PROMOTION RECOMMENDATION The University of Michigan Stephen M. Ross School of Business

Andreas Hagemann, assistant professor of business economics and public policy, Stephen M. Ross School of Business, is recommended for promotion to associate professor of business economics and public policy, with tenure, Stephen M. Ross School of Business.

Academic Degrees:

Ph.D. 20)12 U1	niversity o	f Illinois a	ıt Urbana-	-Champaign	, Economics,	Champaign, IL	,
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Diplom 2006 Universit at Regensburg, Economics, Regensburg, Germany

Professional Record:

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2021-Present	Assistant Professor of Business Economics and Public Policy, University
	of Michigan, Stephen M. Ross School of Business, Ann Arbor, MI
2014-2021	Assistant Professor, Department of Economics, University of Michigan,
	College of Literature, Science, and the Arts, Ann Arbor, MI
2012-2014	Assistant Professor, Department of Economics, University of Notre Dame,
	Notre Dame, IN

Summary of Evaluation:

<u>Teaching</u>: Professor Hagemann's teaching record is strong. His average evaluations in the Business Economics BBA core class across three sections in W23 were 4.58, which compares well to other instructors. The ratings also show an upward trajectory, relative to his first year of teaching the class.

Beyond the ratings received in his two years at Ross, in prior years Professor Hagemann was teaching at the Department of Economics. His teaching evaluation scores for undergraduate classes were very high (with average of Q2 scores above 90%) and he was nominated for the Golden Apple university teaching award.

Research: Professor Hagemann's overall research productivity both in terms of the number of research papers, as well as the quality of his work reflected in the number of A journal publications and in the number of cites, compares favorably with the best researchers in his cohort. Professor Hagemann's research productivity and quality are excellent. He has made important contributions in his areas of work, particularly on inference in contexts with one or few clusters and quantile regressions. Notably, he also has been successful in interdisciplinary work with researchers in labor and health economics as well as with Ross colleagues in marketing and strategy. His work has had immediate impact on practice, with his clustering inference approach now incorporated into standard R "quantreg" package, and his work cited extensively in two of the *Journal of Econometrics* "How-To" papers aimed at supporting the work of applied researchers.

Professor Hagemann has eight published/accepted papers and two R&R papers. Of these ten papers, nine are in top journals for their respective fields, which provides evidence of the very high quality of his work. It is also noteworthy that seven of these nine papers are solo authored, which further emphasizes the quality of his work.

Recent and Significant Publications:

- Hagemann, A. (2023). Inference on Quantile Processes with a Finite Number of Clusters. Revise and resubmit at the *Journal of Econometrics*.
- Hagemann, A. (2022). Permutation Inference with a Finite Number of Heterogeneous Clusters. *Review of Economics and Statistics*, forthcoming.
- Orhun, Y., T. Guo, and A. Hagemann (2021). Reaching for Gold: Frequent-Flyer Status Incentives and Moral Hazard. *Marketing Science* 41(3), 548-574.
- Hagemann, A. (2019). Placebo Inference on Treatment Effects When the Number of Clusters Is Small. *Journal of Econometrics* 213(1), 190–209.
- Hagemann, A. (2017). Cluster-Robust Bootstrap Inference in Quantile Regression Models. *Journal of the American Statistical Association* 112(517), 446–456.
- Buckles, K., A. Hagemann, O. Malamud, M. Morrill, and A. Wozniak (2016). The Effect of College Education on Mortality. *Journal of Health Economics* 50, 99-114.
- Hagemann, A. (2014). Stochastic Equicontinuity in Nonlinear Time Series Models. *Econometrics Journal* 17(1), 188–196.

<u>Service</u>: Professor Hagemann's service to the BE area and to the broader community is very solid. Before joining the Ross School, Professor Hagemann was involved in the service roles at the Department of Economics (as executive committee member, in hiring roles, and organizing seminars). In the business economics area at Ross, he contributed significantly to recruiting efforts last year and also helped with the screening of applicants and advising students. He also served as one of the organizers of the Hosmer lunch seminar series and co-organized a full-day workshop on two-way fixed effects.

External Reviewers:

Reviewer B: "This is an excellent publication record. ...The fact that Andreas mostly works alone, and not with other authors (excepting his forays into applied research) also allows us to infer that his output fully represents his individual intellectual contribution.....let me reiterate that I fully support the promotion of Andreas Hagemann to Associate Professor with tenure at the University of Michigan."

Reviewer C: "This is an area of research that is close to my heart and within this area Andreas has made several interesting and useful contributions.....this body of work has helped establish Andreas as the leading junior econometrician working on cluster-robust inference. ... I would rank him near the top of his cohort of econometric theorists. In particular, it is my opinion that he already meets the standards for tenure and, in particular, that he has considerable upside potential."

Reviewer D: "He developed novel inference methods for quantile regression models as well as those for treatment effects. These inference methods are directly relevant in applications in economics and business..."

Reviewer E: "All but two of these are solely-authored, which is unusual these days. All of the solely-authored works are in the field of theoretical econometrics.... It is clear that Professor Hagemann is not averse to doing either joint work or empirical work, which suggests that he is probably a valuable colleague. ... All I can say is that, compared with every candidate for whom I have written tenure evaluation letters for as far back as I can remember, Professor Hagemann clearly has the strongest record... Finally, you ask whether Professor Hagemann's work would meet the requirements for tenure and promotion at my institution. Absolutely! He has a stronger record than anyone we have given tenure to for a very long time. If we had a tenured position in econometrics at the Associate Professor level available, and Professor Hagemann applied for it, my guess is that he would be at the top of the list... ... It was a surprise to learn that he does not already have tenure."

Reviewer F: "Andreas has produced a steady output of high quality work, most of which aims at the development of econometric methodology for the analysis of clustered data – an important topic in econometrics, which should be of great interest to empirical researchers... ... As I hope this letter makes clear, I think Andreas Hagemann is a high-quality researcher who studies important methodological questions, and hence I support his promotion to tenure in your department."

Reviewer G: "My general impression of the research work of Prof. Hagemann is very positive. The quantity is reasonable with about one publication per year on average. Of course, this has to be weighed against the quality of the work, which is very high, and in combination this is an impressive body of work...I have read several of these papers myself. Both prior to accepting to write this letter, and also in the process of writing it. The quality of the scholarly work is very impressive. ... The theory is rigorous, precise, and relevant, and the empirical analyses and examples seem relevant...With respect to the quality and quantity of Prof. Hagemann's research, if he were being considered for promotion at my institution, then I have no doubt that he would be granted promotion and tenure."

Reviewer H: "Andreas['] research record is sufficiently good in terms of quality and quantity to warrant promotion to tenured Associate Professor in your department. I support the case and I encourage you to act accordingly.....publication in JASA should be considered as a top publication because is among the top outlets (on par with Annals of Statistics and Econometrica)"

Reviewer I: "Professor Hagemann is a world leader in research regarding inference in quantile regression models with clustered observations... ...this is a portfolio that is worthy of tenure. To my mind, Professor Hagemann has demonstrated elegance in proving asymptotic results, creativity in proposing new test statistics, and has consistently moved his work in the direction of the issues empirical researchers face. I recommend him for promotion, with tenure, to Associate Professor at the Ross School of Business."

Reviewer J: "...Andreas's [sic] current body of work makes him an international expert in cluster-robust inference in settings where traditional approaches do not apply. ... With his current record, Andreas would be promoted to associate professor, with tenure, in the economics department at my institution."

<u>Summary Recommendation</u>: I am pleased to recommend Andreas Hagemann for promotion to associate professor of business economics and public policy, with tenure, Stephen M. Ross School of Business.

Sharon F. Matusik

Edward J. Frey Dean of Business Stephen M. Ross School of Business

May 2024