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Bachelor Theses FFS 2021: Topics

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Advisor: Chia-Yi Yen

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Advisor: Mengqiao Du

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Advisor: Alexandra Niessen-Ruenzi

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Advisor: Alexandra Niessen-Ruenzi

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Advisor: Alexandra Niessen-Ruenzi

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Advisor: Alexandra Niessen-Ruenzi

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Advisor: Alexandra Niessen-Ruenzi

TOPIC NR1: Gender discrimination in the mutual fund industry: a rational perspective

Advisor: Chia-Yi Yen

Women are underrepresented in the mutual fund industry. As documented by Niessen-Ruenzi and Ruenzi (2019), women account for only 10% of all single-managed U.S. equity fund managers over the past 20 years. Following Kumar (2010)'s self-selection hypothesis, female fund managers that select into the male-dominated fund industry are likely to be competitive and perform well. Indeed, Niessen-Ruenzi and Ruenzi (2019) report that female fund managers are more persistent in investing styles and have almost identical average performance as male fund managers. However, female-managed funds experience lower fund inflows than male-managed ones. It seems that some clients of mutual funds are subject to gender biases, which leads to lower inflows in female-managed funds. As a result, management companies might be less willing to hire female fund managers because they earn on fees for assets under management. This may explain the underrepresentation of women in the mutual fund industry.

One possible explanation for such gender bias is (rational) statistical discrimination: if female fund managers make poorer investment decisions, investors will rationally use managers' gender to signal their skills. Though Niessen-Ruenzi and Ruenzi (2019) do not find that the average performance of female managers is inferior to their male peers, investors may see other disadvantages in female-managed funds. For instance, female managers may have less connected positions among mutual fund managers' network than their male peers. Rossi et al. (2018) show the importance of network positions: fund managers located centrally enjoy better performance and higher inflows. Given that sociology literature has indicated men and women are highly sex-segregated in workplaces (e.g., Reskin et al, 1999) and women are underrepresented in the mutual fund industry, female fund managers may have disadvantages in their network of social interactions.

Requirements:
The primary goal of this bachelor thesis is to provide a comprehensive literature survey on whether gender discrimination in the mutual fund industry can be justified from a rational perspective. The discussion should include but is not limited to (1) potential arguments of statistical discrimination on gender differences in the mutual fund industry; (2) academic evidence that supports or rejects these arguments; (3) the role of network centrality in explaining these gender differences. In addition to the literature survey, the student is supposed to visualize the fraction of male/female funds during the period of 2009-2012, as Figure 1 in Niessen-Ruenzi and Ruenzi (2019). Raw data of manager names are accessible from the Morningstar Direct database, and the gender information of fund managers has to be manually collected.

Introductory Literature:

- Niessen-Ruenzi, A., & Ruenzi, S. (2019). Sex matters: Gender bias in the mutual fund industry. Management Science, 65(7), 3001-3025.
- Kumar, A., 2010. Self-selection and the forecasting abilities of female equity analysts. Journal of Accounting Research, 48(2), pp.393-435.
- Reskin, B. F., McBrier, D. B., & Kmec, J. A. (1999). The determinants and consequences of workplace sex and race composition. Annual review of sociology, 25(1), 335-361.
- Rossi, A. G., Blake, D., Timmermann, A., Tonks, I., & Wermers, R. (2018). Network centrality and delegated investment performance. Journal of Financial Economics, 128(1), 183-206.

TOPIC NR2: Gender gap and organization structure: the mutual fund episode

Advisor: Chia-Yi Yen

Women are underrepresented in the mutual fund industry. As documented by Niessen-Ruenzi and Ruenzi (2019), women account for only 10% of all single-managed U.S. equity fund managers over the past 20 years. Following Kumar (2010)'s self-selection hypothesis, female fund managers that select into the male-dominated fund industry are likely to be competitive and perform well. Indeed, Niessen-Ruenzi and Ruenzi (2019) report that female fund managers are more persistent in investing styles and have almost identical average performance as male fund managers. However, female-managed funds experience lower fund inflows than male-managed ones. It seems that some clients of mutual funds are subject to gender biases, which leads to lower inflows in female-managed funds. As a result, management companies might be less willing to hire female fund managers because they earn on fees for assets under management. This may explain the underrepresentation of women in the mutual fund industry.

Adams and Kim (2020) further observe that the fraction of female fund managers shrinks by 30% over the past two decades. They attribute it to the growing trend of team management in this industry: female fund managers of team-managed funds are more likely to be discriminated due to lack of individual performance signals. Ivanova-Stenzel and Kübler (2011) document that gender differences are particularly large under some organizational structures. As Brands et al. (2015) indicate, the organizational transition from top-down hierarchies to a more cohesive management model could benefit women in leadership positions. [1]

Requirements:

The primary goal of this bachelor thesis is to provide a comprehensive literature survey on how organization structure affects gender differences, particularly in the mutual fund industry. The discussion should include but is not limited to (1) the mechanisms of how organization structure puts female managers in disadvantage; (2) how much these mechanisms apply to the mutual fund industry in particular; (3) the effective affirmative actions to correct underrepresentation problems from the perspective of organization structure. In addition to the literature survey, the student is supposed to visualize the fraction of male/female funds during the period of 2013-2016, as Figure 1 in Niessen-Ruenzi and Ruenzi (2019). Raw data of manager names are accessible from the Morningstar Direct database, and the gender information of fund managers has to be manually collected.

Introductory Literature:

- Adams, R. B., & Kim, M. S. (2020). Gender Discrimination as a Consequence of Team Failure. Available at SSRN 3215521.
- Brands, R. A., Menges, J. I., & Kilduff, M. (2015). The leader-in-social-network schema: Perceptions of network structure affect gendered attributions of charisma. Organization Science, 26(4), 1210-1225.
- Ivanova-Stenzel, R., & Kübler, D. (2011). Gender differences in team work and team competition. Journal of Economic Psychology, 32(5), 797-808.
- Niessen-Ruenzi, A., & Ruenzi, S. (2019). Sex matters: Gender bias in the mutual fund industry. Management Science, 65(7), 3001-3025.

[1] "How a company's structure affects the leadership gender gap," https://www.weforum.org/agenda/2015/06/how-a-companys-structure-affects-the-leadership-gender-gap/

TOPIC NR3: Gender gap in the fund industry: the perspective of family considerations

Advisor: Chia-Yi Yen

Women are underrepresented in the mutual fund industry. As documented by Niessen-Ruenzi and Ruenzi (2019), women account for only 10% of all single-managed U.S. equity fund managers over the past 20 years. Following Kumar (2010)'s self-selection hypothesis, female fund managers that select into the male-dominated fund industry are likely to be competitive and perform well. Indeed, Niessen-Ruenzi and Ruenzi (2019) report that female fund managers are more persistent in investing styles and have almost identical average performance as male fund managers. However, female-managed funds experience lower fund inflows than male-managed ones. It seems that some clients of mutual funds are subject to gender biases, which leads to lower inflows in female-managed funds. As a result, management companies might be less willing to hire female fund managers because they earn on fees for assets under management. This may explain the underrepresentation of women in the mutual fund industry.

One source of the gender biases is associated with family considerations. For example, managers who are mothers are more burdened with childcare than managers who are fathers. Tommar, Kolokolova, and Mura (2020) present evidence that, during the first month of COVID-19 lockdown, female hedge fund managers missed out at least 6% monthly excess returns than their male peers because of the disproportional burden of childcare in the home.[2] Family-related considerations may thus distract employees from fulfilling their work duties. Lu, Ray, and Teo (2016) document that martial events, i.e., marriages and divorces, reduce annual fund returns by 3-5% because hedge fund managers suffer from limited attention during this period.

Requirements:
The primary goal of this bachelor thesis is to provide a comprehensive literature survey on how family considerations may affect the gender gap, particularly in the mutual fund industry. The discussion should include but is not limited to (1) the mechanisms of how family considerations put female managers in disadvantage; (2) how much these mechanisms apply to the mutual fund industry in particular; (3) the effective affirmative actions to correct underrepresentation problems induced by family-related considerations. In addition to the literature survey, the student is supposed to visualize the fraction of male/female funds during the period of 2017-2020, as Figure 1 in Niessen-Ruenzi and Ruenzi (2019). Raw data of manager names are accessible from the Morningstar Direct database, and the gender information of fund managers has to be manually collected.

Introductory Literature:

- Lu, Y., Ray, S., & Teo, M. (2016). Limited attention, marital events and hedge funds. Journal of Financial Economics, 122(3), 607-624.
- Niessen-Ruenzi, A., & Ruenzi, S. (2019). Sex matters: Gender bias in the mutual fund industry. Management Science, 65(7), 3001-3025.
- Tommar, S. A., Kolokolova, O., & Mura, R. (2020). When Paid Work Gives in to Unpaid Care Work: Evidence from the Hedge Fund Industry under COVID-19. Working Paper.

[2] "COVID nightmares for women in hedge funds," https://www.efinancialcareers.de/en/news/2021/02/women-in-hedge-funds

TOPIC NR4: Natural language processing in finance research

Advisor: Mengqiao Du

Text analytics, also referred to as text mining or data mining, describes the process of deriving valuable information from text files. In finance, firm specific news inflows, conference calls and Securities and Exchange Commission (SEC) filings, provide ample resources for applying this technique. With the development of technologies in natural language processing, especially machine learning techniques, the finance literature exploring information in texts has been growing rapidly.

The text representation from bag-of-words models has been widely used in the literature. For example, Hillert et al. (2016) capture context-free features of individual words. Other studies (e.g., Ke et al. (2019), Garcia et al. (2020) and Zhang (2021)) use machine learning algorithms to account for the sentence, the sequence of words, and relations among words and classify the sentiment of news articles, conference call transcripts and shareholder newsletters.

Requirements:

The student is asked to conduct a literature review on natural language processing in the finance research. The discussion should include but is not limited to the development of techniques of textual analyses and the sources of content analyzed. Further discussions on the perspectives textual data capture should also be included. In addition, the student should choose a source of data he or she is interested in , extract a sample of the text data, and generate summary statistics on the information extracted from the text data.

Introductory Literature:

- Garcia, D., Hu, X., & Rohrer, M. (2020). The Colour of Finance Words. Working paper.
- Hillert, A., Niessen-Ruenzi, A., & Ruenzi, S. (2016). Mutual fund shareholder letters: flows, performance, and managerial behavior. Working paper.
- Ke, Z. T., Kelly, B. T., & Xiu, D. (2019). Predicting returns with text data (No. w26186). National Bureau of Economic Research Working Paper.
- Zhang, A. L. (2020). Uncovering Mutual Fund Private Information with Machine Learning. Working paper.

TOPIC NR5: Mutual fund investment style classification

Advisor: Mengqiao Du

Mutual funds state their investment objectives in prospectuses. However, Sensoy (2009) shows that a fraction of size and value/growth benchmark indices disclosed in the prospectuses of U.S. equity mutual funds does not match the fund's actual style. Similarly, Chen et al. (2019) find misclassification of bond fund investment styles.

Commonly used mutual fund databases (e.g., CRSP mutual fund database and Morningstar) have ready-to-use investment categories and investment benchmarks. Previous literature uses these variables to classify mutual funds and analyze fund performance (e.g., Sirri and Tufano (1998) and Pastor et al. (2015)). Therefore, mutual fund investment style classification and misclassification are expected to have a large impact on empirical research.

Requirements:
The student is asked to conduct a literature review on fund (mis)classifications. The discussion should include but is not limited to the impact of investment style classification on performance and fund flows. Further discussions on fund performance measurements related to fund investment style classification should also be included. In addition, the student should compare the classification measures from the CRSP mutual fund database and the Morningstar Direct database and conduct case studies on funds with conflicting classifications.

Introductory Literature:

- Chen, H., Cohen, L. & Gurun, U.G. (2021), Don't Take Their Word For It: The Misclassification of Bond Mutual Funds. Journal of Finance. Accepted Author Manuscript.
- Pástor, Ľ., Stambaugh, R. F., & Taylor, L. A. (2015). Scale and skill in active management. Journal of Financial Economics, 116(1), 23-45.
- Sensoy, B. A. (2009). Performance evaluation and self-designated benchmark indexes in the mutual fund industry. Journal of Financial Economics, 92(1), 25-39.
- Sirri, E. R., & Tufano, P. (1998). Costly search and mutual fund flows. Journal of Finance, 53(5), 1589-1622.

TOPIC NR6 The gender wage gap in the United States

Advisor: Alexandra Niessen-Ruenzi

Over the last 30 years, the gap between men and women in terms of education and labor market outcomes has markedly narrowed. Despite this ``grand convergence'', women are still underrepresented in leadership positions and they still earn less than men on average. In Germany, the raw gender wage gap amounts to 18% in 2020, and is still about 6% large if gender differences in occupational choice, education, and labor supply are accounted for. Similar results have been shown for other countries, including the United States.

Requirements:
The student is asked to conduct a literature review on the raw and adjusted gender wage gap in the United states. The discussion should include but is not limited to showing a time trend of the gender wage gap in the U.S. and providing an in-depth explanation of i) what explains the gap in the cross-section and ii) what explains time trends of the gender wage gap. The student is supposed to coordinate with the student working on topic NR7 and provide a discussion why results between the U.S. and continental Europe may differ and what they have in common.

Introductory Literature:

- Blau, F. D., & Kahn, L. M. (2017). The gender wage gap: Extent, trends, and explanations. Journal of economic literature, 55(3), 789-865.
- Sin, I., Stillman, S., & Fabling, R. (2017). What Drives the Gender Wage Gap? Examining the Roles of Sorting, Productivity Differences, and Discrimination.
- Weichselbaumer, D., & Winter-Ebmer, R. (2005). A meta-analysis of the international gender wage gap. Journal of Economic Surveys, 19(3), 479-511.
- Gharehgozli, O., & Atal, V. (2020). Revisiting the gender wage gap in the United States. Economic Analysis and Policy, 66, 207-216.

TOPIC NR7: The gender wage gap in Europe

Advisor: Alexandra Niessen-Ruenzi

Over the last 30 years, the gap between men and women in terms of education and labor market outcomes has markedly narrowed. Despite this ``grand convergence'', women are still underrepresented in leadership positions and they still earn less than men on average. In Germany, the raw gender wage gap amounts to 18% in 2020, and is still about 6% large if gender differences in occupational choice, education, and labor supply are accounted for. Similar results have been shown for other European countries.

Requirements:
The student is asked to conduct a literature review on the raw and adjusted gender wage gap across European countries. The discussion should include but is not limited to showing a time trend of the gender wage gap in these countries and providing an in-depth explanation of i) what explains the gap in the cross-section and ii) what explains time trends of the gender wage gap. The student is supposed to coordinate with the student working on topic NR6 and provide a discussion why results between the U.S. and continental Europe may differ and what they have in common.

Introductory Literature:

- Fransen, E., Plantenga, J., & Vlasblom, J. D. (2012). Why do women still earn less than men? Decomposing the Dutch gender pay gap, 1996–2006. Applied Economics, 44(33), 4343-4354.
- Gallen, Y., Lesner, R. V., & Vejlin, R. (2019). The labor market gender gap in Denmark: Sorting out the past 30 years. Labour Economics, 56, 58-67.

TOPIC NR8: The impact of gender quotas on firm performance

Advisor: Alexandra Niessen-Ruenzi

Several countries have responded to gender inequality in boardrooms by adopting mandatory quotas. The first country to act was Norway, which introduced a gender quota of 40% female representation in 2003. Following Norway's lead, Belgium, France, Germany, Iceland, India, Israel, Italy, and Portugal have all established similar quotas. In the United States, California was the first state to also introduce a mandatory quota.

The empirical literature on the impact of gender quotas on firm performance is still inconclusive. While several papers find a negative relation (e.g., Ahern and Dittmar (2012)), there are also papers finding no significant results (Eckbo, Nygaard, and Thorburn (2021)) or even a positive link (Kuzmina and Melentyeva (2020)).

Requirements:
The student is asked to conduct a literature review on the impact of gender quotas on firm performance. The discussion should include but is not limited to a balanced comparison of existing studies on the link between gender quotas and firm performance, a discussion of why these studies may yield different results, and a detailed overview on the various economic reasons for a link between gender quotas and firm performance posited in the literature.

Introductory Literature:

- Ahern, Kenneth R., and Amy K. Dittmar. "The changing of the boards: The impact on firm valuation of mandated female board representation." The quarterly journal of economics 127.1 (2012): 137-197.
- Eckbo, B. E., Nygaard, K., & Thorburn, K. S. (2020). Valuation effects of Norway's board gender-quota law revisited. Tuck School of Business Working Paper, (2746786).
- Kuzmina, O., & Melentyeva, V. (2021). Gender diversity in corporate boards: Evidence from quota-implied discontinuities. Available at SSRN 3790376.
- Von Meyerinck, F., Niessen-Ruenzi, A., Schmid, M., & Davidoff Solomon, S. (2021). As California goes, so goes the nation? Board gender quotas and the legislation of non-economic values. Board Gender Quotas and the Legislation of Non-Economic Values (January 20, 2021) , SSRN Working Paper.

TOPIC NR9: The impact of Covid 19 on gender inequality

Advisor: Alexandra Niessen-Ruenzi

According to several surveys conducted during the lockdown phase in March and April 2020, women may be disproportionally affected by the Covid19 pandemic. They indicated that they are taking care of the majority of housework, including childcare and homeschooling. For example, a survey of 2,200 adults in the US conducted for The New York Times by Morning Consult on April 9-10, 2020, shows that women are handling home schooling disproportionately. Specifically, 70% (66%) of women say they are fully or mostly responsible for housework (childcare) during lockdown. Similarly, for Germany, a survey of 7,677 employees conducted by the Hans Böckler Stiftung shows that 24% of women but only 16% of men reduced the number of hours worked to take care of their children. This unequal shift of household and care burdens on male vs. female employees may have short-term and maybe even long-term consequences on their careers and on their pay.

Requirements:
The student is asked to conduct a literature review on studies investigating how the Covid19 pandemic affects gender inequality. The discussion should include but is not limited to changes on the labor market w.r.t labor supply and wages, the distribution of men and women across different industries, and changes w.r.t housework and care activities. The student is supposed to compile statistics on occupational choices and labor supply by men and women in Germany and derive predictions regarding the long-term impact of the pandemic on gender inequality in Germany.

Introductory Literature:

- Alon, T., Coskun, S., Doepke, M., Koll, D., & Tertilt, M. (2021). From Mancession to Shecession: Women&Apos; S Employment in Regular and Pandemic Recessions.
- Olmstead, T. A. M. D. J., & Tertilt, R. M. (2020). This Time It’s Different: The Role of Women’s Employment in a Pandemic Recession.
- Fuchs-Schündeln, N., Kuhn, M., & Tertilt, M. (2020). The short-run macro implications of school and child-care closures.
- Du, M. (2020). Locked-in at Home: Female Analysts' Attention at Work during the COVID-19 Pandemic.

TOPIC NR10: Gender segregation on the labor market

Advisor: Alexandra Niessen-Ruenzi

The gender wage gap has been established for various countries including Germany. On average, women earn about 20% less than men in Germany. The size of the gap is similar for other industrialized countries. The literature has established several reasons for the gender wage gap, including self-selection of women in lower payed industries and occupations. If women prefer to work in areas where compensation is lower on average, a gender pay gap will result automatically and has an entirely different interpretation compared to a situation in which women and men wish to work in the exact same occupations and job levels.

Requirements:
The student is asked to conduct a literature review on gender segregation on the labor market. The discussion should include but is not limited to the distribution of men and women across different industries and occupations, but also their educational choices that may lead to gender segregation on the labor market later on. All arguments need to be supported by statistics provided by, for example, the federal statistical office. The student is also expected to discuss time trends and derive predictions regarding future developments based on existing studies on the topic. While the main focus of the thesis is the German labor market, comparisons to other countries should be included where appropriate.

Introductory Literature:

- Bertrand, M. (2017). The glass ceiling. Becker Friedman Institute for Research in Economics Working Paper, (2018-38).
- Bettinger, E. P., & Long, B. T. (2005). Do faculty serve as role models? The impact of instructor gender on female students. American Economic Review, 95(2), 152-157.
- Blau, F. D., & Kahn, L. M. (2013). Female labor supply: Why is the United States falling behind?. American Economic Review, 103(3), 251-56.
- Preston, J. A. (1999). Occupational gender segregation trends and explanations. The Quarterly Review of Economics and Finance, 39(5), 611-624.