* |
| (0.006) | (0.006) | (0.006) | (0.006) |
|  |  |  |  |  |
| Age<35&>55 | -0.058\*\*\* | -0.056\*\*\* | -0.046\*\*\* | -0.045\*\*\* |
| (0.012) | (0.012) | (0.012) | (0.012) |
|  |  |  |  |  |
| Age35-54&>55 | 0.018\*\*\* | 0.019\*\*\* | 0.021\*\*\* | 0.021\*\*\* |
| (0.006) | (0.006) | (0.006) | (0.006) |
|  |  |  |  |  |
| Age<35&35-54&>55 | -0.049\*\* | -0.044\*\* | -0.033. | -0.032. |
| (0.022) | (0.022) | (0.022) | (0.022) |
| Gender of Operator(s) (Base - Male) | | | | |
| Female | 0.100\*\*\* | 0.098\*\*\* | 0.092\*\*\* | 0.092\*\*\* |
| (0.004) | (0.004) | (0.004) | (0.004) |
|  |  |  |  |  |
| Both | -0.062\*\*\* | -0.063\*\*\* | -0.066\*\*\* | -0.066\*\*\* |
| (0.003) | (0.003) | (0.003) | (0.003) |
| Multigenerational (Base - MultiGen) | | | | |
| NoMultiGen | -0.037\*\*\* | -0.041\*\*\* | -0.042\*\*\* | -0.043\*\*\* |
| (0.008) | (0.008) | (0.008) | (0.008) |
| ***Farm Characteristics*** | | | | |
| Farmland | -0.024\*\*\* | -0.014\*\*\* | -0.009\*\*\* | -0.006\*\*\* |
| (0.001) | (0.001) | (0.001) | (0.001) |
|  |  |  |  |  |
| Capital |  | -2.2E-08\*\*\* |  | -1.1E-08\*\*\* |
|  | (0.000) |  | (0.000) |
|  |  |  |  |  |
| Capital Square |  | 0.000\*\*\* |  | 0.000\*\*\* |
|  | (0.000) |  | (0.000) |
| Sales Category (Base - Sales250-499) | | | | |
| Sales<10 |  |  | 0.179\*\*\* | 0.170\*\*\* |
|  |  | (0.006) | (0.006) |
|  |  |  |  |  |
| Sales10-24 |  |  | 0.100\*\*\* | 0.091\*\*\* |
|  |  | (0.007) | (0.007) |
|  |  |  |  |  |
| Sales25-49 |  |  | 0.061\*\*\* | 0.052\*\*\* |
|  |  | (0.007) | (0.007) |
|  |  |  |  |  |
| Sales50-99 |  |  | 0.043\*\*\* | 0.036\*\*\* |
|  |  | (0.007) | (0.007) |
|  |  |  |  |  |
| Sales100-249 |  |  | 0.014\*\* | 0.009. |
|  |  | (0.007) | (0.007) |
|  |  |  |  |  |
| Sales500-999 |  |  | -0.021\*\* | -0.015. |
|  |  | (0.011) | (0.011) |
|  |  |  |  |  |
| Sales1000-1999 |  |  | -0.009. | 0.008. |
|  |  | (0.014) | (0.015) |
|  |  |  |  |  |
| Sales>2000 |  |  | -0.023. | 0.016. |
|  |  | (0.017) | (0.017) |
| Farm Type (>50% of sales) (Base - Grain) | | | | |
| Dairy | -0.088\*\*\* | -0.080\*\*\* | -0.046\*\*\* | -0.046\*\*\* |
| (0.007) | (0.007) | (0.007) | (0.007) |
|  |  |  |  |  |
| Beef | -0.030\*\*\* | -0.032\*\*\* | -0.047\*\*\* | -0.048\*\*\* |
| (0.004) | (0.004) | (0.004) | (0.004) |
|  |  |  |  |  |
| Hog | 0.013\* | 0.023\*\*\* | 0.050\*\*\* | 0.048\*\*\* |
| (0.008) | (0.008) | (0.008) | (0.008) |
|  |  |  |  |  |
| Poultry | 0.104\*\*\* | 0.104\*\*\* | 0.080\*\*\* | 0.079\*\*\* |
| (0.005) | (0.005) | (0.005) | (0.005) |
|  |  |  |  |  |
| Sheep | 0.071\*\*\* | 0.065\*\*\* | 0.021\*\* | 0.019\*\* |
| (0.008) | (0.008) | (0.008) | (0.008) |
|  |  |  |  |  |
| OtherLivestock | 0.040\*\*\* | 0.037\*\*\* | 0.004. | 0.003. |
| (0.004) | (0.004) | (0.004) | (0.004) |
|  |  |  |  |  |
| Vegetable | 0.097\*\*\* | 0.095\*\*\* | 0.071\*\*\* | 0.070\*\*\* |
| (0.007) | (0.007) | (0.007) | (0.007) |
|  |  |  |  |  |
| Fruit | -0.018\*\*\* | -0.019\*\*\* | -0.043\*\*\* | -0.043\*\*\* |
| (0.006) | (0.006) | (0.006) | (0.006) |
|  |  |  |  |  |
| Greenhouse | 0.048\*\*\* | 0.046\*\*\* | 0.023\*\*\* | 0.022\*\*\* |
| (0.005) | (0.005) | (0.005) | (0.005) |
|  |  |  |  |  |
| OtherCrop | 0.052\*\*\* | 0.048\*\*\* | 0.009\*\* | 0.008\* |
| (0.004) | (0.004) | (0.004) | (0.004) |
| ***Regional Characteristics*** | | | | |
| PopnDen | 0.055\*\*\* | 0.062\*\*\* | 0.067\*\*\* | 0.069\*\*\* |
| (0.005) | (0.005) | (0.005) | (0.005) |
|  |  |  |  |  |
| MedIncome | -0.002\*\*\* | -0.001\*\*\* | -0.0005\*\*\* | -0.0005\*\*\* |
| (0.000) | (0.000) | (0.000) | (0.000) |
| Provinces (Base - Quebec) | | | | |
| Newfoundland and Labrador | 0.016. | 0.015. | 0.004. | 0.004. |
| (0.019) | (0.019) | (0.019) | (0.019) |
|  |  |  |  |  |
| Prince Edward Island | 0.028\* | 0.028\*\* | 0.025\* | 0.025\* |
| (0.014) | (0.014) | (0.014) | (0.014) |
|  |  |  |  |  |
| Nova Scotia | 0.026\*\*\* | 0.024\*\*\* | 0.010. | 0.009. |
| (0.008) | (0.008) | (0.008) | (0.008) |
|  |  |  |  |  |
| New Brunswick | 0.032\*\*\* | 0.031\*\*\* | 0.019\*\* | 0.018\* |
| (0.010) | (0.010) | (0.009) | (0.009) |
|  |  |  |  |  |
| Ontario | 0.017\*\*\* | 0.023\*\*\* | 0.016\*\*\* | 0.019\*\*\* |
| (0.004) | (0.004) | (0.004) | (0.004) |
|  |  |  |  |  |
| Manitoba | 0.054\*\*\* | 0.054\*\*\* | 0.051\*\*\* | 0.050\*\*\* |
| (0.005) | (0.005) | (0.005) | (0.005) |
|  |  |  |  |  |
| Saskatchewan | 0.048\*\*\* | 0.045\*\*\* | 0.045\*\*\* | 0.044\*\*\* |
| (0.005) | (0.005) | (0.005) | (0.005) |
|  |  |  |  |  |
| Alberta | 0.024\*\*\* | 0.029\*\*\* | 0.027\*\*\* | 0.029\*\*\* |
| (0.004) | (0.004) | (0.004) | (0.004) |
|  |  |  |  |  |
| British Columbia | 0.026\*\*\* | 0.034\*\*\* | 0.013\*\*\* | 0.017\*\*\* |
| (0.005) | (0.005) | (0.005) | (0.005) |
| ***Time Effect*** | | | | |
| Year Dummy (Base - 2011) | | | | |
| Year - 1996 | -0.015\*\*\* | -0.028\*\*\* | -0.035\*\*\* | -0.039\*\*\* |
| (0.003) | (0.003) | (0.003) | (0.003) |
|  |  |  |  |  |
| Year - 2001 | -0.082\*\*\* | -0.091\*\*\* | -0.088\*\*\* | -0.092\*\*\* |
| (0.003) | (0.004) | (0.003) | (0.003) |
|  |  |  |  |  |
| Year - 2006 | -0.113\*\*\* | -0.119\*\*\* | -0.116\*\*\* | -0.118\*\*\* |
| (0.004) | (0.004) | (0.004) | (0.004) |
|  |  |  |  |  |
| ***Model Information*** | | | | |
| R-Square | 0.050 | 0.051 | 0.063 | 0.064 |
| Number of Observations Used | 199786 | | | |

1: \*: Significant at 10% level; \*\*: Significant at 5% level; \*\*\*: Significant at 1% level; .: P value > 10 % (insignificant)

2: Standard Errors are in parentheses

Table A3: Logit Regressions and Odd-Ratio Results for Exit

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Without Sales and Capital** | | **Without Sales** | | **Without Capital** | | **Full Model** | |
| **Notation** | **Estimates** | **Odds Ratio** | **Estimates** | **Odds Ratio** | **Estimates** | **Odds Ratio** | **Estimates** | **Odds Ratio** |
| **Intercept** | -39.8093\*\*\*1 |  | -54.4702\*\*\* |  | -52.5599\*\*\* |  | -56.6936\*\*\* |  |
|  | (1.035)2 |  | (1.076) |  | (1.066) |  | (1.088) |  |
|  |  |  |  |  |  |  |  |  |
| ***Operator Characteristics*** | | | | | | | | |
| Age of Operator(s) (years) (Base - Age 35-54) | | | | | | | | |
| Age<35 | 0.0480\*\*\* | 1.049 | 0.0372\*\*\* | 1.038 | 0.0861\*\*\* | 1.090 | 0.0827\*\*\* | 1.086 |
| (0.014) |  | (0.014) |  | (0.014) |  | (0.014) |  |
|  |  |  |  |  |  |  |  |  |
| Age>55 | 0.6268\*\*\* | 1.872 | 0.6114\*\*\* | 1.843 | 0.5412\*\*\* | 1.718 | 0.5410\*\*\* | 1.718 |
| (0.006) |  | (0.006) |  | (0.006) |  | (0.006) |  |
|  |  |  |  |  |  |  |  |  |
| Age<35&35-54 | -0.0940\*\*\* | 0.910 | -0.0904\*\*\* | 0.914 | -0.0538\*\* | 0.948 | -0.0559\*\* | 0.946 |
| (0.022) |  | (0.022) |  | (0.022) |  | (0.022) |  |
|  |  |  |  |  |  |  |  |  |
| Age<35&>55 | -0.0624\*\* | 0.940 | -0.0537\* | 0.948 | -0.0090. | 0.991 | -0.0093. | 0.991 |
| (0.028) |  | (0.028) |  | (0.028) |  | (0.028) |  |
|  |  |  |  |  |  |  |  |  |
| Age35-54&>55 | 0.2166\*\*\* | 1.242 | 0.2253\*\*\* | 1.253 | 0.2103\*\*\* | 1.234 | 0.2133\*\*\* | 1.238 |
| (0.014) |  | (0.014) |  | (0.014) |  | (0.014) |  |
|  |  |  |  |  |  |  |  |  |
| Age<35&35-54&>55 | -0.1110\*\* | 0.895 | -0.0802\* | 0.923 | -0.0402. | 0.961 | -0.0390. | 0.962 |
| (0.047) |  | (0.047) |  | (0.047) |  | (0.047) |  |
| Gender of Operator(s) (Base - Male) | | | | | | | | |
| Female | 0.4875\*\*\* | 1.628 | 0.4656\*\*\* | 1.593 | 0.3758\*\*\* | 1.456 | 0.3732\*\*\* | 1.452 |
| (0.013) |  | (0.013) |  | (0.013) |  | (0.013) |  |
|  |  |  |  |  |  |  |  |  |
| Both | -0.1230\*\*\* | 0.884 | -0.1276\*\*\* | 0.880 | -0.1057\*\*\* | 0.900 | -0.1065\*\*\* | 0.899 |
| (0.007) |  | (0.007) |  | (0.007) |  | (0.007) |  |
| Multigenerational (Base - MultiGen) | | | | | | | | |
| NoMultiGen | 0.0298\* | 1.030 | -0.0026. | 0.997 | -0.0012. | 0.999 | -0.0091. | 0.991 |
| (0.018) |  | (0.018) |  | (0.018) |  | (0.018) |  |
| ***Farm Characteristics*** | | | | | | | | |
| Farmland | -0.0004\*\*\* | 1.000 | -0.0002\*\*\* | 1.000 | -0.0001\*\*\* | 1.000 | -0.0001\*\*\* | 1.000 |
| (0.000) |  | (0.000) |  | (0.000) |  | (0.000) |  |
|  |  |  |  |  |  |  |  |  |
| Capital |  |  | 0.0000\*\*\* | 1.000 |  |  | 0.0000\*\*\* | 1.000 |
|  |  | (0.000) |  |  |  | (0.000) |  |
|  |  |  |  |  |  |  |  |  |
| Capital Square |  |  | 0.0000\*\*\* | 1.000 |  |  | 0.0000\*\*\* | 1.000 |
|  |  | (0.000) |  |  |  | (0.000) |  |
| Sales Category (Base - Sales250-499) | | | | | | | | |
| Sales<10 |  |  |  |  | 1.3734\*\*\* | 3.949 | 1.3114\*\*\* | 3.711 |
|  |  |  |  | (0.014) |  | (0.014) |  |
|  |  |  |  |  |  |  |  |  |
| Sales10-24 |  |  |  |  | 0.9222\*\*\* | 2.515 | 0.8646\*\*\* | 2.374 |
|  |  |  |  | (0.014) |  | (0.014) |  |
|  |  |  |  |  |  |  |  |  |
| Sales25-49 |  |  |  |  | 0.6647\*\*\* | 1.944 | 0.6117\*\*\* | 1.844 |
|  |  |  |  | (0.014) |  | (0.014) |  |
|  |  |  |  |  |  |  |  |  |
| Sales50-99 |  |  |  |  | 0.4280\*\*\* | 1.534 | 0.3826\*\*\* | 1.466 |
|  |  |  |  | (0.014) |  | (0.014) |  |
|  |  |  |  |  |  |  |  |  |
| Sales100-249 |  |  |  |  | 0.1458\*\*\* | 1.157 | 0.1151\*\*\* | 1.122 |
|  |  |  |  | (0.013) |  | (0.013) |  |
|  |  |  |  |  |  |  |  |  |
| Sales500-999 |  |  |  |  | -0.0074. | 0.993 | 0.0425\*\* | 1.043 |
|  |  |  |  | (0.019) |  | (0.020) |  |
|  |  |  |  |  |  |  |  |  |
| Sales1000-1999 |  |  |  |  | -0.0873\*\*\* | 0.916 | 0.0356. | 1.036 |
|  |  |  |  | (0.029) |  | (0.030) |  |
|  |  |  |  |  |  |  |  |  |
| Sales>2000 |  |  |  |  | -0.0353. | 0.965 | 0.2174\*\*\* | 1.243 |
|  |  |  |  | (0.039) |  | (0.042) |  |
| Farm Type (>50% of sales) (Base - Grain) | | | | | | | | |
| Dairy | -0.8185\*\*\* | 0.441 | -0.7702\*\*\* | 0.463 | -0.5135\*\*\* | 0.598 | -0.5182\*\*\* | 0.596 |
| (0.015) |  | (0.015) |  | (0.016) |  | (0.016) |  |
|  |  |  |  |  |  |  |  |  |
| Beef | -0.2418\*\*\* | 0.785 | -0.2764\*\*\* | 0.758 | -0.3986. | 0.671 | -0.4069\*\*\* | 0.666 |
| (0.008) |  | (0.008) |  | (0.008) |  | (0.008) |  |
|  |  |  |  |  |  |  |  |  |
| Hog | -0.1873\*\*\* | 0.829 | -0.1233\*\*\* | 0.884 | 0.1096\*\*\* | 1.116 | 0.0952\*\*\* | 1.100 |
| (0.019) |  | (0.020) |  | (0.020) |  | (0.020) |  |
|  |  |  |  |  |  |  |  |  |
| Poultry | 0.2316\*\*\* | 1.261 | 0.2505\*\*\* | 1.285 | 0.2392\*\*\* | 1.270 | 0.2192\*\*\* | 1.245 |
| (0.016) |  | (0.016) |  | (0.016) |  | (0.016) |  |
|  |  |  |  |  |  |  |  |  |
| Sheep | 0.1457\*\*\* | 1.157 | 0.0876\*\*\* | 1.092 | -0.1815\*\*\* | 0.834 | -0.1952\*\*\* | 0.823 |
| (0.026) |  | (0.026) |  | (0.026) |  | (0.026) |  |
|  |  |  |  |  |  |  |  |  |
| OtherLivestock | 0.1037\*\*\* | 1.109 | 0.0647\*\*\* | 1.067 | -0.1597\*\*\* | 0.852 | -0.1696\*\*\* | 0.844 |
| (0.012) |  | (0.012) |  | (0.012) |  | (0.012) |  |
|  |  |  |  |  |  |  |  |  |
| Vegetable | 0.0579\*\*\* | 1.060 | 0.0955\*\*\* | 1.100 | 0.0745\*\*\* | 1.077 | 0.0697\*\*\* | 1.072 |
| (0.020) |  | (0.020) |  | (0.021) |  | (0.021) |  |
|  |  |  |  |  |  |  |  |  |
| Fruit | 0.0121. | 1.012 | 0.0015. | 1.001 | -0.1068\*\*\* | 0.899 | -0.1138\*\*\* | 0.892 |
| (0.017) |  | (0.017) |  | (0.017) |  | (0.017) |  |
|  |  |  |  |  |  |  |  |  |
| Greenhouse | 0.1473\*\*\* | 1.159 | 0.1313\*\*\* | 1.140 | 0.0989\*\*\* | 1.104 | 0.0773\*\*\* | 1.080 |
| (0.016) |  | (0.016) |  | (0.017) |  | (0.017) |  |
|  |  |  |  |  |  |  |  |  |
| OtherCrop | 0.3459\*\*\* | 1.413 | 0.2968\*\*\* | 1.346 | 0.0186\* | 1.019 | 0.0080. | 1.008 |
| (0.009) |  | (0.010) |  | (0.010) |  | (0.010) |  |
| ***Regional Characteristics*** | | | | | | | | |
| PopnDen | 0.0000. | 1.000 | 0.0001\*\*\* | 1.000 | 0.0001\*\*\* | 1.000 | 0.0001\*\*\* | 1.000 |
| (0.000) |  | (0.000) |  | (0.000) |  | (0.000) |  |
|  |  |  |  |  |  |  |  |  |
| MedIncome | 0.0000\*\*\* | 1.000 | 0.0000\*\*\* | 1.000 | 0.0000\*\*\* | 1.000 | 0.0000\*\*\* | 1.000 |
| (0.000) |  | (0.000) |  | (0.000) |  | (0.000) |  |
| Provinces (Base - Quebec) | | | | | | | | |
| Newfoundland and Labrador | 0.1855\*\*\* | 1.204 | 0.1706\*\*\* | 1.186 | 0.0882. | 1.092 | 0.0842. | 1.088 |
| (0.055) |  | (0.055) |  | (0.056) |  | (0.056) |  |
|  |  |  |  |  |  |  |  |  |
| Prince Edward Island | 0.1804\*\*\* | 1.198 | 0.2071\*\*\* | 1.230 | 0.1908\*\*\* | 1.210 | 0.1947\*\* | 1.215 |
| (0.033) |  | (0.033) |  | (0.033) |  | (0.033) |  |
|  |  |  |  |  |  |  |  |  |
| Nova Scotia | 0.0516\*\* | 1.053 | 0.0463\* | 1.047 | -0.0464\* | 0.955 | -0.0474\* | 0.954 |
| (0.024) |  | (0.025) |  | (0.025) |  | (0.025) |  |
|  |  |  |  |  |  |  |  |  |
| New Brunswick | 0.1641\*\*\* | 1.178 | 0.1604\*\*\* | 1.174 | 0.0688\*\* | 1.071 | 0.0682\*\* | 1.071 |
| (0.027) |  | (0.027) |  | (0.027) |  | (0.027) |  |
|  |  |  |  |  |  |  |  |  |
| Ontario | 0.0383\*\*\* | 1.039 | 0.1031\*\*\* | 1.109 | 0.0512\*\*\* | 1.053 | 0.0709\*\*\* | 1.073 |
| (0.011) |  | (0.011) |  | (0.011) |  | (0.011) |  |
|  |  |  |  |  |  |  |  |  |
| Manitoba | 0.4145\*\*\* | 1.514 | 0.3937\*\*\* | 1.482 | 0.3844\*\*\* | 1.469 | 0.3787\*\*\* | 1.460 |
| (0.013) |  | (0.013) |  | (0.014) |  | (0.014) |  |
|  |  |  |  |  |  |  |  |  |
| Saskatchewan | 0.4348\*\*\* | 1.545 | 0.3696\*\*\* | 1.447 | 0.3498\*\*\* | 1.419 | 0.3345\*\*\* | 1.397 |
| (0.012) |  | (0.012) |  | (0.012) |  | (0.012) |  |
|  |  |  |  |  |  |  |  |  |
| Alberta | 0.3088\*\*\* | 1.362 | 0.3537\*\*\* | 1.424 | 0.3095\*\*\* | 1.363 | 0.3278\*\*\* | 1.388 |
| (0.012) |  | (0.012) |  | (0.012) |  | (0.012) |  |
|  |  |  |  |  |  |  |  |  |
| British Columbia | 0.2092\*\*\* | 1.233 | 0.2932\*\*\* | 1.341 | 0.0840\*\*\* | 1.088 | 0.1151\*\*\* | 1.122 |
| (0.014) |  | (0.015) |  | (0.015) |  | (0.015) |  |
| ***Time Effect*** | | | | | | | | |
| Year - Trend | 0.0192\*\*\* | 1.019 | 0.0265\*\*\* | 1.027 | 0.0252\*\*\* | 1.026 | 0.0273\*\*\* | 1.028 |
| (0.001) |  | (0.001) |  | (0.001) |  | (0.001) |  |
|  |  |  |  |  |  |  |  |  |
| ***Model Information*** | | | | | | | | |
| AIC | 789,848.3 | | 787,134.8 | | 771,148.3 | | 770,781.8 | |
| Response Profile Value: 1 | 182,845 | | | | | | | |
| Response Profile Value: 0 | 575,893 | | | | | | | |

1: \*: Significant at 10% level; \*\*: Significant at 5% level; \*\*\*: Significant at 1% level; .: P value > 10 % (insignificant)

2: Standard Errors are in parentheses

Table A4: Logit Regressions and Odd-Ratio Results for Entry-Exit Model

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | | | | | | | | |
|  | **Without Sales and Capital** | | **Without Sales** | | **Without Capital** | | **Full Model** | |
| **Notation** | **Estimates** | **Odds Ratio** | **Estimates** | **Odds Ratio** | **Estimates** | **Odds Ratio** | **Estimates** | **Odds Ratio** |
| **Intercept** | 1.2036.1 |  | -6.0918\*\*\* |  | -8.117\*\*\* |  | -10.6151\*\*\* |  |
|  | (1.2294)2 |  | (1.2708) |  | (1.2542) |  | (1.2808) |  |
|  |  |  |  |  |  |  |  |  |
| ***Operator Characteristics*** | | | | | | | | |
| Age of Operator(s) (years) (Base - Age 35-54) | | | | | | | | |
| Age<35 | -0.234\*\*\* | 0.791 | -0.2393\*\*\* | 0.787 | -0.1951\*\*\* | 0.823 | -0.1974\*\*\* | 0.821 |
| (0.0108) |  | (0.0109) |  | (0.0109) |  | (0.011) |  |
|  |  |  |  |  |  |  |  |  |
| Age>55 | 0.4819\*\*\* | 1.619 | 0.4792\*\*\* | 1.615 | 0.4563\*\*\* | 1.578 | 0.4573\*\*\* | 1.58 |
| (0.00969) |  | (0.0097) |  | (0.00977) |  | (0.00978) |  |
|  |  |  |  |  |  |  |  |  |
| Age<35&35-54 | -0.0769\*\*\* | 0.926 | -0.0775\*\*\* | 0.925 | -0.0545\*\* | 0.947 | -0.0555\*\*\* | 0.946 |
| (0.0215) |  | (0.0216) |  | (0.0217) |  | (0.0217) |  |
|  |  |  |  |  |  |  |  |  |
| Age<35&>55 | -0.1852. | 0.831 | -0.1771\*\*\* | 0.838 | -0.1362\*\*\* | 0.873 | -0.134\*\*\* | 0.875 |
| (0.0419) |  | (0.042) |  | (0.0423) |  | (0.0423) |  |
|  |  |  |  |  |  |  |  |  |
| Age35-54&>55 | 0.1082\*\*\* | 1.114 | 0.1152\*\*\* | 1.122 | 0.1182\*\*\* | 1.125 | 0.121\*\*\* | 1.129 |
| (0.0225) |  | (0.0226) |  | (0.0227) |  | (0.0227) |  |
|  |  |  |  |  |  |  |  |  |
| Age<35&35-54&>55 | -0.1659\*\* | 0.847 | -0.1476\*\* | 0.863 | -0.1009. | 0.904 | -0.0971\*\*\* | 0.907 |
| (0.075) |  | (0.0751) |  | (0.0755) |  | (0.0755) |  |
| Gender of Operator(s) (Base - Male) | | | | | | | | |
| Female | 0.4167. | 1.517 | 0.4087\*\*\* | 1.505 | 0.3904\*\*\* | 1.478 | 0.3889\*\*\* | 1.475 |
| (0.0142) |  | (0.0142) |  | (0.0143) |  | (0.0143) |  |
|  |  |  |  |  |  |  |  |  |
| Both | -0.2806\*\*\* | 0.755 | -0.2848\*\*\* | 0.752 | -0.2982\*\*\* | 0.742 | -0.2984\*\*\* | 0.742 |
| (0.0095) |  | (0.00952) |  | (0.00959) |  | (0.0096) |  |
| Multigenerational (Base - MultiGen) | | | | | | | | |
| NoMultiGen | -0.1507. | 0.86 | -0.1657\*\*\* | 0.847 | -0.167\*\*\* | 0.846 | -0.172\*\*\* | 0.842 |
| (0.0283) |  | (0.0283) |  | (0.0285) |  | (0.0285) |  |
| ***Farm Characteristics*** | | | | | | | | |
| Farmland | -0.0002\*\*\* | 1 | -0.00014\*\*\* | 1 | -0.00007\*\*\* | 1 | -0.00005\*\*\* | 1 |
| (7.70E-06) |  | (7.73E-06) |  | (6.80E-06) |  | (6.814E-06) |  |
|  |  |  |  |  |  |  |  |  |
| Capital |  |  | -1.47E-07\*\*\* | 1 |  |  | -6.33E-08\*\*\* | 1 |
|  |  | (6.32E-09) |  |  |  | (6.556E-09) |  |
|  |  |  |  |  |  |  |  |  |
| Capital Square |  |  | 3.09E-15\*\*\* | 1 |  |  | 1.07E-15\*\*\* | 1 |
|  |  | (1.94E-16) |  |  |  | (1.64E-16) |  |
| Sales Category (Base - Sales250-499) | | | | | | | | |
| Sales<10 |  |  |  |  | 0.7697\*\*\* | 2.159 | 0.7185\*\*\* | 2.051 |
|  |  |  |  | (0.0255) |  | (0.0261) |  |
|  |  |  |  |  |  |  |  |  |
| Sales10-24 |  |  |  |  | 0.4063\*\*\* | 1.501 | 0.3584\*\*\* | 1.431 |
|  |  |  |  | (0.0261) |  | (0.0266) |  |
|  |  |  |  |  |  |  |  |  |
| Sales25-49 |  |  |  |  | 0.2221\* | 1.249 | 0.1779\*\*\* | 1.195 |
|  |  |  |  | (0.0269) |  | (0.0273) |  |
|  |  |  |  |  |  |  |  |  |
| Sales50-99 |  |  |  |  | 0.1633\*\*\* | 1.177 | 0.1254\*\*\* | 1.134 |
|  |  |  |  | (0.0274) |  | (0.0277) |  |
|  |  |  |  |  |  |  |  |  |
| Sales100-249 |  |  |  |  | 0.0269. | 1.027 | 0.00215\*\*\* | 1.002 |
|  |  |  |  | (0.0277) |  | (0.0278) |  |
|  |  |  |  |  |  |  |  |  |
| Sales500-999 |  |  |  |  | -0.0536. | 0.948 | -0.0207\* | 0.98 |
|  |  |  |  | (0.0431) |  | (0.0433) |  |
|  |  |  |  |  |  |  |  |  |
| Sales1000-1999 |  |  |  |  | 0.0465. | 1.048 | 0.1217\*\*\* | 1.129 |
|  |  |  |  | (0.059) |  | (0.0598) |  |
|  |  |  |  |  |  |  |  |  |
| Sales>2000 |  |  |  |  | -0.013. | 0.987 | 0.1436\*\*\* | 1.154 |
|  |  |  |  | (0.0689) |  | (0.072) |  |
| Farm Type (>50% of sales) (Base - Grain) | | | | | | | | |
| Dairy | -0.4599\*\*\* | 0.631 | -0.4221\* | 0.656 | -0.2756\*\*\* | 0.759 | -0.2744\*\*\* | 0.76 |
| (0.0245) |  | (0.0246) |  | (0.0253) |  | (0.0253) |  |
|  |  |  |  |  |  |  |  |  |
| Beef | -0.1795\*\*\* | 0.836 | -0.1875\*\*\* | 0.829 | -0.247\*\*\* | 0.781 | -0.2503\*\*\* | 0.779 |
| (0.0125) |  | (0.0125) |  | (0.0127) |  | (0.0127) |  |
|  |  |  |  |  |  |  |  |  |
| Hog | -0.0478\* | 0.953 | -0.00797. | 0.992 | 0.1148\*\*\* | 1.122 | 0.105\*\*\* | 1.111 |
| (0.0264) |  | (0.0266) |  | (0.0273) |  | (0.0273) |  |
|  |  |  |  |  |  |  |  |  |
| Poultry | 0.4631\*\*\* | 1.589 | 0.4656\*\*\* | 1.593 | 0.37\*\*\* | 1.448 | 0.3653\*\*\* | 1.441 |
| (0.0158) |  | (0.0158) |  | (0.0161) |  | (0.0161) |  |
|  |  |  |  |  |  |  |  |  |
| Sheep | 0.179\*\*\* | 1.196 | 0.1524\*\*\* | 1.165 | -0.00059. | 0.999 | -0.00875\*\*\* | 0.991 |
| (0.0349) |  | (0.035) |  | (0.0353) |  | (0.0353) |  |
|  |  |  |  |  |  |  |  |  |
| OtherLivestock | 0.0275\* | 1.028 | 0.0159. | 1.016 | -0.0931\*\*\* | 0.911 | -0.0972\*\*\* | 0.907 |
| (0.0165) |  | (0.0165) |  | (0.0167) |  | (0.0167) |  |
|  |  |  |  |  |  |  |  |  |
| Vegetable | 0.3299. | 1.391 | 0.3289\*\*\* | 1.389 | 0.259\*\*\* | 1.296 | 0.2546\*\*\* | 1.29 |
| (0.0251) |  | (0.0251) |  | (0.0254) |  | (0.0254) |  |
|  |  |  |  |  |  |  |  |  |
| Fruit | -0.1389\*\*\* | 0.87 | -0.1364\*\*\* | 0.872 | -0.2196\*\*\* | 0.803 | -0.2201\*\*\* | 0.802 |
| (0.0218) |  | (0.0218) |  | (0.022) |  | (0.022) |  |
|  |  |  |  |  |  |  |  |  |
| Greenhouse | 0.1488\*\*\* | 1.16 | 0.1436\*\*\* | 1.154 | 0.0645\*\*\* | 1.067 | 0.058\*\*\* | 1.06 |
| (0.0185) |  | (0.0185) |  | (0.0188) |  | (0.0188) |  |
|  |  |  |  |  |  |  |  |  |
| OtherCrop | 0.2507\* | 1.285 | 0.2315\*\*\* | 1.26 | 0.0869\*\*\* | 1.091 | 0.081\*\*\* | 1.084 |
| (0.0142) |  | (0.0142) |  | (0.0146) |  | (0.0146) |  |
| ***Regional Characteristics*** | | | | | | | | |
| PopnDen | 0.000218\*\*\* | 1 | 0.000268\*\*\* | 1 | 0.000285\*\*\* | 1 | 0.000302\*\*\* | 1 |
| (0.00002) |  | (0.00002) |  | (0.000021) |  | (0.000021) |  |
|  |  |  |  |  |  |  |  |  |
| MedIncome | -4.21E-06\*\*\* | 1 | -3.54E-06\*\*\* | 1 | 1.19E-06\*\* | 1 | 1.183E-06\*\* | 1 |
| (5.88E-07) |  | (5.89E-07) |  | (5.97E-07) |  | (5.973E-07) |  |
| Provinces (Base - Quebec) | | | | | | | | |
| Newfoundland and Labrador | 0.0384. | 1.039 | 0.0341. | 1.035 | -0.0117. | 0.988 | -0.0137\*\* | 0.986 |
| (0.0656) |  | (0.0656) |  | (0.0661) |  | (0.0661) |  |
|  |  |  |  |  |  |  |  |  |
| Prince Edward Island | 0.0791. | 1.082 | 0.0818. | 1.085 | 0.0699. | 1.072 | 0.0706\*\*\* | 1.073 |
| (0.0511) |  | (0.0511) |  | (0.0514) |  | (0.0514) |  |
|  |  |  |  |  |  |  |  |  |
| Nova Scotia | 0.1054\*\*\* | 1.111 | 0.0973\*\*\* | 1.102 | 0.0465. | 1.048 | 0.0443. | 1.045 |
| (0.0298) |  | (0.0298) |  | (0.03) |  | (0.03) |  |
|  |  |  |  |  |  |  |  |  |
| New Brunswick | 0.1125\*\*\* | 1.119 | 0.1077\*\*\* | 1.114 | 0.0596\* | 1.061 | 0.0585. | 1.06 |
| (0.0344) |  | (0.0344) |  | (0.0346) |  | (0.0346) |  |
|  |  |  |  |  |  |  |  |  |
| Ontario | 0.00552. | 1.006 | 0.0395\*\*\* | 1.04 | 0.0193. | 1.019 | 0.0322\* | 1.033 |
| (0.0145) |  | (0.0146) |  | (0.0146) |  | (0.0147) |  |
|  |  |  |  |  |  |  |  |  |
| Manitoba | 0.1276\*\*\* | 1.136 | 0.1234\*\*\* | 1.131 | 0.1088\*\*\* | 1.115 | 0.1073\*\*\* | 1.113 |
| (0.0191) |  | (0.0191) |  | (0.0192) |  | (0.0192) |  |
|  |  |  |  |  |  |  |  |  |
| Saskatchewan | 0.065. | 1.067 | 0.0441\*\*\* | 1.045 | 0.0437\*\*\* | 1.045 | 0.0379\*\*\* | 1.039 |
| (0.0165) |  | (0.0166) |  | (0.0166) |  | (0.0166) |  |
|  |  |  |  |  |  |  |  |  |
| Alberta | -0.0185. | 0.982 | 0.0035. | 1.004 | -0.00809. | 0.992 | 0.00204\*\*\* | 1.002 |
| (0.0154) |  | (0.0155) |  | (0.0155) |  | (0.0156) |  |
|  |  |  |  |  |  |  |  |  |
| British Columbia | 0.1453. | 1.156 | 0.1858\*\*\* | 1.204 | 0.1019\*\*\* | 1.107 | 0.1198\*\*\* | 1.127 |
| (0.0174) |  | (0.0175) |  | (0.0175) |  | (0.0176) |  |
| ***Time Effect*** | | | | | | | | |
| Year - Trend | -0.00069. | 0.999 | 0.00298\*\*\* | 1.003 | 0.00374\*\*\* | 1.004 | 0.00503\*\*\* | 1.005 |
| (0.000615) |  | (0.000636) |  | (0.000626) |  | (0.00064) |  |
|  |  |  |  |  |  |  |  |  |
| ***Model Information*** | | | | | | | | |
| AIC | 372,624.7 | | 372,091.4 | | 368,490.1 | | 368,395.1 | |
| Response Profile Value: 1 | 122,115 | | | | | | | |
| Response Profile Value: 0 | 160,456 | | | | | | | |

1: \*: Significant at 10% level; \*\*: Significant at 5% level; \*\*\*: Significant at 1% level; .: P value > 10 % (insignificant)

2: Standard Errors are in parentheses