Do investors of Chinese origin in Africa have a differential impact on a firm’s performance compared to when investors of other nationalities invest? Through the investigation of the independent variable, change in ownership, and the dependent variables, revenue, net income, stock price, market capitalization, and PE ratio, two qualities of Chinese investment will be explored. One, has Chinese investment been successful in achieving some positive financial impact on a firm. Two, does this investment from investors originating from China have unique qualities that are unlike that of investors from other countries. China’s economic miracle on the back of its unique economic system could lead to a country with different strategies and goals with their foreign direct investment. China’s government plays a much larger role in how they direct investment, which is a significant difference between China and other countries in the West and Asia. Additionally, China’s influence throughout the developed world is only growing, and they specifically want to develop an economic partnership with African countries. Understanding how investor ownership affects firm performance will help firms and policymakers better approach decision-making regarding regulations and FDI.

To find optimal comparison countries for China, data mining for correlation between the treatment effect different thresholds and the dependent variables listed previously. This data mining process found two countries of comparison that were used in the final analysis. Once the comparison countries were determined, a two-way fixed effects regression was run to identify the coefficients of change in ownership on the dependent variables. From this analysis, I expect Chinese firms to have a significant positive impact on firms because the managers in

Papers related to my methodology come in two different types. Some papers relate more qualitatively through their investigation of investment in Africa, and others apply econometric methodologies to analyze questions related to ownership structure more broadly. The study of Chinese FDI has been quite robust in recent years. Dollar et al. discovered that Chinese stock investment as of 2015 had been relatively low, and the difference between Western Investment and Chinese Investment is relatively small, with the main difference between China’s willingness to invest in any country regardless of their level of governance, while Western countries are more hesitant to invest in countries with unstable regimes (Dollar 2015)[[1]](#endnote-1). In comparison, this paper will focus on the difference between foreign investors' and Chinese investors' ability to drive the financial performance of these African firms. Bautigam et al analyze manufacturing firms in Tanzania, Nigeria, Ghana, and Ethiopia and whether China will enter. They note that these investors coming into Africa are similar to Indian and Hong Kong investors in China (Bautigam 2018).[[2]](#endnote-2) A robustness check between Chinese investors and Hong Kong investors, as well as Chinese investors and Indian investors, can be made to determine if this analysis can find a similar result. A plethora of literature exists on ownership structure and firm performance. Most papers solve the endogeneity problem through the use of 2SLS with Tobin’s Q, and they use the Hausman test to check of exogeneity In their analysis, they look specifically at private firms in the EU. Their definition of an ownership change is one where a foreign owner buys a controlling stake in the company. Therefore, their data contains slightly different data than my analysis\, but the results chain they identify in their paper is similar. The biggest difference between the results chain in their paper and mine is in the outcome and final outcome portion. Their hypothesis relies on the idea that the origin country's governance level and economic freedom influence the capital flow into Eastern European countries. Additionally, they explain their result chain through managerial discipline theory, which is when foreign investors invest in higher-risk and less profitable firms. My result chain sees business skills, knowledge spillover, and connections to foreign governments from Chinese and Western firms resulting in an increase in firm performance.

1. Dollar, D., Tang, H., & Chen, W. (2015). Why is China investing in Africa? Evidence from the firm level. *Brookings Institution*. [↑](#endnote-ref-1)
2. Brautigam, D., Xiaoyang, T., & Xia, Y. (2018). What kinds of Chinese ‘geese’are flying to Africa? Evidence from Chinese manufacturing firms. *Journal of African Economies*, *27*(suppl\_1), i29-i51.

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   | Table 1: Threshold 3% | | | | | | |
   | Investor Country | PE Ratio | Stock Price | Ln Revenue | Ln Net Income | Market Capitalization | Earnings per Share |
   | United States | -20.55 | -1.703e+08 | 1.691\*\*\* | 1.395\*\*\* | 3.038e+09\*\*\* | -0.0853 |
   | France | -27.03 | -1.546e+08 | 0.00829 | -0.387 | -5.566e+08 | -27.03 |
   | Germany | -28.10 | -1.546e+08 | -0.555 | -1.024\*\*\* | -1.191e+09\*\* | -1.486 |
   | Singapore | -12.48 | -1.570e+08 | 1.988\*\*\* | 1.458\*\*\* | 2.134e+09\*\*\* | -12.48 |
   | Belgium | -31.38 | -1.538e+08 | -0.525 | 0.175 | -1.132e+09 | -0.685 |
   | United Kingdom | -15.58 | -1.649e+08 | 0.394\*\*\* | 0.176 | 2.899e+07 | -0.269 |
   | Hong Kong | -26.73 | -1.538e+08 | -2.289 | -1.560 | -1.230e+09 | -0.718 |
   | India | -31.81 | -1.541e+08 | -1.245\*\*\* | -0.981\*\* | -6.743e+08 | -31.81 |

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   | Table 2: Threshold 5% | | | | | | |
   | Investor Country | PE Ratio | Stock Price | Ln Revenue | Ln Net Income | Market Capitalization | Earnings per Share |
   | United States | -20.55 | -1.703e+08 | 1.691\*\*\* | 1.395\*\*\* | 3.038e+09\*\*\* | -0.0853 |
   | France | -26.16 | -1.545e+08 | -0.0842 | -0.381 | -4.964e+08 | -26.16 |
   | Germany | -27.42 | -1.545e+08 | -0.535 | -1.161\*\*\* | -1.191e+09\* | -1.690 |
   | Singapore | -14.51 | -1.559e+08 | 1.701\*\*\* | 1.062\*\*\* | 1.162e+09\*\*\* | -0.193 |
   | Belgium | -31.38 | -1.538e+08 | -0.525 | 0.175 | -1.132e+09 | -0.685 |
   | United Kingdom | -13.90 | -1.631e+08 | 0.465\*\*\* | 0.190 | 1.192e+08 | -0.256 |
   | Hong Kong | -26.73 | -1.538e+08 | -2.289 | -1.560 | -1.230e+09 | -0.718 |
   | India | -32.28 | -1.539e+08 | -1.590\*\*\* | -1.258\*\* | -1.225e+09 | -0.701 |

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   | Table 3: Threshold 10% | | | | | | |
   | Investor Country | PE Ratio | Stock Price | Ln Revenue | Ln Net Income | Market Capitalization | Earnings per Share |
   | United States | -18.31 | -1.601e+08 | 1.300\*\*\* | 0.853\*\*\* | 2.084e+09\*\*\* | 0.0402 |
   | France | -26.24 | -1.545e+08 | -0.174 | -0.478 | -6.764e+08 | -26.24 |
   | Germany | -27.16 | -1.544e+08 | -0.358 | -1.158\*\*\* | -1.184e+09\* | -27.16 |
   | Singapore | -14.27 | -1.546e+08 | 0.980\*\*\* | 0.0924 | -1.333e+08 | -0.373 |
   | Belgium | -31.38 | -1.538e+08 | -0.525 | 0.175 | -1.132e+09 | -0.685 |
   | United Kingdom | -10.43 | -1.611e+08 | 0.344\*\* | 0.0916 | 1.206e+08 | -0.174 |
   | Hong Kong | -26.73 | -1.538e+08 | -2.289 | -1.560 | -1.230e+09 | -0.718 |
   | India | -32.28 | -1.539e+08 | -1.590\*\*\* | -1.258\*\* | -1.225e+09 | -0.701 |

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   | Table 4: Threshold 12% | | | | | | |
   | Investor Country | PE Ratio | Stock Price | Ln Revenue | Ln Net Income | Market Capitalization | Earnings per Share |
   | United States | -16.86 | -1.585e+08 | 1.076\*\*\* | 0.710\*\*\* | 1.322e+09\*\*\* | 0.0335 |
   | France | -26.24 | -1.545e+08 | -0.174 | -0.478 | -6.764e+08 | -26.24 |
   | Germany | -25.23 | -1.544e+08 | 0.292 | -0.926\*\* | -1.147e+09 | -1.690 |
   | Singapore | -14.93 | -1.542e+08 | 0.594 | -0.319 | -9.819e+08 | -0.457 |
   | Belgium | -31.38 | -1.538e+08 | -0.525 | 0.175 | -1.132e+09 | -0.685 |
   | United Kingdom | -8.819 | -1.604e+08 | 0.304\*\* | 0.0682 | 1.162e+08 | -0.280 |
   | Hong Kong | -26.73 | -1.538e+08 | -2.289 | -1.560 | -1.230e+09 | -0.718 |
   | India | -32.28 | -1.539e+08 | -1.590\*\*\* | -1.258\*\* | -1.225e+09 | -0.701 |

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   | Table 5: Threshold 15% | | | | | | |
   | Investor Country | PE Ratio | Stock Price | Ln Revenue | Ln Net Income | Market Capitalization | Earnings Per Share |
   | United States | -14.89 | -1.568e+08 | 0.559\*\*\* | 0.358\* | 4.235e+08 | -14.89 |
   | France | -26.24 | -1.545e+08 | -0.174 | -0.478 | -6.764e+08 | -26.24 |
   | Germany | -25.18 | -1.541e+08 | 0.0905 | -0.923\*\* | -1.131e+09 | -0.656 |
   | Singapore | -15.29 | -1.541e+08 | 0.565 | -0.350 | -1.056e+09 | -0.534 |
   | Belgium | -31.38 | -1.538e+08 | -0.525 | 0.175 | -1.132e+09 | -0.685 |
   | United Kingdom | -6.171 | -1.597e+08 | 0.318\*\* | 0.104 | 2.374e+08 | -0.232 |
   | Hong Kong | -26.73 | -1.538e+08 | -2.289 | -1.560 | -1.230e+09 | -0.718 |
   | India | -32.28 | -1.539e+08 | -1.590\*\*\* | -1.258\*\* | -1.225e+09 | -0.701 |

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   | Table 6: Number of Switchers At Different Ownership Thresholds | | | | | |
   |  | 3% | 5% | 10% | 12% | 15% |
   | China | 7 | 6 | 5 | 5 | 3 |
   | United States | 202 | 157 | 95 | 76 | 54 |
   | France | 12 | 11 | 10 | 10 | 10 |
   | Germany | 12 | 9 | 8 | 6 | 5 |
   | Singapore | 52 | 37 | 15 | 8 | 7 |
   | Western | 390 | 330 | 247 | 226 | 209 |
   | Belgium | 2 | 2 | 2 | 2 | 2 |
   | United Kingdom | 122 | 97 | 76 | 71 | 61 |
   | Hong Kong | 2 | 1 | 1 | 1 | 1 |
   | India | 8 | 3 | 3 | 3 | 3 |

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   | Table 6: 5 % Threshold for Treatment with Country-Year and Firm Level FE with No Clustering at Firm Level | | | | | | |
   |  | (1) | (2) | (3) | (4) | (5) | (6) |
   | VARIABLES | Ln Revenue (USD) | Ln Net Income (USD) | PE Ratio | Market Cap (USD) | EPS (USD) | Stock Price |
   |  |  |  |  |  |  |  |
   | United States | -0.00468 | 0.140\*\* | -45.94 | 7.929e+08\*\*\* | -0.341 | -0.0469 |
   |  | (0.0502) | (0.0682) | (40.21) | (1.647e+08) | (0.240) | (4.347e+06) |
   | China | 0.312 | 0.697\*\* | -12.99 | -3.238e+07 | 0.0628 | 0.616 |
   |  | (0.223) | (0.287) | (191.0) | (7.621e+08) | (1.126) | (2.079e+07) |
   | Singapore | -0.00804 | 0.0804 | -43.63 | 1.825e+08 | 0.303 | 2.556 |
   |  | (0.0953) | (0.121) | (73.03) | (3.140e+08) | (0.421) | (8.352e+06) |
   | Constant | 18.87\*\*\* | 16.81\*\*\* | 45.98\*\*\* | 1.252e+09\*\*\* | 0.671\*\*\* | 1.574e+08\*\*\* |
   |  | (0.0108) | (0.0145) | (8.808) | (3.547e+07) | (0.0631) | (918,225) |
   |  |  |  |  |  |  |  |
   | Observations | 6,160 | 5,127 | 4,827 | 6,139 | 2,760 | 6,525 |
   | R-squared | 0.902 | 0.832 | 0.217 | 0.664 | 0.493 | 1.000 |

   Standard errors in parentheses

   \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

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   | Table 8: Threshold 12 % for Treatment with Country-Year and Firm FE with No Clustering at Firm Level | | | | | | |
   |  | (1) | (2) | (3) | (4) | (5) | (6) |
   | Investor Origin Country | Ln Revenue (USD) | Ln Net Income (USD) | PE Ratio | Market Cap (USD) | EPS (USD) | Stock Price |
   |  |  |  |  |  |  |  |
   | United States | -0.0183 | 0.0609 | -20.99 | -9.288e+08\*\*\* | -0.457 | -5.621 |
   |  | (0.0723) | (0.0987) | (57.03) | (2.374e+08) | (0.328) | (6.263e+06) |
   | China | 0.207 | 0.738\*\* | -3.632 | -1.206e+08 | 0.0304 | 0.0791 |
   |  | (0.296) | (0.375) | (226.4) | (1.020e+09) | (1.273) | (2.591e+07) |
   | Singnapore | -0.299\* | -0.300 | 17.50 | -5.534e+08 | -0.149 | 0.880 |
   |  | (0.178) | (0.237) | (145.4) | (5.870e+08) | (1.368) | (1.552e+07) |
   | Constant | 18.87\*\*\* | 16.82\*\*\* | 41.85\*\*\* | 1.350e+09\*\*\* | 0.655\*\*\* | 1.574e+08\*\*\* |
   |  | (0.0102) | (0.0136) | (8.225) | (3.351e+07) | (0.0564) | (870,731) |
   |  |  |  |  |  |  |  |
   | Observations | 6,161 | 5,128 | 4,828 | 6,140 | 2,761 | 6,526 |
   | R-squared | 0.902 | 0.832 | 0.217 | 0.664 | 0.493 | 1.000 |

   Standard errors in parentheses

   \*\*\* p<0.01,

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   | Table 9: Threshold 12 % for Treatment with Country-Year and Firm FE with Clustering at Firm Level | | | | | | |
   |  | (1) | (2) | (3) | (4) | (5) | (6) |
   | VARIABLES | Ln Revenue (USD) | Ln Net Income (USD) | PE Ratio | Market Cap (USD) | EPS (USD) | Stock Price |
   |  |  |  |  |  |  |  |
   | United States | -0.0183 | 0.0609 | -20.99 | -9.288e+08 | -0.457 | -5.621 |
   |  | (0.0748) | (0.133) | (31.90) | (1.020e+09) | (0.315) | (4.606) |
   | China | 0.207\* | 0.738\*\*\* | -3.632 | -1.206e+08 | 0.0304\*\*\* | 0.0791 |
   |  | (0.110) | (0.226) | (2.736) | (2.388e+08) | (0.0115) | (0.0995) |
   | Singapore | -0.299 | -0.300 | 17.50 | -5.534e+08 | -0.149 | 0.880 |
   |  | (0.299) | (0.552) | (27.20) | (4.380e+08) | (0.144) | (1.344) |
   | Constant | 18.87\*\*\* | 16.82\*\*\* | 41.85\*\*\* | 1.350e+09\*\*\* | 0.655\*\*\* | 1.574e+08\*\*\* |
   |  | (0.00289) | (0.00488) | (1.047) | (3.465e+07) | (0.0143) | (0.144) |
   |  |  |  |  |  |  |  |
   | Observations | 6,161 | 5,128 | 4,828 | 6,140 | 2,761 | 6,526 |
   | R-squared | 0.902 | 0.832 | 0.217 | 0.664 | 0.493 | 1.000 |

   Robust standard errors in parentheses

   \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

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   | Table 10: F-Tests with China Coefficient at 5% Threshold | | | | | | |
   |  | (1) | (2) | (3) | (4) | (5) | (6) |
   | Country | Ln Revenue (USD) | Ln Net Income (USD) | PE Ratio | Market Cap (USD) | EPS (USD) | Stock Price |
   |  |  |  |  |  |  |  |
   | Singapore | 9.43 | 6.49 | 1.18 | 0.11 | 1.63 | 2.18 |
   |  | (0.0001) | (0.0016) | (0.3067) | (0.8984) | (0.1973) | (0.1139) |
   | United States | 9.43 | 7.59 | 1.73 | 1.57 | 1.51 | 1.51 |
   |  | (0.0001) | (0.0006) | (0.1789) | (0.2100) | (0.2239) | (0.2220) |
   | F-Statistics and p-values in parentheses | | | | | | |

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   | Table 11: F-Test Statistic with China at 12% Threshold | | | | | | |
   |  | (1) | (2) | (3) | (4) | (5) | (6) |
   | Country | Ln Revenue (USD) | Ln Net Income (USD) | PE Ratio | Market Cap (USD) | EPS (USD) | Stock Price |
   |  |  |  |  |  |  |  |
   | Singapore | 2.22 | 10.47 | 0.98 | 0.99 | 3.99 | 0.64 |
   |  | (0.1098) | (0.0000) | (0.3751) | (0.3709) | (0.0197) | (0.5266) |
   | United States | 1.79 | 5.43 | 1.03 | 0.55 | 4.49 | 1.26 |
   |  | (0.1682) | (0.0046) | (0.3591) | (0.5780) | (0.0121) | (0.2848) |

   F-Statistics and p-values in parentheses [↑](#endnote-ref-2)