**THE NEW PRODUCT PORTFOLIO INNOVATIVENESS-STOCK RETURNS RELATIONSHIP: tHE ROLE OF LARGE INDIVIDUAL INVESTORS’ CULTURE**

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WEB APPENDICES

**WEB APPENDIX A. LIST OF THE STOCK EXCHANGES IN OUR SAMPLE**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Stock Exchange (Country)** | **Number of observations** | **Percentage** | **Thresholds** | **Notification Period for Holder Declarations** |
| New York Stock Exchange (USA) | 242 | 5.96% | >5% | 10 business days |
| Amman (Jordan) | 92 | 2.26% | 1% | Immediately |
| Australian Stock Exchnage (Australia) | 155 | 3.82% | 5% | 5 business days |
| Bangkok (Thailand) | 202 | 4.98% | 5% and first 10 major shareholders | 14 days |
| Bombay (India) | 223 | 5.52% | 5% | 15 days |
| SWX Swiss Exchange (Switzerland) | 48 | 1.18% | 3% | As soon as possible |
| Frankfurt (Germany) | 13 | .32% | 3% | 7 days |
| Istanbul (Turkey) | 8 | .20% | 5% | As soon as possible |
| Johannesburg (South Africa) | 59 | 1.48% | 5% | Immediately |
| Bursa Malaysia (Malaysia) | 39 | 1.04% | 5% | Immediately |
| London (UK) | 155 | 3.82% | >3% | 24 hours |
| Madrid (Spain) | 78 | 1.92% | 5% | 7 days |
| Milan (Italy) | 5 | .12% | 2% | 48 hours |
| National Market (India) | 164 | 4.04% | 5% | 15 days |
| GreTai Securities Market (Taiwan) | 155 | 3.82% | 10% | 10 days |
| Seoul (South Korea) | 109 | 2.69% | 5% | 5 days |
| Shanghai (China) | 519 | 12.79% | 3% | 7 days |
| Shenzhen (China) | 366 | 9.02% | 3% | 7 days |
| Singapore (Singapore) | 307 | 7.57% | 5% | 2 business days |
| Stockholm (Sweden) | 61 | 1.50% | 5% | Immediately |
| Taipei (Taiwan) | 769 | 18.95% | 10% | 10 days |
| Tel Aviv (Israel) | 38 | .94% | 5% | Immediately |
| Tokyo (Japan) | 56 | 1.38% | 5% | As soon as possible |
| Vilnius (Lithuania) | 60 | 1.48% | 5% | 4 days |
| Warsaw (Poland) | 1 | .02% | 5% | 24 hours |
| Jasdaq (Japan) | 104 | 2.56% | 5% | As soon as possible |
| Riyadh (Saudi Arabia) | 24 | .59% | 5% | Immediate |

**WEB APPENDIX B. Site visit example: 2013 Annual Report of Haixin Foods Co., Ltd.**

|  |  |  |  |
| --- | --- | --- | --- |
| **Time** | **Place** | **Type of Visitor** | **Visitor** |
| 1. 01/31/2013 | Headquarter | Institution | Changjiang Securities (Mi Zhou, senior analyst of food and beverage industry), Orient Securities Asset Management (Weixu, senior planning manager) |
| 1. 01/24/2013 | Headquarter | Institution | Zhongtai Securities (Wenjing Huang, analyst of food and beverage industry) |
| 1. 04/09/2013 | Headquarter | Institution | Industrial Securities (Lili Xue, investment manager of securities investment department, Lihua Bao, investment manager), China International Fund Management (Zhen Man, Researcher), UBS SDIC Fund Management, (Hong Zhang, Fund manager), Sinolink Securities (Xiaoyuan Zhao, analyst of food and beverage industry), Orient Securities Asset Management (Senior Researchers Weisun), Great Wall Glory Securities (Research institute director Xuejun Zheng, industry analyst, Xiaobin Dai, analyst assistant Zhilong Sun), Caitong Securities ( senior analyst of food and beverage industry Chunsheng She, research assistant Yingzhou), Northeast Securities (Chengliang Zhu, analyst of food and beverage industry), Shanghai Hesheng Asset Management (senior partner Yuanchuan Hu, Investment manager Dan LI), GTJA Allianz Fund management (Researcher Jinglin), Huatai Securities (Peng Liu, analyst of food and beverage), Western Securities (researcher Qing Qin), First-trust Fund Management (Yan Zhang, Manager assistant) |
| 1. 04/09/2013 | Headquarter | Individual | Jimin Gong |
| 1. 05/10/2013 | Headquarter | Institution | Hongyuan Securities (Yang Liu, analyst of food and beverage industry) |
| 1. 05/31/2013 | Headquarter | Institution | China Asset Management (Deputy director of investment Huaizhi Gong, Investment Research Department Haiwei Peng, Stock investment department Yongzhang, Investment research department Yijia Sun), Great Wall Securities (Weiwei Zhang, Finance Research Institute analyst of food and beverage industry) |
| 1. 06/05/2013 | Headquarter | Institution | Sunsource Investment (securities analyst Xia Yang, investment director Yunhe Ren) |
| 1. 06/24/2013 | Headquarter | Institution | CITIC Securities (Hongxian Li, Senior vice President of asset management department), Century Securities (Ximin Liang, Senior industry analyst), Lombarda China Fund Management (Kun Yang, Deputy director of research), China International Capital (Jun Jiang, Senior manager of management department), CIB Fund Management (Luan Sun, General manager assistant of research department), Huatai Securities (Peng Liu, Research fellow) |
| 1. 09/03/2013 | Headquarter | Institution | Zhongtai Securities (Wenjing Huan, Food and beverage industry analyst), Changjiang Securities (Jieming Liu, Food and beverage industry analyst), Orient Securities Asset Management (Wei Xu, Senior planning manager), Shang Hai Sunsource development (Yunhe Ren, investment director), Golden Nest Capital (Partner Ke Xu), China General Technology (Group) Holding (Yv Zhu), Wanjia Asset Management (Yi Chen, Researcher) |
| 1. 11/04/2013 | Headquarter | Institution | Huaan Securities |
| 1. 11/18/2013 | Headquarter | Institution | Great Wall Securities (analyst of food and beverage industry) |
| 1. 12/24/2013 | Subsidiary | Institution | China Securities (Fusheng Huang, food and beverage chief analyst), Zhongtai Securities Company Limited (Yinghua Wang, food and beverage chief analyst), Zhongtai Securities Company Limited (Wenjing Huang, food and beverage analyst, Changjiang Securities Company Limited (Jieming Liu, food and beverage industry analyst), Guohai Securities (Chunsheng Yu, food and beverage analyst), Gf Fund Management (Di Sun, General manager assistant), Lombarda China Fund Management (Deputy director of research institute Kun Yang), China Southern Fund Management (Kecheng Yin) |
| 1. 12/24/2013 | Subsidiary | Individual | Jian Tan |

**WEB APPENDIX C. INFORMATION ABOUT THE DATA**

**Table C1. Examples of new-to-the-markets and incremental new products in our sample**

|  |  |  |
| --- | --- | --- |
| **Firms** | **New-to-the-market product** | **Incremental product** |
| Barry Callebaut | **Probiotic Chocolate** (Switzerland, Nov 2007): Swiss chocolate producer Barry Callebaut is launching its new probiotic confectionery bar by the beginning of November 2007. It claims that its new chocolate bar is a better carrier of intestinal 'good' bacteria compared to traditional dairy products. The new bar is part of the company's drive to provide healthier products for chocolate lovers. | **3 x 4 with Praliné Blanc Chocolate with Praline** (Belgium, Feb 2005): White chocolate with praline filling, available in a 200g multipack of four bars |
| Cloetta | **Liquid Sweetener** (Italy, Oct 2011): Dietor Vantaggio Dolcificante Liquido (Liquid Sweetener) with zero calories is said to sweeten as much as a teaspoon of sugar or a sweetener tablet. The product is ideal for hot or cold beverages and is also suitable for cooking and desserts. It is retailed in a 77ml bottle containing 1400+140 drops | **Jelly Bean New Packaging Concepts and Flavours** (Ireland, Feb 2004): Aran Candy has revealed a range of new packaging concepts for its The Jelly Bean Factory brand. These include 200g pyramid bags, 45g boxes featuring a product window and a finger perforation hole, and a 90g plastic can, which resembles mini soft drinks cans but has a spring-loaded sliding lid that clicks back into place after accessing the product. |
| Daesang | **Banana Mayonnaise for Kids** (South Korea, Apr 2004): a Banana Mayonnaise for Kids, fortified with CGF (Chlorella Growth Factor) and GABA (Gamma-Aminobutyric acid). It is free from artificial flavors, colors, and preservatives, and is packaged in a plastic bottle with a duck head-shaped cap. |  |

**Table C2. Correlation matrix for the Investor Level Analysis**

|  | **Mean** | **Std. Dev.** | **1.** | **2.** | **3.** | **4.** | **5.** | **6.** | **7.** | **8.** | **9.** | **10.** | **11.** | **12.** | **13.** | **14.** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 1. Stock holding change | 2.77 | 7.04 | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2. Innovativeness | .16 | .30 | .04\* | 1 |  |  |  |  |  |  |  |  |  |  |  |  |
| 3. Individualism | 63.43 | 32.43 | .10\* | -.05\* | 1 |  |  |  |  |  |  |  |  |  |  |  |
| 4. Uncertainty avoidance | 50.54 | 22.58 | .07\* | .05\* | -.04\* | 1 |  |  |  |  |  |  |  |  |  |  |
| 5. Power distance | 64.79 | 15.84 | -.04 | .04\* | -.56\* | -.47\* | 1 |  |  |  |  |  |  |  |  |  |
| 6. Masculinity | 53.96 | 15.2 | -.01 | -.11\* | .14\* | -.13\* | .23\* | 1 |  |  |  |  |  |  |  |  |
| 7. Long-term orientation | 74.45 | 31.29 | -.08\* | .04\* | -.66\* | -.12\* | .48\* | .31\* | 1 |  |  |  |  |  |  |  |
| 8. Indulgence | 40.19 | 15.28 | .01 | -.10\* | .44\* | .22\* | -.74\* | -.26\* | -.64\* | 1 |  |  |  |  |  |  |
| 9. Market GDP | 2.77 | 3.72 | -.03\* | .64\* | -.19\* | .01 | .20\* | -.03\* | .21\* | -.27\* | 1 |  |  |  |  |  |
| 10. Market consumer expenditures | 9.50 | 2.55 | -.07\* | .36\* | -.17\* | -.24\* | .30\* | .20\* | .37\* | -.35\* | .72\* | 1 |  |  |  |  |
| 11. Market efficiency | 1.72 | 2.25 | -.01 | .66\* | -.19\* | .09\* | .14\* | -.15\* | .14\* | -.18\* | .96\* | .56\* | 1 |  |  |  |
| 12. Market infrastructure | 1.76 | 2.35 | -.01 | .66\* | -.19\* | .12\* | .11\* | -.12\* | .13\* | -.16\* | .94\* | .54 | .99\* | 1 |  |  |
| 13. Rule of law | .11 | .47 | .06\* | .30\* | .07\* | .32\* | -.24\* | -.19\* | -.19\* | .19\* | .23\* | -.20 | .38\* | .46\* | 1 |  |
| 14. Consumer conservatism | 1.62 | 2.13 | -.04\* | .68\* | -.16\* | .06\* | .13\* | -.10\* | .14\* | -.19\* | .77\* | .58\* | .79\* | .78\* | .36\* | 1 |
| 15. Consumer affective autonomy | 1.27 | 1.67 | -.04\* | .67\* | -.15\* | .06\* | .13\* | -.10\* | .14\* | -.20\* | .77\* | .59\* | .79\* | .78\* | .36\* | .79\* |
| 16. Consumer intellectual autonomy | 1.56 | 2.05 | -.04\* | .67\* | -.17\* | .07\* | .13\* | -.10\* | .16\* | -.20\* | .77\* | .60\* | .79\* | .78\* | .36\* | .79\* |
| 17. Consumer hierarchy | 1.1 | 1.47 | -.07\* | .64 | -.22\* | .01 | .20\* | -.05\* | .23\* | -.27\* | .78\* | .69\* | .76\* | .74\* | .18\* | .77\* |
| 18. Consumer mastery | 1.54 | 2.01 | -.05\* | .66\* | -.18\* | .03\* | .17\* | -.07\* | .19\* | -.23\* | .78\* | .64\* | .78\* | .77\* | .29\* | .79\* |
| 19. Consumer harmony | 1.43 | 1.87 | -.04\* | .67\* | -.16\* | .05\* | .14\* | -.10\* | .16\* | -.20\* | .76\* | .59\* | .79\* | .77\* | .34\* | .79\* |
| 20. Consumer egalitarian commitment | 1.60 | 2.12 | -.05\* | .66\* | -.15\* | .06\* | .12\* | -.10\* | .15\* | -.20\* | .75\* | .58\* | .77\* | .76\* | .36\* | .70\* |
| 21. Firm’s relevance | 77.09 | 37.29 | .08\* | -.02 | .14\* | .16\* | -.17\* | -.03\* | -.12\* | .14\* | -.08\* | -.12\* | -.05\* | -.04\* | .08\* | -.05\* |
| 22. Frequency trading | .04 | .18 | -.03\* | .01 | -.08\* | -.12\* | .18\* | .11\* | .17\* | -.15\* | .06\* | .14\* | .04\* | .04\* | -.06\* | .04\* |
| 23. Investor’s portfolio beta | .04 | .19 | -.04\* | .01 | -.08\* | -.11\* | .13\* | .08\* | .12\* | -.11\* | .06\* | .11\* | .04\* | .03 | -.08\* | .05\* |
| 24. Investor’s portfolio alpha | 7.04 | 23.32 | -.01 | .02 | -.08\* | -.08\* | .12\* | .03\* | .08\* | -.10\* | .07\* | .08\* | .06\* | .04\* | -.11\* | .06\* |
| 25.  Stock purchase price | .24 | .75 | -.05\* | .08\* | -.09\* | .08\* | .02 | -.04\* | .06\* | .07\* | .04\* | -.03 | .07\* | .07\* | .09\* | .06\* |
| 26. Investor Tenure | 9.55 | 7.70 | .18\* | -.04\* | .16\* | .13\* | -.21\* | -.08\* | -.21\* | .21\* | -.11\* | -.13\* | -.08\* | -.07\* | .13\* | -.09\* |
| 27. Local Investor | .94 | .24 | -.10\* | .02 | -.21\* | .09\* | .09\* | -.07\* | .09\* | -.16\* | .01 | -.05\* | .03\* | .03\* | .08\* | .02 |
| 28. Gender | .59 | .49 | .04\* | -.01 | .21\* | -.03\* | -.08\* | .08\* | -.18\* | .03\* | -.021 | -.01 | -.05\* | -.04\* | -.01 | -.05\* |
| 29. First period | .08 | .27 | -.05\* | .02 | -.07\* | -.0102 | .05\* | .02 | .07\* | -.07\* | .01 | .01 | .01 | .01 | -.02 | .01 |
| 3. Last period | .07 | .25 | -.11\* | .02 | -.07\* | -.07\* | .07\* | .03\* | .11\* | -.07\* | .04\* | .04\* | .03\* | .01 | -.04\* | .03\* |
| 31. # new-to-the-market products in prior 3 years | 7.48 | 16.59 | -.05\* | .16\* | -.13\* | .24\* | -.03\* | -.15\* | .02 | -.13\* | .30\* | .11\* | .28\* | .31\* | .28\* | .26\* |
| 32. # incremental products in prior 3 years | 9.52 | 22.16 | -.08\* | .15\* | -.14\* | .24\* | -.02 | -.14\* | .04\* | -.14\* | .30\* | .12\* | .28\* | .31\* | .28\* | .26\* |
| 33. # investors | 44.39 | 7.38 | .28\* | .112\* | .16\* | .16\* | -.22\* | .02 | -.12\* | .08\* | .18\* | .05\* | .18\* | .21\* | .26\* | .18\* |
| 34. Corporate branding | .30 | .46 | -.15\* | -.03 | -.26\* | -.20\* | .19\* | .17\* | .47\* | -.21\* | .06\* | .32\* | -.02 | -.03 | -.24\* | -.01 |
| 35. House of brands | .42 | .49 | .10\* | .06\* | .15\* | .05\* | .01 | .08\* | -.23\* | -.07\* | .02 | -.17\* | .05\* | .07\* | .26\* | .06\* |
| 36. Stock price difference | 1.07 | .57 | -.02 | .08\* | -.05\* | .03\* | .01 | -.07\* | -.01 | .01 | .09\* | .02 | .09\* | .09\* | -.01 | .10\* |
| 37. Abnormal trading volume | 7.97 | 127.73 | -.01 | .06\* | -.03\* | .03\* | -.01 | -.07\* | -.03\* | .01 | .06\* | -.01 | .06\* | .05\* | -.03\* | .07\* |
| 38 # countries | .78 | 1.78 | -.01 | .35\* | -.12\* | .24\* | .01 | -.20\* | .01 | -.13\* | .54\* | .23\* | .55\* | .56\* | .38\* | .54\* |
| 39. Stock index growth | .02 | .12 | -.02 | -.01 | -.03 | -.06\* | .07\* | .04\* | .07\* | -.07\* | .03\* | .06\* | .01 | .01 | -.03 | .01 |
| 40. Investor country’s regulatory profile | .58 | .19 | .04\* | -.13\* | .43\* | .27\* | -.73\* | -.07\* | -.48\* | .76\* | -.28\* | -.29\* | -.23\* | -.19\* | .23\* | -.23\* |

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **15.** | **16.** | **17.** | **18.** | **19.** | **20.** | **21.** | **22.** | **23.** | **24.** | **25.** | **26.** | **27.** | **28.** | **29.** |
| 15. Consumer affective autonomy | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 16. Consumer intellectual autonomy | .79\* | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 17. Consumer hierarchy | .77\* | .77\* | 1 |  |  |  |  |  |  |  |  |  |  |  |  |
| 18. Consumer mastery | .79\* | .79\* | .78\* | 1 |  |  |  |  |  |  |  |  |  |  |  |
| 19. Consumer harmony | .79\* | .79\* | .77\* | .79\* | 1 |  |  |  |  |  |  |  |  |  |  |
| 20. Consumer egalitarian commitment | .79\* | .79\* | .77\* | .79\* | .79\* | 1 |  |  |  |  |  |  |  |  |  |
| 21. Firm’s relevance | -.05\* | -.05\* | -.08\* | -.06\* | -.06\* | -.05\* | 1 |  |  |  |  |  |  |  |  |
| 22. Frequency trading | .04\* | .04\* | .06\* | .05\* | .04\* | .04\* | -.18\* | 1 |  |  |  |  |  |  |  |
| 23. Investor’s portfolio beta | .05\* | .05\* | .07\* | .06\* | .05\* | .05\* | -.05\* | .01 | 1 |  |  |  |  |  |  |
| 24. Investor’s portfolio alpha | .07\* | .06\* | .09\* | .07\* | .06\* | .06\* | -.05\* | .05\* | .66\* | 1 |  |  |  |  |  |
| 25.  Stock purchase price | .05\* | .06\* | .05\* | .06\* | .06\* | .06\* | -.02 | -.04\* | .01 | -.01 | 1 |  |  |  |  |
| 26. Investor Tenure | -.10\* | -.10\* | -.14\* | -.11\* | -.10\* | -.10\* | .03\* | -.11\* | -.09\* | -.09\* | .28\* | 1 |  |  |  |
| 27. Local Investor | .02 | .02 | .01 | .01 | .02 | .02 | -.01 | -.01 | .03\* | .04\* | .09\* | -.03\* | 1 |  |  |
| 28. Gender | -.05\* | -.05\* | -.05\* | -.05\* | -.05\* | -.05\* | -.01 | -.02 | -.01 | -.03\* | -.14\* | .01 | -.04\* | 1 |  |
| 29. First period | .01 | .01 | .01 | .01 | .01 | .01 | .04\* | .04\* | .03\* | .04\* | -.09\* | -.30\* | .01 | -.01 | 1 |
| 30. Last period | .03\* | .03\* | .04\* | .03\* | .03\* | .03\* | -.54\* | .03\* | -.05\* | -.06\* | .01 | -.03 | .01 | -.02 | -.09 |
| 31. # new-to-the-market products in prior 3 years | .27\* | .28\* | .24\* | .26\* | .26\* | .26\* | -.13\* | -.02 | -.02 | -.03\* | .01 | .07\* | .01 | .11\* | -.01 |
| 32. # incremental products in prior 3 years | .27\* | .28\* | .24\* | .26\* | .26\* | .26\* | -.13\* | -.02 | -.02 | -.03 | .01 | .07\* | .01 | .11\* | -.01 |
| 33. # investors | .19\* | .19\* | .13\* | .16\* | .17\* | .18\* | -.07\* | .01 | -.04\* | -.06\* | .03\* | .08\* | -.01 | .12\* | .01 |
| 34. Corporate branding | -.10 | .01 | .07\* | .03\* | -.01 | -.01 | -.04\* | .10\* | .10\* | .07\* | -.01 | -.15\* | .14\* | -.05\* | .05\* |
| 35. House of brands | .06\* | .06\* | -.01 | .04\* | .06\* | .07\* | .01 | -.03 | -.04\* | -.12\* | -.03\* | .09\* | -.14\* | .07\* | -.01 |
| 36. Stock price difference | .10\* | .10\* | .10\* | .10\* | .10\* | .10\* | .01 | -.01 | .04\* | .03\* | .25\* | -.07\* | .02 | -.02 | -.01 |
| 37. Abnormal trading volume | .07\* | .06\* | .07\* | .07\* | .07\* | .07\* | .01 | -.01 | .05\* | .03\* | .13\* | -.05\* | .01 | -.01 | -.01 |
| 38 # countries | .54\* | .54\* | .49\* | .52\* | .53\* | .53\* | -.11\* | -.01 | -.02 | -.02 | .02 | .02 | .03\* | .07\* | -.01 |
| 39. Stock index growth | .01 | .01 | .02 | .02 | .01 | .01 | .01 | .02 | -.04\* | .03\* | .06\* | -.02 | .01 | -.01 | -.01 |
| 40. Investor country’s regulatory profile | -.22\* | -.23\* | -.30\* | -.26\* | -.24\* | -.23\* | .13\* | -.13\* | -.12\* | -.14\* | .03 | .23\* | -.16\* | .05\* | -.05\* |

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **30.** | **31.** | **32.** | **33.** | **34.** | **35.** | **36.** | **37.** | **38.** | **39** |
| 30. Last period | 1 |  |  |  |  |  |  |  |  |  |
| 31. # new-to-the-market products in prior 3 years | -0.01 | 1 |  |  |  |  |  |  |  |  |
| 32. # incremental products in prior 3 years | -0.01 | 0.90\* | 1 |  |  |  |  |  |  |  |
| 33. # investors | 0.01 | 0.47\* | 0.47\* | 1 |  |  |  |  |  |  |
| 34. Corporate branding | 0.01\* | -0.11\* | -0.09\* | -0.12\* | 1 |  |  |  |  |  |
| 35. House of brands | -0.03\* | 0.17\* | 0.17\* | 0.16\* | -0.56\* | 1 |  |  |  |  |
| 36. Stock price difference | 0.01 | -0.01 | -0.01 | -0.02 | -0.02 | -0.05\* | 1 |  |  |  |
| 37. Abnormal trading volume | -0.01 | 0.01 | -0.01 | -0.02 | -0.03\* | -0.05\* | 0.89\* | 1 |  |  |
| 38 # countries | 0.01 | 0.87\* | 0.87\* | 0.47\* | -0.14\* | 0.17\* | 0.04\* | 0.03\* | 1 |  |
| 39. Stock index growth | -0.03 | -0.01 | -0.01 | -0.04\* | 0.03\* | 0.02 | 0.17\* | 0.01 | -0.01 | 1 |
| 40. Investor country’s regulatory profile | -0.06\* | -0.01 | -0.01 | 0.20\* | -0.20\* | 0.08\* | -0.08\* | -0.06\* | -0.01\* | -10\* |

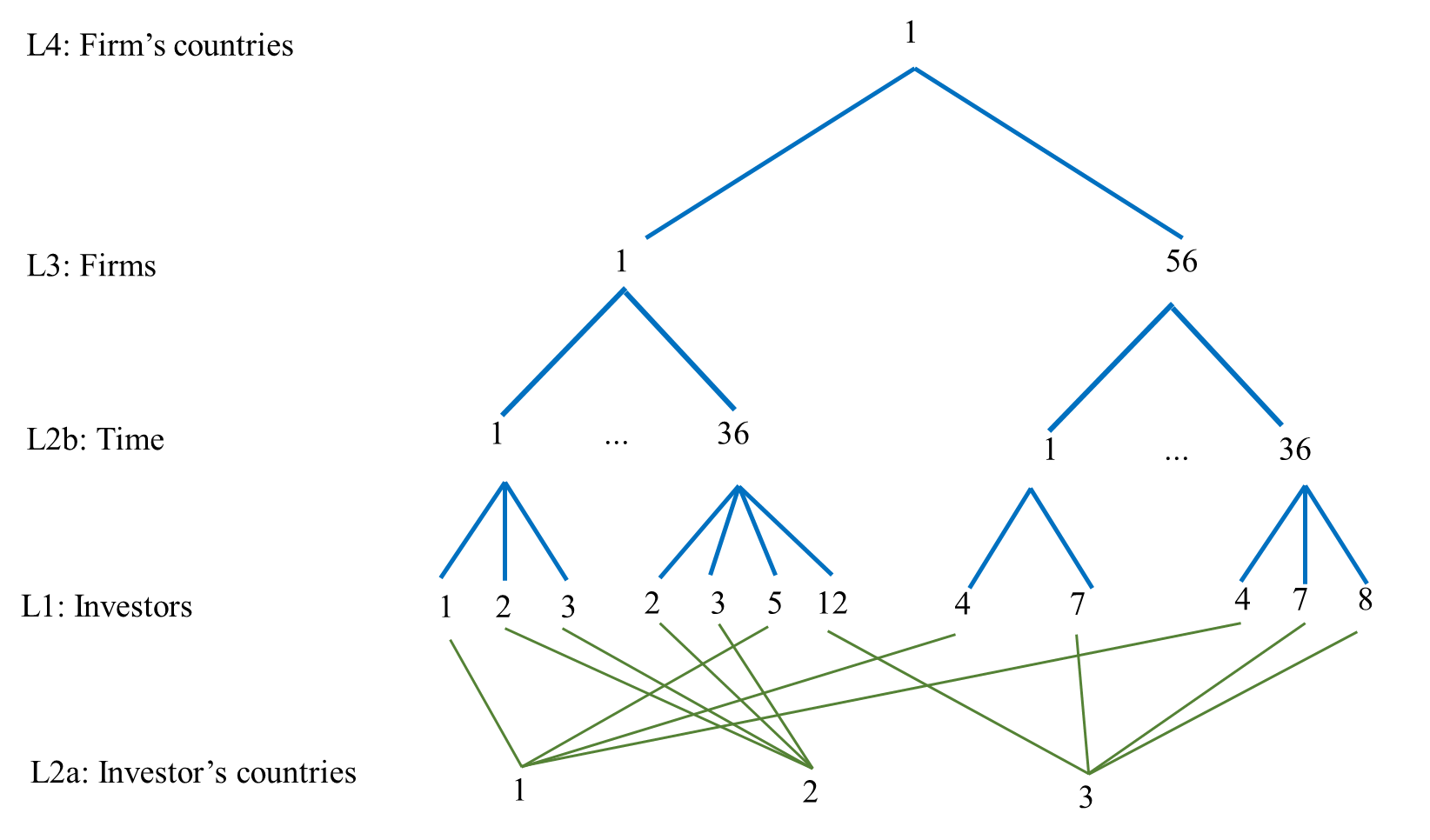
**Table C3. Correlation matrix for the Firm Level Analysis**

|  | **Mean** | **Std. Dev.** | **1.** | **2.** | **3.** | **4.** | **5.** | **6.** | **7.** | **8.** | **9.** | **10.** | **11.** | **12.** | **13.** | **14.** | **15.** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 1. Stock returns | .02 | .36 | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1. DLISH**^** | .17 | 3.95 | .10\* | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1. Innovativeness | .15 | .31 | .10\* | .04 | 1 |  |  |  |  |  |  |  |  |  |  |  |  |
| 1. Large Investors’ (LI) Individualism | 4.49 | 7.36 | .01 | .19\* | .01 | 1 |  |  |  |  |  |  |  |  |  |  |  |
| 1. LI Uncertainty avoidance | 6.14 | 8.64 | .05\* | .22\* | -.01 | .56\* | 1 |  |  |  |  |  |  |  |  |  |  |
| 1. LI Power distance | 7.28 | 10.53 | .05\* | .19\* | -.01 | .45\* | .62\* | 1 |  |  |  |  |  |  |  |  |  |
| 1. LI Masculinity | 6.24 | 9.41 | .01 | -.18\* | -.01 | .64\* | .74\* | .78\* | 1 |  |  |  |  |  |  |  |  |
| 1. LI Long-term orientation | 7.85 | 11.75 | .03 | .17\* | .01 | .32\* | .66\* | .78\* | .72\* | 1 |  |  |  |  |  |  |  |
| 1. LI Indulgence | 4.66 | 7.40 | .04 | .22\* | -.01 | .72\* | .67\* | .62\* | .71\* | .46\* | 1 |  |  |  |  |  |  |
| 1. # new-to-the-market products in prior 3 years | 5.24 | 17.88 | .02 | -.03 | .27\* | .05\* | .02 | .06\* | .06\* | .07\* | .02 | 1 |  |  |  |  |  |
| 1. # incremental products in prior 3 years | 10.68 | 23.67 | .03 | -.01 | .21\* | -.03 | .03 | .05\* | .04 | .04 | .01 | .92\* | 1 |  |  |  |  |
| 1. # countries | .43 | .93 | .07\* | -.05\* | .36\* | .02 | .04 | .01 | .01 | -.07\* | -.02 | .01 | -.01 | 1 |  |  |  |
| 1. Market GDP | .01 | 2.51 | .07\* | -.01 | .56\* | -.01 | .01 | .01 | .01 | .01 | -.01 | -.01 | .03 | .64\* | 1 |  |  |
| 1. Market consumer expenditures | .04 | 1.97 | .02 | -.01 | .32\* | -.01 | .01 | .01 | .01 | .01 | -.01 | .01 | .02 | .22\* | .52\* | 1 |  |
| 1. Market efficiency | .02 | 1.52 | .07\* | -.01 | .55\* | .01 | .01 | .02 | .01 | .01 | .01 | .02 | .03 | .42\* | .72\* | .55\* | 1 |
| 1. Market infrastructure | .02 | 1.6 | .07\* | -.02 | .56\* | -.01 | .01 | .01 | .01 | -.01 | .01 | .02 | .03 | .42\* | .72\* | .55\* | .98\* |
| 1. Rule of law | 0 | .36 | .03 | .01 | .25\* | .01 | -.01 | .02 | .01 | .04 | .01 | .01 | .03 | .25\* | .30\* | .04 | .48\* |
| 1. Consumer conservatism | .02 | 1.52 | .04 | -.03 | .53\* | -.01 | .04 | .03 | .01 | -.05\* | .01 | .03 | .03 | .38\* | .67\* | .55\* | .94\* |
| 1. Consumer affective autonomy | .01 | 1.17 | .03 | -.03 | .54\* | .03 | .01 | .02 | .02 | .03 | .01 | .02 | .03 | .39\* | .69\* | .57\* | .94\* |
| 1. Consumer intellectual autonomy | .02 | 1.44 | .04 | -.03 | .53\* | -.01 | -.01 | .01 | -.01 | .01 | -.02 | .03 | .03 | .38\* | .67\* | .56\* | .94\* |
| 1. Consumer hierarchy | .01 | .93 | .03 | -.04 | .50\* | -.02 | -.01 | .02 | -.01 | .01 | -.01 | .02 | .02 | .37\* | .68\* | .63\* | .91\* |
| 1. Consumer mastery | .02 | 1.36 | .04 | -.03 | .52\* | -.06\* | -.02 | -.01 | -.02 | -.02 | -.04 | .02 | .02 | .38\* | .68\* | .59\* | .94\* |
| 1. Consumer harmony | .01 | 1.32 | .04 | -.03 | .53\* | -.03 | -.09\* | -.06\* | -.06\* | -.02 | -.09\* | .02 | .02 | .38\* | .66\* | .56\* | .93\* |
| 1. Consumer egalitarian commitment | .01 | 1.5 | .07\* | -.03 | .56\* | -.03 | -.07\* | -.05\* | -.05\* | -.01 | -.08\* | -.01 | .02 | .67\* | .94\* | .44\* | .73\* |
| 1. Corporate branding | .18 | .38 | -.02 | -.01 | -.06\* | -.01 | .01 | .01 | .01 | .01 | -.01 | .15\* | .14\* | -.01 | -.01 | -.01 | -.01 |
| 1. House of brands | .41 | .49 | -.01 | .03 | .02 | -.01 | .01 | .01 | .01 | .01 | -.01 | -.16\* | -.16\* | -.01 | -.01 | .01 | -.01 |
| 1. # outstanding shares (0000000) | 17.50 | 33.20 | -.01 | -.03 | .06\* | -.01 | .01 | .01 | .01 | .01 | .01 | .53\* | .48\* | .04 | .02 | .001 | .04 |
| 1. Market returns | .001 | .16 | .22\* | .04 | -.02 | .01 | .01 | .01 | .01 | .01 | .01 | -.01 | -.01 | -.02 | -.02 | -.04 | -.01 |
| 1. SMB | .001 | .07 | .13\* | .04 | -.01 | -.01 | .01 | .01 | .01 | -.002 | .01 | -.01 | -.01 | .01 | .01 | -.01 | .01 |
| 1. HML | .001 | .06 | .01 | .02 | -.01 | . 01 | -.01 | .02 | .01 | .04 | -.01 | .01 | -.01 | -.04 | -.03 | .01 | -.01 |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **16.** | **17.** | **18** | **19** | **20** | **21** | **22.** | **23.** | **24.** | **25.** | **26.** | **27.** | **28.** | **29.** |
| 1. Market infrastructure | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1. Rule of law | .56\* | 1 |  |  |  |  |  |  |  |  |  |  |  |  |
| 1. Consumer conservatism | .92\* | .43\* | 1 |  |  |  |  |  |  |  |  |  |  |  |
| 1. Consumer affective autonomy | .93\* | .45\* | .99\* | 1 |  |  |  |  |  |  |  |  |  |  |
| 1. Consumer intellectual autonomy | .93\* | .44\* | .99\* | .99\* | 1 |  |  |  |  |  |  |  |  |  |
| 1. Consumer hierarchy | .88\* | .28\* | .96\* | .96\* | .96\* | 1 |  |  |  |  |  |  |  |  |
| 1. Consumer mastery | .92\* | .38\* | .99\* | .99\* | .99\* | .98\* | 1 |  |  |  |  |  |  |  |
| 1. Consumer harmony | .92\* | .41\* | .99\* | .99\* | .99\* | .96\* | .99\* | 1 |  |  |  |  |  |  |
| 1. Consumer egalitarian commit. | .73\* | .37\* | .75\* | .76\* | .75\* | .73\* | .75\* | .74\* | 1 |  |  |  |  |  |
| 1. Corporate branding | -.01 | -.01 | -.01 | -.01 | -.01 | .01 | -.01 | -.01 | -.01 | 1 |  |  |  |  |
| 1. House of brands | -.01 | -.01 | -.01 | -.01 | -.01 | -.01 | -.01 | -.01 | -.01 | -.39\* | 1 |  |  |  |
| 1. # outstanding shares (0000000) | .05\* | .05\* | .04 | .04 | .04 | .02 | .03 | .04 | .02 | .02 | -.12\* | 1 |  |  |
| 1. Market returns | -.01 | .04 | -.02 | -.02 | -.02 | -.03 | -.02 | -.02 | -.02 | .01 | -.01 | 01 | 1 |  |
| 1. SMB | .01 | .01 | -.01 | -.01 | -.01 | -.01 | -.01 | -.01 | 01 | 01 | 01 | .01 | .46\* | 1 |
| 1. HML | -.02 | -.02 | -.01 | -.01 | -.01 | .01 | -.01 | -.01 | -.03 | -.01 | .01 | -.01 | -.11\* | -.22\* |

^Change in Large Investors’ Stock Holding. \**p* < .05

**WEB APPENDIX D. INVESTOR LEVEL METHOD: THE HIERARCHICAL STRUCTURE OF OUR DATA\***

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\*Please note that we have different countries, even though, for the sake of simplicity, we depict just one country here.

**WEB APPENDIX E. INVESTOR LEVEL METHOD: MODEL SELECTION**

In order to understand the best nested structure to represent our data, we start with a not-nested model and subsequently add one random intercept at the time (see Table E1). We use two criteria to determine whether a level is necessary: the proportion of variance of at each level (PV) and model deviance statistics that allow model comparison (Castellaneta and Gottschalg 2016), with a diagnostic known as Deviance Information Criterion (DIC), which is a generalization of the Akaike’s Information Criterion. A lower DIC suggests a better model (Browne 2009).

We start with a not-nested model whose DIC is 13835.88. Then, in M2 we add the random intercept at the investor’s country level . This model has a smaller DIC (DIC= -261.05) and the PV at the investor’s country level is pretty high (.60). Hence, we retain M2 over M1. In M3 we add the time-level random intercept . This addition does not improve the model (DIC= 5.29) and the PV across time is negligible (PVT=.001). Hence, we retain M2 over M3. In M4, we add the firm-level random intercept . This addition improves the model (DIC= -6.36) and the PV between firms is acceptable (PVF=.01). Hence, we retain M4 over M2. Finally, in M5 we add the firm’s country-level random intercept. Adding does not improve M4 (DIC= 17.85) and the PV between firm’s countries is negligible (PVT=.002).

Summarizing, we retain a model where observations about stock holding change (Level 1) are cross-classified within investor’s country and within firms (Level 2). In its compact form, the final random intercept cross-classified model used in the remaining of the analysis is:

(2) ); ); )

Where is the observed stock holding change of investor *i* in investor’s country *c* and firm *f* at the end of quarter *t*; is overall mean stock holding change; is the random intercept of investor’s country *c*; is the random intercept of firm *f*, and is the random investor intercept. The investor variance measures how variable investors are within their firm-investor’s country pairings; measures the differences between investor’s countries, having adjusted for differences between firms; measures the differences between firms, having adjusted for differences between investor’s countries. We find that that the variance in stock holding change that occurs between investor’s countries is 59.9% (calculated as ), supporting our contention of high heterogeneity across investors from different countries.

To control for the possibility that the effect of innovativeness differs for investors across firms even after accounting for investor’s country effects, we test a model with a random interaction effect between investor’s countries and firms . We find that the random interaction effect is not significant (= .0001, *p* > .10). The LR test (2(1) = .001, p >.10) also suggests that the additive model is preferred. Hence, we proceed with a cross-classified model in which investor’s country and firm random coefficients are additive.

**Table E1. Model Fit**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  | **Investor level (L1)** | **Investor's country level (L2a)** | **Time level (L2b)** | **Firm level (L3)** | **Firm's country level (L4)** | **Bayesian DIC** | ** DIC** |
| **M1**  **(not-nested model)** | Coefficient (standard error) | 1.58 (.03) |  |  |  |  | 13835.88 |  |
| Proportion of variance explained (PVL) | 1 |  |  |  |  |  |  |
| **M2: M1 + L2a** | Coefficient (standard error) | 1.48 (.03) | 2.21 (.76) |  |  |  | 13574.83 | -261.05 |
| (PVL) | 0.04 | 0.60 |  |  |  |  |  |
| **M3: M2+L2b** | Coefficient (standard error) | 1.48 (.03) | 2.22 (.75) | .002 (.002) |  |  | 13580.12 | 5.29 |
| (PVL) | 0.39 | 0.60 | 0.001 |  |  |  |  |
| **M4: M2+ L3** | Coefficient (standard error) | 1.48 (.03) | 2.24 (.76) |  | .02 (.10) |  | 13568.47 | -6.36 |
| (PVL) | 0.39 | 0.60 |  | 0.01 |  |  |  |
| **M5: M4+ L4** |  |  |  |  |  |  |  |  |
| Coefficient (standard error) | 1.48 (.03) | 2.20 (.75) |  | .02 (.20) | .006 (.01) | 13586.32 | 17.85 |
| (PVL) | 0.39 | 0.60 |  | 0.01 | 0.002 |  |  |

**WEB APPENDIX F: THE EFFECT OF INNOVATIVENESS ON CHANGES IN STOCK HOLDING AT DIFFERENT VALUES OF:**

1. **Individualism**
2. **Uncertainty Avoidance**
3. **Power Distance**
4. **Masculinity**
5. **Long-term Orientation**
6. **Indulgence**

**WEB APPENDIX G. INVESTOR LEVEL: ROBUSTNESS ANALYSES**

*Different measures of innovativeness: Changes-changes model.* Rather than using the unexpected component in Equation 1, we measure unexpected innovativeness as the quarter-to-quarter change of observed innovativeness:

Since our dependent variable is already the quarter-to-quarter change in stock holding, we first-difference all the time-varying independent variables in Equations 3.1 and 3.2 and estimate a changes-changes model. In this way, we also eliminate fixed or time-varying investment strategies[[1]](#footnote-1). The results, reported in Table G1, remain invariant.

*Different measure of innovativeness: Number of new-to-the-market products and number of incremental products* introduced each quarter. Similarly to what was done in the previous analysis, we run a changes-changes model. Consistent with our expectations, the results, reported in Table G2, indicate a positive new-to-the-market products-stock holding change relationship (b=.032, p<.05) and a negative one with incremental products (b= -.018, p<.05). We attribute this negative finding to the fact that large investors may perceive that firms are misusing their investments in innovations by focusing more than expected on incremental innovations at the expense of radical innovations. Our results are consistent with previous literature that found that incremental innovations have a negative, albeit not significant, effect on abnormal stock returns (Sorescu and Spanjol 2008). In Model 2, we add the interactions between new-to-the-market /incremental products and the culture of the large investors. Consistent with the main analysis, we find that new-to-the-market products have the same effects as innovativeness, while incremental products have opposite effects than innovativeness. Hence, results are robust to different measures of the key independent variable.

*Blundell and Bond style instruments.* In order to control for past levels of stock holding and other time-varying omitted variables at the investor level, such as inertia, persistence, and different initial conditions that can predict future stock holding change, we estimate an alternate model with lagged dependent variable. To correctly account for the lagged dependent variable, which is also endogenous, we run a dynamic panel analysis with a Blundell and Bond (1998) GMM estimator, which jointly estimates levels-levels and changes-changes formulations. To avoid the problem of having too many instruments (Roodman 2009), we use up to four-period lags of innovativeness, its interaction with a large investor’s cultural variables, and the characteristics of the markets in which a firm introduced the products as GMM-style instruments, and all the other variables as IV-style instruments. We also cluster the errors within large investors to account for within-investor correlation. We use *xtabond2* routine in Stata with the collapse option for the GMM-style instruments to avoid an excessive number of instruments. We use a robust estimator of the covariance matrix of the parameter estimates, which produces standard error estimates that are consistent in the presence of any pattern of heteroskedasticity and autocorrelation within investors.

Dynamic panel GMM assumes that first-order serial correlation is present, but not second-order serial correlation. The Arellano and Bond test reveals first-order (AR1=-3.48, p<.05), but not second-order serial correlation (AR2= .78, p>.05). We test for the goodness of our instruments with the Hansen J-statistic, which jointly tests correct model specification and valid instrument overidentification restrictions (p=.14), and with the difference-in-Hansen test as an additional robustness test of instrument validity of the changes-changes model specifications (p=.64). The results, reported in Table G3, remain invariant. We also perform the analysis with the Windmejer’s finite-sample correction for the two-step covariance matrix. Results, available from the authors, do not change.

*Lewbel’s instrument method*. We also control for endogeneity with the instrument-free method proposed by Lewbel (2012). In this approach, the identification comes from observing a vector of variables Z (which can equal to the vector of model regressors X) that are uncorrelated with the covariance of heteroscedastic errors (Lewbel 2012). Unlike ordinary instruments, identification is obtained even when all the elements of Z are also regressors in every model equation. Following the marketing literature (e.g., Kashyap and Murtha 2017) we use our variables in Equations 3.1 and 3.2 as instruments for unexpected innovativeness and its interactions with large investor’s cultural variables. We use the *ivreg2h* routine in Stata with the *robust* option, which reports standard errors that are robust to the presence of arbitrary heteroskedasticity. We test two different models, with and without fixed effects. The results, reported in Table G3, are largely consistent with those of the main analysis. The only exception is the moderation effect of uncertainty avoidance, which is not significant in both models.

Summarizing, our results are largely consistent with the ones of the main analysis, alleviating concerns that endogeneity may bias our results.

*Moderation effects of the institutional context.* Investors may increase their stock holding more when firms introduce innovations in countries whose institutional context facilitates the adoption of innovations than in others. Hence, we add the moderation effects of the variables that define the institutional context in the innovativeness-stock holding change relationship. The results, reported in Table G4, indicate that this relationship is stronger in countries that are more efficient (b=1.226, p<.05), whose consumers are low on hierarchy (b=-1.424, p<.05) and high on mastery (b=2.268, p<.05). With the only exception of long-term orientation, the main effect of innovativeness and the moderation effects of the large investor’s culture do not change.

*Non-linear effect of innovativeness.* Previous research has shown that the relationship between investor response and innovativeness does not grow in a linear way, but it reaches a peak after which the positive relationship increases at a decreasing rate (e.g., Sorescu and Spanjol 2008). Hence, we also test for the existence of a quadratic relationship between innovativeness and stock holding change. We present the results in Table G5. Model 1 presents the main effects. We find a negative quadratic effect (b=-.567, p<.001), suggesting that the relationship between innovativeness and stock holding change increases at a decreasing rate. Further inspection shows that the innovativeness-stock holding change relationship becomes negative only when unexpected innovativeness is higher than .40, which means just for 10% of firms in our sample. In Model 2 we add the moderation effects of the large investor’s cultural variables on the quadratic term of innovativeness. Overall, we show the robustness of our results to the existence of a non-linear effect of innovativeness.

*Foreign bias.* In the main analysis, we control for home bias, namely the investors’ tendency to systematically prefer stocks of their own home country than other stocks (Grinblatt and Keloharju 2001). A more sophisticated bias is foreign bias, defined as the investor’s tendency to allocate money to specific foreign markets according to their preferences (Beugelsdijk and Frijns 2010). For instance, Austrian investors tend to systematically prefer German stocks rather than stocks from other countries. The finance literature has identified three main drivers of foreign bias: language, geographic, and cultural distance between the investor’s and firm’s country (Beugelsdijk and Frijns 2010; Grinblatt and Keloharju 2001). Hence, we add additional control variables in our model to control for possible foreign bias. Specifically, we measure language distance with a dummy that takes the value of 1 when the investor’s and firm’s countries have the same official language, 0 otherwise (Beugelsdijk and Frijns 2010). We measure geographic distance as the distance (in kilometers) between the capitals of the investor’s and of the countries where a firm is headquartered (Beugelsdijk and Frijns 2010). We measure cultural distance as the absolute difference in the scores for investor’s country and firm’s country. Following Kogut and Singh (1988) and Beugelsdijk and Frijns (2010), we compute a single Euclidean distance measure across the six Hofstede’s measures by taking the square root of the scaled sum of squared distance measure. The results, reported in Table G6, do not change. Most of note, geographic, language, and cultural distance have no significant effects, suggesting that foreign bias cannot explain our results.

*No firms listed in Taiwanese stock exchanges*. Taiwanese stock exchanges represent an exception because the minimum threshold to notify the stock exchange when an individual investor buys a firm’s stocks is 10%. We run a robustness analysis without these firms. Results, reported in Table G7, do not change.

**Table G1. Investor Level Analysis: Different Measures of Innovativeness - Changes- Changes Model**

|  |  |  |
| --- | --- | --- |
| **DV:**  **Stock Holding** | **Model 1** | **Model 2** |
| Intercept | .652 (.811) | .667 (.806) |
| Innovativeness (INN) | .101 (.044)\* | .553 (.145)\*\*\* |
| INN X IND) |  | .016 (.004)\*\*\* |
| INN X UA) |  | .005 (.003)\* |
| INN X PD) |  | .020 (.005)\*\*\* |
| INN X MASC) |  | -.018 (.003)\*\*\* |
| INN X LTO) |  | .009 (.002)\*\*\* |
| INN X INDULG) |  | .017 (.004)\*\*\* |
| Individualism (IND) | -.013 (.009) | -.012 (.009) |
| Uncertainty avoidance (UA) | .002 (.007) | .001 (.007) |
| Power distance (PD) | .002 (.008) | .002 (.008) |
| Masculinity (MASC) | .006 (.007) | .005 (.007) |
| Long-term orientation (LTO) | .001 (.007) | .001 (.007) |
| Indulgence (INDULG) | .002 (.015) | .003 (.015) |
| Market GDP | -.020 (.024) | -.015 (.025) |
| Market consumer expenditures | .001 (.001) | .002 (.001) |
| Market efficiency | -.018 (.096) | -.021 (.100) |
| Market infrastructure | .008 (.064) | .003 (.064) |
| Rule of law | .022 (.079) | .047 (.079) |
|  Consumer conservatism | -.267 (.167) | 3.858 (2.301)\* |
| Consumer affective autonomy | .184 (.114) | .140 (.121) |
| Consumer intellectual autonomy | -.166 (.194) | -.154 (.195) |
| Consumer hierarchy | -.186 (.138) | -.171 (.140) |
| Consumer mastery | .407 (.232)\* | .441 (.236)\* |
| Consumer harmony | .051 (.148) | .149 (.152) |
| Consumer egalitarian commitment | -3.650 (2.290) | -4.237 (2.292)\* |
| Firm’s relevance | .002 (.001)\* | .002 (.001)\* |
| Frequency trading | .002 (.079) | -.042 (.065) |
| Investor’s portfolio beta | .001 (.001) | -.011 (.079) |
| Investor’s portfolio alpha | .018 (.045) | .001 (.001) |
|  Stock purchase price) | -.042 (.066) | .031 (.045) |
| Investor Tenure | .030 (.072) | .011 (.219) |
| Local Investor | .001 (.024) | .022 (.072) |
| Gender | .015 (.220) | .002 (.024) |
| First period | .015 (.039) | .011 (.039) |
| Last period | -.610 (.084)\*\*\* | -.610 (.084)\*\*\* |
| # new-to-the-market products in prior 3 years | .001 (.011) | -.004 (.011) |
| # incremental products in prior 3 years | -.004 (.007) | -.003 (.007) |
| # investors | .001 (.001) | .001 (.001) |
| Corporate branding | -.018 (.041) | -.015 (.041) |
| House of brands | -.017 (.042) | -.016 (.042) |
| Stock price difference | .013 (.038) | .013 (.037) |
| Abnormal trading volume | .003 (.004) | .002 (.004) |
| # countries | .054 (.019)\*\*\* | .049 (.019)\*\* |
| Stock index growth | -.085 (.078) | -.101 (.078) |
| Country’s regulatory profile | .332 (.299) | .287 (.297) |
| Country ( | .00001 | .00005 |
| Firm ( | .000002 | .000005 |
| Errors ( | .431 | .426 |
| -Log likelihood | 3749.918 | 3723.658 |
| AIC | 7649.836 | 7607.318 |

\**p* < .10, \*\**p* < .05; \*\*\**p* < .01. Quarter, year, and stock index dummies

**Table G2. Investor Level Analysis: Different Measures of Innovativeness**

|  |  |  |
| --- | --- | --- |
|  | **Model 1** | **Model 2** |
| Intercept | -.248 (.519) | -.285 (.514) |
|  New-to-the-market products | .032 (.013)\*\* | .402 (.064)\*\*\* |
| Incremental products | -.018 (.009)\*\* | -.202 (.062)\*\*\* |
| New-to-the-market products X IND) |  | .010 (.002)\*\*\* |
| New-to-the-market products X UA) |  | .002 (.001)\*\* |
| New-to-the-market products X PD) |  | .011 (.003)\*\*\* |
| New-to-the-market products X MASC) |  | -.007 (.001)\*\*\* |
| New-to-the-market products X LTO) |  | .004 (.001)\*\*\* |
| New-to-the-market products X INDULG) |  | .009 (.002)\*\*\* |
| Incremental products X IND) |  | -.006 (.002)\*\* |
| Incremental products X UA) |  | -.004 (.002)\*\* |
| Incremental products X PD) |  | -.009 (.003)\*\*\* |
| Incremental products X MASC) |  | .004 (.002)\*\*\* |
| Incremental products X LTO) |  | -.004 (.002)\*\* |
| Incremental products X INDULG) |  | -.006 (.001)\*\*\* |
| Individualism (IND) | -.013 (.009) | -.012 (.008) |
| Uncertainty avoidance (UA) | .001 (.007) | .001 (.007) |
| Power distance (PD) | .002 (.008) | .002 (.007) |
| Masculinity (MASC) | .006 (.007) | .005 (.007) |
| Long-term orientation (LTO) | .001 (.007) | .001 (.007) |
| Indulgence (INDULG) | .003 (.015) | .002 (.015) |
| Market GDP | -.028 (.024) | -.038 (.024) |
| Market consumer expenditures | .001 (.001) | .001 (.001) |
| Market efficiency | -.028 (.096) | -.001 (.098) |
| Market infrastructure | -.003 (.064) | -.021 (.064) |
| Rule of law | .039 (.079) | .055 (.079) |
|  Consumer conservatism | 3.617 (2.292) | 4.586 (2.281)\*\* |
|  Consumer affective autonomy | .135 (.117) | .061 (.121) |
|  Consumer intellectual autonomy | -.089 (.194) | -.016 (.196) |
|  Consumer hierarchy | -.119 (.140) | -.158 (.142) |
|  Consumer mastery | .331 (.234) | .513 (.239)\*\* |
|  Consumer harmony | .079 (.152) | .036 (.152) |
|  Consumer egalitarian commitment | -3.872 (2.284)\* | -4.962 (2.273)\*\* |
|  Firm’s relevance | .002 (.001)\* | .002 (.001)\* |
| Frequency trading | -.039 (.066) | -.040 (.065) |
|  Investor’s portfolio beta | .004 (.079) | -.028 (.079) |
|  Investor’s portfolio alpha | .001 (.001) | .001 (.001) |
|  ( Stock purchase price) | .021 (.045) | .048 (.045) |
| Investor Tenure | .015 (.220) | .011 (.217) |
| Local Investor | .033 (.072) | .026 (.071) |
| Gender | .001 (.024) | .002 (.024) |
| First period | .016 (.039) | .011 (.039) |
| Last period | -.612 (.084)\*\*\* | -.605 (.083)\*\*\* |
| # new-to-the-market products in prior 3 years | .009 (.013) | .010 (.013) |
| # incremental products in prior 3 years | -.007 (.007) | -.012 (.007)\* |
| # investors | .001 (.001) | .001 (.001) |
| Corporate branding | -.017 (.041) | -.016 (.041) |
| House of brands | -.017 (.042) | -.023 (.041) |
| Stock price difference | .019 (.038) | -.005 (.038) |
| Abnormal trading volume | .002 (.004) | .001 (.004) |
| # countries | .042 (.021)\*\* | .014 (.021) |
| Stock index growth | -.093 (.079) | -.098 (.079) |
| Country’s regulatory profile | .320 (.298) | .319 (.294) |
| Quarter, year, and stock index dummies | YES | YES |
| Country ( | .0000004 | .00000003 |
| Firm ( | .0000005 | .000000004 |
| Errors ( | .430\*\*\* | .410\*\* |
| - Log likelihood | 3745.477 | 3689.281 |
| AIC | 7646.951 | 7556.562 |

**Table G3. Investor Level Analysis: Instrument-Free Methods**

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Blundell-Blond**  **(errors clustered by investors)** | **Lewbel’s Method fixed effects** | **Lewbel’s Method** |
| Intercept | 4.045 (3.439) |  | .088 (.570) |
| Lagged stock holding change | .957 (.044)\*\*\* |  |  |
| Unexpected Innovat. (INN) | 4.492 (2.233)\*\* | .601 (.323)\* | .909 (.346)\*\*\* |
| INN X IND | .139 (.063)\*\* | .026 (.009)\*\*\* | .03 (.011)\*\*\* |
| INN X UA | .094 (.044)\*\* | .007 (.008) | .018 (.013) |
| INN X PD | .169 (.085)\*\* | .031 (.015)\*\* | .049 (.022)\*\* |
| INN X MASC | -.058 (.029)\*\* | -.037 (.012)\*\*\* | -.028 (.009)\*\*\* |
| INN X LTO | .077 (.036)\*\* | .019 (.006)\*\*\* | .014 (.006)\*\*\* |
| INN X INDULG | .117 (.057)\* | .022 (.012)\* | .031 (.013)\*\* |
| Individualism (IND) | .020 (.016) |  | -.015 (.011) |
| Uncertainty avoidance (UA) | .023 (.015) |  | .004 (.004) |
| Power distance (PD) | -.014 (.012) |  | -.002 (.002) |
| Masculinity (MASC) | .033 (.025) |  | .009 (.005) |
| Long-term orientation (LTO) | .022 (.018) |  | -.004 (.005) |
| Indulgence (INDULG) | -.025 (.033) |  | -.006 (.013) |
| Copula correction term for INN |  |  |  |
| Market GDP | .130 (.196) | -.011 (.038) | -.024 (.036) |
| Market consumer expenditures | .001 (.008) | .004 (.003) | .004 (.003) |
| Market efficiency | -.591 (.984) | -.151 (.188) | -.069 (.179) |
| Market infrastructure | .644 (.335)\* | -.147 (.299) | -.174 (.295) |
| Rule of law | -.608 (.668) | .156 (.294) | .102 (.254) |
| Consumer conservatism | 27.743 (15.801)\* | 12.882 (8.57) | 12.022 (8.169) |
| Consumer affective autonomy | -1.673 (1.496) | -.319 (.672) | -.226 (.596) |
| Consumer intellectual autonomy | -.086 (1.742) | .735 (.956) | .87 (1.042) |
| Consumer hierarchy | .865 (1.732) | .848 (1.302) | .771 (1.232) |
| Consumer mastery | -2.362 (3.044) | -1.655 (2.261) | -1.526 (2.166) |
| Consumer harmony | .585 (.997) | .350 (.164)\*\* | .322 (.162)\* |
| Consumer egalitarian commitment | -25.511 (14.886)\* | -12.315 (7.697) | -11.750 (7.402) |
| Firm’s relevance | -.001 (.001) | .001 (.001) | .001 (.001) |
| Frequency trading | -.081 (.067) |  | -.043 (.035) |
| Investor’s portfolio beta | .023 (.106) | .031 (.086) | .022 (.087) |
| Investor’s portfolio alpha | .001 (.001) | .001 (.001) | .001 (.001) |
|  Stock purchase price | -.005 (.03) | .004 (.038) | .003 (.036) |
| Investor Tenure | .001 (.004) | -.003 (.005) | -.003 (.005) |
| Local Investor | -.091 (.248) |  | .011 (.042) |
| Gender | .026 (.036) |  | .007 (.022) |
| First period | .840 (.647) | 1.148 (.619)\* | 1.120 (.562)\*\* |
| Last period | -.886 (.154)\*\*\* | -.692 (.157)\*\*\* | -.701 (.156)\*\*\* |
| # new-to-the-market pdts in prior 3 years | -.019 (.015) | -.010 (.015) | -.003 (.015) |
| # increm. products in prior 3 years | .008 (.006) | .005 (.005) | .003 (.005) |
| # investors | .002 (.002) | .001 (.001) | .001 (.001) |
| Corporate branding | .005 (.13) |  | -.014 (.039) |
| House of brands | -.050 (.208) |  | -.024 (.049) |
| Stock price difference | .078 (.129) | .101 (.072) | .089 (.069) |
| Abnormal trading volume | -.005 (.01) | .003 (.008) | .004 (.008) |
| # countries | .051 (.051) | -.048 (.08) | -.047 (.075) |
| Stock index growth | -.333 (.231) | -.199 (.134) | -.180 (.128) |
| Country’s regulatory profile | .495 (.457) | -.421 (.34) | -.383 (.309) |
| p-value for Arellano-Bond test for AR(2) | .433 |  |  |

\**p* < .10, \*\**p* < .05; \*\*\**p* < .01. Quarter, year, and stock index dummies

**Table G4. Investor Level Analysis: Moderation Effects of the Institutional Context**

|  |  |
| --- | --- |
| Intercept | -.412 (2.221) |
| Unexpected Innovativeness (INN) | 2.910 (.884)\*\*\* |
| INN X IND | .041 (.009)\*\*\* |
| INN X UA | .035 (.007)\*\*\* |
| INN X PD | .060 (.012)\*\*\* |
| INN X MASC | -.036 (.007)\*\*\* |
| INN X LTO | .009 (.005) |
| INN X INDULG | .032 (.010)\*\*\* |
| Individualism (IND) | -.014 (.015) |
| Power distance (PD) | .003 (.012) |
| Uncertainty avoidance (UA) | -.002 (.013) |
| Masculinity (MASC) | .008 (.013) |
| Long-term orientation (LTO) | .001 (.012) |
| Indulgence (INDULG) | .009 (.026) |
| Market GDP | -.007 (.053) |
| Market consumer expenditures | .003 (.002) |
| Market efficiency | -.427 (.220)\* |
| Market infrastructure | -.156 (.139) |
| Rule of law | .249 (.180) |
| Consumer conservatism | -3.888 (13.391) |
| Consumer affective autonomy | -.811 (.305)\*\*\* |
| Consumer intellectual autonomy | 1.321 (.479)\*\*\* |
| Consumer hierarchy | 1.090 (.340)\*\*\* |
| Consumer mastery | -2.002 (.542)\*\*\* |
| Consumer harmony | .166 (.382) |
| Consumer egalitarian commitment | 4.866 (13.355) |
| Market GDP X INN | .110 (.119) |
| Market consumer expenditures X INN | .008 (.005) |
| Market efficiency X INN | 1.226 (.518)\*\* |
| Market infrastructure X INN | -.108 (.333) |
| Rule of law X INN | -.596 (.378) |
| Consumer conservatism X INN | 32.350 (27.462) |
| Consumer affective autonomy X INN | .893 (.642) |
| Consumer intellectual autonomy X INN | -.271 (.911) |
| Consumer hierarchy X INN | -1.424 (.708)\*\* |
| Consumer mastery X INN | 2.268 (1.131)\*\* |
| Consumer harmony X INN | -.554 (.654) |
| Consumer egalitarian commitment X INN | -35.026 (27.406) |
| Firm’s relevance | .001 (.001) |
| Frequency trading | -.064 (.115) |
| Investor’s portfolio beta | .048 (.146) |
| Investor’s portfolio alpha | -.001 (.001) |
|  Stock purchase price | -.008 (.034) |
| Investor Tenure | -.001 (.003) |
| Local Investor | .123 (.136) |
| Gender | -.005 (.041) |
| First period | 1.057 (.508)\*\* |
| Last period | -.738 (.091)\*\*\* |
| # new-to-the-market products in prior 3 years | .011 (.008) |
| # incremental products in prior 3 years | -.003 (.004) |
| # investors | -.001 (.001) |
| Corporate branding | -.001 (.081) |
| House of brands | .010 (.083) |
| Stock price difference | .107 (.087) |
| Abnormal trading volume | .003 (.009) |
| # countries | -.081 (.044)\* |
| Stock index growth | -.180 (.192) |
| Country’s regulatory profile | -.528 (.286)\* |
| Country ( | .00000001 |
| Firm ( | .000000001 |
| Errors ( | 1.244\*\* |
| - Log likelihood | 5827.852 |
| AIC | 11845.700 |

\**p* < .10, \*\**p* < .05; \*\*\**p* < .01. Quarter, year, and stock index dummies included

**Table G5. Investor Level Analysis: Non-linear effect of Innovativeness**

|  |  |  |
| --- | --- | --- |
| **DV: Stock Holding Change** | **Model 1** | **Model 2** |
| Intercept | .065 (2.181) | .553 (2.156) |
| Unexpected Innovativeness (INN) | .375 (.107)\*\*\* | 3.775 (.517)\*\*\* |
| INN2 | -.567 (.172)\*\*\* | -4.482 (.737)\*\*\* |
| INN X IND |  | .117 (.014)\*\*\* |
| INN X UA |  | .083 (.010)\*\*\* |
| INN X PD |  | .158 (.018)\*\*\* |
| INN X MASC |  | -.054 (.009)\*\*\* |
| INN X LTO |  | .053 (.009)\*\*\* |
| INN X INDULG |  | .088 (.013)\*\*\* |
| INN2 X IND |  | -.139 (.020)\*\*\* |
| INN2 X UA |  | -.112 (.014)\*\*\* |
| INN2 X PD |  | -.210 (.028)\*\*\* |
| INN2 X MASC |  | .058 (.018)\*\*\* |
| INN2 X LTO |  | -.051 (.012)\*\*\* |
| INN2 X INDULG |  | -.108 (.022)\*\*\* |
| Individualism (IND) | -.014 (.015) | -.013 (.015) |
| Uncertainty avoidance (UA) | .003 (.012) | .006 (.011) |
| Power distance (PD) | -.002 (.013) | -.002 (.013) |
| Masculinity (MASC) | .008 (.013) | .007 (.012) |
| Long-term orientation (LTO) | -.001 (.012) | .007 (.012) |
| Indulgence (INDULG) | .004 (.026) | .025 (.026) |
| Market GDP | -.011 (.045) | .006 (.044) |
| Market consumer expenditures | .003 (.002) | .003 (.002) |
| Market efficiency | -.125 (.182) | -.133 (.187) |
| Market infrastructure | -.074 (.126) | -.173 (.125) |
| Rule of law | .071 (.167) | .204 (.169) |
| Consumer conservatism | 9.737 (5.11)\* | 10.089 (5.11)\*\* |
| Consumer affective autonomy | -.407 (.245)\* | -.552 (.258)\*\* |
| Consumer intellectual autonomy | .520 (.393) | .693 (.401)\* |
| Consumer hierarchy | .660 (.295)\*\* | .919 (.300)\*\*\* |
| Consumer mastery | -1.408 (.464)\*\*\* | -1.693 (.477)\*\*\* |
| Consumer harmony | .286 (.300) | .250 (.303) |
| Consumer egalitarian commitment | -9.047 (5.062)\* | -9.251 (5.058)\* |
| Firm’s relevance | .001 (.001) | .001 (.001) |
| Frequency trading | -.067 (.116) | -.067 (.114) |
| Investor’s portfolio beta | .056 (.146) | .082 (.145) |
| Investor’s portfolio alpha | -.001 (.001) | -.001 (.001) |
|  Stock purchase price | -.007 (.034) | .009 (.034) |
| Investor Tenure | -.001 (.003) | .001 (.003) |
| Local Investor | .043 (.133) | .221 (.137) |
| Gender | .001 (.041) | .001 (.041) |
| First period | 1.048 (.509)\*\* | 1.080 (.502)\*\* |
| Last period | -.734 (.092)\*\*\* | -.708 (.091)\*\*\* |
| # new-to-the-market products in prior 3 years | .005 (.008) | .010 (.008) |
| # incremental products in prior 3 years | -.002 (.004) | -.003 (.004) |
| # investors | -.001 (.001) | -.001 (.001) |
| Corporate branding | .012 (.08) | -.046 (.079) |
| House of brands | .001 (.082) | .037 (.081) |
| Stock price difference | .092 (.087) | .100 (.086) |
| Abnormal trading volume | .003 (.009) | .003 (.009) |
| # countries | -.072 (.043)\* | -.109 (.043)\*\* |
| Stock index growth | -.164 (.191) | -.194 (.189) |
| Country’s regulatory profile | -.475 (.285)\* | -.848 (.290)\*\*\* |
| **Random Effects** |  |  |
| Country ( | .00001 | .00001 |
| Firm ( | .000006 | .000005 |
| Errors ( | 1.266 | 1.231 |
| - Log likelihood | 5860.542 | 5804.219 |
| AIC | 11871.09 | 11788.44 |

\**p* < .10, \*\**p* < .05; \*\*\**p* < .01. Quarter, year, and stock index dummies included

**Table G6. Investor Level Analysis: Controlling for Foreign Bias**

|  |  |  |
| --- | --- | --- |
| **DV: Stock Holding Change** | **Model 1** | **Model 2** |
| Intercept | .209 (1.025) | .215 (1.021) |
| Unexpected Innovativeness (INN) | .176 (.087)\*\* | .828 (.305)\*\*\* |
| INN X IND |  | .028 (.008)\*\*\* |
| INN X UA |  | .017 (.006)\*\*\* |
| INN X PD |  | .047 (.011)\*\*\* |
| INN X MASC |  | -.027 (.006)\*\*\* |
| INN X LTO |  | .014 (.005)\*\*\* |
| INN X INDULG |  | .029 (.009)\*\*\* |
| Individualism (IND) | -.014 (.014) | -.014 (.013) |
| Uncertainty avoidance (UA) | -.003 (.012) | -.003 (.012) |
| Power distance (PD) | .006 (.014) | .006 (.014) |
| Masculinity (MASC) | .011 (.015) | .011 (.015) |
| Long-term orientation (LTO) | -.007 (.014) | -.007 (.014) |
| Indulgence (INDULG) | -.005 (.030) | -.005 (.030) |
| Market GDP | -.024 (.054) | -.024 (.054) |
| Market consumer expenditures | .003 (.002) | .004 (.002)\* |
| Market efficiency | -.118 (.219) | -.075 (.228) |
| Market infrastructure | -.144 (.141) | -.173 (.142) |
| Rule of law | .104 (.182) | .104 (.182) |
| Consumer conservatism | 11.988 (5.312)\*\* | 12.014 (5.353)\*\* |
| Consumer affective autonomy | -.310 (.271) | -.222 (.281) |
| Consumer intellectual autonomy | .769 (.435)\* | .855 (.443)\* |
| Consumer hierarchy | .867 (.33)\*\*\* | .774 (.332)\*\* |
| Consumer mastery | -1.750 (.542)\*\*\* | -1.545 (.551)\*\*\* |
| Consumer harmony | .295 (.338) | .329 (.342) |
| Consumer egalitarian commitment | -11.353 (5.281)\*\* | -11.717 (5.320)\*\* |
| Firm’s relevance | .001 (.002) | .001 (.002) |
| Frequency trading | -.045 (.112) | -.040 (.112) |
| Investor’s portfolio beta | .055 (.169) | .024 (.169) |
| Investor’s portfolio alpha | .001 (.002) | .001 (.002) |
|  Stock purchase price | .001 (.045) | .002 (.045) |
| Investor Tenure | -.003 (.005) | -.003 (.005) |
| **Geographic Distance** | .001 (.001) | .001 (.001) |
| **Language Distance** | -.404 (.613) | -.399 (.611) |
| **Cultural Distance** | .034 (.047) | .034 (.047) |
| Gender | .005 (.041) | .007 (.041) |
| First period | 1.134 (.528)\*\* | 1.120 (.526)\*\* |
| Last period | -.686 (.157)\*\*\* | -.700 (.156)\*\*\* |
| # new-to-the-market products in prior 3 years | -.002 (.012) | -.003 (.012) |
| # incremental products in prior 3 years | .003 (.006) | .003 (.006) |
| # investors | -.001 (.001) | .001 (.001) |
| Corporate branding | -.017 (.072) | -.016 (.071) |
| House of brands | -.025 (.073) | -.026 (.073) |
| Stock price difference | .097 (.091) | .091 (.091) |
| Abnormal trading volume | .005 (.010) | .004 (.010) |
| # countries | -.052 (.046) | -.048 (.046) |
| Stock index growth | -.187 (.199) | -.184 (.200) |
| Country’s regulatory profile | -.439 (.35) | -.389 (.351) |
| **Random Effects** |  |  |
| Country ( | .00004 | .00001 |
| Firm ( | .000005 | .000004 |
| Errors ( | 1.274 | 1.263 |
| - Log likelihood | 5867.820 | 5853.471 |
| AIC | 11885.650 | 11868.952 |

\**p* < .10, \*\**p* < .05; \*\*\**p* < .01. Quarter, year, and stock index dummies included

**Table G7. Investor Level Analysis: No firms listed in Taiwanese stock exchanges**

|  |  |  |
| --- | --- | --- |
| **DV: Stock Holding Change** | **Model 1** | **Model 2** |
| Intercept | -.398 (2.517) | -.122 (2.505) |
| Unexpected Innovativeness (INN) | .236 (.110)\*\* | 1.083 (.359)\*\*\* |
| INN X IND |  | .020 (.009)\*\* |
| INN X UA |  | .028 (.007)\*\*\* |
| INN X PD |  | .048 (.012)\*\*\* |
| INN X MASC |  | -.031 (.007)\*\*\* |
| INN X LTO |  | .020 (.006)\*\*\* |
| INN X INDULG |  | .042 (.011)\*\*\* |
| Individualism (IND) | -.013 (.017) | -.013 (.017) |
| Uncertainty avoidance (UA) | .002 (.013) | .003 (.013) |
| Power distance (PD) | -.001 (.015) | -.001 (.015) |
| Masculinity (MASC) | .008 (.014) | .007 (.014) |
| Long-term orientation (LTO) | -.003 (.014) | -.002 (.014) |
| Indulgence (INDULG) | .003 (.030) | .004 (.030) |
| **Control variables** |  | -.021 (.059) |
| Market GDP | -.025 (.059) | .004 (.003) |
| Market consumer expenditures | .003 (.003) | -.013 (.308) |
| Market efficiency | -.158 (.295) | -.202 (.160) |
| Market infrastructure | -.149 (.158) | .015 (.228) |
| Rule of law | .119 (.226) | 21.444 (8.419)\*\* |
| Consumer conservatism | 2.877 (8.412)\*\* | -.080 (.343) |
| Consumer affective autonomy | -.489 (.324) | .636 (.524) |
| Consumer intellectual autonomy | .802 (.514) | .420 (.402) |
| Consumer hierarchy | .785 (.393)\*\* | -1.133 (.577)\*\* |
| Consumer mastery | -1.588 (.565)\*\*\* | .238 (.505) |
| Consumer harmony | .139 (.506) | -21.164 (8.366)\*\* |
| Consumer egalitarian commitment | -2.055 (8.363)\*\* | .001 (.001) |
| Firm’s relevance | .001 (.001) | -.062 (.130) |
| Frequency trading | -.056 (.131) | .042 (.170) |
| Investor’s portfolio beta | .074 (.170) | -.001 (.002) |
| Investor’s portfolio alpha | -.001 (.002) | .015 (.049) |
|  Stock purchase price | .009 (.049) | -.001 (.004) |
| Investor Tenure | .001 (.004) | .027 (.167) |
| Local Investor | .004 (.167) | .011 (.054) |
| Gender | .007 (.054) | .543 (.898) |
| First period | .512 (.903) | -.649 (.113)\*\*\* |
| Last period | -.655 (.113)\*\*\* | .005 (.011) |
| # new-to-the-market products in prior 3 years | .004 (.011) | -.001 (.005) |
| # incremental products in prior 3 years | -.001 (.005) | -.001 (.001) |
| # investors | -.001 (.001) | -.008 (.147) |
| Corporate branding | .010 (.148) | -.014 (.123) |
| House of brands | -.008 (.124) | .084 (.105) |
| Stock price difference | .084 (.105) | .015 (.014) |
| Abnormal trading volume | .016 (.014) | -.058 (.055) |
| # countries | -.064 (.055) | -.199 (.255) |
| Stock index growth | -.177 (.255) | -.474 (.335) |
| Investor country’s regulatory profile | -.531 (.332) | -.122 (2.505) |
| **Random Effects** |  |  |
| Country ( | .0000001 | .0000001 |
| Firm ( | .0000002 | .00000009 |
| Errors ( | 1.588\*\*\* | 1.571\*\*\* |
| - Log likelihood | 4752.901 | 4737.071 |
| AIC | 9649.803 | 9630.142 |

\**p* < .10, \*\**p* < .05; \*\*\**p* < .01. Quarter, year, and stock index dummies included

**WEB APPENDIX H. FIRM LEVEL ANALYSIS: BOOTSTRAP ANALYSES**

*Unconditional mediating role of change in large investors’ stock holding.* To test for H9, which advocates a partial mediating role for large investors’ stock holding, we run a bootstrap analysis with 1000 resamples (Preacher and Hayes 2008). We first estimate:

This Equation is similar to Equation 5 in the text, but without the moderation effect of cultural variables. This is necessary because we are interested in the unconditional, indirect path. We then insert the predicted change in large investor’s stock holding in Equation 6.

We find that the mediated effect of innovativeness on stock returns is equal to 0.028 (i.e., 0.88 \* 0.032)[[2]](#footnote-2). We account for the fact that percentile bootstrap confidence intervals (CIs) can be asymmetrical around the estimated coefficient because they are based on an empirical estimation of the sampling distribution of the indirect effect, rather than on an assumption that the sampling distribution is normal. Considering CIs to be symmetrical would result in estimation inaccuracies and problems with Type I errors and power (Preacher and Hayes 2008). Hence, we use the bias‑corrected CIs (BCIs) to test for the significance of our bootstrapped coefficients, which correct for the asymmetrical distribution of the CIs. The bias-corrected CI ranges from .002 to 0.20. Since it contains no 0, we can conclude that change in large investors’ stock holding significantly mediates the innovativeness-stock return relationship, in support of H9.

*Moderated mediation analysis.* Hypothesis 10 maintains that the innovativeness-stock returns relationship is contingent upon the cultural characteristics of the large investor base. To test for this, we run a moderated mediation analysis, which investigates how the strength of this relationship changes at different values of the cultural variables. Take the case of individualism. We can express how the innovativeness-stock returns relationship , mediated by change in large investors’ stock holding, varies at different percentages of individualism across large investors:

Where:

* From Equation 5 in the main text, is the estimated coefficient of the effect of innovativeness on change in large investors’ stock holding;
* From Equation 5 in the main text, is the estimated coefficient of the interaction effect between innovativeness and individualism on change in large investors’ stock holding;
* From Equation 6 in the main text,is the estimated coefficient of the effect of change in large investors’ stock holding on stock returns;
* From Equation 6 in the main text, is the estimated coefficient of the direct effect of innovativeness on stock returns.

Following the same approach, we check for the significance of at different levels of each cultural variable through a bootstrap analysis with 1000 resamples (Preacher, Rucker, and Hayes 2007). Also in this analysis we use the BCIs to identify the region in the range of each cultural dimension for which the innovativeness-stock returns relationship is significant (Preacher and Hayes 2008). We plot the estimated coefficients and BCIs in Figure H1. Since we mean-center the moderators to perform our analysis, to obtain more meaningful results in the Figure we rescale the x-axis by adding the mean back (Hayes 2013).

The analysis reveals that the innovativeness-stock returns relationship is positive and it increases as individualism, power distance, long-term orientation, and indulgence increase. These moderated mediation relationships are always significant as the BCIs never include 0. Masculinity represents the only exception as we find that the innovativeness-stock returns relationship is negative when the masculinity of the large investor’s base is higher than 10 (BCI ranges from -3.54 to -.07). Even though just 18% of the firms in our sample have a large investor base with masculinity above this threshold, this is still a red flag for firms with high masculinity among their large investors.

**FIGURE H1: THE INNOVATIVENESS-STOCK RETURNS RELATIONSHIP AT DIFFERENT VALUES OF:**

1. **Individualism**
2. **Power Distance**
3. **Masculinity**
4. **Long-Term Orientation**
5. **Indulgence**

**WEB APPENDIX I. FIRM LEVEL ROBUSTNESS ANALYSIS**

*Lewbel’s analysis*. We follow a similar procedure to that adopted in the investor level analysis. We use our variables in Equation 5 as instrument for unexpected innovativeness and its interactions with large investor’s cultural variables when the dependent variable is change in large investors’ stock holding. Results, reported in Table I1, are largely consistent with that of the main analysis, with the exception of uncertainty avoidance and long-term orientation, which are not significant. As for stock returns, we use variables in Equation 6 as instruments for change in large investors’ stock holding and innovativeness. The results do not change.

*Change in the number of outstanding stocks*. In the main analysis, we control for the number of outstanding stocks in the market. We run a robustness analysis in which, instead, we control for the change in the number of outstanding stocks across quarters. The results, reported in Table I2, do not change.

**Table I1. Firm Level Analysis: Instrument-free Methods**

|  |  |  |
| --- | --- | --- |
|  | **Lewbel’s Method fixed effects** | |
|  | **DV: LISH^** | **DV: Stock Returns** |
| Intercept | -.016 (.147) | .027 (.013)\*\* |
| LISH**^** |  | .010 (.002)\*\*\* |
| Unexpected Innovativeness (INN) | .834 (.441)\* | .155 (.054)\*\*\* |
| Large Investors’ (LI) Individualism | 0.224 (0.100)\*\* |  |
| LI Uncertainty avoidance | -0.001 (0.086) |  |
| LI Power distance | 0.188 (0.093)\*\* |  |
| LI Masculinity | -0.448 (0.150)\*\*\* |  |
| LI Long-term orientation | 0.043 (0.066) |  |
| LI Indulgence | 0.224 (0.100)\*\* |  |
| INN X LI Individualism | .303 (.144)\*\* |  |
| INN X LI Uncertainty avoidance | -.423 (.192)\*\* |  |
| INN X LI Power distance | .502 (.166)\*\*\* |  |
| INN X LI Masculinity | -1.355 (.298)\*\*\* |  |
| INN X LI Long-term orientation | .123 (.096) |  |
| INN X LI Indulgence | 1.038 (.300)\*\*\* |  |
| Copula correction term for INN |  |  |
| # new-to-the-market products in prior 3 years | -.023 (.022) | .002 (.002) |
| # incremental products in prior 3 years | .011 (.013) | .001 (.001) |
| # countries | -.079 (.171) | .014 (.015) |
| Market GDP | .264 (.158)\* | -.021 (.014) |
| Market consumer expenditures | -.004 (.013) | .001 (.001) |
| Market efficiency | -.182 (.497) | .048 (.045) |
| Market infrastructure | -.146 (.485) | .009 (.043) |
| Rule of law | 1.113 (.505)\*\* | -.016 (.045) |
| Consumer conservatism | -4.282 (1.605)\*\*\* | .034 (.146) |
| Consumer affective autonomy | -.998 (1.028) | -.246 (.091)\*\*\* |
| Consumer intellectual autonomy | -1.459 (1.859) | -.017 (.162) |
| Consumer hierarchy | -4.337 (1.096)\*\*\* | -.086 (.100) |
| Consumer mastery | 7.732 (1.910)\*\*\* | .182 (.172) |
| Consumer harmony | 2.616 (1.750) | -.024 (.156) |
| Consumer egalitarian commitment | -.527 (.280)\* | .054 (.025)\*\* |
| Corporate branding | .132 (.269) | -.028 (.025) |
| House of brands | .351 (.208)\* | -.018 (.019) |
| # outstanding stocks | -.002 (.003) | -.001 (.003) |
| Market returns |  | .420 (.069)\*\*\* |
| SMB |  | .157 (.158) |
| HML |  | .258 (.160) |

\**p* < .10, \*\**p* < .05; \*\*\**p* < .01. Quarter, year, and stock index dummies

**Table I2. Firm Level Analysis: Change in number of outstanding stocks**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Model 1**  **DV: LISH^** | **Model 2**  **DV: LISH^** | **Model 3**  **DV: Stock Returns** | **Model 4**  **DV: Stock Returns** |
| Intercept | .652 (.471) | .623 (.467) | -.006 (.042) | -.028 (.042) |
| LISH**^** |  |  |  | .047 (.008)\*\*\* |
| Unexpected Innovativeness (INN) | .813 (.400)\*\* | .767 (.397)\* | .165 (.035)\*\*\* | .127 (.035)\*\*\* |
| Large Investors’ (LI) Individualism | .307 (.099)\*\*\* | .245 (.101)\*\* |  |  |
| LI Uncertainty avoidance | -.106 (.083) | .005 (.086) |  |  |
| LI Power distance | .231 (.096)\*\* | .068 (.102) |  |  |
| LI Masculinity | -.665 (.145)\*\*\* | -.330 (.159)\*\* |  |  |
| LI Long-term orientation | .085 (.068) | .052 (.068) |  |  |
| LI Indulgence | .543 (.129)\*\*\* | .351 (.138)\*\* |  |  |
| INN X LI Individualism |  | .647 (.296)\*\* |  |  |
| INN X LI Uncertainty avoidance |  | -.352 (.261) |  |  |
| INN X LI Power distance |  | .546 (.252)\*\* |  |  |
| INN X LI Masculinity |  | -2.039 (.364)\*\*\* |  |  |
| INN X LI Long-term orientation |  | .472 (.224)\*\* |  |  |
| INN X LI Indulgence |  | .836 (.381)\*\* |  |  |
| # new-to-the-market products in prior 3 years | -.033 (.022) | -.02 (.022) | .002 (.002) | .002 (.002) |
| # incremental products in prior 3 years | .014 (.013) | .013 (.013) | .001 (.001) | .001 (.001) |
| # countries | -.088 (.172) | -.079 (.172) | .008 (.014) | .017 (.014) |
| Market GDP | .263 (.160) | .251 (.159) | -.023 (.013)\* | -.033 (.013)\*\* |
| Market consumer expenditures | -.011 (.014) | -.010 (.013) | .001 (.001) | .001 (.001) |
| Market efficiency | -.275 (.519) | -.265 (.517) | .065 (.044) | .088 (.044)\*\* |
| Market infrastructure | .154 (.498) | .138 (.496) | .013 (.042) | -.017 (.042) |
| Rule of law | .717 (.494) | .873 (.493)\* | -.040 (.042) | -.057 (.041) |
| Consumer conservatism | -3.600 (1.635)\*\* | -3.864 (1.626)\*\* | .037 (.138) | .231 (.140)\* |
| Consumer affective autonomy | -.912 (1.006) | -.950 (.997) | -.251 (.085)\*\*\* | -.228 (.084)\*\*\* |
| Consumer intellectual autonomy | -1.003 (1.822) | -1.574 (1.822) | .032 (.153) | .134 (.153) |
| Consumer hierarchy | -3.550 (1.099)\*\*\* | -3.796 (1.101)\*\*\* | -.089 (.094) | .093 (.098) |
| Consumer mastery | 5.986 (1.906)\*\*\* | 6.855 (1.913)\*\*\* | .152 (.161) | -.204 (.171) |
| Consumer harmony | 2.383 (1.741) | 2.524 (1.747) | -.063 (.147) | -.161 (.146) |
| Consumer egalitarian commitment | -.522 (.287)\* | -.467 (.285) | .055 (.024)\*\* | .075 (.024)\*\*\* |
| Corporate branding | .123 (.275) | .134 (.273) | -.031 (.026) | -.039 (.026) |
| House of brands | .337 (.212) | .362 (.210)\* | -.013 (.022) | -.028 (.022) |
|  # outstanding shares | -.033 (.040) | -.028 (.039) | -.004 (.001)\*\*\* | -.011 (.003)\*\*\* |
| Market returns |  |  | .426 (.065)\*\*\* | .426 (.064)\*\*\* |
| SMB |  |  | .236 (.151) | .216 (.149) |
| HML |  |  | .268 (.152)\* | .251 (.15)\* |
| Firm’s country | 2.11e-10 | 4.38e-11 | .061 | .059 |
| Errors | 3.792 | 3.752 | .320 | .316 |
| - Log likelihood | 4279.227 | 4262.974 | 449.900 | 433.790 |
| AIC | 8636.454 | 8615.949 | 971.801 | 941.581 |

^Change in Large Investors’ Stock Holding

\**p* < .10, \*\**p* < .05; \*\*\**p* < .01. Quarter, year, and stock index dummies included

**WEB APPENDIX J. FIRM LEVEL: PORTFOLIO ANALYSES**

**Table J1a. Moderating Effects of Large Investors’ Culture in the Innovativeness- Stock Returns Relationship**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| One-tailed t-test comparing | High Innovativeness subsample | | Low Innovativeness subsample | |
| Abnormal stock returns (t-stat) | p-value | Abnormal stock returns (t-stat) | p-value |
| Low vs. high Individualism portfolios | . 026 vs. .184  (-2.70) | .003 | -.030 vs. 003  (-2.37) | .009 |
| Low vs. high Uncertainty Avoidance portfolios | .041 vs. .151  (-1.88) | .030 | -.024 vs. -.002  (-1.75) | .039 |
| Low vs. high Power Distance portfolios | .044 vs. .153  (-1.90) | .028 | -.026 vs. -.001  (-1.94) | .025 |
| Low vs. high Masculinity portfolios | .156 vs. .019 (2.36) | .009 | -.036 vs. 002  (-2.90) | .002 |
| Low vs. high Long-term orientation portfolios | .041 vs. .164  (-2.11) | .018 | -.026 vs. 0003 (-1.96) | .024 |
| Low vs. high Indulgence portfolios | .038 vs. 148  (-1.89) | .029 | -.025 vs. -.004  (-1.54) | .061 |

**Table J1b. Large Investors’ Stock Holding– Stock Returns Relationship**

|  |  |  |  |
| --- | --- | --- | --- |
|  | No change  vs.  Buy portfolio | No change portfolio  vs.  Sell portfolio | Sell portfolio  vs.  Buy portfolio |
| Stock returns | .007 vs .070 | .007 vs .002 | .002 vs. .070 |
| t-stat | -2.40 | .22 | -1.69 |
| p-value | .008 | .587 | .045 |

**References**

Beugelsdijk, Sjoerd and Bart Frijns (2010), “*A Cultural Explanation of The Foreign Bias in International Asset Allocation*”, *Journal of Banking & Finance*, 34(9), 2121-2131.

Blundell, Richard W. and Stephen R. Bond (1998), “Initial Conditions and Moment Restrictions in Dynamic Data Models”, *Journal of Econometrics*, 87, 115-143.

Browne William J. (2009). *MCMC Estimation in MLwiN v2.1*. Centre for Multilevel Modelling, University of Bristol: Bristol, UK.

Castellaneta, Francesco and Olir Gottschalg (2016), “Does Ownership Matter in Private Equity? The Sources of Variance in Buyouts' Performance”, *Strategic Management Journal*, 37(2), 330–348.

Datta, Hannes, Foubert, Bram, and Van Heerde Harald (2015), “The Challenge of Retaining Customers Acquired With Free Trials,” *Journal of Marketing Research*, 52(2), 217-234.

Grinblatt, Mark and Matti Keloharju (2001), “What Makes Investors Trade?”, *Journal of Finance,* 56(2), 589-616.

Hayes, Andrew F. (2013) *Introduction to Mediation, Moderation, and Conditional Process Analysis: A Regression-Based Approach*. Guilford Press.

Kashyap Vishal and Brian R. Murtha (2017), “The Joint Effects of Ex Ante Contractual Completeness and Ex Post Governance on Compliance in Franchised Marketing Channels,” *Journal of Marketing*, 81(3), 130-153.

Kogut, Bruce and Harbir Singh. (1988), “The Effect of National Culture on the Choice of Entry Mode,” *Journal of International Business Studie*s, 19(3), 411-432.

Lewbel, Arthur (2012), “Using Heteroskedasticity to Identify and Estimate Mismeasured and Endogenous Regressor Models,” *Journal of Business and Economic Statistics,* 30(1), 67-80

Park, Sungho and Sachin Gupta (2012), “Handling Endogenous Regressors by Joint Estimation using Copulas,” *Marketing Science*, 31(4), 567–586.

Preacher Kristoper J., Derek D.Rucker, and Andrew F. Hayes (2007), “Addressing Moderated Mediation Hypotheses: Theory, Methods, and Prescriptions”, *Multivariate Behavioral Research*, 42(1), 185-227.

Roodman, David (2009), “How to do xtabond2: An introduction to difference and system GMM in Stata”, *Stata Journal,* 9(1), 86-136.

Spiller, Stephen A., Fitzsimmons, Gavan J., Lynch, John G., and McClelland Gary H. (2013) “Spotlights, Floodlights, and the Magic Number Zero: Simple Effects Tests in Moderated Regression,” *Journal of Marketing Research*, 50(2), 277-288.

1. We thank the Associate Editor for this suggestion. [↑](#footnote-ref-1)
2. This coefficient is different from what reported in Table 2 -Model 4 in the main text because here we test for an unconditional mediating path that does not include the moderating effects of culture, as instead in Table 2-Model 4. [↑](#footnote-ref-2)