

FACULTY SABBATICAL / CHANCELLOR'S FELLOWSHIP COVER PAGE

| Applicant Name: | Jeffery S Heinrich | | |
|---|---|---|--|
| Department: | Economics | | |
| Years of Service: | 13 | Year of Tenure Decision: | 2005/2006 |
| ☐ Fall 2014 S | Support Time Period Academic Year (up to 6 emester (up to full com 5 Semester (up to full co | pensation) | |
| Supplemental support | required through a Cha | ncellor's Fellowship? | |
| | plicant for sabbatical/fe an Ethnic Minority | llowship is a (please check app ☐ Woman | propriate) |
| Abstract, summarizing | sabbatical/fellowship a | ctivities (Please limit to a short Iso be provided electronically to | and clear paragraph of |
| components, both e Wisconsin. This pro rural areas of the sta examining the relati | xamining the econom pject will initially look ate affect visitor behav onship between broad It will also lay the four | boot my research agenda and ic impact of broadband internat how reliable broadband internation and spending, and will the land internet access and the idation for subsequent resea | net access in ternet access in select nen gravitate to e location of business |
| full-time service immed compensation (salary, university during the sa | diately following the term plus the university's shabbatical/fellowship. | isconsin-Whitewater for at least nination of the sabbatical/fellow are of fringe benefits) I have red | rship, or repay any ceived from the |
| (Applican t's Signature) | | (Date) | DEGETVEN |

1. OBJECTIVES AND PROJECT PLAN

1.A. Objectives

Since coming to UWW, I have had an unusually large service contribution. For example, at one point prior to tenure in my 4th year I had 7 committee assignments. Shortly after receiving tenure, I became department chair for a further 6 years ending Fall 2013 in addition to serving on other committees including several recent years as chair of the General Education Review Committee. This level of service has come at the expense of my research activities. While I have managed to maintain the necessary minimum level of research to be Academically Qualified in the College of Business and Economics, little of it has been at my own initiative. My primary goal for this sabbatical leave is to reboot my research agenda so as to create a sustainable research agenda that reflects my interests and will help me prepare a record of research activities that will support a successful application for promotion to full professor.

My interests currently diverge from the training I receiving in pursuing my PhD. I was originally minted as an international economist. While I still retain that competence, my interests of late have gravitated to fields that are much newer to the discipline including the internet and computing technologies, modern digital forms of leisure and entertainment, and behavioral economics. All of these issues are relatively new areas of economic analysis and ripe for new research.

The specific objective for this leave is an initial foray into the digital economy with a focus on the economic impact of broadband internet service in Wisconsin. Using data on broadband access from the Center for Community Technology Solutions of the UW-Extension, I and Russ Kashian will be studying the economic impact of broadband access in Wisconsin.

The first step of this effort will be to do an assessment of the economic impact of broadband access in relation to tourism. There are numerous second homes in Wisconsin primarily used for vacations by non-permanent residents who utilize the property only intermittently throughout the year. However, broadband internet providers do not typically offer contracts for intermittent service. Non-permanent residents are thus often faced with the prospect of paying for service when they are not using it, or going without the service when they are visiting the property. Our research question is to ask whether having itinerant broadband service would increase the number of visits by property owners and other tourists, and if so what the community economic impact would be of any such change in behavior. Communities can use this information to inform their interaction with broadband providers in pursuit of the public interest.

A second step in this effort will be to combine broadband access information with other information on the geographic intensity of business and industry to assess the impact of broadband service levels on the location of businesses in the state. We hope to be able to utilize this data to determine which industries are most sensitive to broadband service availability, and try to determine the impact of the level of broadband service. This information can then be used

policy makers to work with broadband providers to better meet the needs of Wisconsin businesses and perhaps enhance the economic development of the state.

This research project will lay the foundation of my further research into the economics of the digital economy more broadly. Broadband internet access is one important element of the infrastructure of the digital economy and a good place to start. During the leave I will begin reading the academic economic literature and settling on an agenda for subsequent research. While this is not the primary purpose of the sabbatical, the leave is an essential enabler for my future research.

1.B. Procedures

Some of the work on broadband will have been undertaken before the leave begins. The leave will include finishing up work on a paper deriving from the "first step" described above and presenting it at a professional meeting during or around the time of the leave, and undertaking the main analysis of the "second step". The latter will require a great deal of data management in order to get the data into proper order to enable subsequent statistical analysis. The data is believed to be available without much effort to obtain it, but it is unlikely to be in a form suited to analytical needs. I expect by the end of the leave to have completed the analysis sufficient to proceed to writing of results, and hope to have a draft manuscript ready for sharing with colleagues.

Additional work on the digital economy involve literature review and developing specific research questions that will facilitate more directed research work after the leave. I will be looking for conferences and meetings to attend that attract the leading researchers in the area of inquiry.

1.C. Schedule of Activities for Sabbatical

Prior to sabbatical: have prepared the literature review of economic impact of broadband; have the survey data on broadband access and visitor behavior in rural areas of Wisconsin; have completed the base analysis of that data.

To be undertaken at some point during the sabbatical: Present work at a general economic conference on the economic impact of broadband access related to non-resident visitor behavior; Attend a conference more specifically dedicated to the area of 'digital economy' with an eye toward improving my understanding of the broad infrastructure of such (exact conferences and dates to be determined). Develop a reading list on the digital economy in general, and design specific research questions to pursue after the sabbatical is concluded.

January 2015: Complete any remaining work on paper examining economic impact of broadband related to non-permanent residents traveling behavior; obtain data on broadband service levels and pricing along with data on geographical distribution of business and industry.

February 2015: Clean and organize data on broadband and business location; meet with state officials having some contact with broadband policy-making. Obtain and review literature on broadband and business location

March 2015: Finalize literature review on broadband and business location; meet informally with state and regional business organizations and leaders to get their perspective on broadband and business location; establish research design for broadband and business location project.

April 2015: Conduct analysis of data on broadband and business location to identify at minimum those industries most sensitive to broadband access.

May 2015: Write paper presenting results on broadband and business location; by May, have paper on economic impact of broadband on non-resident visitor behavior submitted to a peer-reviewed journal for review.

Summer 2015: Finalize and polish paper on broadband and business location; begin the studies and research design necessary to pursue identified research questions on digital economy.

1.D. Reading List and Conferences

The following articles relate to the economic impact of broadband internet access:

- Crandall, Robert, Lehr, William, Litan, Robert, 2007. The Effects of Broadband Deployment on Output and Employment: A Cross-sectional Analysis of US Data. Issues in Economic Policy Discussion Paper No. 6. Brookings Institution.
- Gaspar, Jess, Glaeser, Edward, 1998. Information technology and the future of cities. *Journal of Urban Economics* 43, 136–156
- Gillett, Sharon, Lehr, William, Osorio, Carlos, Sirbu, Marvin, 2006. Measuring the Economic Impact of Broadband Deployment. US Department of Commerce, Economic Development Administration
- Government Accountability Office, 2009. Current Broadband Measures Have Limitations, and New Measures Are Promising but Need Improvement. GAO-10-49. Report to Congressional Committees.
- Greenstein, Shane, McDevitt, Ryan, 2009. The Broadband Bonus: Accounting for Broadband Internet's Impact on US GDP. NBER Working Paper 14758.
- Grubesic, Tony, 2003. Inequities in the broadband revolution. *Annals of Regional Science* 37, 263–289.
- Grubesic, Tony, 2006. "A spatial taxonomy of broadband regions in the United States." *Information Economics and Policy* 18 (4), 423-448.
- Grubesic, Tony, Murray, Alan, 2004. "Waiting for broadband: local competition and the spatial distribution of advanced telecommunication services in the United States." *Growth and Change* 35 (2).
- Kolko, Jed, 2010. "A new measure of US residential broadband availability." *Telecommunications Policy* 34, 132–143.
- Kolko, J (2012), "Broadband and Local Growth." *Journal of Urban Economics* 71 (1), 100-113.
- Prieger, James, 2003. "The supply side of the digital divide: is there equal availability in the broadband internet access market?" *Economic Inquiry* 41 (2).
- Rosenthal, Stuart, Strange, William, 2008. "The attenuation of human capital spillovers." *Journal of Urban Economics* 64, 373–389.
- Shideler, David, Badasyan, Narine, Taylor, Laura, 2007. "The economic impact of broadband deployment in Kentucky." *Regional Economic Development* 3 (2), 88–118.

- Stenberg, Peter, Morehart, Mitchell, Vogel, Stephen, Cromartie, John, Breneman, Vince, Brown, Dennis, 2009. "Broadband Internet's Value for Rural America." US Department of Agriculture, Economic Research Service.
- Van Gaasbeck, Kristin, Perez, Stephen, Sharp, Ryan, Schaubmayer, Helen, Owens, Angela, Cox, Lindsay, 2007. "Economic Effects of Increased Broadband Usage in California." Summary Report. Sacramento Regional Research Institute.

I have not yet explored a reading list for existing works on the digital economy; the initial search for such will occur between the time of this writing and the sabbatical with more thorough investigation of such being a significant objective for the sabbatical itself. I expect to attend at least one conference substantially related or dedicated to this area during the sabbatical, with specifics yet to be determined.

1.E. Grant Proposals/Awards

No additional requests for additional funding, awards, or grant proposals are anticipated at this time, and the sabbatical plan is not sensitive to the availability of such.

2. RATIONALE FOR THE PROJECT

2.A. Contribution to Improvement as a Teacher/Scholar

As noted, the underlying motive for this leave is to reboot my research agenda. This will lay a foundation for a sustainable and sustained research activity. I will expand my peer network, make contributions to the body of scholarship in important expanding fields in the economy (namely the internet and digital economy), and be engaging in the broad approach of applied analysis that has been an emphasis of the department in the last decade or more.

The emphasis on applied research is one that will complement the teaching mission of the department, college, and university. This project is expected to include one or more student research assistants which will give them training in applied research. This experience will develop my skill in fostering other student researchers and including them in my research efforts. A student is already on board with the "first step" of this research. Student participation in research is recognized at UWW as an essential applied learning activity and a LEAP high-impact practice. In addition, the particular areas of research I am proposing to study are notable for their currency and so students and colleagues benefit from a member of our community developing expertise in them. Lastly, this leave will generate the capacity for the department to offer new coursework in these fields should the department wish to do so.

2.B. Contribution to Long Term Professional Plans

The requested leave would contribute to my plans in several significant ways. First, it allows me to launch into a research agenda of my own initiative in areas that very much capture my interests. Second, it enables sustained research efforts and outputs sufficient for me to maintain Academic Qualification in the College of Business and Economics, a status important to the accreditation needs of CoBE. Third, this leave will yield research output sufficient to support a successful application for promotion to full professor.

2.C. Relation to Institutional Goals and Priorities

2.C.i. Relation to Department Goals

The mission of the Department of Economics is as follows:

"The mission of the Department of Economics at the University of Wisconsin-Whitewater is to foster new knowledge through high quality research conducted by our faculty and to convey that knowledge to students through undergraduate and graduate programs. ... Second, with regards to research, we wish to create an environment that will enable our faculty to maintain an active and diverse research agenda. By doing so, we seek to attract and retain high quality faculty to the Department. In addition, we aim to allow faculty to lend their expertise to regional, national and international interests, and outreach."

As is readily apparent, the goals of my proposed sabbatical directly coincide with the mission of the Department of Economics. It should also be noted that the elements related to broadband availability in Wisconsin have immediate state interest and is an area the state Department of Commerce is actively seeking research on as of this writing

2.C.ii. Relation to College of Business and Economics Goals and Priorities By pursuing high-quality research of an applied nature, the objectives for this sabbatical tie into the following College of Business and Economics strategic objectives:

- I. **Programs and Learning:** "The College will provide relevant and rigorous academic programs integrated with applied learning experiences... We will maintain AACSB accreditation, achieving the highest standards for...faculty qualifications and continuous improvement."
- II. **Research and Professional Development:** "The College will support sustained scholarship and ongoing professional development by faculty and students. We will maintain an engaged and research active faculty, which is essential to quality professional business education."
- IV. Regional Resource for Businesses, Not-for-Profits and Communities: "The College will strive to be a center of excellence, providing intellectual resources to serve businesses, not-for-profit organizations and communities... The business and economic development needs of the region and the professional development of our faculty and students will be closely integrated."

My sabbatical project will contribute to my sustained scholarship which helps meet college accreditation standards, is of an applied nature which will continue to include active student participation in collaborative research with faculty, and which is of direct interest to state and regional development by investigating the state and impact of vital economic digital infrastructure.

The objectives of this sabbatical also align with the **CoBE Priority Areas** of:

- Social, Economic, and Environmental Responsibility, by offering insight into the infrastructural broadband internet needs of businesses and the public, and
- Innovation/Creative Activity, by developing expertise in the college community in the broad topic of the Digital Economy, a part of the economy almost iconic in symbolizing innovation, creation, new ways of doing things, and profound contemporary change. The economic impact of broadband is my entry point into this broader field.

2.C.iii. Relation to University Goals, Values, and Mission

As this is sabbatical is dedicated to a research agenda part of which is meant to inform public policy and regional economic development, and allow me the opportunity to restore a research agenda sacrificed to benefit my service contributions to the university community, its objectives go towards the following values, which lie at the heart of what we do at UWW:

- 1. *Commitment to the pursuit of knowledge and understanding* by expanding on the body of knowledge about the significance of broadband internet access.
- 2. Development of the individual by giving me the time to enhance my scholarly productivity.
- 3. *Commitment to serve* by engaging in scholarship that intends to better inform policy making and economic development in Wisconsin.

Similarly, my sabbatical objectives align with the following **UWW Mission** elements:

- To engage in scholarly activity, including research, scholarship and creative endeavor, that supports its programs at the associate and baccalaureate degree level, its graduate programs, and its select mission.
- To serve as a regional cultural and economic resource center through its service initiatives.
- To provide a variety of co-curricular activities to enhance out-of-class learning opportunities by involving a student in my project

The University has specific goals for its strategic priorities. This sabbatical contributes to the strategic priorities of being **an Educator-Scholar Community** where faculty possess and practice excellence in the creation of new knowledge and its effective integration in teaching, research, learning and problem-solving, and **Regional Engagement** where we desire to be a valued educational, economic, and cultural resource that seeks new ways of serving regional communities. The specific goals this sabbatical most closely aligns with are:

- Scholar-Educator Community Goal #1: Increase support for faculty, staff, and students to engage in research and scholarly activity, by providing me with this leave to enhance my research potential and productivity,
- Scholar-Educator Community Goal #2 regarding high impact educational practices by involving a student (at least one) as a collaborator in this project, and
- Regional Engagement Goal #2, Increase campus capacity to connect students, faculty, and staff in service engagement, entrepreneurship, and economic development in ways that enhance student learning and foster community and regional partnerships, as this sabbatical will entail research on the links between broadband access, business location, and ultimately economic development that is specific to Wisconsin.

This sabbatical will also enhance my effectiveness as a teacher ala **LEAP** goals by building in the faculty a greater Knowledge of Human Cultures and the Physical and Natural World, as well as Intellecutal and Practical skills. Economic activity is human interactivity, and the digital realm of such is a relatively new and suddenly important arena of such interaction that our faculty and students deserve to have more expertise on. This sabbatical also builds on LEAP by integrating the **high-impact educational practice of Undergraduate Research** by involving at least one student in the project. Additionally, as I teach the General Education core course of Global Perspectives, and the digital economy is a realm of much deeper global integration and exchange, this sabbatical will enhance my ability as teacher to help students understand the complexities of our more digital and global world. A core feature of the current global system is

the digital divide and how access to the internet deeply affects one's connectedness to the current global system. This issue is already part of my course. The results of this project will help students in Global Perspectives understand the impact of the quality of that access in a "home" context they are familiar with, giving them a better basis on which to broaden the matter to a global context, in particular in developing regions of the world where levels of internet access are quite different from those students understand through personal experience.

2.C.iv. Relation to Board of Regents Committee Emphases

The Board of Regents Education Committee identified several emphases to be addressed by sabbatical projects. Those that are furthered by this sabbatical include:

- Projects in support of the mission of the institution, which this sabbatical does as described above relating sabbatical goals to institutional goals
- The scholarship of teaching and learning as relates to student achievement, as student researchers will be working with me on the broadband and business project which will develop their Critical and creative thinking skills. Additionally, this sabbatical will enhance my own Knowledge of human cultures and the natural world which will allow me to improve my instruction in Global Perspectives as described in the previous paragraph, and also provide the foundation for a possible future course on the digital economy.

3. PROJECT EVALUATION

3.A. Evaluation of Activities

The work of these projects (- the first two objectives) will be evaluated both informally as well as formally. Informal feedback will be provided by colleagues to whom I send the paper, as well as by colleagues within my own department. I plan to present the results of the paper in our departmental seminar series. Additional feedback will occur when I present the findings at conferences. Formal feedback will occur when I submit my findings for publication in peer reviewed journals.

3.B. Results and Outcomes of Activities

This leave will result in scholarly works which are expected to result in published articles in peer-reviewed journals. The path to that outcome will also involve my expanding my professional range of expertise, develop currency in new and exciting parts of the economy, and expanding my peer network. This will also manifest in future courses I teach and may even lead to the development of new courses in cutting-edge areas of economics.

3.C. Dissemination of Results on Campus

Results of work will be shared with colleagues and other interested parties in the Department of Economics Seminar Series as well as the Brown Bag Lecture Series in CoBE.

<u>APPLICANT DATA – JEFF HEINRICH</u>

EDUCATION

Ph.D. in Economics, University of Hawaii at Manoa, December 1998. Dissertation: "Multimarket Economies of Scale in International Trade: R&D, Multinationals, and Trade Policy," advised by Denise Eby Konan (chair), Kwang-Soo Cheong, Sumner La Croix, Chung Lee and Peter Manicas

M.A. in Economics, University of Hawaii at Manoa, 1995

B.A. in Economics, University of Illinois at Urbana-Champaign, 1992

PROFESSIONAL EXPERIENCE

Associate Professor with tenure, Department of Economics, College of Business & Economics, University of Wisconsin-Whitewater, Fall 2006-present

Assistant Professor, Department of Economics, CoBE, UW-W, Fall 2000-Spring 2006

Visiting Assistant Professor, Wabash College, Wabash IN, Fall 1999-Spring 2000

Instructor, Department of Economics, University of Hawaii-Manoa, Falls 1997 & 1998, Summers 1996 & 1997

<u>Teaching Assistant</u>, Dept. of Economics, University of Hawaii-Manoa, Fall 1995-Spring 1998

PREVIOUS LEAVES OF ABSENCE - NONE

TEACHING AT UW-WHITEWATER

CoBE teaching evaluations use a 5-point Likert scale on at least 15 questions (22 for online courses), up to 10 of which are instructor-selected. As the data below shows, department average evaluation scores are very good. My own evaluations have exceeded the department average for every term except SP13. A pedagogical experiment in "flipping" the classroom in ECON 202 in SP 13 was obviously unsuccessful and not representative of my teaching record at UW-W.

| Fall 2011: | GENED 140 ECON 704 Dept. Avg. | 4.33 | Spring 2012: | ECON 471 ECON 704 Dept. Avg. | 4.66 |
|------------|---|--------------|--------------|-------------------------------------|------|
| Fall 2012: | GENED 140 ECON 201 ECON 704 Dept. Avg. | 4.55 4.56 | Spring 2013: | GENED 140 ECON 202 Dept. Avg. | 3.42 |

By CoBE merit standards, this teaching record is considered "Excellent", the highest merit rating category. I have achieved this peer rating of my teaching every merit period for the last decade.

I have actively participated in several university-wide teaching and learning improvement efforts, including the workshop on writing which ultimately resulted in the Writing Matters Document, The UW-W General Education Assessment Summit in Summer 2011 and the General Education mini-summit in Summer 2013 to name a few.

SCHOLARLY ACTIVITY

PUBLICATIONS:

- "An Estimation of the Elasticity of Demand for Tap Water," with R. Kashian, E. Cramer, and B. Narveson, Journal of Strategic Innovation and Sustainability, vol. 3, March 2012, pp. 100-112. *Peer reviewed*.
- "Pricing the Homebuyer's Proximity to Open Land," with R. Kashian, Journal of Applied Business and Economics, vol. 11, July 2010, pp. 17-25. *Peer reviewed*
- "Credit Union to Mutual Conversion: Do Interest Rates Diverge?" with R. Kashian, Contemporary Economic Policy, vol. 26, January 2008, pp. 107-121. Peer reviewed
- "The Publishing Patterns of Mid-Career Economics Doctoral Graduates," with R. Kashian, *Journal of Business and Economics Research*, vol.3 no. 6, June 2005, pp. 1-22. *Peer reviewed.*
- Contribution to United Nations Conference on Trade and Development *World Investment Report 2003*, Box II.5, "Effect of regional agreements on FDI in Asia" with Craig Parsons and UNCTAD staff.
- "Prospects for FDI in the AFTA," with D. Konan, *ASEAN Economic Bulletin*, v.18 n.2 August 2001, p. 141-160. *Peer reviewed.*
- "Foreign Direct Investment and Host-Country Trading Blocks," with D. Konan, *Journal of Economic Integration*, v15 n4 Dec. 2000, p. 565-584. *Peer reviewed.*
- Review of *The Economics of Preferential Trade Areas*, J. Bhagwati and A. Panagariya, eds. (Washington, DC: The AEI Press, 1996). *Review of International Economics* 8(1), February 2000
- Konan, D.E., S.J. La Croix, J.A. Roumasset and J.S. Heinrich (1995), "Intellectual Property Rights in the Asia-Pacific Region: Problems, Patterns, and Policy," *Asia Pacific Economic Literature* 9(2), 13-35

PROFESSIONAL PRESENTATIONS:

- "An Estimation of the Elasticity of Demand for Tap Water," presented at the Georgetown Economic Research Center 2011 Conference, Georgetown U. Campus, Washington, DC, June 2, 2011.
- "Interest Rate Differentials and the Conversion of Credit Unions", with Russ Kashian, Midwest Economics Association, Chicago, IL, March 25, 2006
- "The Publishing Patterns of Mid-Career Economics Doctoral Graduates," authored with R. Kashian, Midwest Economics Association Meetings, Chicago, IL, 3/19/04-3/21
- "A Look into the Causes of US FDI Behavior in ASEAN (1982-1999)," authored with Craig Parsons, presented at 79th Annual Meeting of the Western Economics Association, Vancouver, British Columbia, Canada, June 29-July 3, 2004
- "A Look into the Causes of US FDI Behavior in ASEAN (1982-1999)," presented with Craig Parsons at Eighth International Convention of the East Asian Economic Association, Kuala Lumpur, Malaysia, Nov. 4-5 2002.
- Discussant: "How Comprehensive will the Doha Round be? Experiments with Agricultural and Non-Agricultural Reforms" by S. Chatterjee, A. Rae, and S. Shakur at Eighth International Convention of the East Asian Economic Association, Kuala Lumpur, Malaysia, Nov. 4-5 2002.



FACULTY SABBATICAL / CHANCELLOR'S FELLOWSHIP SUPPORT FORM

| Applicant Name: | Jeffery S. Heinrich |
|---|--|
| Department: | Economics |
| ☐ Fall | Support Time Period 4-2015 Academic Year (up to 65% compensation) 2014 Semester (up to full compensation) ing 2015 Semester (up to full compensation) |
| Supplemental support | required through a Chancellor's Fellowship? |
| | arch into the Economics of Broadband Access and the Digital Economy |
| resources to suppo described below. Briefly, describe I services to stude Department facu | cation for sabbatical leave/fellowship. The Department has committed the ort the personnel expenses related to this sabbatical leave request as now staffing arrangements have been made to maintain quality instructional ints during the leave. Alty will provide coverage for Dr. Heinrich's sabbatical by assuming his sibilities for the term. |
| I support this applied is secured. | cation for sabbatical leave IF AND ONLY IF Supplemental Sabbatical Support |
| Briefly, justify the | need for Supplemental Sabbatical Support. |

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| I am unable to support this application for sabbatical leave / fellowship. | |
|---|--------------------------|
| Describe rationale for lack of support. | |
| | |
| Signature of Department Chair | /0//0/13 Date |
| COLLEGE SUPPORT | |
| I approve the proposed activity, the semester(s) requested, and the arrathe applicant's teaching responsibilities during the leave. | angements for covering |
| I support this application for sabbatical leave IF AND ONLY IF Chasecured. | incellor's Fellowship is |
| Briefly, justify the need for Supplemental Sabbatical Support. | |
| I am unable to support this application for sabbatical leave. | |
| Describe rationale for lack of support. | |
| Signature of College Door | 10/11/13 |
| Signature of College Dean | Date |