

Topics in Applied Microeconomics

Risk, Time, and Social Preferences: Measurement, Determinants, Origin, and Consequences

Thomas Dohmen

Course Description

This course is designed to introduce students to the literature on preferences and personality traits. It provides insights into the measurement of risk, time, and social as well as personality traits, their origin and formation, and their consequences for heterogeneity in outcomes.

The course is not intended to provide a comprehensive coverage of all research topics. Rather, it aims to offer an overview of how important questions at the research frontier are tackled, illustrate what challenges have not been solved yet, and provide a glimpse on how concepts and measurement methods are sometimes forcefully discussed.

The target audience is PhD and Master students who possess a strong interest in economic research and have some experience with experimental methods and applied econometric methods. The course aims to enhance students' understanding of current (empirical) methods used in behavioral economics to equip students with the ability to critically assess the current state of knowledge and to enable them to formulate and tackle open questions in the field

The reading list includes recently published or forthcoming papers from leading economic journals, as well as recent working papers.

Students are expected to read the papers that are listed below as literature for the course (it is also recommended to inspect papers labelled as additional references) below, analyze original research papers in the field, develop their own research ideas, and present their work in class.

Course Goals

By the end of the course, students should

- be familiar with diverse approaches to measuring preferences,
- be able to read and critically evaluate original research papers in behavioral economics,
- develop the ability to communicate research findings effectively,
- develop the skills necessary to conduct original research in behavioral economics,
- and ideally, they should have gained inspiration for their own research endeavors.

Prerequisites

A good background in microeconomic theory and basic knowledge of experimental and econometric methods is expected.

Course Organization

The course starts with 3-4 lectures that provide a concise overview of conceptual frameworks of risk, time and social preferences, personality, and cognitive skills. These lectures are intended to provide some background on the research topics that are later discussed in more depth. In the remaining weeks, each student will present 1-2 papers from the reading list (depending on the number of participants), which will then be discussed by the class.

During the course, students should also develop their own research question, and, at the end of the course, provide a written research proposal that describes a research strategy to answer this research question.

Grading

The course grade will be based on the paper presentation(s) (40%) and a written research proposal (60%). Details about the written research proposal will be provided during the course.

Office Hours

By appointment via email (t.dohmen@uni-bonn.de). Office: IAME, Lennéstr. 43, First Floor.

Course Outline

I. Concepts and Measurement

- i. Intelligence and cognitive skills
- ii. Personality (Big Five, Locus of control, grit)
- iii. Risk preferences
- iv. Time preferences
- v. Social preferences

Literature

Almlund, Mathilde, Angela Lee Duckworth, James Heckman, Tim Kautz (2011). Personality Psychology and Economics. in Hanushek, E.A., S. Machin, L. Woessmann, eds. (2011). *Handbook of the Economics of Education*, Vol. 4. Amsterdam: North-Holland

Becker, Anke, Thomas Deckers, Thomas Dohmen, Fabian Kosse, Armin Falk (2012). The Relationship Between Economic Preferences and Psychological Personality Measures. *Annual Review of Economics* 4(1): 453-478. <https://doi.org/10.1146/annurev-economics-080511-110922>

Dohmen, Thomas, Armin Falk, David Huffman, and Uwe Sunde (2012). The Intergenerational Transmission of Risk and Trust Attitudes. *Review of Economic Studies* 79(2): 645–677. <https://doi.org/10.1093/restud/rdr027>

Dohmen, Thomas and Tomáš Jagelka (2024). Accounting for Individual-Specific Reliability of Self-Assessed Measures of Economic Preferences and Personality Traits. *Journal of Political Economy Microeconomics* 2(3):399–46. <https://doi.org/10.1086/727559>

Falk, Armin, Anke Becker, Thomas Dohmen, Benjamin Enke, David Huffman, Uwe Sunde (2018). Global Evidence on Economic Preferences. *Quarterly Journal of Economics*, 133(4): 1645-1692. <https://doi.org/10.1093/qje/qjy013>

Falk, Armin, Anke Becker, Thomas Dohmen, David Huffman, Uwe Sunde (2023). The Preference Survey Module: A Validated Instrument for Measuring Risk, Time, and Social Preferences. *Management Science* 69(4): 1935–1950. <https://doi.org/10.1287/mnsc.2022.4455>

Heckman, J.J., T. Kautz (2013). Fostering and Measuring Skills: Interventions That Improve Character and Cognition, IZA Discussion Paper 7750 (published in: J. Heckman, J.E. Humphries, and T. Kautz (eds.), *The Myth of Achievement Tests: The GED and the Role of Character in American Life*, Chicago: University of Chicago Press, 2014).

Heckman, J.J., R. Pinto, P. Savelyev (2013). Understanding the Mechanisms Through Which an

Influential Early Childhood Program Boosted Adult Outcomes. *American Economic Review* 103 (6): 2052-86. <https://doi.org/10.1257/aer.103.6.2052>

Additional references

Borghans, L., A. Lee Duckworth, J.J. Heckman, and B. ter Weel (2008). The Economics and Psychology of Personality Traits. *Journal of Human Resources* 43(4): 972-1059

Borghans, L., H. Meijers, B. ter Weel (2008). The Role of Noncognitive Skills in Explaining Cognitive Test Scores. *Economic Inquiry* 46(1): 2-12.

Borghans, L., B. H.H. Golsteyn, J.J. Heckman, and J. E. Humphries (2011). Identification Problems in Personality Psychology. *Personality and Individual Differences* 51 (3): 315-320.

Cunha, F., J.J. Heckman, S. Schennach (2010). Estimating the Technology of Cognitive and Noncognitive Skill Formation. *Econometrica*, 78(3): 883-931.

Cunha, F., J.J. Heckman (2010). The Technology of Skill Formation. *American Economic Review* 97 (2): 31-4.

Dohmen, T., A. Falk, D. Huffman, and U. Sunde (2010). Are Risk Aversion and Impatience Related to Cognitive Ability? *American Economic Review* 100(3): 1238-1260.
<http://www.aeaweb.org/articles.php?doi=10.1257/aer.100.3.1238>

Dohmen, T., A. Falk (2011). Performance Pay and Multi-dimensional Sorting: Productivity, Preferences and Gender, *American Economic Review* 101 (2): 556-590.
<https://doi.org/10.1257/aer.101.2.556>

Duckworth, A. L., M. E. P. Seligman (2005). Self-Discipline Outdoes IQ in Predicting Academic Performance of Adolescents. *Psychological Science* 16: 939–944.

Duckworth, A. L., Peterson, C., Matthews, M. D., & Kelly, D. R. (2007). Grit: Perseverance and passion for long-term goals. *Journal of Personality and Social Psychology* 92 (6), 1087–1101.
<https://doi.org/10.1037/0022-3514.92.6.1087>

Heckman, J. J., Y. Rubinstein (2001). The Importance of Noncognitive Skills: Lessons from the GED Testing Program. *American Economic Review* 91: 145–149.

Heckman, J. J., J. Stixrud, and S. Urzua (2006). The Effects of Cognitive and Noncognitive Abilities on Labor Market Outcomes and Social Behavior. *Journal of Labor Economics* 24(3): 411-482.

Judge, T.A., Higgins, C.A., Thoresen, C.J., & Barrick, M.R. (1999). The big five personality traits, general mental ability, and career success across the life span. *Personnel Psychology* 52: 621-652.

McCrae, R. R., & Costa, P. T., Jr. (2008). The five-factor theory of personality. In L. A. Pervin & O. P. John, & R.W. Robins (Eds.), *Handbook of personality theory and research* (Vol. 3). New York: Guilford Press.

II. Experimental Measures of Preferences

Literature

Cohen, Jonathan and Ericson, Keith Marzilli, David Laibson and John Myles White (2020). Measuring Time Preferences. *Journal of Economic Literature* 58: 299–347.

Andreoni, James, and Charles Sprenger. 2012. "Estimating Time Preferences from Convex Budgets." *American Economic Review* 102 (7): 3333–56. DOI: 10.1257/aer.102.7.3333

Andreoni, James, and Charles Sprenger. 2012. "Risk Preferences Are Not Time Preferences." *American Economic Review* 102 (7): 3357–76. DOI: 10.1257/aer.102.7.3357

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Miao, Bin, and Songfa Zhong. (2015). Risk Preferences Are Not Time Preferences: Separating Risk and Time Preference: Comment. *American Economic Review* 105 (7): 2272–86. DOI: 10.1257/aer.20131183

Cheung, Stephen L. (2015). Risk Preferences Are Not Time Preferences: On the Elicitation of Time Preference under Conditions of Risk: Comment. *American Economic Review* 105 (7): 2242–60. DOI: 10.1257/aer.20120946

Epper, Thomas, and Helga Fehr-Duda. (2015). Risk Preferences Are Not Time Preferences: Balancing on a Budget Line: Comment. *American Economic Review* 105 (7): 2261–71. DOI: 10.1257/aer.20130420

Andersen, Steffen, Glenn W. Harrison, Morten Igel Lau and Elisabet Rutström, (2006). Elicitation Using Multiple Price List Formats. *Experimental Economics* 9: 383–405.

Binswanger, Hans P. (1980). Attitudes Toward Risk: Experimental Measurement in Rural India. *American Journal of Agricultural Economics* 62: 395–407.

Coller, Maribeth and Melonie B. Williams (1999). Eliciting Individual Discount Rates. *Experimental Economics* 2, 107–127.

Holt, Charles, and Susan K. Laury (2002). Risk Aversion and Incentive Effects. *American Economic Review* 92: 1644–1655.

Gneezy, Uri and Jan Potters (1997). An Experiment on Risk Taking and Evaluation Periods. *Quarterly Journal of Economics* 112: 631–645.

III. Validated Survey Measures

Literature

Falk, Armin, Anke Becker, Thomas Dohmen, David Huffman, and Uwe Sunde (2023). The Preference Survey Module: A Validated Instrument for Measuring Risk, Time, and Social Preferences. *Management Science*. DOI: 10.1287/mnsc.2022.4455

Chapman, Jonathan, Pietro Ortoleva, Erik Snowberg, Leeat Yariv, Colin Camerer (2025). Reassessing Qualitative Self-Assessments and Experimental Validation. CESifo Working Paper No. 11703. <https://www.cesifo.org/en/publications/2025/working-paper/reassessing-qualitative-self-assessments-and-experimental>

Additional references

Bauer, Michal and Chytilova, Julie and Miguel, Edward (2020): Using Survey Questions to Measure Preferences: Lessons From an Experimental Validation in Kenya. *European Economic Review* 127: 103493. doi.org/10.1016/j.eurocorev.2020.103493

IV. Measuring Preferences Around the Globe

Literature

Armin Falk, Anke Becker, Thomas Dohmen, Benjamin Enke, David Huffman, and Uwe Sunde (2018). Global Evidence on Economic Preferences. *The Quarterly Journal of Economics* 133(4): 1645 - 1692. DOI: 10.1093/qje/qjy013

Cappelen, Alexander W., Benjamin Enke, Bertil Tungodden (2025). Universalism: Global Evidence. *American Economic Review* 115(1): 43–76.

Additional references

Alain Cohn, Michel André Maréchal, David Tannenbaum and Christian Lukas Zünd (2019). Civic Honesty Around the Globe. *Science* 365:, 70–73.

Ruggeri, K. and et al. (2022). The Globalizability of Temporal Discounting, *Nature Human Behavior* 6, 1386–1397.

Vieider, Ferdinand M., Mathieu Lefebvre, Ranua Bouchouicha, Thorsten Chmura, Rustamdjani Hakimov, Michal Krawczyk, and Peter Martinsson (2015). Common Components of Risk and Uncertainty Attitudes Across Contexts and Domains: Evidence From 30 Countries. *Journal of the European Economic Association* 13: 421–452.

Wang, Mei, Marc Rieger and Thorsten Hens (2016). How Time Preferences Differ: Evidence from 53 Countries. *Journal of Economic Psychology* 52: 115–135.

V. Measurement Error

Beauchamp, Jonathan P., David Cesarini, and Magnus Johannesson (2017). The Psychometric and Empirical Properties of Measures of Risk Preferences. *Journal of Risk and Uncertainty* 3(54): 203-237.

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VI. Determinants of Preferences

Dohmen, Thomas, Armin Falk, David Huffman, Uwe Sunde (2018). On the Relationship Between Cognitive Ability and Risk Preference. *Journal of Economic Perspectives* 32(2): 115-134. <https://doi.org/10.1257/jep.32.2.115>

Falk, Armin and Johannes Hermle (2018). Relationship of Gender Differences in Preferences to Economic Development and Gender Equality. *Science* 362, eaas9899.

Meissner, Thomas, Xavier Gassmann, Corinne Faure, and Joachim Schleich, (2023). Individual Characteristics Associated with Risk and Time Preferences: A Multi Country Representative Survey. *Journal of Risk and Uncertainty* 66: 77–107.

Additional references

Croson, Rachel and Uri Gneezy (2009). Gender Differences in Preferences. *Journal of Economic Literature* 47: 448–74.

Charness, Gary and Uri Gneezy (2012). Strong Evidence for Gender Differences in Risk Taking. *Journal of Economic Behavior & Organization* 83: 50–58.

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<http://www.aeaweb.org/articles.php?doi=10.1257/aer.100.3.1238>

VII. Stability of Preferences

Literature

Hanaoka, Chie, Hitoshi Shigeoka, and Yasutora Watanabe (2018). Do Risk Preferences Change? Evidence from the Great East Japan Earthquake. *American Economic Journal: Applied Economics*. 10: 298–330.

Einav, Liran, Amy Finkelstein, Iuliana Pascu, and Mark R. Cullen (2012). How General Are Risk Preferences? Choices under Uncertainty in Different Domains. *American Economic Review* 102 (6): 2606–38. DOI: 10.1257/aer.102.6.2606

Additional references

Barseghyan, Levon, Jeffrey Prince, and Joshua C. Teitelbaum (2011). Are Risk Preferences Stable across Contexts? Evidence from Insurance Data. *American Economic Review* 101 (2): 591–631. DOI: 10.1257/aer.101.2.591

Schildberg-Hörisch, Hannah (2018). Are Risk Preferences Stable?. *Journal of Economic Perspectives* 32: 135–154.

VIII. Origin and Formation of Preferences

Literature

Alan, S., & Ertac, S. (2018). Fostering patience in the classroom: Results from randomized educational intervention. *Journal of Political Economy* 126 (5), 1865–1911.

<https://doi.org/10.1086/699007>

Galor, Oded, and Ömer Özak. (2016) The Agricultural Origins of Time Preference. *American Economic Review* 106 (10): 3064–3103. DOI: 10.1257/aer.20150020

Fabian Kosse, Thomas Deckers, Pia Pinger, Hannah Schildberg-Hörisch and Armin Falk (2020). The Formation of Prosociality: Causal Evidence on the Role of the Social Environment. *Journal of Political Economy* 128 (2): 434–467. <https://doi.org/10.1086/704386>

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Alan, S., Boneva, T., & Ertac, S. (2019). Ever failed, try again, succeed better: Results from a randomized educational intervention on grit. *The Quarterly Journal of Economics* 134 (3), 1121–1162. <https://doi.org/10.1093/qje/qjz006>

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IX. Preferences, Personality, and Outcomes

Literature

Golsteyn, B.H.H., A. Non, U. Zöllitz (2021). The Impact of Peer Personality on Academic Achievement. *Journal of Political Economy* 129 (4): 1052-1099.

Hanushek, Eric A., Lavina Kinne, Philipp Legetporer, Ludger Woessmann (2022). Patience, Risk-Taking, and Human Capital Investment across Countries. *Economic Journal* 132 (646): 2290-2307. <https://doi.org/10.1093/ej/ueab105>

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James J. Heckman, Jora Stixrud, and Sergio Urzua (2006). The Effects of Cognitive and Noncognitive Abilities on Labor Market Outcomes and Social Behavior. *Journal of Labor Economics* 24(3): 411-482.

Roberts, B. W., Kuncel, N., Shiner, R., N., Caspi, A., & Goldberg, L. R. (2007). The Power of Personality: The Comparative Validity of Personality Traits, Socio-economic Status, and Cognitive Ability for Predicting Important Life Outcomes. *Perspectives in Psychological Science* 2: 313-345.

Sutter, M., Kocher, M. G., Glätzle-Rützler, D., & Trautmann, S. T. (2013). Impatience and Uncertainty: Experimental Decisions Predict Adolescents' Field Behavior. *American Economic Review* 103 (1), 510-531. <https://doi.org/10.1257/aer.103.1.510>

X. Patience and Accumulation

Epper, Thomas, Ernst Fehr, Helga Fehr-Duda, Claus Thustrup Kreiner, David Dreyer Lassen, Søren Leth-Petersen, and Gregers Nytoft Rasmussen (2020). Time Discounting and Wealth Inequality. *American Economic Review* 110 (4): 1177-1205. DOI: 10.1257/aer.20181096

Sunde, Uwe, Thomas Dohmen, Benjamin Enke, Armin Falk, David Huffman, Gerrit Meyerheim

(2022). Patience and Comparative Development. *Review of Economic Studies* 89(5): 2806–2840. <https://doi.org/10.1093/restud/rdab084>

Additional references

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XI. Social Comparison and Social Preferences in Labor Markets

Literature

David J. Deming (2017). The Growing Importance of Social Skills in the Labor Market. *The Quarterly Journal of Economics*, 132(4): 1593–1640.

Arindrajit Dube, Laura Giuliano and Jonathan Leonard (2019). Fairness and Frictions: The Impact of Unequal Raises on Quit Behavior. *American Economic Review* 109 (2): 620-63. DOI: 10.1257/aer.20160232

Emily Breza, Supreet Kaur, Yogita Shamsasani, (2018). The Morale Effects of Pay Inequality, *The Quarterly Journal of Economics* 133(2) 2018, Pages 611–663. <https://doi.org/10.1093/qje/qjx041>

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Anat Bracha, Uri Gneezy, and George Loewenstein (2015). Relative pay and labor supply. *Journal of Labor Economics* 33(2), 297–315.

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