

Project /Activity Number: NC-1030

Project/Activity Title: Sustainable Families, Firms and Communities in Times of Change

Period Covered: October 1, 2020 to September 30, 2021

Date of this Report: November 30, 2021

Annual Meeting Date(s): October 7 & 8, 2021

Participants: Cheang, Michael (University of Hawaii); Niehm, Linda (Iowa State University); LeHew, Melody L. A. (Kansas State University); Zuiker, Virginia (University of Minnesota); Valdivia Corinne, (University of Missouri); Haynes, George W. (Montana State University); Manikowske, Linda (North Dakota State University); Jorgensen, Jennifer Johnson (University of Nebraska-Lincoln); Marshall, Maria I. (Purdue University); Lee, Yoon G. (Utah State University); Jasper, Cynthia R. (University of Wisconsin). New members starting October 1, 2021: Inwood, Shoshannah (The Ohio State University); Visser, Anne (UC Davis); Diddi, Sonali (Colorado State University). Also attending Renee Wiatt and Sandra Sydnor, Purdue University. Also present on October 7 Dr. M. D. Wilcox (Purdue University) advisor to NC1030.

Brief Summary of Annual Meeting Minutes

This year the NC1030 Annual Meeting took place at Utah State University, hosted by Dr. Yoon Lee, October 7 and 8. All the state representatives were present either in person or virtual, along with NC1030 advisor. On October 7, day one (8:30 - 5:00pm) there were introductions by NC1030 co-chairs Marshall and Valdivia, welcoming new members from California, Colorado, and Ohio, and the welcome of Dr. Chris Davies, Associate Director of Utah Agricultural Experiment Station, who addressed the importance of maintaining resilience and sustainable communities and businesses in the context of COVID as well as climate change. He was impressed by the diversity and national scope of the members of NC-1030. A presentation by Dr. Don Albrecht, executive director of the Western Rural Development Center focused on Sustainable and Resilient Businesses. Next, Dr. LeHew gave a presentation of the 5 year project that began October 1st, as new members have joined from Colorado State, UC Davis, and The Ohio State University. The business meeting was held following the presentations. The Co-chairs were selected, Drs. Sandra Sydnor and Virginia Zuiker. The remaining of Day 1 focused on the discussion of potential research activities and development of interest groups on each of the objectives of the new project, and data collection for the new project. The framework that informs the research for the next five years was also a focus of brainstorming activities. Four themes were identified: 1) Rural Small Business Recovery and Resilience to Natural Hazards; 2) Sustainable and Resilient SMEs in a Regenerative Fiber and Food System; 3) Entrepreneurial and Innovative Response to Disruption and System Shocks by Family-Owned SMEs; 4) Contributions of Socioemotional Wealth, Rurality, Collaboration and Race on Resilience and Success of Family-Owned SMEs; and 5) Impact of Transgenerational Control and Transfer within Family Businesses on Resilience and Recovery. Day two began with welcoming and a presentation by Dr. Scot Allgood, Department Head of Human Development and Family Studies, focusing on socio emotional health in this difficult times, addressing mental health problems, both related to students of concern, and of business owners. Dr. Marshall presented on the

NCRCRD (North Central Region Center for Research and Development) Grant Opportunities promoting rural development, and opportunities for research groups that include multiple states in the North Central region. This was followed by presentations of existing and new data sets that are available for collaborative research. Then the members gathered in groups to brainstorm on the themes followed by a discussion of impacts of the 5 year project 2016-2021. Discussions concentrated on the supporting evidence from the literature and on-going research, agreeing to the following objectives for the five year project: Objective 1: Identify and measure the sources of major change and disruption and the structural barriers that impact the family/household, the business or the community; Objective 2: Identify and measure transformative responses to the positive and negative impacts of change and disruption on the family/household, the business, or the community; and Objective 3: Determine and inform policy or practice related to the wellbeing of the family, the business, or the community.

Accomplishments by NC 1030 Research Objectives (2020-2021):

The NC1030 research team met every other month virtually to share and discuss on-going research activities. These meetings also informed the research team of current and upcoming research projects. Smaller groups met throughout the year to discuss on-going research and to work on manuscripts.

An important outcome of the last year is the 2021-2025 research project for NC-1030. Co-chairs Drs. Manikowske and LeHew led the writing team to develop a proposal for the five-year project for NC 1030. Two manuscripts were submitted, three manuscripts were published this year, and three are in preparation. The manuscripts reported are collaborative across states.

Specific accomplishment are summarized by the three project objectives

Objective 1. Identify and measure the sources of change and disruption that impact the family/household, the family firm or the community.

Collaborative research by Johnson Jorgensen, Zuiker, Manikowske and LeHew focused on the role of communication technologies of small business success. Owners and managers of small businesses tend to struggle to utilize online communicative technologies effectively. Businesses rely on technologies, but don't find easy-to-use technologies to be useful in their retail establishments. They also find that business owners and managers who are younger, located in urban areas, and in business for a shorter time are also more likely to use communication technologies. Impact- Findings from this study are useful for small business owners, community government officials, business agencies, and other stakeholders. Results can also help guide entrepreneurship education, as it has been determined that technologies can help businesses be successful and serve entrepreneurs and communities. This research also serves as a foundation for future inquiry into how businesses can further benefit from using communicative technologies in their processes and practices. A manuscript has been submitted and is under review.

Objective 2. Identify and measure responses to the positive and negative impacts of change and disruption on the family/household, the family business, or the community.

Four research activities completed this year focused on the responses and impacts of disruptions, specifically recovery after a natural disaster; adjustment strategies by small business owners at the start of the COVID 19 pandemic; and how government loan programs were implemented in

response to COVID 19.

Wiatt, Lee, Marshall, and Zuiker studied the effect of cash flow problems and intermingling of resources on the recovery and resilience of small businesses after a natural disaster. This study investigated the implications that cash flow problems and resource intermingling between the family and the business had on small business recovery and resilience after a natural disaster, thus addressing the impacts of disruption to the family and household. This study contributed to the literature by studying the impact of cash flow problems and resource intermingling on small businesses in two separate periods: right after the natural disaster (period 1) and eight years after the disaster (period 2). Period 1 determined whether the business was in operation directly following Hurricane Katrina. Period 2 investigated success of the small business after Katrina (compared to pre-Katrina success). Results showed that cash flow problems and resource intermingling did not affect operational status directly following Katrina, but did play a role in business resilience in the long run. Impact - Implications from this study can be utilized to inform practitioners, business consultants, and policy makers. These professionals can use the results from this study to advise family firms in intermingling, bootstrapping, and financial management during disruptive times, crises, and disasters. An article was published in the Journal of Family and Economic Issues.

Collaborative research from Purdue and University of Missouri (Drs. Marshall and Valdivia from NC 1030 and Dr. B. Katare from Purdue) focused on COVID-19 impacts and recovery of small businesses. An online survey was developed and data collected in July 2020. Two journal articles were published this year. The research on small businesses focused on small business owner adaptive strategies and the effect of the CARES Act. The study provided early evidence on how small business owners were affected by COVID-19 and the implementation of the Coronavirus Aid, Relief, and Economic Security (CARES) Act. The online survey was completed by 463 small business owners, a representative sample from across the United States. The results from this research study will lead to a better understanding of key vulnerabilities and adjustments that small businesses make to fully recover from economic shocks.

Haynes also conducted related research focused on the change in small business loans outstanding during the COVID-19 Pandemic. The financial stimulus provided by the CARES Act through the Paycheck Protection Program (PPP) had profound impacts on the market for business lending by depository institutions and others. While the value of outstanding loans greater than \$1 million (large business loans) increased by 10%, the value of outstanding loans for loans less than \$1 million (small business loans) increased by 39% in just 6 months. The largest share of the PPP funds was distributed through larger lenders; however, the most important question was which depository lenders “stepped up to the plate”. The study finds that depository lenders with between \$1 and 10 billion in total assets (mid-sized banks) “stepped up to the plate” and hit a home run by distributing 62% more funding than expected, and increasing their market share for small business loans by 16%. For most small business borrowers, these loans have been and will likely be converted into grants and removed from the balance sheets of depository lenders. Impact – this research examined the additional funding provided by depository lenders from December, 2019 through June, 2020. This research was important in assessing the additional funds supplied by large and small lenders through the PPP. This paper is under review by the Office of Advocacy at the Small Business Administration.

Niehm, Less Masuo and Shin are preparing a manuscript for submission focusing on the Survival of Family-owned business in rural and small communities, looking into the entrepreneurila and

innovative responses to recessionary disruption. Wiatt, Sydnor, Marshall, Haynes, Valdivia Jasper and Zuiker collaborated in research on the impact of the family business culture and wellbeing. This research is on going into the new project. Day, Sydnor, Marshall and Noakes published on econotourism, regenerative tourism and the circular economy.

Objective 3: Determine and inform policy or practice related to family firms.

Haynes, Marshall, Lee, Zuiker, Jasper, Wiatt, Sydnor, Valdivia, Niehm, and Masuo published in 2021, *Family Business Research: Reviewing the Past, Contemplating the Future*. This review of a decade of research identified accomplishments and areas of further research. The review addressed four areas, household and business economics, business continuity and succession, managerial and adoption strategies, and values and goals. Future research opportunities for family business research should seek to better understand the impact of community resources and climate; more carefully assess the challenges of women, minorities and immigrants; understand the role of cultural capital, and explore the impact of innovation during rapidly changing times, such as those created by the pandemic.

Findings from the research by Wiatt et al 2021 inform professionals working with small firms after a natural disaster that more experienced small business owners were more likely to be resilient following Hurricane Katrina and that gender differences do exist within these small businesses. Also, following Hurricane Katrina, the largest factor that affected short-term recovery was major storm damage, not business finances and intermingling habits.

Short term outcomes:

Outputs:

Haynes, G., Marshall, M., Lee, Y., Zuiker, V., Jasper, C., Wiatt, R., Sydnor, S., Valdivia, C., Niehm, L.S., & Masuo, D. 2021. *Family Business Research: Reviewing the Past, Contemplating the Future*. *Journal of Family and Economic Issues*, 42(1), 70-83.

<https://doi.org/10.1007/s10834-020-09732-6> (objective 2 and 3)

Wiatt, R.D., Y. Lee, M.I. Marshall, and V. Zuiker. 2021. The Effect of Cash Flow Problems and Resource Intermingling on Business Recovery and Resilience after a Natural Disaster. *Journal of Family and Economic Issues*, 42: 203-214. <https://doi.org/10.1007/s10834-020-09710-y> (Objective 2)

Edobor, E.W., R. Wiatt, and M.I. Marshall. 2021. Keeping the Farm Business in the Family: Examining Succession Planning among Small and Medium-sized Farm and Non-Farm Family Businesses in the Midwestern United States. *International Food and Agribusiness Management Review*. <https://doi.org/10.22434/IFAMR2020.0138> (Objective 2)

Katare, B., M.I. Marshall, and C.B. Valdivia. 2021. Bend or Break? Small Business Strategies and the CARES Act during the COVID-19 Shock. *International Journal of Disaster Risk Reduction* <https://doi.org/10.1016/j.ijdrr.2021.102332> (Objectives 1 and 3)

Wiatt, R.D., Lee, Y.G., Marshall, M.I., and Zuiker, V.S. 2020. The Effect of Cash Flow Problems and Resource Intermingling on Small Business Recovery and Resilience After a Natural Disaster. *Journal of Family and Economic Issues*. Available at: <https://doi.org/10.1007/s10834-020-09710-y>.

Manuscripts Submitted (under review)

Johnson Jorgensen, J., Zuiker, V., Manikowske, L., & LeHew, M. (In Review). Impact of communication Technologies on Small Business Success. *Journal of Small Business Strategy*.

Manuscripts Under Development

Niehm, L.S., Lee, Y., Masuo, D., & Shin, E. The Survival of Family-Owned Business in Rural and Small Communities: Entrepreneurial and Innovative Responses to Recessionary Disruption. (Preparing for submission to JFEI).

Working Papers

Sydnor, S. B., Marshall, M. I., Haynes, G. W., Valdivia, C. B., Jasper, C., Zuiker, V. S. (in process). The Impact of Family Business Culture and Wellbeing (or Balance or Self-Care) on Functioning and Profitability

Refereed Publications

Katare, B., M.I. Marshall, and C.B. Valdivia. 2021. Bend or Break? Small Business Strategies and the CARES Act during the COVID-19 Shock. *International Journal of Disaster Risk Reduction* <https://doi.org/10.1016/j.ijdrr.2021.102332> (Objective 1)

Day, J., S. Sydnor, M.I. Marshall, and S. Noakes. 2021. Ecotourism, Regenerative Tourism, and the Circular Economy: Emerging Trends and Ecotourism, *Handbook for Ecotourism*. Ed David Fennell. Routledge. (Objective 2)

Wiatt, R.D., Y. Lee, M.I. Marshall, and V. Zuiker. 2021. The Effect of Cash Flow Problems and Resource Intermingling on Business Recovery and Resilience after a Natural Disaster. *Journal of Family and Economic Issues*, 42: 203-214. <https://doi.org/10.1007/s10834-020-09710-y> (Objective 2)

Haynes, G, M.I. Marshall, Y. Lee, V. Zuiker, C.R. Jasper, S. Sydnor, C. Valdivia, D. Masuo, L. Niehm, and R. Wiatt. 2020. Family Business Research: Reviewing the Past, Contemplating the Future. *Journal of Family and Economic Issues*, <https://doi.org/10.1007/s10834-020-09732-6> (Objective 3)

Katare, B., S. Zhao, J. Cuffey, M.I. Marshall, C. Valdivia. 2021. Preferences Toward COVID-19 Diagnostic Testing Features: Results from a National Cross-Sectional Survey. *American Journal of Health Promotion*. <https://doi.org/10.1177/08901171211034093>. (Objective 3)

Manuscripts in Preparation

Sydnor, S. B., Marshall, M. I., Haynes, G. W., Valdivia, C. B., Jasper, C., Zuiker, V. S. (in process). The Impact of Family Business Culture and Wellbeing (or Balance or Self-Care) on Functioning and Profitability (Objective 2)

Extension Publications

Wiatt, R, Y. Lee, M.I. Marshall, V. S. Zuiker. 2020. Cash Flow Problems and Resource Intermingling: Do They Affect Small Business Recovery and Resilience in the Wake of a Natural Disaster? *Purdue Agricultural Economics Report*. October Issue. Department of Agricultural Economics. <https://ag.purdue.edu/commercialag/home/paer-article/cash-flow-problems-and-resource-intermingling-do-they-affect-small-business-recovery-and-resilience-in-the-wake-of-a-natural-disaster/> (objective 3)

Current Grants

USDA-NIFA-AFRI: *Rural Small Business Recovery and Resilience to Natural Hazards: A Focus on Women and Minority Owned Small Businesses*, 2019-2022, \$500,000, PI and Project Director, Co-PIs: B. Katare (Purdue) and C. Valdivia (University of Missouri).

USDA-NIFA-AFRI: *Taking the Next Step as a Small and Medium Sized Farm: Understanding the Integration of Production, Food Safety, and Profitability*, 2021-2025, \$500,000, PI and Project Director, Co-PIs: B. Feng (FS), P. Langenhoven (HLA), N. Shoaf (Urban Ag), and R. Wiatt (AGEC).

SASA/World Initiative for Soy in Human Health (WISHH) Foundation: *Proposal to Develop and Implement a Course on Business Plan Development for Elite Entrepreneurs from Developing and Emerging Markets*, 2021, \$101,221, PI and Project Director, Co-PI: R. Wiatt (Purdue) and J. Fulton (Purdue).

Authorization:

Abstracts of Journal Articles from collaborative work with NC1030 members:

Family business research: Reviewing the past, contemplating the future

This paper reviews articles published in the Journal of Family and Economic Issues (JFEI) from 2010 to 2019 and considers future research opportunities. The JFEI articles utilize theories and conceptual frameworks from several social science fields, to help readers understand the importance of including both the family and business in any discussion of family businesses. The literature review addresses four family business topical areas: (1) household and business economics, (2) business continuity and succession, (3) managerial and adoption strategies, and (4) values and goals. These JFEI articles have focused on differentiating family businesses from other types of businesses; explaining the unique interface between the family and the business; and identifying the characteristics (i.e., demographics, adjustment strategies, continuity, capitals, and values and goals) for family business survival and success. **In the future, family business researchers have the opportunity to better understand the impact of community resources and climate; more carefully assess the challenges of women, minorities, and immigrants; understand the role of cultural capital; and explore the impact of innovation during rapidly changing times, such as those created by the pandemic.**

The Effect of Cash Flow Problems and Resource Intermingling on Small Business Recovery and Resilience After a Natural Disaster

This study investigated the implications that cash flow problems and resource intermingling between the family and the business had on small business recovery and resilience after a natural disaster. This study contributed to the literature by studying the impact of cash flow problems and resource intermingling on small businesses in two separate periods: right after the natural disaster (period 1) and eight years after the disaster (period 2). Period 1 determined whether the business was in operation directly following Hurricane Katrina. Period 2 investigated success of the small business after Katrina (compared to pre-Katrina success). **Results showed that cash flow problems and resource intermingling did not affect operational status directly following Katrina, but did play a role in business resilience in the long run.**

Bend or Break? Small Business Survival and Strategies during the COVID-19 Shock

This manuscript studies the impact of the exogenous COVID-19 pandemic shock on small businesses in the United States. We provide early evidence on how small business owners were affected by COVID-19 and the implementation of the Coronavirus Aid, Relief, and Economic Security (CARES) Act. We collected online survey data from a national sample of 463 small business owners across the United States. The survey was conducted in June 2020, eight weeks after the passage of the CARES Act and the Paycheck Protection Program and Health Care Enhancement Act. The survey data include information about business characteristics, financial well-being, current response to the crisis, beliefs about the future of their business survival, and the business-owning family demographic information. There are three main themes that emerge from the results. First, drivers of income loss were not necessarily associated with time to recovery. Second, businesses that were undercapitalized were more likely to suffer higher income loss, longer time to recovery, and less likely to be resilient. Resilient was operationalized as a scale merging perceived success, potential for growth, and perceived profitability. Third, business model changes were necessary due to the pandemic but not all adaptive strategies led to better business outcomes. **The results from this research study will lead to a better understanding of key vulnerabilities and adjustments that small businesses make to fully recover from economic shocks.**

Preferences toward COVID-19 Diagnostic Testing Features: Results from a National Cross-Sectional Survey

Widespread COVID-19 diagnostic testing is necessary to guide public health policies and speed economic recovery from the pandemic.¹ For mass COVID-19 diagnostic testing to succeed in the U.S., individuals must be willing to regularly undergo a test. Tests can be taken in different locations using different methods, and participation can be motivated with monetary incentives.² Preferences toward these testing features may influence individuals' willingness to test (WTT). Individual preferences predict preventive behavior in a range of other contexts^{3,4} and may therefore influence the success of any COVID-19 testing campaign. There is currently little knowledge about the COVID-19 testing features that individuals prioritize. **This study elicits preferences for COVID-19 diagnostic testing features (method, location, and monetary incentive) using a discrete choice experiment and simulates the impact of monetary incentives on individual WTT.**

Ecotourism, Regenerative Tourism, and the Circular Economy: Emerging Trends and Ecotourism

Ecotourism organizations have often been at the cutting edge of new trends in sustainability. They were among the first tourism organization adopting sustainability, they have developed techniques to operationalize key principles and have been quick to adopt new techniques to achieve their objectives. This chapter will examine three trends that seem likely to influence tourism in the coming years. These three interrelated trends are the rise of the circular economy, the emerging focus on regenerative tourism, and the regenerative recovery. **Each of these concepts is closely aligned with ecotourism principles and, while some ecotourism may already apply these principles, each provides new opportunities for ecotourism products to improve their operational effectiveness.**

Keeping the Farm Business in the Family: The Case of Farm and Non-Farm Family Businesses in Midwestern United States

Succession planning is a very crucial aspect of family business continuity. The successful transition of family businesses is especially important for small and medium scale family businesses which constitute the beginning phase of most businesses. This paper explores two critical aspects of succession planning namely the decision to keep business ownership within the family, and the transfer-readiness of family businesses. This study assessed potential correlates of these two constructs using data from small and medium scale farm and non-farm businesses in Midwest US. Results from a probit estimator showed that farm businesses were more likely to be kept within the family ($p < 0.01$). For the full sample, the number of generations involved in daily management, the readiness of the senior management to delegate control, and the owner experience were also found to be good correlates of the decision to keep the business within the family. For farms, we also found some correlation between the perception of the business as being successful and the decision to keep the business in the family ($p < 0.1$). Results from the probit and bivariate probit models showed that capital, and the number of generations in management are the most consistent correlates of transfer readiness for the full and farm samples. Finally, we found that female owners of farm businesses were less likely to be ready for business transfers than their male counterparts ($p < 0.01$).

Impact of Communication Technologies on Small Business Success.

Business owners and managers of small businesses tend to struggle to utilize online communication technologies effectively. To investigate the role of communication technologies in small businesses, the purpose of this study was to determine the perceived usefulness and perceived ease of use for online communication technologies and how those perceptions relate to business success. The Small Business Values Survey was used to access data from 522 business owners, and an integrated model using the Diffusion of Innovation and the Technology Acceptance Model was used as a theoretical foundation. Relationships between variables were tested using multiple regression and confirmed that small business owners and managers find that easy-to-use communication technologies are not perceived to be useful or contribute to business success. However, communication technologies that are perceived to be useful do contribute to business success. Business owners and managers who are younger, located in urban areas, and in business for a shorter time are also more likely to use communication technologies. This study contributes to current literature, as it was unclear how small business owners and managers perceive communication technologies for use in their businesses.

Abstracts from collaborative research in NC1030:

Under review:

--*Not Yet Accepted*—Submitted to *Journal of Small Business Strategy*; July 2021

Title: Impact of Communication Technologies on Small Business Success

Authors: Johnson Jorgensen, J., Zuiker, V., Manikowske, L., & Lehew, M.

Abstract: Business owners and managers of small businesses tend to struggle to utilize online communication technologies effectively. To investigate the role of communication technologies in small businesses, the purpose of this study was to determine the perceived usefulness and perceived ease of use for online communication technologies and how those perceptions relate to business success. The Small Business Values Survey was used to access data from 522 business owners, and an integrated model using the Diffusion of Innovation and the Technology Acceptance Model was used as a theoretical foundation. Relationships between variables were

tested using multiple regression and confirmed that small business owners and managers find that easy-to-use communication technologies are not perceived to be useful or contribute to business success. However, communication technologies that are perceived to be useful do contribute to business success. Business owners and managers who are younger, located in urban areas, and in business for a shorter time are also more likely to use communication technologies. This study contributes to current literature, as it was unclear how small business owners and managers perceive communication technologies for use in their businesses.