EVALUATION OF THE EVOLUTION AND PERCEPTIONS OF EXTENSION PROGRAMS AND SERVICES IN THE UNITED STATES

by

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(Under the Direction of Dan Barry Croom)

Abstract

The Cooperative Extension Service has experienced a great deal of change over the last 50 years. Amid demographic shifts, funding volatility, and rising expectations for equity and measurable public value, the Extension must adapt organizational designs that sustain both relationships and specialist depth. This dissertation examines how structure, innovation, and workforce experience interact to shape effectiveness in achieving the mission of Extension. Chapter 2 presents a multi-case study of senior leaders across seven states that maps funding architectures, governance routines, and delivery portfolios, offering a contemporary typology of county, regional, and hybrid models. Chapter 3 uses a phenomenological inquiry of high-profile innovations from the last two decades to identify enabling conditions—trusted boundary spanners, specialist teams, logistics and marketing backbones, leadership sponsorship, protected time, and evaluation that tracks adoption and equity. Chapter 4 reports a national survey ($N = 584$; 48 states and one territory) on program supports, job satisfaction, burnout, and perceptions of structural models; findings show generally positive collaboration alongside workload and work–life pain points, with significant yet modest differences across structures and regions. Chapter 5 integrates insights into design principles that protect county relationship capacity, strengthen program and data backbones, and isolate core roles from short-term funding. These findings inform future research and practice.

INDEX WORDS: Cooperative Extension; Organizational structure; Program delivery; Extension Agent; County-based models; Regionalization; Leadership processes; Diffusion of innovations; Public value; Equity; Job satisfaction; Burnout; Workforce capacity; Evaluation systems; Boundary spanners; Cost-share.

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Chapter 1 Introduction

George Bernard Shaw (1944, p. 330) once said, “Progress is impossible without change, and those who cannot change their minds cannot change anything." To remain an agent of change, one must also be able to change. In this scenario, the change agent is the Cooperative Extension Service (Extension). Extension, established to deliver research-based education and practical knowledge to communities, stands as one of the most enduring and impactful change agencies in history. However, the past five decades have brought significant shifts to this century-old institution, driven by societal, economic, and technological changes. Extension is constantly facing limitations financially, at times unrealistic client demands, and the emergence of market competition in the form of the other companies and businesses, and even the internet. This is not new information having been the motivation behind many research studies analyzing programmatic delivery methods, client engagement, and impacts from organizational restructuring (Bloir & Scheer, 2017; Calvin, 2018; Franz, 2007; Morse, 2009; Schmitt & Batholomay, 2009; Torppa & Smith, 2009). The research has also spanned over a decade, showing that these ‘threats’ have continued to be at the forefront of Extension leadership discussion across the United States. As the Extension Service navigates these transitions, it faces a critical challenge: how to remain relevant, effective, and sustainable in a rapidly evolving environment. To ensure a sustainable future, Extension Services must adapt and change at a faster pace than any of the ‘threats’ while continually looking ahead in anticipation of future change (Kolb, 1994; Morse, 2009). Some Extension Services have implemented drastic changes to their systems, while others have stayed true to the traditional model of county delivery that Extension is known for (Rogers, 2003). Change is inevitable and has been occurring in Extension more in the last 50 years (CRS, 2024; Morse, 2009; NIFA, n.d.). This dissertation explores the structural and programmatic changes within the

Cooperative Extension Service through three interconnected studies, each addressing a unique yet complementary aspect of these transformations. To situate this work, the literature below focuses on three strands most salient to the present study: (a) organizational development and leadership processes in Extension; (b) innovations and Extension; and (c) Extension professionals' perceptions of their organizations and programming—including job satisfaction and burnout.

Purpose of the Study

Extension systems face concurrent pressures: funding volatility; diversified, multi-platform delivery expectations; and the need to evidence impact while protecting workforce sustainability. Leaders continue to restructure in response—shifting between county-centric and regionalized approaches, piloting hybrid staffing, and refining evaluation routines—yet comparative, cross-state evidence on what has changed, how it is perceived, and with what consequences remains limited (Martin, 2019; Wang, 2014). This study addresses that gap by documenting the current state of Extension and describing organizational changes underway. The purpose of this three-paper dissertation is to take inventory of the current state of Extension programs and services across multiple U.S. systems and to identify the changes Extension systems have undergone. The integrated analysis connects organizational development and leadership processes, innovation pathways, and professionals' perceptions of programming, satisfaction, and burnout to inform design choices for the next decade.

Overall Research Objectives

1. To describe and analyze the organizational structures, leadership processes, funding models, and program delivery systems within Extension in the United States, to assess their effectiveness, adaptability, and sustainability in addressing diverse community needs.

2. To comprehensively analyze the development, implementation, and impact of innovations within Extension, including their purpose, driving needs, challenges faced, facilitating factors, and resulting outcomes, to gain insights into their effectiveness and applicability in achieving desired goals.
3. To evaluate the programmatic approaches, job satisfaction, and perceived effectiveness of agents and educators within similarly structured Extension systems, and to analyze how organizational structure influences these aspects.

Chapter 2 Literature Review

Extension has evolved alongside shifting demographics, funding environments, and knowledge ecosystems for more than a century. As the U.S. population has urbanized and client needs have diversified, Extension organizations have repeatedly adapted how they structure work, align leadership routines, and deliver programs. The contemporary literature situates Extension within a broader class of knowledge-intensive public service systems that must coordinate local responsiveness with regional or statewide priorities, demonstrate public value to funders, and maintain a skilled and motivated workforce (Franz, 2011; Lamm et al., 2013). Across this body of work, three problem domains organize recent inquiry: (a) describing how Extension systems are currently configured and governed; (b) explaining how innovations in programming and delivery emerge, diffuse, and achieve outcomes; and (c) examining how organizational arrangements relate to professionals' experiences of program delivery, job satisfaction, and burnout. These domains align with long-standing theoretical perspectives in systems and organizational theory, the diffusion of innovations, and stakeholder/public value scholarship, creating a coherent foundation for synthesizing what is known and identifying knowledge gaps.

Theoretical And Conceptual Frameworks

Extension is a multi-level; intergovernmental organization embedded in dynamic environments. General systems theory views organizations as open systems composed of interdependent components that adapt through feedback and environmental exchange (Bertalanffy, 1969). Organizational theory extends this lens to the fit among environment, strategy, technology, and structure; it emphasizes the role of formal roles, decision rights, and culture in coordinating complex work (Jones, 2012). For Extension, these traditions imply that restructuring—shifting from rural county-generalist models toward regionalized coverage, specialized program-unit models, or hybrids—should be evaluated by effects on information flow, accountability, collaboration, and learning across levels. Contingency theory adds that there is no single best structure; effectiveness depends on fit with environmental complexity, technology, and strategy (Fiedler, 1967; Lawrence & Lorsch, 1967; Woodward, 1958). Institutional theory explains why Extension units sometimes converge on similar forms (e.g., statewide program teams, regional hubs) due to normative and coercive pressures (DiMaggio & Powell, 1983; Meyer & Rowan, 1977). Diffusion of innovations provides a perspective on how new practices spread through social systems when they offer a relative advantage, align with local values and needs, are tangible and observable, and are minimally complex to adopt (Rogers, 2003). Finally, stakeholder and public-value perspectives argue that Extension's legitimacy depends on demonstrating benefits that accrue beyond private program participants to communities and funders, often through credible evaluation narratives and indicators (Franz, 2011; Franz et al., 2014). Multiple studies show that when environmental complexity rises (e.g., urban growth, fiscal volatility), more differentiated structures (regional specialists, statewide teams) can improve technical depth and consistency—but only if paired with integration mechanisms that preserve local relationships and

responsiveness (Bartholomay, 2009; Leuci, 2012; Morse, 2006). During crises, Extension organizations that built slack resources, cross-boundary teams, and rapid feedback loops adapted more effectively (Davis et al., 2021). Systems perspectives also frame Extension as a learning organization; organizational learning capacity predicts responsiveness and outcome improvement (Leuci, 2012). These theories justify a hybrid design: county presence for access/legitimacy; regional specialists and program teams for depth/scale; and coordination mechanisms (shared metrics, evaluation staff, CoPs) to maintain alignment across levels (Bertalanffy, 1965; Jones, 2012; Leuci, 2012).

Organizational Structure, Leadership, and Change in Extension

Multiple states have reconfigured Extension to balance proximity with topical expertise and scale. The literature documents mixed but instructive consequences. In Minnesota, reorganization improved some efficiency and alignment outcomes while raising concerns about local presence and staff role clarity (Morse, 2009; Schmitt & Bartholomay, 2009). In Maine, professionals reported communication challenges and persistent ambiguity following restructuring (Forstadt & Fortune, 2016). Identification with the organization can be strained when local relationships are perceived to weaken or when decision authority shifts without commensurate feedback channels (Torppa & Smith, 2009). Collectively, these studies suggest that structural change is not a panacea; outcomes depend on how leadership processes, cross-level communication, and incentives are rewired in practice.

Parallel development in the evaluation and public-value literature helps explain why structure matters. As budgets tighten, Extension is pressed to articulate outcomes that extend beyond private benefits to participants and to report contributions to broader community and system-level goals (Franz, 2011). National scans show uneven evaluation capacity and gaps

between current and ideal public-value practices, indicating opportunities to better align strategy, measurement, and communication across organizational layers (Downey et al., 2017; Lamm et al., 2013). Beyond the United States' cases, international scholarship further specifies organizational functioning domains—structure and relevance, management and activities, strategy and guidance, and leadership—that together predict network performance; these constructs can be adapted for state-level diagnostics (Lamm et al., 2022). The record indicates attention should shift from structure alone to the leadership routines and evaluation systems through which it functions. Characteristics were defined after systematically reviewing how Extension Services operate. I started with the National Institute of Food and Agriculture (NIFA) Land-grant University Directory (NIFA, n.d.) and reviewed publicly accessible webpages of each of the services across the country. Keywords associated with each were documented as outlined by Naeem's six-step systematic thematic process (Naeem et al., 2023). From those keywords, a systematic thematic analysis (Naeem et al., 2023) was performed to identify patterns of characteristics for each Model. The models presented may not capture the complex nature of some Extension services, but they do give an overview of the diverse structures that have evolved since Extension's inception. Other characteristics, such as warnings or potential pitfalls, were identified throughout the literature review. These established Extension structures, along with their characteristics, can be seen in Table 1.1.

In addition to structural differences, regionality also adds a layer of complexity. APLU/ECOP regions and 1890/1862 contexts present different client profiles and resource mixes; systems adapt by emphasizing different model elements (APLU/ECOP, n.d.; USDA-NIFA, 2025). Urbanized regions benefit from metropolitan hubs and programmatic specialization; rural regions rely on county anchors and volunteer networks supported by regional specialists (Fox et al., 2017;

Wang, 2014). Communication-channel studies show audience preferences vary by context, reinforcing the need to align structural choices with communication strategies (Lamm et al., 2019; Worley et al., 2022).

Table 1.1

Currently Utilized Extension Models Across the U.S.

Extension Models Currently in Use	Defining Characteristics of Extension Model
County Agent Model (Traditional)	• Traditional model used since the Smith-Lever Act of 1914 • Agents are based in individual counties • Generalists covering broad topics in agriculture, 4-H, FCS, or ANR • Strong community presence and local relationships • Emphasis on local needs assessments and responsiveness • Supported by county government infrastructure and funding.
Hybrid Model	• Combines elements of two or more models (e.g., regional agents with local programmatic focus) • Offers flexibility in staffing and programming based on state needs • Can balance specialization with community presence • Often used in large, diverse, or changing states to optimize resources • Requires clear communication and role clarity across organizational levels
Programmatic Agent Model	• Agents are hired based on specific programmatic expertise (e.g., water resources, youth workforce development) • May operate across counties or regions but within a focused content area • Strong alignment with strategic initiatives or grant-funded efforts • Metrics-driven and outcome-focused • Can collaborate with local and regional agents for implementation
Multi-County Agent Model	• One agent is shared among two or more neighboring counties • Similar to regional model but on a smaller geographic scale • Often used in rural areas with limited funding • Requires effective scheduling and coordination between counties • Can lead to reduced visibility and accessibility in each county

Regional Agent Model	• Agents serve multiple counties within a designated region • Usually have subject-matter specialization (e.g., row crops, livestock, horticulture) • Reduced local presence but broader technical expertise • Cost-effective staffing approach • Often travel frequently and rely on virtual or regional programming • Counties may share funding responsibilities
Specialist Model	• University-based experts in specific disciplines (e.g., entomology, economics) • Provide statewide support and research-based information • Focus on applied research, publications, curriculum, and agent training • Do not usually deliver direct programming to the public • Integral in developing best practices and supporting field staff
Statewide Agent Model	• Agent holds a statewide appointment in a specific subject area • Travels across the state to deliver programming and support county staff • Highly specialized and often aligned with grant projects or statewide priorities • Limited community presence in any one location • Works closely with specialists and regional agents
Urban Programming Model	• Designed for densely populated metropolitan areas • Addresses unique urban challenges (e.g., food deserts, youth violence, green infrastructure) • May focus on underserved populations and social equity • Requires different outreach approaches (e.g., partnerships, non-traditional venues) • Often interdisciplinary and collaborative across program areas

Public Value and Stakeholder Theory

Public value provides a normative and practical rationale for sustained investment in Extension: programs should produce benefits that accrue beyond direct participants and justify public support. Foundational work shows how to articulate and measure those benefits (Kalambokidis, 2004). Subsequent scholarship operationalizes public value narratives in planning, evaluation, and communication to sustain Extension amid fiscal pressure (Braverman et al., 2013;

Franz, 2011;). State and national audits highlight wide variation in evaluation capacity and practice across systems, tied partly to organizational size and structure (Lamm et al., 2013; Wang, 2014). Studies also document the need to align stakeholder engagement strategies with local contexts to enhance legitimacy and reach underserved audiences (Martin, 2019; Washington & Fowler, 2005). Structures that centralize or network evaluation expertise—e.g., regional evaluation specialists, statewide evaluation teams—help capture and communicate public value and inform structural decisions (Franz, 2011; Lamm et al., 2013).

Innovation and Program Delivery in Extension

Innovation has always been central to Extension's mission, yet the mechanisms that enable or impede it vary by organizational arrangement. Diffusion theory predicts faster adoption when program innovations are compatible with local contexts, can be trialed, and generate visible benefits (Rogers, 2003). Empirical studies describe both the promise and constraints of innovation under real-world conditions. Agents frequently cite time scarcity, administrative complexity, and competing priorities as barriers to implementing new approaches (Brain et al., 2009). Conversely, boundary-spanning collaboration, communities of practice, and intentional evaluation designs that track outcomes and tell credible public-value stories function as facilitators (Franz, 2011; Sellers et al., 2009). Field demonstrations and farmer-led events can produce a "field-day success loop"—relationship-centered, iterative exposure that increases trial and peer diffusion (Comito et al., 2017). Volunteer-intensive peer models (e.g., Master programs) scale diffusion via alumni networks and local leadership; forestry reviews and evaluations document gains in reach, stewardship behaviors, and local leadership capacity (Christiansen et al., 2025; Kueper et al., 2014; Sagor et al., 2014).

At the system level, crisis conditions have accelerated organizational innovation—pushing rapid experimentation with digital tools, remote facilitation, and new partnerships. Comparative analyses of global extension responses during COVID-19 show that modifications to inputs (human capital, technology), outputs (services), and governance arrangements can be mobilized quickly when leadership clarifies goals and reduces procedural frictions (Davis et al., 2021). These findings reinforce that innovation capacity is not solely a function of individual creativity; it is an organizational property shaped by decision rights, slack time, and cross-unit coordination—features directly affected by structural design. Structures should explicitly resource network brokerage (agents/specialists as connectors), alumni cultivation, and longitudinal follow-up to capture diffusion effects (Comito, et al., 2017; Kueper et al., 2014).

Relationship-centered programming (e.g., field days) drives adoption when coupled with systematic follow up evaluation (Comito, et al., 2017). Volunteer peer learning models multiply reach and leadership; periodic evaluations show increasing effectiveness when alumni networks and advanced trainings are cultivated (Christiansen, et al., 2025; Kueper et al., 2014). Communication channel studies suggest segmenting outreach by audience to improve efficiency (Lamm et al., 2019; Worley et al., 2022). Systems that concentrate evaluation expertise—via programmatic units or regional evaluation specialists—produce clearer public value narratives and more actionable feedback loops (Franz, N., 2011; Lamm et al., 2013). These capacities are especially important in hybrid and urban models where partnerships and scale complicate attribution (Fox et al., 2017).

Across lenses, equity is treated as both an outcome and a design constraint. Studies focused on underserved audiences highlight that delivery choices and partner alignment materially affect

who is reached and with what intensity (Washington, P., 2005). The framework, therefore, treats equity considerations as integral to assessing structure and portfolio options, not as an add-on.

Experiential, and Transformative Learning in the Workforce

Because Extension is both a learning organization and a provider of non-formal education, workforce development draws on adult learning, experiential learning, and transformative learning. Practice-embedded leadership development and reflective evaluation are linked to durable changes in professional practice (Franz, 2007). Experiential cycles (experience–reflect–conceptualize–experiment) clarify how staff translate training into delivery routines, while transformative learning explains shifts in frames of reference (Kolb, 1984; Mezirow, 2000). Agricultural education research shows that autonomy-supportive contexts and implementation coaching improve uptake of new methods, implications for Extension's training and supervision systems (Worley, 2022).

Workforce Capacity: Job Demands-Resources (JD-R), Person-Environment Fit (P-E Fit), Job Satisfaction, and Burnout

The extension's ability to meet stakeholder expectations depends on recruiting, developing, and retaining professionals who can navigate complex roles. Multi-state and system-specific studies associate job satisfaction with commitment and retention, identifying recognition, skill utilization, supervisory support, team climate, and opportunities for growth as salient predictors (Harder et al., 2014; Martin & Kaufman, 2013). Delphi work and needs assessments catalog the everyday challenges that accumulate toward turnover intentions—workload, administrative burden, travel, and unclear expectations—especially when supports and career ladders are uneven (Dettenmaier et al., 2020). These workforce dynamics are not only human-resource problems; they shape program coverage, partnerships, and the sustainability of delivery models. JD–R explains

how high demands (workload, role overload, after-hours commitments, travel, role conflict) interact with resources (autonomy, support, recognition) to predict burnout and engagement. Extension-specific evidence shows job demands strongly predict burnout across disciplines; resources buffer effects inconsistently, suggesting that eliminating chronic overload can yield larger gains than adding isolated supports (Russell et al., 2020). P–E fit and Self-Determination Theory (autonomy, competence, relatedness) highlight how policies and supervisory practices shape satisfaction, performance, and retention (Harder et al., 2014; Harder et al., 2015; Hodous et al., 2014; Self-Determination Theory, 2022; Vlosky et al., 2009).

Satisfaction studies report consistent strengths (meaningful work, variety) and weak points (compensation, advancement pathways); perceived administrative support, role clarity, and fairness correlate with lower burnout and higher JS (Harder et al., 2014; Harder et al., 2015; Hodous et al., 2014; Vlosky et al., 2009). Qualitative work highlights how chronic overload and evening/weekend expectations erode well-being (Ensle, 2005; Kutilek et al., 2002). Social exchange theory clarifies how reciprocation norms underlie commitment and turnover intentions (Chernyak-Hai et al., 2018; Cropanzano et al., 2016). Structural design must be paired with workload modeling, caseload thresholds, role clarity, and targeted mentoring/competency development for early-career agents (Berven et al., 2016; Walker et al., 2025).

Job satisfaction is consistently linked to autonomy, meaningful work, and supportive supervisory practices; dissatisfaction centers on compensation and advancement pathways (Harder et al., 2014; Harder et al., 2015; Hodous et al., 2014; Vlosky et al., 2009). Gender-linked differences in satisfaction drivers appear in some datasets, underscoring the importance of equitable policies and advancement (Vlosky et al., 2009). Retention improves where mentoring

and competency-based onboarding are systematic (Berven et al., 2020; Mentoring Adult Learners, 2016; Walker et al., 2025).

Workload intensity, travel, and evening/weekend obligations are persistent features of Extension work (Kutilek et al., 2002). Early burnout analyses urged boundary setting and organizational supports (Ensle, 2005). Restructuring without workload modeling can increase territory sprawl and role conflict (Forstadt et al., 2016). JD–R research in Extension shows that high demands are the most consistent predictors of burnout across disciplines (Russell et al., 2020). Burnout is conceptually distinct from job satisfaction but intersects with it in practice. Organizational research links chronic workload, low control, insufficient reward, strained community, perceived unfairness, and value conflict to heightened burnout risk (Maslach & Leiter, 2016). Elevated burnout reduces engagement, lowers program quality, and elevates turnover intentions—disrupting continuity, partnerships, and cumulative impacts (Harder et al., 2015; Russell et al., 2020). Chronic overload also suppresses innovation by crowding out reflective practice and professional development (Berven et al., 2020; Franz, 2011). In knowledge-intensive public services, these conditions can degrade program quality, narrow experimentation, and erode stakeholder trust. Emerging threads in Extension point to inclusion and belonging as additional capacity drivers: systems that invest in mentoring, onboarding, and equity work report stronger climates for collaboration and innovation (Diaz & Balis, 2024). Taken all together, the literature suggests that structural choices are inseparable from professionals' daily experiences.

Stakeholders, Public Value, and Comparative Advantage

Stakeholder relationships are intertwined with organizational form. County-embedded generalist models cultivate dense ties with local governments and civic organizations; specialized program-unit models often deepen links to topical networks and research partners. Public-value

scholarship argues that, regardless of form, Extension must demonstrate contributions that extend beyond direct participants and connect to community-level outcomes (Franz, 2011; Franz et al., 2014). Comparative advantage concepts offer an additional lens: specialization can increase quality and efficiency in domains where expertise and scale effects are strong, whereas locally embedded generalists may confer advantages for access, trust, and rapid problem solving. The delivery models' literature implies that a portfolio approach—pairing proximity with specialization through intentional hybrid designs—can mitigate trade-offs when accompanied by strong coordination and evaluation.

Synthesis and Remaining Gaps

Stakeholder relationships are intertwined with organizational form. County-embedded generalist models cultivate dense ties with local governments and civic organizations; specialized program-unit models often deepen links to topical networks and research partners. Public-value scholarship argues that, regardless of form, Extension must demonstrate contributions that extend beyond direct participants and connect to community-level outcomes (Franz, 2011; Franz et al., 2014). Comparative advantage concepts offer an additional lens: specialization can increase quality and efficiency in domains where expertise and scale effects are strong, whereas locally embedded generalists may confer advantages in access, trust, and rapid problem-solving. The literature on delivery models implies that a portfolio approach—pairing proximity with specialization through intentional hybrid designs—can mitigate trade-offs when accompanied by strong coordination and evaluation.

Despite this progress, notable gaps remain. Descriptive accounts of contemporary U.S. Extension structures are uneven and often limited to single states or program areas; comparative cross-regional profiles of funding arrays, leadership routines, and delivery architectures are scarce

(Braverman et al., 2012). Similarly, while case studies document innovative programs, fewer trace full pathways from problem framing to outcomes across diverse audiences and organizational forms. Finally, many workforce studies examine single systems or snapshots in time; fewer link structure and regionality to multi-dimensional outcomes such as program delivery supports, job satisfaction, and burnout using integrated designs. Addressing these gaps will require systematic description of current structures, in-depth examination of innovation drivers and constraints, and multi-state comparisons of professionals' perceptions across delivery models and regions.

The literature establishes a coherent agenda for understanding Extension's evolution as a complex service system. Foundational theories illuminate why structure, coordination, and stakeholder alignment matter; empirical studies identify mechanisms through which organizational design and leadership routines influence innovation, program delivery, and workforce well-being. The remaining gaps—particularly around contemporary system description, the innovation process in practice, and comparative perceptions across models—point to high-value directions for research that can inform strategic decisions about funding arrangements, leadership processes, and delivery portfolios.

Rationale and Scope

This dissertation adopts a layered conceptual frame to explain how Extension systems organize, adapt, and generate outcomes. At its core, General Systems Theory (GST) and organizational design models treat Extension as an open system where inputs (e.g., capacity funds, state appropriations, county cost-shares, talent pipelines) flow through leadership processes and delivery routines to produce outputs and outcomes (learning, behavior change, equity). GST sensitizes the analysis to feedback loops and boundary conditions, while organizational design clarifies how structure and culture channel attention and coordination (Bertalanffy, 1965; Burke,

1992). Empirically, Extension scholarship connects these lenses to contemporary realities, funding volatility, partnership governance, and workforce sustainability (Leuci, 2012; Martin, 2019; Wang, 2014).

Organizational Design and the Burke–Litwin Lens

The Burke–Litwin model posits that external environment and mission cascade through leadership, structure, work climate, and systems to shape individual and organizational performance (Burke, 1992). In Extension, studies show that codified county partnerships (e.g., MOUs, cost-shares) and clear decision rights stabilize core capacity and widen reach, particularly for underserved audiences, when aligned to local goals (Wang, 2014; Washington, 2005). Leadership development embedded in practice and supported over time is associated with stronger cross-boundary coordination and program follow-through (Leuci, 2012). From this lens I expect that structures which protect base roles and clarify governance improve perceived effectiveness and reduce churn.

Application to the Three Papers

Chapter 3 (Present State) uses GST and organizational theory to describe system boundary conditions and leadership processes shaping delivery portfolios across cases (Leuci, 2012; Wang, S., 2014). Chapter 4 (Innovations) applies diffusion and communities-of-practice lenses to explain how innovations emerged and spread over the past two decades and which structural features enabled scale (Hubbard, 2007; Rogers, 2003). Chapter 45 (Multi-State Perceptions) links organizational design, program delivery, and adult learning support to professionals' reports of satisfaction, burnout, and perceived effectiveness, testing relationships among structure, delivery mix, and workforce indicators.

Key Terms

Autonomy-supportive management: Supervisory practices that provide clear goals and resources while granting discretion, feedback, and role clarity—linked to motivation, performance, and well-being (Deci et al., 2017).

Boundary spanner: An individual who bridges organizations or communities (e.g., county agent linking residents, specialists, and partners), enabling trust, information flow, and adoption (Aldrich & Herker, 1977).

Capacity Funds: Ongoing, formula-allocated federal appropriations (often with required state match) that provide base support for research and Extension. Examples include Smith–Lever 3(b)&(c) (Extension, 1862s), Hatch Act (research, 1862s), Evans–Allen (research, 1890s), 1890 Extension, and McIntire–Stennis (forestry research) (USDA NIFA, 2025).

Capacity lines (base funding): Stable, recurring funds that support core positions and operating expenses (the "people architecture"). Protecting these lines insulates essential roles from grant volatility (TEConomy Partners, 2017).

Communities of Practice: Networks of practitioners who share a concern and learn how to do it better through regular interaction, enabling peer diffusion and knowledge stewardship (Wenger-Trayner & Wenger-Trayner, 2015).

County co-investment / Cost-share: Local government or partner contributions (e.g., assistants, facilities, travel) that formalize shared ownership of Extension presence and expand reach (Congressional Research Service, 2024).

Educational & General Funds (E&G): a university's core state/tuition budget that supports the academic side (instruction and related operations) (Eastern Oregon University, 2020).

Extension Agent / Educator / Professional: Role titles used across states for front-line Extension faculty or staff who design, deliver, and evaluate programs; conduct needs assessment; and build partnerships that connect communities to university expertise. Typically, these classifications can be faculty OR staff. Titles vary by system (agent, educator, specialist, coordinator). Within this dissertation, agent, educators, and professionals are interchangeable (USDA NIFA, 2025).

Extension Specialist: a discipline-expert (often called a state or subject-matter specialist) who provides statewide or multi-county leadership for Cooperative Extension. Typically, these positions are classified as faculty, with many (not all) holding split appointments across Extension, research, and sometimes teaching — e.g. 40% research, 40% Extension, 20% teaching. In the context of this dissertation Extension Specialists are faculty members that translate and generate applied research, develop curricula and recommendations, train and consult with Extension agents/educators/professionals, and support program planning and evaluation (Benge, 2024).

Integration backbone (program design, logistics, marketing, data): Coordinated supports—templates, calendars, registration, communications, and evaluation systems—that reduce educator burden and scale innovations (Kania & Kramer, 2011).

McIntire–Stennis: The Cooperative Forestry Research Program, a capacity-type, formula funding stream supporting forestry and natural resources research at eligible universities (including many land-grants) (USDA NIFA, 2025).

Memoranda of Understanding (MOUs): Written agreements that specify roles, cost-shares, and deliverables among Extension and partners (e.g., counties, Boards of Education) (University of Georgia Cooperative Extension, 2015).

National Institute of Food and Agriculture (NIFA): The USDA National Institute of Food and Agriculture, the federal agency that invests in U.S. food, agriculture, natural resources, and human sciences by distributing both competitive grants and formula ("capacity") funds to land-grant universities and partners (USDA NIFA, 2025).

Public Value: The societal benefits created by Extension beyond individual participants (e.g., community resilience, equity, environmental outcomes) that justify sustained investment (Kalambokidis, 2011).

Research, Education, and Economics (REE): USDA's Research, Education, and Economics mission area, which houses NIFA alongside other science agencies (e.g., ARS, ERS, NASS) and oversees the department's science portfolio (USDA REE, 2025).

Structure / Model: The formal arrangement of roles, reporting lines, funding flows, and geographic or programmatic coverage that organizes Extension work. "Structure" is the governance and staffing design (e.g., county-generalist, regionalized, program-unit, hybrid); "model" is shorthand for a particular configuration of these elements and its delivery approach, used to compare alternatives and guide management. Within this dissertation, structure and model are interchangeable (Bright & Cortes, 2019).

Chapter 3 The Present State of Extension Programs and Services in the Eastern United States[1]

[1] Carter, B., Croom, D.B., Sandlin, M., Campbell, B., Lamm, A. To be submitted to the *Journal of Extension*.

Introduction and Study Context

French Romantic writer Victor Hugo said, "Change your opinions, keep to your principles; change your leaves, keep intact your roots." Change is inevitable and is part of life as we know it. Throughout history, species have either evolved or died off; the same can be said for organizations and businesses. The United States Cooperative Extension Service is not exempt from this fact. Thus, it must actively anticipate change and begin equipping itself with the tools to persevere once it arrives. Over the last century, changes to Extension Services have occurred at the National and State levels (Rogers 1976; 1988; 2003). These changes to the Cooperative Extension Service began in the 1980s intending to refine the mission and vision of Extension to better address societal needs as well as place more emphasis on accountability and impact to strengthen stakeholder relationships and buy-in. Changes at the National level in the 1980s started the snowball of change that started occurring at state levels soon after, due to external factors such as funding reductions, workforce availability, and changing social climates. What has resulted can be seen through examples of expansions in programmatic focus and services provided, new means of reporting impact and plans of work (POWs), state-specific initiatives catering to state stakeholders, and approaches to disseminating information to the public, to name a few (Morse, 2009; NIFA, n.d; Norton, 2020; Rogers, 2003).

The longevity of Extension has been frequently discussed after external factors, which include a reduction in workforce and funding, have caused significant changes to occur in several systems across the United States such as expanding agent territories, reducing the number of in-county agents, and in some cases removing the county agents entirely, causing a restructuring of the traditional county-based delivery model (Schmitt & Bartholmay, 2009). Many accounts of the Extension Service nationwide are reports from within five-years after what the USDA coined a

"rebirth" of Extension in the mid-1980s (Johnsrud & Rauschkolb, 1989; Rogers, 1988). It is worth noting that a focus on Extension beyond an individual state was seen to become a focus again after the Agricultural Research, Extension, and Education Reform Act of 1998 (AREERA), which called for states to submit individual POWs to receive federal funding (Morse, 2009; Wang, 2014).

When reviewing the literature surrounding the change in Extension Services, it is evident that numerous research publications address the impacts of change on individual state systems since the beginning of the century, such as regionalized agents in Alabama and South Carolina, placing a heavier emphasis on using digital means to distribute information and offer Extension programming or even combining program areas under one leadership umbrella (such as combining FACS and 4-H) to foster more streamlined and cohesive programming (Braverman et al., 2012; Calvin, 2018; Forstadt & Fortune, 2016; Morse, 2009; Schmitt & Batholomay, 2009; Torppa & Smith, 2009; Washington & Fowler, 2005). Still, the last time anyone holistically reviewed the current state of the United States Cooperative Extension Service was in the late 1980s. Possible reasons for this could be the complexity and wide array of organizational models Extension Services have created or implemented, the sheer scope of the project, or the effort involved with undertaking such a task without a sound justification. Even when Rogers (1976; 1988) published his findings, the information was rather thick and difficult for field professionals to digest. Yet, due to the significant changes seen over the last thirty years, there is a justifiable need for a review that takes a deeper look into the structures being utilized by states, programmatic delivery, leadership processes, and changes and challenges that have occurred over the last 20 years, so that as Extension services across the country continue to face changes, they will have a resource to reference to aid in making the difficult decision of what direction the organization should go in.

Conceptual Framework

Using general systems theory in combination with organizational theory allows for a better framework to examine the current state of Cooperative Extension across the United States.

General Systems Theory (GST)

General systems theory (GST) was first introduced in the 1930s by Ludwig von Bertalanffy and has since been expanded upon by Bertalanffy and Borch in 1960 and 1995, respectively. This theory views organizations as open systems that interact with their external environment. Organizations are composed of interrelated and interdependent components (e.g., departments, teams, and individuals) that work together to achieve common goals (Bertalanffy, 1969; Borch, 1995; Borch, 2011). Changes in one part of the system affect other parts, emphasizing the importance of understanding the organization as a whole rather than focusing solely on individual components. This theory highlights adaptability, feedback loops, and the need for organizations to balance internal efficiency with external responsiveness (Bertalanffy, 1969; Borch, 1995; Borch, 2011).

Organizational Theory

Organizational theory examines the structures, designs, and behaviors of organizations to understand how they function, adapt, and achieve their goals (Jones, 2012). This theory explores the interplay between an organization's environment, strategy, technology, and structure to determine how these elements influence efficiency, effectiveness, and innovation. Within the theory there is an emphasis placed on the dynamic nature of organizations, highlighting their need to respond to external pressures and internal complexities through effective decision-making, resource allocation, and coordination (Jones, 2012). By integrating various perspectives, such as

systems theory, contingency theory, and institutional theory, organizational theory provides a comprehensive framework for analyzing and improving organizational performance and adaptability in changing environments. Organizational theory interacts with three aspects of an organization: organizational structure, organizational design and change, and organizational culture.

Organizational Structure

Organizational structure is the formal system of task and authority relationships that controls how people coordinate their actions and use resources to achieve organizational goals (Jones, 2012). Its purpose is to determine how people coordinate their actions to achieve organizational goals and the motivations by which they are driven to do so. Organizations can expect better responses to coordination and motivation problems when the appropriate structure is in place. Organizations grow and change, with their structure changing along with them, managed by organizational design and development (Jones, 2012).

Organizational Culture

Organizational culture is a set of shared values and norms that control members' interactions with each other internally and with individuals outside of the organization. Like structure, organizational culture shapes and controls semantic elements responsible for behavior within the organization (Jones, 2012).

Organizational Design and Change

Organizational design is the process by which managers select and manage aspects of structure and culture to control activities necessary to achieve organizational goals. It balances the pressures on the environment from outside and technology within the organization. Striking a

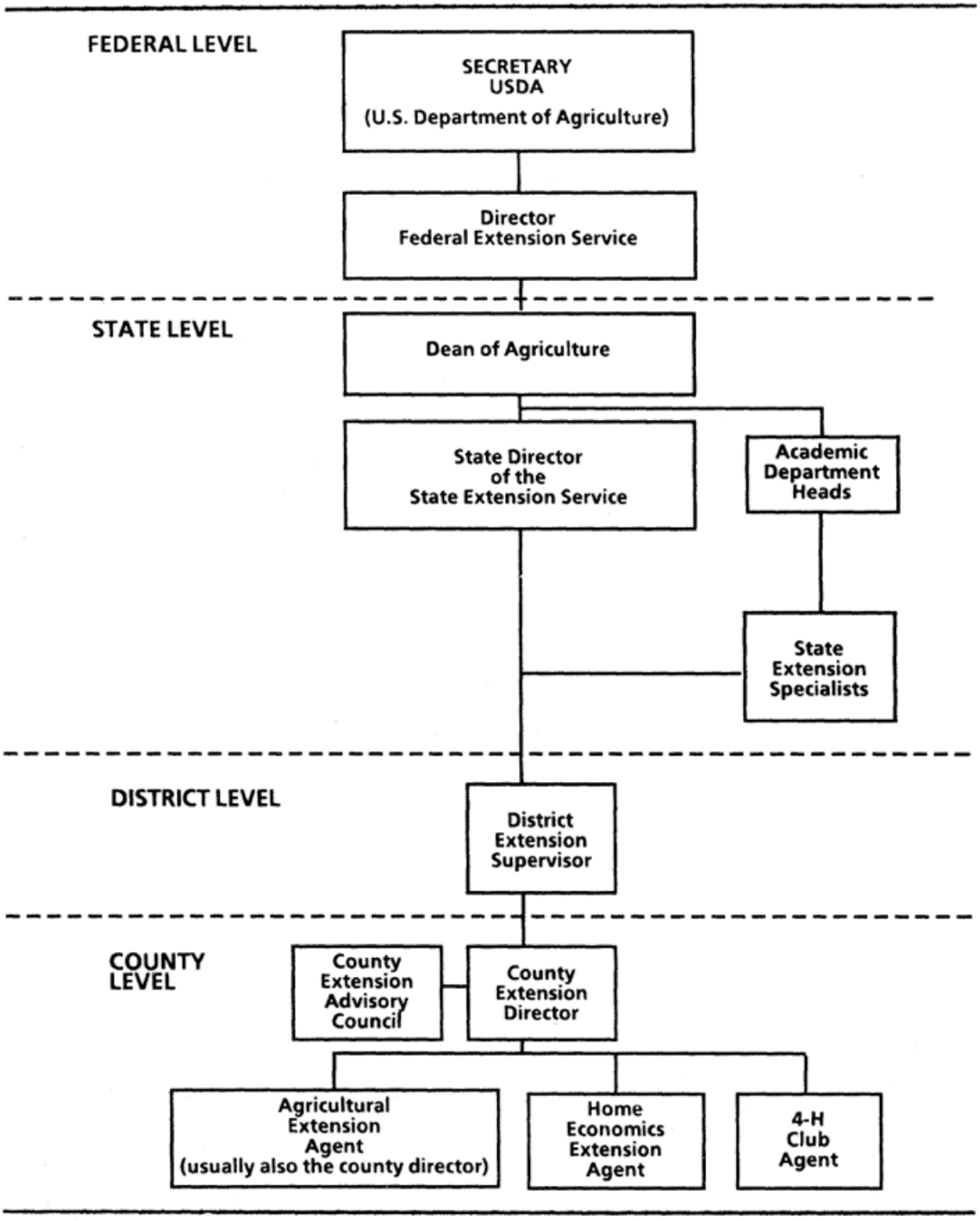
balance like this will lead to an organization's sustained survival. Organizational change is where organizations move from their present state to a desired future state to increase overall effectiveness (Jones, 2012; Kolb, 1994). It emphasizes leveraging new or improved uses of sources and capabilities to elevate value generation and present superior performance of outputs. However, organizations need to understand the revolving door of change that will occur throughout the lifespan of an organization. The more established and sustainable the organization, the more periods of change will be experienced over time (Jones, 2012; Kolb, 1994). The sizes of the organizations also matter concerning specific challenges faced. Ultimately, the decisions that organizations make initially will have significant ramifications as the organizations grow (Jones, 2012).

General systems theory provides a foundational framework for understanding organizations as dynamic, interdependent systems that thrive on adaptation, feedback, and holistic management. Organizational theory applies these principles to guide organizations in navigating complexity, fostering collaboration, and remaining responsive to their environments. How an organization is structured, and its culture is essential in helping integrate a diverse workforce and spawn creativity and innovations. These aspects are critical to providing an environment that supports collaboration, communication, and inclusion, enabling diverse perspectives to integrate seamlessly, as well as fostering creativity and innovation by encouraging unique ideas and leveraging varied experiences to solve problems and drive progress. For organizations, this results in talented employees leaving, resources starting to dry up, and the value creation process slowing down to a grinding halt. In today's fast-paced digital world, correctly implemented organizational structure, design, response to change, and culture can give the organization a competitive advantage that could be the difference in Extension's continued survival.

These theories all relate to organizational theory, each offering a deeper dive into how organizations function, change, succeed, and fail. To utilize these effectively in exploring what has made or broken Cooperative Extension Services over the last 40 years, an examination of the current state of the Cooperative Extension Service is needed. This would include exploring the key components mentioned within the theories above: structure, culture, design and change. Since its establishment in 1914, Cooperative Extension has become known as the premier source of unbiased research-based information for the public (Rogers, 1988). In doing so, it has built a sense of credibility and reliability within the communities where it is housed. The traditional organizational structure of the Extension Service in the United States can be seen in Figure 3.1.

Figure 3.1

Context of Organizational Structures of Cooperative Extension Services



Traditional Cooperative Extension Model, Rogers, 1988

Study Purpose and Questions

While this structure displayed is nearly 40 years old, it still holds truth in states that have yet to undergo significant change or restructuring. This structure has proven to achieve the organization's vision and mission while effectively disseminating information regarding innovations or better practices to clients (Rogers, 2003). The question of the effectiveness of new structures Extension Services have implemented in continuing to be change agents in the diffusion process, provide service to their communities, and create a culture that promotes innovation, and collaboration has yet to be agreed upon. The research literature represents mixed opinions as to whether the changes implemented to various states have produced positive outcomes both internal and external (Calvin, 2018; Forstadt & Fortune, 2016; Morse, 2009; Norton, 2020; Schmitt & Bartholomay, 2009; Torppa & Smith, 2009). For instance, two studies out of the University of Minnesota show significantly varied outcomes for employees and stakeholders. Schmitt and Bartholomay (2009) examined organizational restructuring within the University of Minnesota Extension. Their findings indicated that while some staff experienced increased job satisfaction and perceived effectiveness post-restructuring, others reported challenges in adapting to new roles and responsibilities, leading to mixed outcomes regarding the overall effectiveness of the change. Similarly, Morse (2009) analyzed the impact of structural changes on agricultural extension services and found that while certain modifications led to improved efficiency and resource utilization, there were concerns about reduced local presence and community engagement, resulting in varied perceptions of effectiveness. In a more recent study, Forstadt and Fortune (2016) examined the impact of organizational restructuring on Cooperative Extension professionals in Maine, which found that again, while the restructuring aimed to improve efficiency, challenges in communication and role ambiguity among staff were faced. George

Norton (2020) provided a snapshot of the Cooperative Extension Service as a whole, and why change is happening, citing that funding, technology, client base, and client needs have changed resulting in a "revolution" in Extension. Even with this snapshot, there are still no detailed explorations of current Cooperative Extension Services in the United States. Before conclusions can be drawn on the effectiveness of Extension structures, there is a knowledge gap surrounding current structures that must be addressed to understand better where Extension stands and where it is heading. This study aims to obtain information to describe Cooperative Extension Services systematically. Areas of interest include organizational structure, leadership processes, and information/program delivery systems focused on Extension systems in the Eastern United States.

Research Questions

1. How are Cooperative Extension Services in the eastern United States funded, and what is their scope and size (e.g., budgets, FTE, geographic coverage, clientele served)?
2. What leadership processes operate at the state, regional, and local levels within different Extension organizational structures in the eastern United States?
3. What primary information/program delivery systems are used within different Extension organizational structures in the eastern United States, and how are they organized and implemented?

Methods

This study used a qualitative, exploratory multiple-case study design to describe how state Cooperative Extension Services are structured and administered and how they deliver programs across contexts. The case was bounded at the organizational level (state Extension service), and key informants were senior leaders positioned to speak on funding, leadership processes, and delivery systems most accurately. A multiple-case design is appropriate for "how/why" questions

about contemporary organizational systems in real-life contexts and enables analytic comparison across cases (Creswell & Poth, 2018; Stake, 1995; Yin, 2018). Although some interview prompts elicited personal experiences, the unit of analysis was the organization, not the essence of a lived experience, so a phenomenological approach was not adopted.

Sampling and Recruitment

Eight state Extension leaders were interviewed, representing seven distinct Extension Services in Association of Public and Land-Grant Universities (APLU) regions (Appendix B): Southern (n = 5 leaders), 1890 (n = 2), and Northeast (n = 1). One service contributed two leaders (a director and a program leader). Sampling combined purposive and snowball methods to reach information-rich experts in a relatively small, elite population (Noy, 2008; Palinkas et al., 2015). Initial contacts were made through existing professional networks of state directors (yielding five leaders). One participant then connected me to two additional leaders (snowball referrals). The sample size is consistent with guidance for expert key-informant studies in focused domains, where thematic sufficiency often occurs within approximately 6–12 interviews; adequacy was judged using information power (specific aim, expert informants, strong interview quality) and evidence of diminishing returns during analysis (Guest et al., 2006; Hennink et al., 2017; Malterud et al., 2016).

Instrumentation and Data Collection

We approached the data collection processes with an emergent design strategy to allow for a natural openness between the clients and the interviewer (Merriam & Tisdell, 2016). Data were collected through semi-structured interviews conducted via Zoom. The study used a semi-structured interview protocol (Appendix D) designed to balance consistency across cases with flexibility to follow participants' expertise and emergent leads. The guide mapped directly to the

study objectives and theoretical frame and was organized into six domains: (1) organizational role and current structure; (2) funding models and organizational scope; (3) leadership processes and decision routines; (4) program and information delivery; (5) system integration and adaptability; and (6) wrap-up/referrals. Questions prompted concrete descriptions (e.g., staffing configurations, budgeting flows, communication mechanisms, urban–rural delivery strategies) while allowing the interviewer to vary order, wording, and depth to create a natural conversational flow (Merriam & Tisdell, 2016). This format ensured core topics were addressed across all interviews while preserving space for unanticipated but relevant detail from state leaders.

Interviews were conducted via Zoom, lasted 45–75 minutes, were audio-recorded with each participant's consent, and transcribed verbatim. Brief factual clarifications (e.g., unit names, acronyms) were verified by email when needed. No identifying quotes are presented in findings; cases are described in aggregate to protect confidentiality. Likewise, pseudonyms were given to each of the participants. These are outlined as well as years of experience and position descriptions in Table 2.1. To ensure accuracy and to preserve confidentiality, participants had the opportunity to review their quotes and how they were presented. Minor clarification edits were made to ensure accuracy of the presented material.

Table 3.1

Descriptors of Participants

Pseudonym	Extension Region	Years of Service	Position
Jordan	Southern	+20 years	Director of Extension County Operations
Casey	1890	10–20 years	Associate Dean and Director of Extension

Riley	1890	10–20 years	ANR Program Leader
Avery	Northeast	10–20 years	Associate Dean and Director of Extension
Louie	Southern	10–20 years	Associate Dean and Director of Extension
Quinn	Southern	+20 years	Associate Director of Extension
Joe	Southern	+20 years	Director of Extension
Dana	Southern	10–20 years	Director of Extension County Operations

Note. Dana and *Joe* are both from the same Extension Service but represent different levels of management and experiences worth capturing.

Data Analysis

We used a phenomenological analytic sequence (Merriam & Tisdell, 2016) that included: bracketing to suspend presuppositions and minimize judgment; horizontalization to treat each meaning unit with equal value; clustering to group codes into themes and subthemes; and textualization to compose concise statements of essence. Interviews were transcribed verbatim with Otter.ai and verified against the audio. NVivo supported data management, coding, and memoing throughout. At the outset, the team enacted bracketing by drafting reflexivity statements. During horizontalization, we weighted the interview transcripts, the lead researcher's field notes, and notes generated during concurrent collection and analysis equally. Following Saldaña's (2021) guidance, we combined deductive and inductive coding: four parent themes were identified from the interviews. The team then audited the final thematic map and validated excerpts for accuracy before textualizing the identified essences.

Trustworthiness and Ethics

Trustworthiness followed Lincoln and Guba's (1985) criteria: Credibility (prolonged engagement with the data; peer debriefs with external reviewers; triangulation across leaders and

cases; attention to disconfirming evidence); Transferability (thick description of context to support applicability judgments); and Dependability and Confirmability (audit trail, reflexive memos, and preserved codebook/version history to document analytic decisions and enhance transparency). Prior to data collection, this study received an Institutional Review Board (IRB) determination (PROJECT00012824). The project was classified as Not Human Subjects Research and therefore not subject to human subjects' oversight. Documentation of this determination appears in Appendix A.

Findings

Guided by a phenomenological thematic analysis and an abductive lens, four interlocking themes describe how Cooperative Extension Services in the eastern United States are structured, administered, and how they deliver programs. Exemplars quoted from senior leaders are used to describe organizational processes and decisions. Themes are distinct yet mutually reinforcing (funding/scope; leadership processes; and program delivery) and are as follows: (a) Resource Architecture, (b) Structures & Delivery Systems, (c) Leadership Processes, and (d) Strategic Sustainability. Additional sub-themes arose in most of the parent themes. Sub-themes organize specific patterns and are supported by illustrative quotations.

Resource Architecture

Participants emphasized that staffing patterns and funding mosaics form the operating boundary conditions of Extension. Essentially, this theme helps explain how dollars flow across federal, state, and county sources and how personnel are positioned to translate those dollars into service shapes what is feasible on the ground.

Financial Appropriations

States varied in the relative weight of funding sources. Several noted over-matches at the state level, heavy reliance on grants, and targeted appropriations that fluctuate with political and economic cycles.

Extension runs on a mixed revenue stack: state appropriations, federal capacity funds, county/local dollars, and competitive grants. The weights shifting by state and system. In some places the state is the anchor. *Dana* explained:

> I think 60 to 70% of our funds come from the state… our state appropriations are 60%… federal is 12 or 16% and then the grant revenue is… right at 13, with county support somewhat less to make up the remaining funds.

Jordan discussed having a concrete split in their Extension system highlighting the benefit and reliance on county support to fund their organization:

> The primary source of our funding… is from state resources. We have about $60 million from state resources… about $40 million from county resources… about $10–11 [million] from federal and… another $10 [million] through grants, contracts, departmental sales and service.

Jordan also noted, adding that local Boards of Education in "about 40 counties" co-fund program assistants, including a county that "last year invested about a half a million dollars of new money into their local service."

Match mechanics and "overmatch" shape the map. *Avery* described their funding model as a state-heavy model, "what the state does is overmatch… more than… most of the states." He went on to explain that because they have no county government, after the federal funds and the state match, that is all the hard money available to them. Looking ahead, leaders are wary of shifts from

formula to competition: “we heard… Smith Lever and Hatch could become competitive… I’m concerned about that,” *Joe* said. Even now there are issues with competitiveness and unequal funding distributions taking place. Match disparities also influence equity across 1862/1890 partners. *Avery* recalled about one state he had worked in, “The state Overmatch[ed] the 1862 institution up to… almost $3.00 for every $1.00 of federal funds, while the 1890 institution only were given $0.80 for every dollar.”

Grants have become the wild card for extension services, especially 1890s and smaller Extension services. They are crucial for growth, but a fragile base to build upon. “More than 50% of the funding… into our Extension comes in through grants,” *Avery* noted. *Avery* went on to say that because of the reliance on grants, when hiring faculty that is a key skillset they look at. He praised the outstanding team of grant writers they have for their contributions to their organization. While *Casey* described his experience at an 1890 institution by saying, “All our specialist positions are 100% funded by Extension, so grants can be focused onto delivery… research components… [and] training events.”

Leveraging grants is the method for funding the programmatic aspects of some of the Extension systems represented in this study. Even so, soft money is not guaranteed. While sustainable now, that money may not be there long-term. *Riley* was blunt about the 1890 reality:

> So federal and even some private funds, you know, through grants and stuff have been the model for 1890s. I know some of the 1862 for extension weren't as immersed, if someone wanted to do a project they could write a grant. But it wasn't like it was really required, you know, to make sure you bring in funding. Being 1890, we write grants, and a lot of them. We're small, so we can, we can move directions quickly. So, all the grant funds sort

of tie back into that focus, so that we can seem like we're moving in a similar direction all the time, even if we are kind of bouncing around to chase the dollar.

Grants, however, do not substitute for core capacity: “you don’t have enough base funds… to keep those people on board,” *Avery* cautioned, and *Jordan* pointed to volatility when “we… lost funding” for AmeriCorps. *Avery* also added their Extension’s strategy is to handle grants to reduce the soft-money risk related to human capital by saying, “We are able to focus grant funding onto delivery, onto the or research components or staffing of the research plot or training events based on the results of the research.”

County and local dollars range from pivotal to auxiliary, and that variance drives hiring flexibility. *Joe* placed his state “in the bottom of the southern region in terms of county support, about 5% of our budget,” but contrasted that with another state in the southern region where “over 50% of their employees are totally county funded,” allowing hiring to continue during a state-level freeze. Several states formalize local contributions via cost-share agreements. *Quinn* talked about counties in his state providing, “housing, utilities and… operation money,” with some salary participation. *Jordan* said their institution is pushing deeper local ties, from Boards of Education funding assistants to courting city governments, though he noted the reality for his state right now, “we just don’t have the capacity right now to come to the table with any new money to match or to offset that buy-in.”

Budget shocks and long flat lines have shaped today’s portfolio for Extension services in the Eastern United States. *Quinn* recalled one big cut, “45% budget cut from the state” in 2008/09 “most people… would have closed the doors,” followed by steady state increases (“the lowest year… right at $2 million”) even as “federal funding has been flat for the last 15/20 years” and

"about 20 years" since a "real increase" at the federal level. *Joe* described mid-year reversions ("pull 2% of your budget back January one—that's really 4%") and the broader policy climate: "most everything's under a federal mandate… getting more and more in that direction." The silver lining, *Quinn* said, is that "budget cuts… force you to do a lot of things differently, get creative and innovative in your approach."

Governance lines matter for how dollars flow. Although housed under one administrative umbrella, *Joe*'s state's 1862 and 1890 Extension components retain distinct line items in the state budget.. *Joe* explained, "we're not connected at all from a funding standpoint, but being under one umbrella did force us to work together." Universities also distinguish academic and Extension budgeting with *Quinn* mentioning a budgetary aspect in their state, "E & G… educational and general budget… funds the academic side, while federal capacity streams remain foundational." *Louie* also echoed *Quinn* by mentioning additional federal funding sources helping support their state (e.g., "NIFA… capacity funds… Research, Education, and Economics (REE)… McIntire-Stennis"). The E & G budget funds the academic enterprise. Federal "capacity" funds—formula allocations administered by USDA-NIFA within the REE mission area—provide base support for research and Extension (e.g., Hatch, Smith–Lever, Evans–Allen, 1890 Extension, and McIntire–Stennis for forestry, Tribal Colleges Extension Program).

Strategically, leaders expect marginal growth locally and through externally funded projects, paired with stronger accountability for outreach impact. "If we're going to grow our budget, it will be at the local level versus anywhere else," *Quinn* argued, emphasizing relationships with county administrators. At the same time, *Quinn* challenged faculty incentives for acquiring grants and university dollars by saying, "who cares if their research is in journals… it's not getting out to the farmers… and that's the reason the land-grant university was started." This sheds light

on an additional complexity that is intertwined within Extension, being the expectations and promotional processes of split-Extension faculty. The institutional pressures and expectations of faculty with an Extension, Teaching, and/research combination seem to vary Extension to Extension, but the nature of academia faculty does not always align with the mission and execution of Extension programming.

Human Capital

County-state partnerships were repeatedly described by the participants as the backbone that anchors local presence while enabling specialization. It is also worth noting that the leaders in states without county-based programming, voiced the desire to build better local connections like traditional systems have. Leaders highlighted the ways county investments offset travel, assistants, and facilities, while state lines cover core salaries. Funding architecture sets the people architecture. In several systems, state dollars cover core positions while counties shoulder the marginal capacity that makes service possible. *Dana* explained their financial relationship with counties, Money that is invested goes to the state… We do not give counties money for travel or printing… directors have to come up with their own funding. That funding can be used for an agent assistant or additional support.

Dana went on to clarify that those additional supports often were seen in 4-H or home horticulture where demand is high. States with broad education funding streams can stabilize salaries even as counties vary in their ability to add local support. *Quinn* described the staffing of extension professionals in their state, and how they have adjusted to ensure the workers are not getting burnt out:

> And so, let's say we have 10 program teams. Well, some of our counties have eight program teams working out of that one county. But all our program teams have a tie to the counties,

> even though, we don't have a person from every program team represented there. We have kept that concept going. Like rural health is one that is our newest team, and we are working on rural health, and then food safety is another one. We had our agents stretched way too thin in food safety, and so we got a legislative "ask" this year, which will at least put a rural food safety agent in every district.

Local delivery relies on local people and that connection sustains funding. *Jordan* underscores that "the county delivery model is very important, because… the local extension personnel build relationships with those communities," creating "ownership" and protecting county investments that might otherwise be "redirected" if services regionalize. Yet scale has limits. *Jordan* shared, "but you don't want to get too big… about two counties is about all someone can handle."

Extension's effectiveness is inseparable from its human system. Who is funded (and by whom), how roles are scoped and supervised, how span-of-control is sized, and how people are developed all shape program coverage, equity, and credibility with local funders. As *Jordan* said, "we are truly a partnership with federal, state and local contributions," and that partnership lives or dies through the people positioned to deliver it. *Joe* summed up how important the right people are in the right positions when he said, "it starts with your people, and we've got to have the brightest of bright… [and] be able to pay them."

Structures & Delivery Systems

Extension organizational wiring, county versus regional footprints, specialization, and supervisory tiers, combined with long established and newer delivery channels (in-person, on-farm demonstrations, virtual/hybrid) framed how audiences are reached and supported.

Extension Structure

Most systems described a county-based footprint coordinated through districts or regions, with county directors and program development roles linking local offices to campus leadership. Several participants underscored that local fiscal investment cements expectations about agent presence. At the foundation is the local governance context. In some states, there simply isn't a county layer, "you don't have county commissioners, you don't have a county manager" (*Avery*), so Extension organizes regionally and ties more directly to campus. Elsewhere, structure is explicitly county-facing. *Joe* reflected, "extension [runs] regional teams that report to an assistant director here on campus, while 4-H pursued a push to have a 4-H agent in every county."

Jordan's state leans into county presence with compensated coordination roles: "the county extension coordinator is compensated… to take on additional responsibilities [in addition to their agent responsibilities] based on the size of the staff that they oversee." There are challenges with deviating from this, as he pointed out when counties co-invest, "it's hard to tell them [an agent is] not going to be there a couple of days a week." *Dana* and *Joe* both discussed the connection with their counties, having full-time county coordinators in each county to better maintain the connection between Extension and the community they serve.

Extension across the 1862 systems employ a top-down leadership structure. Some 1890s do this as well but can be less centralized allowing for more flexibility and adaptability. Supervision ladders are designed to push problem-solving down and strategy up in most of the models. *Dana* explains, "our model has an Assistant Director/Associate Dean over Ag/Forestry/Natural Resources as the liaison to specialists on campus, and the supervisor of those agents… with regional responsibilities." *Jordan* described his state tries to resolve issues below the Associate Dean so leadership can "be more big picture." Even though that helps, *Jordan* did

say there was potentially room for improvement in that area. He discussed how "increasing the number of districts… would help… with oversight on a day-to-day basis," by lessoning the amount of people each district director had to manage. *Louie* discussed when they arrived in their current Extension system, he reorganized some of the roles and support staff to better align with their new organizational leadership model. He mentioned that when coming in behind a longtime leader, sometimes to overcome some hidden challenges left behind, the extension system has to undergo a reorganization.

Employment classifications shape what the structure can do. "In our state, our extension agents are faculty; in many other states, they're staff," said *Jordan*. Which is not always a bad thing, as he went on to add, "those systems can do a lot more things… because we're held to the rules of Faculty Affairs." At an 1890, most field roles are professional/contract (non-faculty): "if you're a specialist… you're just a professional… no steps for promotion. No room for advancement," *Riley* said, describing why he switched titles early in his career "so that I could get myself in a faculty position."

Coverage models mix county anchors with regional specialization to match geography, commodities, and cost. Leaders see rising demand for specialized agents or extension professionals who sit closer to production. *Jordan* talked about the additions of a few new positions that come with higher compensation and are designed to allow extension professionals to specialize and focus their attention on one commodity or resource rather than being generalists. He said, "we have an agent… for citrus… a primary agent for peaches… an agent on the ground [for] onions… a pecan agent, water agents, [and] a couple of livestock agents." He went on to say the locations of these specialized agents are strategic. An example he discussed was the lack of livestock expertise in the southern parts of the state, where many agents have crop backgrounds, so putting a specialized

position in those territories helps fill that knowledge gap. *Jordan* also alluded to specialized agents helping to be extensions of our state specialists. This could help address some of the issues with split-faculty that was discussed prior. *Quinn* also added his perspective to the conversation coming from a regionalized system, "it's not necessarily cost-effective to have [a specialized agent in each subject matter] in every county depending upon the population." Both *Louie* and *Quinn* discussed one strategy– utilized to help in effectively leveraging the regional agent model without sacrificing the community's connection with the Extension service– is ensuring each district included a population center (urban; high population density) to hub services. *Joe* discussed his state's label change from "Regional Extension Agents" to simply "Extension Agents," which signals that area workers still "cross-pollinate with other agents, communities, and program areas." *Riley*'s system prioritizes reach and collaboration, shown as "part of their evaluation." The structural tradeoff is clear: regional approaches work when "relationships and communication" are strong. "There are regions that are rocking it… and… newer folks… getting up to speed," so "mentorship" and "change management" are vital said *Dana*.

Finally, structure must contend with the labor market and place. Some systems face retention frictions not just from pay but from external factors. For instance, *Avery* mentioned discovering through exit interviews that younger hires seek housing, land, and social life which is vastly nonexistent in their state. Leaders also want HR tools that support performance management. "Our HR people are going to have to be a lot more supportive… to our people when we need to do that," *Joe* said, while others note a thin qualified applicant pool for key roles.

Program Delivery Model

Delivery channels shifted in recent years. Social media and webinar platforms expanded during the COVID era, while many states now emphasize shorter, on-farm demonstrations over all-day

field days to meet producers where they are. Program delivery tracks leadership priorities and funding flows. As leadership turns over, middle-management and programming can wobble. *Riley* reflected by sharing his experience, “They want the program leaders to have consistency… even though they’re not consistent and they have different ideas… it sort of has left me stuck a long time.”

Riley described his program leader role in his 1890 service and how for them, they must “move with the money,” creating a faster pace for pivoting from one need to the next. Riley also mentioned that his role is to try to keep “the focus at least moving in the right direction,” for all the agents/educators and specialists. In the 1890 context, *Casey* explained role expectations are broader, “when you’re brought in as a specialist, they’re expecting you to put on programming just like the educators” which pushes delivery to be more hands-on and nimbler.

Coverage blends local access with portable expertise. Several systems still anchor delivery in county offices. *Jordan* explained, “We still have county-based programming and county offices in… 157 counties.” *Avery* also added perspective for his state’s programming approach, “members of the community reach out to the extension office and their situations can be solved.” Though not every office has every specialty, *Avery* ensured agents with specialty areas were utilized across county and district line. *Jordan* did add his thoughts on his current state’s view of changing the delivery model, “We are explicit about preserving county delivery, other states have started pulling away… I don’t anticipate that… it’s very important that we maintain relationships with our county governments and retain that county delivery model.”

Concurrently, audience segmentation shapes who serves whom. *Joe* went on to add perspective on the working relationship and targeted audiences of the 1862 and 1890 institutions in his state, “we’re [the 1862s] here to address the rural audiences… [the 1890s] are to address the

urban and marginalized audiences… we really don't [work together] except for in a few things." While clear target markets provide guidance for professionals, it also can limit impacts by preventing higher levels of collaboration and resource crossover.

Urban growth and technology are stretching traditional delivery models. *Jordan* discussed a limitation the traditional face-to-face programming approach, "It's unreasonable… to reach [our biggest urban city] with… traditional approaches… there are five million people there across the counties that make up that territory." *Joe* also elaborated as he compared the past to now, "Two decades ago, delivery was over 90%… face to face." Social platforms arrived, then COVID "changed everything," adding "remote options for meetings" (*Dana*) and a surge of webinars that "captured a massive audience worldwide that never knew us before" (*Joe*). Experiments continue in the virtual space. *Jordan* supported this by sharing, "one state is experimenting with a virtual agent that never leaves the office," as programs balance reach, cost, and local presence. While covid was described as a challenge all

Social platforms arrived, then COVID "changed everything," adding "remote options for meetings" (*Dana*) and a surge of webinars that "captured a massive audience worldwide that never knew us before" (*Joe*). Experiments continue in the virtual space. *Jordan* supported this by sharing, "one state is experimenting with a virtual agent that never leaves the office," as programs balance reach, cost, and local presence. While covid was described as a challenge all systems faced, *Joe* provided his experience after COVID accelerated structural innovation, "we hit a home run… using all those technologies." *Casey* mentioned pushing more program weaving between campus specialists and field delivery: leaders "work with specialists to make sure their extension appointment weaves through everything they do" so programs land where producers need them.

Quality and fit are safeguarded by continuous evaluation and careful scoping. Leaders worry about agents programming beyond their formal preparation (an equine example was raised), which risks credibility. One mitigation is to build evaluation into the loop. As *Avery* discussed, "pre-evaluation, post evaluation… continually polling people so that you can then adapt… and put [any changes] into their programming to keep content applicable to people's lives." That same feedback lens helps adjust timing and formats. *Quinn* expanded on this, "used to, field days were a great thing, but… ain't nobody coming to a field day anymore the way they used to." Because of this, his Extension teams are shifting toward on-farm demonstrations and shorter, well-timed events, primarily afternoons or Saturday mornings aligned to production windows in Quinn's state.

Leadership Processes

Leaders described governance routines (advisory systems, budgeting, and district coordination) alongside deliberate change efforts such as title changes, market studies, and strategy cycles, to better align programs, research, and workforce realities.

Strategic planning drew on faculty, staff, and stakeholder inputs; some systems used structured focus groups, word clouds, and artificial intelligence to surface themes and shape multi-year initiatives. District–county dissemination was leveraged to carry decisions and messaging downstream to all levels and out to the public. Leadership sits in a clear hierarchy that connects campus governance to county/regional delivery. As *Avery* put it, "in most land-grant universities… it is a hierarchy," and in his case he "also serve[s] as associate Dean in the College of Agriculture and Life Sciences," with duties "a couple tiers down from the top guy." *Louie* describes the modern portfolio: "Associate Dean… Director of [State] Cooperative Extension… with responsibilities to multiple colleges," working "closely with my college dean, Ag Experiment Station and others to work with Federal Congress on items related to Smith Lever… [and] to be

part of governance, part of budget decision making, faculty appointments, hires, etc." *Quinn*'s institution mirrors that span: "two associate directors, one over finance and county operations, and the other one over programmatic activity… overseeing the daily operations of extension." The 1890 institutions had less people in those types of roles, often having one person wearing multiple hats within the organization.

Leaders utilize resources across public, private, and local streams, then translate them into programs. *Quinn* noted PSA, "public service and agriculture," as the internal conduit that "funds experiment stations and Extension." *Avery* highlights building relationships with industry: "massive companies like Ben & Jerry's… fund a lot of the projects that we do." *Louie* stressed that directors must "answer stakeholder questions about the budget," which means knowing federal formulas and campus trade-offs. He also emphasized transparent communication with stakeholders and government officials.

Leaders also discuss mission tensions, frustrations with the bureaucratic system, while stressing what really matters. *Quinn*'s raw experience was captured when he explained, "There's this crap you hear them talking about, 'oh, we are a land grant university, and we honor teaching, research, and extension.' No, they honor research. They honor publications, and they honor grant dollars." In the next breath *Quinn* discussed that the University's mission sometimes contradicts with Extension's core: "Our lifeblood is our programs that we deliver, [not the publications and grants we write]."

Leadership is a people system: recruiting, retaining, and readying talent to execute the mission of Extension. *Jordan* asks the question: "can we retain workers… that want to adapt to the model we have and understand the importance of that model?" That is what he said many leaders are asking across the southern region. *Quinn* details the support leaders must start providing for

their employees, “somebody to help train agents… money to deliver programs… and then retention of young agents. As directors or leaders of our organizations, the buck starts with us.” In small states, leaders adapt structure to talent geography, as *Riley* depicts, “everyone is housed on main campus… you can drive from one end to the state to the other… within two hours,” so supervision and support are close to where agents work.

Two final aspects that leaders described as part of their leadership duties are to ensure unity across all program areas and levels and to execute strategic planning. *Avery*, *Joe*, and *Dana* all discussed name changes to their agents. While *Dana*’s and *Joe*’s state utilize regional agents, they recently renamed to be “extension agents” rather than “regional extension agents.” *Avery*’s institution, however, has gone in a different direction calling their extension professionals “extensionists” instead of agent. This helps bring more unity to the overall workforce. Strategy is built through disciplined listening and alignment. *Avery* shared his thoughts on what leadership should be doing, “need to spend time doing a proper needs analysis.” *Dana* ties that to accountability: in the plan of work, “we use… stakeholder input to identify by county and by region, what those… priorities are.” *Avery* gave great insight of one impactful way the state leaders can help their organization when he talked about identifying competitive advantages that they have over other Extension services and states:

> We produce the best and most [commodity] in the United States. To me, that is where Extension shines. Identifying what our state and communities do best, is the first step. Then we go out and bring back the expertise [specialists, Extension professionals] into our organizations. Then we are positioned to develop and conduct research and programming that enhances our top industries and most importantly supports our producers.

Strategic Sustainability

Finally, participants named cross-cutting pressures and positioning moves aimed at long-term viability: dealing with soft-money volatility, right-sizing expectations with capacity, retaining a diverse workforce, and building broader coalitions with local governments and across campus.

Challenges Extension Is Facing

The central constraints discussed included soft-money volatility, limitations in county government processes, policy shifts that constrain grants, and a persistent need for self-promotion to clarify Extension's public value. Funding fragility sits at the core of all Extension services that were included in this research. This pressure falls more on 1890 institutions than 1862s. While the dynamics differ, 1890s often need funds just to sustain baseline programming, whereas at 1862s shortfalls mainly limit expansion and new hires rather than core operations. Heavy reliance on grants make capacity disappear when awards end as *Avery* highlighted, "grant money is soft money and when it goes away, your people go away, right?" New policy filters are narrowing access. *Riley* and *Casey* noted intensified competition after changes that "took out all the DEI anything in grants," leaving funding lines that 1890s "compete for and had an advantage in acquiring" now "really restricted." Even when local partners want to help, *Avery*, *Jordan*, and *Joe* cited the "limitations of county government," leaving programs squeezed between soft-money volatility and uneven local support.

There are also perception and messaging gaps. Historically Extension has been coined as the University's hidden gem. Public (and even institutional) understanding of Extension's mission is thin. *Louie* described his experience over his career siting, "a lack of understanding… and much of that has been a lack of self-promotion." He even went as far as to ask an AI bot during the

interview to prove this point. The AI software output produced a vague line that "extension is a federal program for outreach," which misses the complex state–local partnership, the mission of Extension, and ultimately undersells real value Extension provides. That misunderstanding makes it harder to defend budgets and recruit allies when cuts or rules change. Reaching new audiences was cited across the leaders as priorities to help expand the brand recognition of Extension.

Leaders across states are most concerned about recruiting and retaining early-career and minoritized professionals. Rising costs, evaluation systems that don't reward excellence, and coverage expectations that exceed available FTE make staying power scarce. *Joe* expressed his thoughts about young career retention challenges, "Retention of young, talented agents, has been hard. [Their] mindset is, I'm gonna be here a couple of years and I'm moving on, and it's not just Extension, it's any job field right now." When soft money ends or local structures can't support roles, churn accelerates; the organization loses momentum and community continuity. Beyond early career retention, leaders flagged leadership churn as its own pain point. *Riley* noted that changes at the top "change everything underneath," creating instability that unsettles teams and forces middle managers to backfill gaps. Thin benches and vacancy backfill strain capacity, especially at 1890s. *Riley* shared, "I have other hats that I wear… when someone leaves, someone else sort of fills the void until they get someone else hired." That stopgap keeps programs moving but spreads people too thin, raising burnout risk and eroding continuity with communities. Drawing on his time as a district director, *Jordan* described misalignment in how leadership used workforce skill sets and a stalled promotion path, he felt "stuck" in the role. He also pointed to districts with persistent turnover in district-director and program-leader positions, and to candidates seeking those roles mainly for a late-career pay bump before retirement, motivations that don't match the responsibilities or importance of those positions. Retention hinges on

belonging and equity, especially for young and minority professionals. When place, pay, and progression don't line up, early-career staff leave, and institutional memory walks out the door.

Compensation and evaluation systems can either fuel motivation or flatten it. If performance ratings don't translate into differentiated rewards high performers check out. *Riley* added perspective from his Extension service, "If you got a poor and you got an exceptional, the amount of raise is the exact same for both." Blanket evaluations oversimplify a complex dynamic of Extension programming. Leaders mentioned that they still have not figured out a fool-proof evaluation metric that works across Extension services, or even at a more local perspective, across program areas. Leaders discussed heavily about ensuring pay scales are being evaluated and updated to stay competitive. Several systems are correcting course. For example, *Joe* explained a recent initiative that his Extension implemented, "we went through a salary survey for all our agents. We were losing some of our better folks to other state agencies." Even then, some constraints prevent that from happening. The intentions are positive, but like *Quinn* said, "we were to provide people with marketable salaries, but it's still not there in some states."

Across all leaders, it was interesting that their view of retention and making jobs more lucrative focused on salary and financial incentives. While having competitive salaries is a benefit and could be a way to get more qualified individuals initially, pay was not found to have a significant impact on job satisfaction and burnout (two factors tied to retention) for Extension professionals currently working across Extension services nationwide (Carter, B., 2025, Unpublished). Leaders should critically review this aspect, suggesting that workforce retention in Extension is more complex than salary and benefit packages. Two leaders provided estimated demographics of their Extension professionals saying they would estimate 1/3 of their Extension agents have less than five years' experience. That may not appear as significant, but it does imply

that 1/3 of Extension professionals have left/changed positions in the last 5 years further reinforcing the concerns leaders were expressing.

Positioning for Sustainable Success

Extension has been a leading resource in connecting university research with local communities. Questions on longevity of Extension have been at the core of Extension leaderships strategic planning. Positioning moves centered on cross-college alignment, targeted local co-investment, and tighter communication loops. Several systems leaned into comparative advantages (e.g., signature commodities or statewide expertise) while expanding partnerships with city governments and school systems to unlock new revenue for responsive positions.

Sustainability starts with cross-campus integration that matches real statewide needs. Leaders are deliberately spanning colleges to concentrate expertise where demand is growing. *Louie* explained that his Extension service, "operates within the College of Agriculture, but works with multiple colleges… Natural Resources and Environment and veterinary medicine in particular." This multi-college model widens the bench for complex issues (animal health, water, human health) and creates more paths for joint hires and co-funded roles. *Casey* also echoed that mentality of collaboration citing not only utilizing expertise across their campus, but also from other state institutions and even neighboring states Extensions to help overcome lack of manpower or resources to address a significant issue.

Differentiation matters. Leaders stressed leaning into what their state does best. *Avery* describes one in his state, "One of those major comparative advantages is Maple." He went on to describe how those advantages are what their programmatic approach and research is focused on. This specialization helps establish the Extension service in its entirety as the go-to for all things related to maple. *Jordan* and *Quinn* also mentioned focusing on what they do well, and what the

state grows well. Building program clusters around signature commodities or issues (e.g., maple, citrus, pecans, coastal resources) concentrates faculty time, partner dollars, and evaluation attention where Extension can show outsized impact and attract recurring investment.

Strengthen local co-investment to unlock innovation. *Louie* argues that "working with our local governments to increase that share, frees up a lot of capital within the local agency fund… for creating new and innovative positions that are responsive." In practice, deeper local cost-share on core roles (or program assistants) can free state/campus funds for agile hires, short-term specialists, data/eval staff, or cross-college joint appointments that follow emerging needs. *Louie* also presented his thoughts of ensuring balance between meeting the needs of the people, while not negatively impacting the Extension employees, "I think another challenge to overcome, that I've seen on multiple campuses extension spent decades doing everything people asked it for, even if it meant on a shoestring budget or cannibalizing things to help."

Finally, leaders brought up change management and communication as a closed loop being instrumental in future sustained success. *Dana* frames this enabling condition as important by saying for her state's Extension to continue, "helping to close that loop on change management and then the communication side of things from all levels, from all across our system." That means routine cascades, clear decision rights, and feedback rituals so priorities, roles, and metrics stay synchronized. *Avery* wrapped up his thoughts about what will make Extension sustainable in his state going forward by expanding on his approach to sustained success again accentuating feedback loops, stakeholder and internal employee feedback:

> So, let's listen all the time, not just when we get a bunch of pushbacks. The system is set up for it. Everybody has a part in making the system work like it's supposed to, intended to, and has the capacity for. I tell my people, if you do the work that you would be proud

of, and that you know your mama would be proud of, and your neighbor is not going to fuss about, you're going to be alright.

Conclusions, Discussion, and Recommendations

Conclusions

This study set out to understand (a) how Cooperative Extension Services (CES) in the eastern United States are funded and scoped, (b) what leadership processes operate within different organizational structures, and (c) how primary information/program delivery systems are organized and implemented. The qualitative scan across eastern systems yielded four reinforcing themes—1) Resource Architecture, 2) Structures & Delivery Systems, 3) Leadership Processes, and 4) Strategic Sustainability—that collectively answer the research questions (RQ1–RQ3).

RQ1: Funding, scope, and size.

Across the East, Extension operates on a mixed revenue stack—state appropriations, federal capacity funds, county/local shares, and competitive grants—with the proportions varying by state and governance context. Leaders described state-anchored models, county-anchored models, and hybrid blends; these blends set real boundary conditions for staffing levels, geographic coverage, and the reliability of local presence. In some states, county co-investment expands assistants and facilities; in others without county government, overmatches at the state level stabilize core operations but narrow local levers. These patterns clarify why capacity lines (state/federal/county) sustain continuity and why heavy grant reliance, while catalytic, risks volatility for people and programs (Avery; Jordan).

RQ2: Leadership processes.

Leadership routines link campus governance to district/county delivery through clearly tiered roles that push problem-solving down and strategy up. Directors emphasized advisory mechanisms, budget translation, and change management to align programs with resource flows and stakeholder priorities. These routines also address workforce realities (recruitment, span-of-control, professional growth) that directly condition program feasibility at the local level. In smaller or 1890 systems, leaders portrayed flatter structures and nimble decision-cycles that aid adaptability within tighter baselines—again underscoring how governance and finance choices cascade into the "people architecture" that delivers programs.

RQ3: Program delivery systems.

Program delivery has diversified. Leaders reported acceleration in hybrid/virtual channels since COVID alongside a shift from all-day field days toward shorter, production-timed demonstrations and on-farm formats. Many systems balance county-based presence with regional/topic teams to deepen specialization without losing place-based ties. Continuous feedback (brief pre/post and quick polls) is used to tune timing and content, particularly when agents program outside prior specialization. Together, these delivery choices are organized to fit local demographics, commodities, and geography while maintaining equitable reach.

Scope and transferability.

The sample represents eight leaders across seven Extension services with a concentration in the Southern region plus 1890 and Northeast cases; as such, these conclusions characterize an "eastern" snapshot rather than a national census. Transferability rests on the thick description of context rather than statistical generalization.

Discussion

The conclusions align with and extend established theory and Extension scholarship. First, the finding that funding architecture drives people architecture is consistent with organizational design principles: authority, roles, and routines channel resources into outcomes; the choice to anchor capacity in counties versus the state creates different coordination and motivation dynamics (Jones, G. R., 2012). In GST terms, leaders are tuning subsystems (finance, staffing, evaluation) to environmental signals (policy, demographics, technology) and using feedback loops to correct course—an open-systems posture that supports resilience (Bertalanffy, L., 1968). Second, the move toward regional/topic teams and hybrid delivery mirrors the literature on structural experimentation and modality diversification since the 1980s "rebirth" of Extension (Rogers, E. M., 1976; 1988; 2003; Schmitt, M. A., & Bartholomay, T., 2009; Torppa, C. B., & Smith, K. L., 2009). These designs accommodate specialization where production clusters warrant it, while maintaining connective tissue with county governments and stakeholders. Third, the evidence that grants amplify but should not backfill core salaries coheres with recent analyses of Extension change and adoption dynamics, which caution that portfolio growth on soft money can destabilize human capital even as it propels innovation (Norton, G. W., & Alwang, J., 2020). When local co-investment is formalized (e.g., MOUs with counties or school systems), capacity expands, and equity improves—especially where multilingual assistants and travel support are aligned to local goals.

Finally, we find that structure tangibly shapes delivery. Where counties co-invest, services can scale assistants, multilingual access, and niche roles; where the state anchors funding, stability can be high but local tailoring requires different mechanisms. Heavy grant dependence expands programming but introduces human-capital risk when soft money recedes. The eastern landscape

is plural: traditional county systems, hybrid regional portfolios, and state-heavy models all coexist, each with distinct trade-offs for presence, specialization, and resilience. When viewing Extension from a multi-state or regional lens, these findings provide guidance. It also encourages erring on the side of caution when evaluating aspects of other systems. Do not compare one to the next without context. As *Jordan* said, "it is not apples-to-apples every time."

Recommendations for Practical Practice for Extension Services

Based on the findings and discussions presented above, the researcher pulled out ten practical applications that Extension systems could implement to better their organizations. Not all suggested practices should be adopted by all services. These recommendations are also made based on an eastern United States Extension lens, meaning other Extension services in other parts of the United States may find cultural differences in approaches below, and should proceed with caution when applying to their own Extension system.

Capacity as the backbone; grants as amplifiers.

Stable base funding and role continuity underpin organizational resilience and program quality; short-term, soft-money dependence heightens churn and distracts from core mission. Retention and organizational-capacity work show that stable, "base" funding underwrites continuity, lowers turnover risk, and sustains community trust, whereas heavy dependence on short-term grants disrupts staffing and programming (Lamm, 2021; Safrit, 2010; Wang, 2014). Those findings justify insulating core roles from soft money and using grants for pilots, tools, and events rather than salaries.

Formalize local co-investment via MOUs when applicable and available.

Partnered, locally aligned arrangements, expand reach, increase equity, and strengthen public value when responsibilities and resources are explicit. Studies of partnerships with schools and local agencies find that explicit agreements expand reach, clarify roles/resources, and improve equity of access when tied to local goals (Ryan, 2023; Washington, 2005). This supports codifying county/municipal cost-shares and assistant positions that was discussed in the findings.

Build a layered delivery portfolio.

Combine county presence with regional/topic teams and hybrid/digital modalities to deepen specialization while preserving place-based ties. Evidence on regional teams, virtual communities of practice, and on-farm cohort models shows that multi-county/topic structures deepen specialization while preserving place-based relationships, especially when paired with hybrid delivery methods (Leuci, 2012; Sobrero, 2008).

Institutionalize feedback loops.

Utilize brief pre/post measures and pulse checks to tune timing, format, and outcomes, especially when agents program beyond prior specialization. Evaluation literature in Extension supports brief pre/post or retrospective pre/post as sensitive, low-burden measures for short events and new audiences (Adedokun, 2018; Nielsen, 2011). Diffusion-informed evaluation pieces also argue for continuous feedback to keep offerings aligned with learner needs (Hubbard, 2007). Utilizing methods such as stakeholder advisory boards or program development teams as mentioned can help. The quality of the stakeholder engagement and the feedback loops seemed to vary amongst the different Extension services. Critical reflection of communication methods should be conducted to better evaluate whether needs are being met effectively.

Right-size roles and caseload using organizational design principles.

Align structure with task interdependence and local variety, clarify role scope, and resource middle management. Restructuring without clarity risks identity and effectiveness, not only externally but internally. Reorganization research links unclear role scope and overloaded spans of control with declines in identification, satisfaction, and effectiveness (Torppa, 2009; Schmitt, 2009). Capacity-needs work highlights transparency, policies, and internal collaboration as core organizational capabilities (Lamm, 2021). This evidence backs targeted decentralization for varied local work and centralized hubs for highly specialized diagnostics.

Strengthen 1862–1890 equity mechanisms.

Transparent formulas and joint initiatives that secure baseline presence before add-ons help address long-standing disparities and expand access to underserved audiences. Reviews of Extension's structure and funding trends document persistent disparities and the need for intentional mechanisms to reach underserved audiences (Wang, 2014; Washington, 2005). Joint 1862–1890 baselines and transparent formulas directly operationalize those findings. A more intentional effort should be made between the 1862 and 1890 institutions in the eastern part of the United States to foster collaboration while leveraging expertise and resources more effectively.

Align campus incentives with outreach impact.

Recognize Extension scholarship in promotion-and-tenure and internal funding to reduce misalignment between reward systems, promotional requirements for tenure, and outreach work. Promotion-and-tenure literature emphasizes recognizing translational, co-authored, and digital Extension scholarship so incentives match actual outreach work (Martin, 2019; O'Neill, 2008). In systems where split appointments occur, this should be prioritized not only to ensure the specialists

are meeting needs of the communities in the state but also lessen the workload and stress on the specialists as they balance Extension/Outreach work with research and academia expectations.

Scenario-Plan for Fiscal Shocks.

Adopt rolling best/base/worst scenarios that pre-commit to protecting priority programs and enable rapid redeployment during downturns, while ensuring employee workloads are not increased. Post-crisis commentaries and organizational-resilience analyses show the value of pre-committed best/base/worst scenarios that protect priority functions and enable rapid redeployment (Davis, 2021; Turner, 2008). Strategic risk management should be constantly evaluated and reviewed to ensure the organization is poised to handle disruptions such as COVID or budget cuts.

Target Specialization Where Production Clusters Warrant It.

Use spatial/sector data to justify regionally embedded specialists and to match information channels growers use. Program-planning studies show that using spatial/sector data to position specialists and channels aligns expertise with growers' actual information sources and improves uptake (Prokopy, 2009; Velandia, 2010; Zimmerman, 2018). That evidence supports regionally embedded specialist positions and further aligns with the discussions by the state leaders in less regional agent systems.

Continue Modernizing Program Delivery Formats.

Shorten events, move them closer to farms, align calendars to agronomic windows, and leverage hybrid/web modalities consistent with producers' preferred channels. Channel-use and webinar-impact studies report strong outcomes for webinars/hybrids and stress aligning formats with producer time constraints (Wardynski, 2018; Worley, 2022; Zimbroff, 2023). This helps

support the shifts toward shorter, field-proximate, well-timed events that were mentioned throughout the interviews.

Recommendations for Future Research

This study is bounded by a small, purposive/snowball sample of eight senior leaders representing seven Extension Services concentrated in the Southern region (plus one Northeast and two 1890 cases), so results reflect an eastern snapshot rather than a nationally generalizable census. Data come from elite informants at the organizational level; perspectives from frontline agents, specialists, county partners, and clientele were not systematically included, introducing potential elite and social-desirability bias. Interviews were cross-sectional, conducted via Zoom, and based on self-report; funding splits, staffing counts, and delivery practices were not independently verified with fiscal/HR records, program outcomes, or observation. To preserve confidentiality, reporting is aggregated, which reduces contextual specificity and limits between-case comparability. Structural and terminological differences across systems (e.g., faculty vs. staff status for agents, county vs. regional governance, differing evaluation regimes) complicates synthesis and weakens causal inference. These constraints bound transferability and point to the need for mixed-methods follow-ups that triangulate leader narratives with stakeholder surveys, administrative data, and longitudinal observations (Merriam & Tisdell, 2016). Future work should triangulate with stakeholder surveys and fiscal/HR data to model links between funding architecture, structure, and outcomes, and expand to mixed-methods comparisons across additional regions (e.g., Midwest/West) and to interactions between 1862/1890 systems (Clark & Clark, 2018; Maxwell, 2013; Patton, 2015). These steps would further test the contingency proposition—that fit between organizational structure and environment drives sustained performance (Burns & Stalker, 1961; Donaldson, 2001; Lawrence & Lorsch, 1967)—and probe

how state and local external pressures and stakeholder expectations vary by region and structure (DiMaggio & Powell, 1983; Pfeffer & Salancik, 1978; Scott, 2014).

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Chapter 4 The Innovation of Extension Programs and Services in the Last Twenty Years[2]

[2] Carter, B., Croom, D.B., Sandlin, M., Campbell, B., Lamm, A. To be submitted to the *Journal of Agricultural Education*.

Introduction and Study Context

The purpose for the Cooperative Extension Service stated in the founding legislature, is to "…aid in diffusing among the people of the United States useful and practical information… and to encourage the application of the same" (Rogers, 1986, p. 14). The original purpose of the agricultural extension model still holds true even in today's ever-changing world. The Cooperative Extension Service defines itself as a go-to destination for more than just agriculture but also youth and community development, health and wellness, and home economics. The organization's roots are still grounded in the mission of Extension, while the shape of the tree above has new branches. The traditional structure for Extension is changing, and, in some states, has already undergone restructuring once, if not multiple times (Calvin, 2018; Forstadt & Fortune, 2016; Morse, 2009; Schmitt & Bartholomay, 2009; Torppa & Smith, 2009). These changes often involve transitioning from traditional, county-based models to regional or multi-county systems to improve efficiency and resource utilization (Morse, 2009). Leadership development and workforce restructuring have been critical as Extension adapts to broader societal needs, emphasizing interdisciplinary collaboration and role clarity (Schmitt & Bartholomay, 2009; Torppa & Smith, 2009). Extension has also expanded its programmatic focus to address contemporary issues like climate change, urbanization, and food security and integrating innovative approaches, such as the use of technology to enhance data-driven decision-making (Calvin, 2018). Additionally, collaborative approaches, including partnerships and networking across disciplines, have become central to the Extension's mission, though challenges, like role ambiguity and reduced presence in communities, persists (Forstadt & Fortune, 2016). These changes reflect an ongoing effort to remain relevant and effective in a rapidly evolving environment.

To continue growing and producing the desired outcomes of Extension's mission, state Extension leaders and agents must think outside the county lines of traditional county-based structures and reinvent themselves. This can be seen through increased investment into branding and presence on the digital market, grouping units within Extension together to foster collaboration more effectively, or implementing a new training plan designed to incorporate new (to Extension) theories and frameworks in hopes of preparing their employees and leaders to cope and overcome organizational change (Braverman et al., 2012; Calvin, 2018; Franz, 2007). While these innovative practices have been shared individually through research, there is a lack of a comprehensive study aiding in exploring the thought processes behind innovations within Extension programs, especially on a national scale. There is also no current research in which Extension structures have been analyzed to determine if restructuring has aided or detracted from the innovation process and how that compares to innovations taking place in the traditional Extension structures.

Conceptual Framework

Combining organizational theory with the diffusion of innovations theory allows for a better framework to explore the perceptions of agents responsible for innovations in varying Extension structures. The two theories provide a framework for the dissemination of information and innovations, core to what Extension is, and for the potential effect Extension structure has on cultivating innovative ideas.

Diffusion of Innovations

The diffusion of innovation theory, developed in 1962, has been synonymous with agricultural Extension since its inception. The theory seeks to explain how, why, and at what rate innovative ideas and technologies spread throughout cultures (Rogers, 2003). It helps understand how new

products and ideas are adopted and spread, informing strategies for marketing, policy-making, and organizational change. The theory outlines key concepts and elements that assist in describing the process, including innovation, communication channels, time, and social system. Innovation is the focus as it relates to this study. An innovation is an idea, practice, or object perceived as new by an individual or other adoption unit (Rogers, 2003). Innovations can be advancements in new technologies, practices, or other changes that provide a relative advantage over other solutions. Rogers (2003) identified five attributes of innovation that impact the adoption rate.

1. *Relative Advantage*: The degree to which an innovation is perceived as better than the idea it supersedes.
2. *Compatibility*: How consistent the innovation is with the values, experiences, and needs of the potential adopters.
3. *Complexity*: How difficult the innovation is to understand and use.
4. *Trialability*: The degree to which an innovation can be experimented with on a limited basis.
5. *Observability*: The extent to which the results of the innovation are visible to others.

Rogers (2003) also outlines adoption categories of the innovations and the diffusion process involved. While innovations can come in many different forms, the factors listed above still play a role in adoption of the innovation.

Organizational Theory

Organizational theory examines the structures, designs, and behaviors of organizations to understand how they function, adapt, and achieve their goals (Jones, 2012). This theory explores the interplay between an organization's environment, strategy, technology, and structure to

determine how these elements influence efficiency, effectiveness, and innovation. Within the theory, there is an emphasis placed on the dynamic nature of organizations, highlighting their need to respond to external pressures and internal complexities through effective decision-making, resource allocation, and coordination (Jones, 2012). By integrating various perspectives, such as systems theory, contingency theory, and institutional theory, organizational theory provides a comprehensive framework for analyzing and improving organizational performance and adaptability in changing environments. Organizational theory interacts with three aspects of an organization: organizational structure, organizational design and change, and organizational culture.

Using these theories as framework, I set out to comprehensively analyze the development, implementation, and impact of innovations within the Cooperative Extension Service, including their purpose, driving needs, challenges faced, facilitating factors, and resulting outcomes, to gain insights into their effectiveness and applicability in achieving desired goals across varying Extension organizations. Five research questions were determined to help guide the research to better understand the innovation process for Extension professionals in different Extension systems across the United States.

Research Questions

1. What purposes and problem framings motivated the development or implementation of the innovation?
2. What stakeholder needs, contextual pressures, or goals drove adoption of the innovation?
3. What roadblocks and challenges were encountered across the innovation's development and implementation, and how were they navigated?

4. Which factors and resources (e.g., organizational, financial, human, partnership) facilitated the innovation's development and implementation, and in what ways?
5. What outputs, outcomes, and unintended consequences resulted from the innovation?

Methodology

This study employed a qualitative, phenomenological case study design to explore the motivations, challenges, and impacts associated with innovative Extension programs or projects across the United States. A phenomenological approach was appropriate given the research aim to understand the lived experiences and perceptions of Extension professionals directly involved in program innovation (Guba & Lincoln, 1994; Hesse-Biber, 2017). The case study design allowed for an in-depth, contextualized examination of multiple Extension systems across varying organizational structures and cultural environments (Yin, 2009). The goal was to derive meaning from the perspectives of those actively designing and implementing innovations in the United States Cooperative Extension Service.

Sampling and Recruitment

Participants were purposefully selected based on their direct involvement in the design, implementation, and leadership of innovative Extension programs/projects across the United States. The sampling strategy was designed to capture a diverse range of programmatic approaches, organizational structures (e.g., county-based, regional, programmatic), and audience types (e.g., youth, urban, underserved). I utilized impact statements or published articles from within the last 10 years to aid in selecting the innovative programs of interest.

Seven innovations were included in the initial selection for the study, representing both land-grant university systems and community-based Extension efforts. Each of the

program/project leads for the seven innovations were sent emails including the scope of the study, why they were being contacted, what to expect during the research process, and consent forms. Six out of the seven project leads responded to the invitation to participate. Each participant held a leadership or administrative role and was recognized by peers or state systems as having led or contributed significantly to a recognized innovation. The sample size was reasonable for a phenomenological study, between 3-25 participants (Creswell & Poth, 2018). Once the consent of each participant was granted, interviews were scheduled via email.

Instrumentation and Data Collection

I approached the data collection processes with an emergent design strategy to allow for a natural openness between the clients and the interviewer (Merriam & Tisdell, 2016). Data were collected through semi-structured interviews conducted via Zoom. The flexible nature of the semi-structured interview protocol (Appendix D) allowed the researcher to create a natural flow to the conversation and explore concepts that emerged during the interviews (Merriam & Tisdell, 2016). Extension literature and researchers' experiences in Extension informed the initial content of the protocol, the questions were reviewed by a panel of Extensionists. Questions solicited information regarding participants' Extension background and experiences that lead to the innovation (e.g., Please describe your role within Extension at the time this innovation was developed or implemented. What experiences inspired the idea for this innovation?) and their experiences throughout the innovation process (e.g., Before this innovation was implemented, how were similar programs or services traditionally delivered? What were the biggest roadblocks or challenges you encountered during the development or implementation of this innovation? How has this innovation changed the way Extension operates in your state?).

Interviews ranged from 45 to 90 minutes in length, were audio-recorded with consent, and transcribed verbatim. All audio recordings were destroyed upon completion of transcription. To ensure accuracy and to preserve confidentiality, participants had the opportunity to review their quotes and how they were presented. Once feedback was received minor changes were made to protect the participants identities further. Additional contextual data, such as program documents, Extension reports, and publicly available materials, were used to support and triangulate interview data (Merriam & Tisdell, 2016; Patton, 2015).

Table 4.1

Descriptors of Participants

Participant Pseudonym	Innovation Pseudonym	Scope of Innovation	Participant Role	Extension Region
Ben	MetroConnect	County & State: Urban Focused	Former County Director/Current Project Director	Western
Bethany	Ag Quest 4-H	District & State: Urban Focused Initially Now Includes Rural	Former County Agent/Current District Program Leader	Southern
Bri	Bloom Project	County: Community and Minority Focused	Professor/Specialist	1890
Kara	Healthy Roots Initiative	State: SNAP-Ed Population Focused	State SNAP-Ed Coordinator	Southern
Larkin	Agri Assist AI	National: State Extension Focused	Project Manager	All Regions
Shannon	Harvest Reach	Regional: Assigned Geographic Territory Focused	Regional Extension Agent	Western

Identifying information was removed or coded to provide confidentiality. The selected innovations and participants represented different regions of Extension across the U.S., as laid out by the Association of Public Land Grant Universities. Three out of the five regions were represented, as well as an initiative that encompasses all regions in terms of scope as outlined in Table 4.1. Each innovative program and participant were given a pseudonym to ensure confidentiality. Brief descriptions of each innovation can be found in Table 4.2.

Table 4.2

Descriptors of Innovations

Innovation Pseudonym	Summary of Innovation
MetroConnect	MetroConnect restructured Extension's role in metropolitan regions, developing urban-specific programs that addressed community priorities such as economic development, health, and sustainability while adapting Extension's traditionally rural mission to a city context.
Ag Quest 4-H	Ag Quest 4-H is an experiential learning initiative connecting youth from rural and urban counties to agricultural careers and policy, fostering cross-cultural understanding and inspiring future leaders to pursue agricultural fields and advocate for the industry.
Bloom Project	The Bloom Project built research and teaching capacity, combining Extension, research, and student engagement to advance sustainable agriculture, food systems innovation, and workforce development.
Healthy Roots Initiative	The Healthy Roots Initiative rebranded and expanded nutrition education programming by integrating billboards, social media, and marketing strategies, shifting from individual-focused outreach to a statewide health campaign that built visibility, engagement, and credibility for Extension.
Agri Assist AI	Agri Assist AI leveraged artificial intelligence and cooperative data-sharing across states to create a national repository of Extension knowledge, using machine learning to expand client access to timely, research-based information while complementing human expertise.
Harvest Reach	Through boat travel and community partnerships, Harvest Reach brought food preservation, gardening, and nutrition workshops to remote communities, increasing food security and resilience in areas with limited Extension presence and infrastructure.

During the interview sessions, participants were asked questions exploring participants' perceptions of innovation drivers, implementation processes, organizational dynamics, and

observed outcomes. In responding to these questions, participants shared their experiences through narrative, framing their insights as stories (Lewis & Hildebrandt, 2019). These narratives are foundational in qualitative research, as storytelling is central to how individuals make sense of their experiences and construct meaning (Lewis & Hildebrandt, 2019).

Data Analysis

Two methods were used when analyzing the data. The first analysis method employed phenomenological data analysis techniques that included bracketing—setting aside personal biases and preconceptions; horizontalization—treating all statements with equal value; clustering—organizing significant statements into themes and subthemes; and textualization—articulating the essential meanings of participants' experiences (Merriam & Tisdell, 2016; Saldaña, 2021). Interviews were transcribed verbatim using Otter.ai, an artificial intelligence text transcription software, and were reviewed for accuracy by the lead researcher. NVivo, a qualitative data analysis software, was used in the inductive analysis process. In this process, six parent themes were identified based on the lead researcher's field notes and those taken during the simultaneous data collection and analysis process. These were entered into NVivo for inductive analysis of the participants' stories.

The second method followed Naeem et al.'s (2023) six-step systematic thematic analysis: (1) transcription and familiarization, (2) keyword selection, (3) coding, (4) theme development, (5) conceptualization, and (6) conceptual model creation. An abductive approach guided the interpretation, blending data-driven insights with the theoretical constructs of the study. Naeem, et al. (2023) formalize two "6Rs" checklists to systematize rigor in thematic analysis. For keyword selection, the 6Rs ensure the terms you elevate from quotations genuinely anchor subsequent coding: Realness (capturing participants' authentic experiences), Richness (semantic depth),

Repetition (recurrence across the corpus), Rationale (theory-linked justification), Repartee (poignant or striking moments that crystalize meaning), and Regal (keywords that are central/indispensable to understanding the focal phenomenon). For coding, the companion 6Rs guide the qualities of good codes: Robust (comprehensive representation of the data segment), Reflective (linking data to theory), Resplendent (powerful, explanatory), Relevant (tightly aligned with the research question), Radical (distinct, non-overlapping—even insight-provoking when counter-narrative), and Righteous (logically consistent within the coding framework and purpose). These heuristics are embedded within a six-step, systematic TA process (from transcription/familiarization and keyword/quotation selection through coding, theming, interpretation, and conceptual-model development) to bolster transparency, replicability, and theory building.

The data were also themed using the artificial intelligence (AI) software ChatGPT as a means of verification. The themes produced by the lead researcher, and AI-produced themes were in congruence with one another. Keywords were selected based on the 6 Rs framework, clustered into codes, and further grouped into thematic domains. From this second method, five parent themes were identified. Cross-referenced with the original six parent themes (*1. Purposeful Disruption, 2. Just-Driven Innovation, 3. Catalysts for Change, 4. Navigation Resistance and Risk, 5. Evidence of Transformation, 6. Organizational Influence*), the five new themes (*1. Expanding Access and Reach, 2. Mission Reframing and Modernization, 3. Strategic Visibility and Stakeholder Engagement, 4. Navigating Resistance and Challenges,* and *5. Outcomes and Perceived Impacts*) were more holistic than the previous themes yet still captured the same patterns the researcher had identified. This helped establish validity of our interpretation of the data, as well as aid in identifying any patterns that had not identified previously.

Trustworthiness and Ethics

To ensure the credibility and rigor of this study, I adhered to established qualitative validation strategies grounded in Lincoln and Guba's (1985) framework. Trustworthiness was demonstrated through attention to credibility, transferability, dependability, and confirmability. Credibility was strengthened through data member checking, peer debriefing, and triangulation. Triangulation was achieved by incorporating multiple data sources, including interview transcripts publicly available program materials, and utilizing AI software. This multi-faceted approach enhanced the robustness of findings and reinforced their alignment with both participant perspectives and theoretical constructs. Two independent, external peer reviews were conducted during the data analysis phase to enhance internal validation, reduce researcher bias, and confirm emergent themes. Transferability (external validity) was supported through purposeful sampling and rich, contextual descriptions of both participants and themes, allowing readers to assess the applicability of findings to their own contexts of interest (Merriam & Tisdell, 2016). Dependability and confirmability (reliability) were addressed through the development and maintenance of a detailed audit trail, including analytic memos and documentation of coding and thematic decisions. Reflexive journaling supported transparency in the researchers' positionality throughout the process. Prior to data collection, this study received an Institutional Review Board (IRB) determination (PROJECT00011638). The project was classified as Not Human Subjects Research and therefore not subject to human subjects' oversight. Documentation of this determination appears in Appendix A.

Reflexivity Statement

As an Extension professional and scholar, I bring both experiential insight and positional awareness to this study. My background includes direct involvement in Cooperative Extension

programming, leadership, and innovation—affording a deep understanding of the systems and communities under study. While this positionality provides deep contextual understanding and an ability to interpret nuanced organizational dynamics, it also carries the potential for bias. To address this, I implemented bracketing to consciously set aside personal assumptions, allowing participant experiences and perspectives to guide meaning-making throughout the research process.

I also recognize the influence of professional authority and community roles in shaping relationships with participants and interpretation of data. To mitigate unintended consequences, strategies such as peer debriefing, triangulation, and analytic journaling were employed to ensure transparency and rigor. My commitment was to amplify participants' voices as co-constructors of knowledge, uphold ethical practices, and prioritize participant well-being while generating insights into the evolving structures and innovations of Cooperative Extension.

Findings

Codes were subsequently grouped into five parent themes: (a) Expanding Access and Reach, (b) Mission Reframing and Modernization, (c) Strategic Visibility and Stakeholder Engagement, (d) Navigating Resistance and Challenges, and (e) Outcomes and Perceived Impacts. Each theme captures a distinct yet interconnected dimension of how Extension professionals conceptualize innovation, organizational change, and the evolving role of Cooperative Extension Services. What follows is a presentation of these themes, supported by participants' quotations and interpretive analysis.

Expanding Access and Reach

Participants thought about the current landscapes of their Extension and how that related to their approach to programming. This led some participants to question whether they were achieving the mission of Extension, which is to disseminate research-based information from the University to the public. With changes in approach to Extension structures, comes changes in job expectations of agents, whether that is change in geographic scope, programmatic focus, or specialization. *Shannon*, a regional agent covering an area the size of Indiana, said:

> Of course, there's lots of reasons for innovation, but having too few people in too big of an area requires innovation… that is where innovation becomes necessary. I really bristle at the "doing more with less." No, you do less with less, but you just try to do the things you can do best, right?

Ben echoed reflecting on his own community and county at the time and emphasizing the need to adapt to the environment he was in. He shared how important it was for him to self-reflect on what value their Extension could bring to the table, what they could offer, that the community would respond positively towards. Being in an urban area, without a significant agriculture footprint, forced outside of the box thinking to reach a different clientele base than traditional Extension programming. *Bri* also added insight on expanding access in a different way purposefully targeting a minority community that ranked last in food security and health outcomes for counties in their state by saying,

> So, we [in Extension], always provide programming for nutrition programming, but if our participants don't have access to nutrient dense foods, they could know everything in the world, and still not eat the right foods because they can't get them.

She continued discussing how expanding access for the bloom project was not just focused on sharing informational resources to clientele, but to foster a change in the community itself. To bring access to better or innovative farming practices not only produce a crop but provide a consistent healthy and nutritional food supply.

Early innovations illustrate how technology was leveraged to expand programming capacity. *Shannon* recalled, "one of my earlier innovations, so it was in like 2013-14/15, we had the libraries throughout the state, had something called online with libraries." This system allowed Extension to broadcast programs on to larger geographic regions, removing travel barriers and expanding access to new audiences. As *Shannon* explained further, "Libraries and the state…you could go to one library and you could teach to all the libraries, or whoever signed on to whatever that particular class was." The use of libraries as hubs not only met clientele where they were but reframed access as a shared community responsibility. Later advances in connectivity reshaped how programs were delivered. *Shannon* reflected on the pandemic era:

> So even though we had Zoom and we did stuff like that, the gold standard is to go there in person…what I learned through the pandemic is that we were actually missing a lot of people, because suddenly I got a lot of people who started joining remotely because they finally could.

This experience revealed previously underserved populations, demonstrating how access innovations can reshape both the scale and equity of Extension's reach. Participants described new ways of extending Extension's reach beyond traditional audiences. Several emphasized digital platforms and mobile outreach as key innovations. As *Larkin* explained:

> We realized we had to meet people where they were and, increasingly, that was online. Creating virtual programs meant reaching clients who never would have walked into a county office.

Others described mobility as transformative. *Shannon* noted, "Taking the program directly into communities, instead of expecting them to come to us, made a huge difference in who we could serve." *Shannon* further explained, "The introduction of mobile programming and partnerships with libraries or community centers opened doors we didn't know were closed. People felt more comfortable engaging when it was in a familiar local setting." These strategies illustrate how Extension adapts to shifting clientele needs and access points, ensuring that Extension remains responsive not only to traditional stakeholders but also to new audiences such as urban populations, minority groups, and working families who may have different schedules and expectations. Perhaps most strikingly, access innovations allowed Extension to serve entirely new communities. As *Shannon* noted: "So one of the biggest impacts of this program…is that I have been to communities that no Extension agent has been to before."

Mission Reframing and Modernization

Throughout the interview process, participants described reframing Extension's mission beyond its traditional agricultural role to include technology, health, and broader social needs. For example, *Larkin* described the national vision behind an AI-driven initiative, "So the next step for us…with the goal being to have a national repository of data that our large language model can be trained on." This reframed Extension as both a contributor to and beneficiary of advanced data systems, signaling a shift toward digital transformation. Similarly, he reflected on early experiments, "it would have been 2021-ish…when we initially started working on the chat

bot…closer to a sort of glorified Google search…with a little sort of AI and machine learning sprinkled in."

Extension's modernization also was taking core concepts of Extension and bringing them into the digital age, creating an online knowledge hub. As *Larkin* recalled: "2008 I think, when *Ask Extension* started…members of the public can ask a question and then that question gets right into a Cooperative Extension expert who supplies an answer to it." This evolution illustrates Extension's ability to maintain relevance by broadening its mission in response to societal change while staying grounded in its educational roots. It also captures the change in culture that started happening as Extension came into the digital age. While rudimentary, these efforts marked Extension's first steps toward integrating artificial intelligence into service delivery. As digital technology has advanced, so must the concepts of earlier innovations to stay relevant. *Larkin* went on to discuss how integrating the data that has been collected from the +15 years of Ask Extension, became a great foundation to build upon for the Agri Assist AI project that is currently being implemented. *Larkin* further added to this concept by discussing how creating a virtual hub of Extension knowledge can reach more people, especially in states or regions where Extension is sparce. The Agri Assist AI does encompass the entire U.S. in scope. *Larkin* explained part of the concept is to "connect Extension with our clientele" in a way that can "alleviate the workload on a local level for agents, while still building the connection with Extension." This dissemination approach is scaled yet keeps the local aspect incorporated into it by having filters that can help sort recommendations for your area or region of the country.

Other reframing emphasized multi-dimensional health. *Bri* asked, "What can we do that addresses multiple dimensions of health at the same time," highlighting the need for holistic programming that integrates food systems, health, and community well-being. This theme also

explores the element of community development and health, which each participant brought up. This showcases a shift in client needs on a national level, not just locally.

When discussing how the participants have had to adapt differently in their area in comparison to other agents in other states, *Shannon* said:

> There are some innovative ways of getting people together, but mostly we look at reach. Are we getting to the communities in our area? It is no longer about programming for change in behavior or getting attendance to in-person meetings, we are programming to just make people aware that we are here. We are a resource to your community.

Each Extension service has their own approach to what they consider their main objective as far as impacts go. *Shannon* shared how the traditional mission and view of impact in their state shifted. *Ben* also added to this by sharing how their state's, and specifically the heavy urban areas, needs have evolved over time. While traditional agriculture programming (grower meetings, master gardeners, etc.) had been in place, the communities stopped seeing as much value in that approach. They saw more value in county specific community development than traditional agricultural programming. The mission for *Ben*'s county's Extension changed completely, even to the point where no designated agent covered agriculture in the county anymore. The approach to programming had to change, to stay relevant, and keep Extension alive in his community.

Strategic Visibility and Stakeholder Engagement

Visibility and stakeholder engagement emerged as critical strategies for sustaining Extension's legitimacy in a crowded and evolving educational landscape. Participants emphasized how branding, marketing, and credibility with stakeholders shaped Extension's survival and helped position their innovative approaches for success. This also reflects a core element of Cooperative Extension, which is the aspect of stakeholder engagement. As far as marketing, *Kara* recalled the

early stages of her state's health campaign, "I'll say we started doing billboards in 2015…It didn't become the Healthy Roots Initiative, until 2017 when we incorporated social media." *Kara* also noted that the direction for this innovation came from new updates to expectations set at a national level, as well as inspiration from other states that have implemented social media and marketing campaigns into their outreach efforts.

However, visibility was not only about technology or branding—it also required confronting cultural barriers. *Kara* noted, "We start from behind sometimes…people want their health to be better, but culturally, it's just not like that." Her comment underscores how visibility requires not only communication strategies but also cultural sensitivity and persistence in reframing norms.

Stakeholder and client education are equally vital. *Bethany* highlighted that "they don't have an awareness. You know, you don't know what you don't know." This lack of awareness underscored the need for consistent visibility campaigns to help establish and recruit for their new youth program.

At times, participants also confronted performative partnerships. *Bri* explained,

> A lot of funders have recently required institutions to 'work with' minority serving institutions or minority communities, but it was unintentionally encouraging very transactional relationships, a type of 'box-checking.' Having experienced that myself, I was cognizant to make sure that the partners I sought knew I was seeking an authentic, non-exploitative, non-extractive, truly collaborative relationship. At first, I encountered hesitancy, but when our conversations showed that I was consistently inviting real, equitable collaboration in everything from budget creation to methodology to reporting, they realized, 'she is for real,' leading to strong partnerships that continue to this day.

Her persistence transformed a transactional partnership into a genuine collaboration. *Ben* further highlighted the benefits of open transparent communication when he described navigating the change from a traditional county agent model to an urban and community development focused model. Clearly outlining what services, the University could provide the county, was vital in convincing leadership to buy into this new contractional model that *Ben* was trying to implement with the local government. *Ben* explained that this new model is where "the county will only contract out specific services and projects with the University based on local needs", no longer will there be a "generalist agriculture agent" or any agent aside from 4-H supported by county funding.

Finally, branding itself became a balancing act. As *Kara* described, "So one time, I was told by someone that Extension is the make, and the Healthy Roots Initiative is like the model." This insight highlights the tension between program-level branding and institutional identity, a tension Extension must navigate carefully to maintain both visibility and legitimacy. This gets further complicated when states have multiple Universities under one Extension umbrella. Not only is it essential that the public understand Extension, but also for the employees at each University to feel as though they can identify with Extension and their home university at the same time.

Navigating Resistance and Challenges

Innovations offer new ideas that add value in a way that has not existed before. Despite this, participants described the challenges and hurdles they faced to implement, invent, and/or sustain their innovations. These challenges and hurdles were significant structural and cultural

barriers that limited Extension's ability to adapt. I have themed these challenges as resource scarcity, organizational barriers, and cultural resistance.

Resource Scarcity

Funding challenges were prominent throughout the interviews. Each participant mentioned limitations of a modern extension innovation being heavily tied to availability of funding sources. *Shannon* lamented, "I hate going for grants…you can't fill the gaps that need to be filled, because you have to do this grant." This showcased the trade-offs extension professionals are facing. To do their job they need money; to get money they must put the core mission of their jobs on hold in an attempt in acquiring grant funds. She finished discussing grants by describing how she would react if her Extension enforced having to secure grant dollars for her salary by saying, "if that started to be required of me to even fill in some of my nine months, I think I'd be looking at retirement." Other participants described how funding for innovations is not just a one-time hurdle to overcome. *Bri* stated, "So the biggest challenge is, I literally am in the middle of a spending freeze, initiated by the recent changes in the Federal Government." Further discussion explained that the innovation she had implemented relied heavily on federal grant funding. This calls attention to the impacts that policy makers and current United States Government officials can have on current Extension Programs.

Beyond funding, human capital was another resource that was lacking. Transportation for *Bethany*'s Ag Quest 4-H program was a "logistic nightmare," proving increasingly difficult to find available and affordable transportation of the students across the state. Even securing vehicles was not enough, as finding drivers for the vehicles also has been challenging. *Larkin* echoed the issue that limited manpower can hinder the progress of the innovation by saying, "I need another two web developers to work with to really make this happen."

Organizational Barriers

Extension services across the country are similar in nature, but each have their own unique qualities, and many have tweaked the programming model utilized in their state. The diversity of Extension Services also brings with it a diversity of challenges that are faced in each state. *Shannon* was the first to explain working for a university by saying, "I had no idea until I started working for the university, how much bureaucracy there is, how much turnover there is, how much politics is involved." These reflections illustrate how administrative and structural constraints limit Extension's ability to act as a nimble innovator. *Kara* also brought up the restrictions on the 'what' and 'how' of innovations based on organizational policies put in place. This limited the outlets that could be utilized to promote their healthy roots initiative, *Shannon* later talked about their state's leaders' acceptance of innovative practices and approaches. While jumping through hoops and navigating the red tape slowed the process, *Shannon* praised her state leaders for being supportive and for realizing that with the manpower they had, different approaches were expected to happen to ensure the mission of Extension is carried out.

Bethany added her experience with leadership, explaining that it took several years of "proving the concept and impact," on top of almost running out of funding, before state 4-H leadership became invested in seeing the Ag Quest 4-H program continue. During her time working on Ag Quest 4-H, she first joined as an agent and now holds a district program leader position in her state. *Bethany* mentioned feeling like her advancement into a leadership position was also a factor in getting state 4-H leaders on board, and even other 4-H agents.

While most participants spoke on their experiences with one Extension Service, *Larkin* described the different barriers Agri Assist AI is facing trying to partner with multiple different Extension Services:

> On the institutional side, the challenge with getting datasets is not necessarily whether institutions are interested, but that many already have their own initiatives underway. They don't see Agri Assist AI as competition, but they're not going to dedicate significant time or energy to the Extension Foundation's tool either. Much of the difficulty comes down to resources—creating the data specifications we need and pulling information into a standardized dataset requires technical skill, and institutional websites are often set up differently. IT departments at land-grant universities are like IT departments everywhere: they have a long list of priorities. Sometimes we encounter IT staff who are excited about AI, the technology, and the fact that we are working on an AI tool for Cooperative Extension, so they make time to help. But more often, IT staff are simply overworked and understaffed. In those cases, progress only happens when a high-level administrator, like a director or assistant director of Extension, steps in, hears about Agri Assist AI, and tells their IT team that it's a priority.

Larkin highlighted the issue of competition and the varying resistance and hurdles faced depending on the structure and size of the Extension Service they are working with. This also was an example of organizational size of Extension Services being a factor as it relates the flexibility and collaborative nature.

Cultural Resistance

Both *Bethany* and *Shannon* specifically brought up time of year as a big factor in the success of their innovative programming. *Shannon* said:

> I've learned that May and July tend to be the best, like end of May after school is out, but before people have really gone out fishing, because we have a very, very seasonal culture in the southeast part of our state because of fishing. There are a couple of communities, for

example, that I do not go to in the summer because it's pointless, because everybody is working, working, working, working. No one has time for classes in the summer.

Bethany stated that time of year is a complex issue for her program. On one-hand the summer is best for students, because they have days, they can travel without interfering with school. On the other-hand, "summer is the busiest for our [State's] 4-H agents", navigating summer programs and summer camp throughout the months of June and July. Finding middle-ground has been a challenge. *Shannon* also added good insight as it related to navigating programming to different cultures:

> Some of our tribe communities, some of them are insular, and that's a different process. That is, I need to be invited, and that's quite important, and we have the connection. So usually someone will contact us or whatever. So, I don't in the tribe communities, especially, I do not push my programs. I'm usually being asked to come to do that.

Initially taking time, the connection *Shannon* built with the local tribes has helped her provide programming to places that have never seen Extension before. *Kara* also talked about long-standing stereotypes around her state and healthy living. *Kara* went on to say, "But I think one of the big barriers that we're still always going to keep facing in our state is the cultural barrier." This introduces another complexity, being stereotypes, when approaching innovations.

It is worth noting that, while not enough to create a separate sub-theme, participants alluded to timeline or supply chain disruptions during the COVID-19 pandemic as being a disruptor, as well. An example of this was from *Ben* when he was discussing the building of the new Urban Center in the county, "So, part of the caveat is the center was starting to build, and then COVID happened, and that has set us back dramatically." This helps showcase that disruptions, even not direct, can have ripple effects that are felt across all sectors. While many participants spent months

or even years planning their innovations, some disruptions cannot be accounted for during the planning process, signaling the need for the ability to be flexible and adaptable.

Outcomes and Perceived Impacts

Finally, participants described the tangible impacts of Extension's work, both at the individual and community levels. These impacts demonstrate how innovation reinforces Extension's legitimacy by creating meaningful change, both internal and external. Each participant described the numbers and reach of the innovations, as well as the success of the projects. The following impacts discussed go deeper than the goals of the innovations themselves, describing intangible impacts.

Bri highlighted the creation of equitable food distribution systems for the local community, "We made sure to develop a distribution system so that the produce…was being distributed equitably across the community."

Trust at both the local and extension leadership levels also emerged as an impact. *Kara* explained, "No matter how much you tell them that they can trust you, you got to show them, that you're actually out there doing the work." Her words reinforce the idea that credibility is earned through consistent presence. This consistent messaging has been shown to have increased the awareness of the healthy roots brand. *Kara* did note that with the nature of a marketing and social media campaign, it can be difficult to capture behavioral change but emphasized the potential that exposure can have. Awareness is key for them to know about program offerings and even become aware that change can happen in their lives, aiding the fight to breakdown the cultural stereotypes that are deeply rooted in their state.

As far as leadership trust, *Bri*, *Ben*, *Bethany*, *Kara*, and *Shannon* all mentioned gaining leadership trust through their innovation process. All acknowledged the initial apprehension from

their leadership, whether that was state level or programmatic. Once the innovative approaches were proven, leadership became more open to helping and supporting. *Bri* talked about how leadership has stepped up to cover the cost of personnel on the project while the grant funding is frozen. This highlights the value and potential that leadership sees in *Bri* and her project. *Ben* explained how the process to flesh out a brand-new model for serving a county in his state took significant amounts of time to get the model to a place the local government and the leadership of Extension both agreed upon. After what seemed like a very long road to gain ground on the new model, leadership turned over on the county side, which almost ruined the progress that had already been made. Luckily, the concept had been fleshed out enough where the core elements were deployed through another approach. *Ben* further explained,

> When the executive for [county government] left, it was dealing with professional politicians. This meant when the Exec left, the politics of replacing him consumed the government. That resulted in sinking the idea with the county, but we sort of had Extension on board enough to have vetted that this seems like a viable model when all of it shook out.

The trust and relationship built between *Ben* and the state was enough to help move the innovation along even amid county leadership turnovers. This also showcases the importance of equally strong relationships with county and state officials in states that utilize a county model. The consistent communication and involvement in the innovation planning process was essential to the success of the project.

Impacts surrounding youth and students also were notable. *Bethany* emphasized how youth themselves became advocates: “So now, I feel like our natural advertisers have actually been the kids.” She later shared, “So this kid loved it…he made friendships that lasted a lifetime. He was like, this is what kept me in 4h.” These examples demonstrate how Extension fosters generational

change, sustaining its mission through youth leadership development. It also displays how the innovative approach to connecting youth to their state's agricultural industry was successful. *Bethany* finally summarized the impact the program has had on other students by telling stories of students not realizing that agriculture is statewide, not just in the south. She also talked about students pursuing degrees in agriculture now, specifically after getting inspired upon completing the program. *Bri* added an element of youth impact, discussing how because the innovative initiative is grant funded, she was able to offer undergraduate student positions on the project that helped contribute to the success of the project while also giving the students an opportunity to learn how extension can connect with and impact local communities.

Another notable impact was a change in approaches to reduce barriers of participation that had been experienced. Participants highlighted efforts to reduce geographic and cultural barriers that traditionally limited participation. *Kara* shared, "In rural and underserved areas, transportation was always an issue. By offering hybrid delivery, people didn't have to choose between attending and taking care of their families." *Bri* added another layer, stating, "It's not just about language—it's about context. We had to rethink how we package information to be relevant and accessible to people from all walks of life." *Larkin* added to discussion by explaining how the AI tool can be a resource to connect individuals in areas where Extension engagement is low, with Extension expertise from across the country. Helping to not only reduce barriers but also fill gaps in manpower that states may have.

Together, these outcomes showcase how Extension's success is ultimately judged not only by its ability to innovate but by its ability to create sustainable, visible, and meaningful impacts at individual, community, and organizational levels.

Conclusions, Discussions, and Recommendations

Conclusion

This qualitative, phenomenological multiple-case study examined how Extension professionals conceive, launch, and sustain innovations across diverse organizational contexts. The analysis integrated diffusion of innovations and organizational theory to interpret six leaders' narratives from three APLU regions plus a national initiative. Drawing from interviews and a systematic thematic analysis, five interrelated themes appeared: Expanding Access and Reach, Mission Reframing and Modernization, Strategic Visibility and Stakeholder Engagement, Navigating Resistance and Challenges, and Outcomes and Perceived Impacts. These findings contribute to the literature on Extension's adaptability by demonstrating how organizational structures both enable and constrain innovation while influencing agents' ability to meet the needs of their clients and stakeholders.

Research Question 1: Purpose behind the innovation

Across cases, innovations were started to realign mission with present realities—expanding beyond traditional agriculture to urban audiences, food systems, health, and digital knowledge access—while preserving Extension's core public service identity (Braverman et al., 2012; Calvin, 2018; Rogers, 2003). Participants consistently framed innovation as a way to keep Extension useful and visible in changing environments rather than as novelty for its own sake, reflecting the centrality of relative advantage and compatibility in diffusion (Rogers, 2003) and the adaptive stance emphasized in organizational theory (Jones, 2012).

Research Question 2: Reasons/Needs Driving Innovation

Adoption was driven by shifts in clientele needs, geography, and access (e.g., urbanization; remote and tribal communities), resource constraints (workforce coverage; funding freezes), and policy or accountability signals (e.g., SNAP-Ed communication expectations). Leaders described hybrid/virtual delivery and on-site/mobile programming as practical responses that reduced barriers of time, travel, and cultural fit—patterns consistent with open systems adapting to environmental feedback (Bertalanffy, 1968; 1969; Knowles, 1980; Kolb, 1984; Rogers, 2003).

Research Question 3: Roadblocks and Challenges

Three recurring impediments emerged: resource scarcity (soft-money volatility; limited staff, transport, and IT capacity), organizational barriers (bureaucracy, turnover, uneven buy-in), and cultural resistance (seasonality, local norms, equity frictions). Without role clarity and middle-management support, restructuring or expansion risks overloading educators and diluting identification with the organization (Forstadt & Fortune, 2016; Schmitt & Bartholomay, 2009; Torppa & Smith, 2009). These constraints underline the need to align structure and workload with task interdependence (Jones, 2012).

Research Question 4: Facilitators and Resources

Successful innovations were enabled by authentic partnerships (schools, community organizations, minority-serving partners), visible and sustained leadership support, strategic branding/communication, and fit-for-purpose technology. Cross-program and cross-state collaboration, plus transparent agreements (e.g., MOUs), created shared capacity while preserving local responsiveness—an organizational design move that couples decentralized presence with specialized hubs (Freeman, 2010; Jones, 2012; Merriam & Tisdell, 2016).

Research Question 5: Outcomes and Impacts of the Innovations

Reported outcomes spanned individual, community, and institutional levels: expanded reach and access to previously underserved audiences; stronger trust and legitimacy via consistent presence and culturally relevant delivery; youth engagement and pipelines; and systems-level effects (e.g., equitable food distribution, statewide health campaigns, national knowledge tools). These impacts reinforce Extension's dual role as knowledge broker and community change agent and substantiate the value of mixed modalities paired with evaluation feedback loops (Patton, 2015; Rogers, 2003).

Discussion

Findings extend the Extension innovation literature by connecting why innovations emerge to how organizational context shapes what is feasible. First, consistent with diffusion theory, adoption clustered where innovations offered clear relative advantage (e.g., reaching new audiences; saving time), compatibility with local norms, and feasible trialability/observability through pilots and on-farm or online demonstrations (Rogers, 2003). Second, the study shows that innovations take hold when organizational structure, design, and culture are aligned with environmental demands: decentralized field presence to handle local variety, coupled with centralized or regionalized hubs for highly specialized functions and digital tools (Jones, 2012). This is a textbook open-systems pattern—leaders tuned subsystems (funding flows, staffing, evaluation, communication) to external signals and used feedback to iterate (Bertalanffy, 1968/1969; Merriam & Tisdell, 2016).

The narratives also provide nuance for restructuring debates. Prior work cautions that reorganization without attention to identity and workload can depress morale and effectiveness (Schmitt & Bartholomay, 2009; Torppa & Smith, 2009). Your cases illuminate concrete

countermeasures: explicit role scopes, middle-manager resourcing, and partnership-based capacity that spreads delivery load. Finally, the study contributes to equity and legitimacy conversations by showing how authentic, co-designed partnerships—not transactional box-checking—anchor sustained engagement with minoritized communities, aligning with stakeholder theory's emphasis on mutual value creation (Freeman, 2010) and with best practices in naturalistic inquiry for trust and transferability (Lincoln & Guba, 1985).

Recommendations for Practical Practice

Throughout this study, innovations across Extension highlighted that innovation in Extension is often driven not only by external pressures, funding reductions, workforce limitations, and shifting social climates, but also internal reflection on mission alignment and responsiveness to stakeholder needs. This highlights how extension professionals serve simultaneously as agents of change and guardians of organizational identity, supporting foundational principles while adapting to shifting contexts. This dual role reflects both Rogers' (2003) diffusion of innovations framework, which emphasizes relative advantage and compatibility, and organizational theory, which stresses adaptability, structure, and culture as determinants of performance (Jones, 2012). Overall, innovation is happening across the country within Extension. The scope, depth, and replicability of the innovations vary greatly, but organizational influence on the innovation process was prominent throughout all the interviews. The following recommendations align directly with the research questions.

Research Question 1: What purposes and problem framings motivated the development or implementation of the innovation?

Leaders consistently framed their innovations as purposeful responses to relevance gaps and mission drift—realigning programs with changing communities while preserving Extension's public-service identity. This pattern reflects an open-systems view of organizations adapting to environmental expectations and feedback (Bertalanffy, 1969; Scott & Davis, 2007). Participants described "mission reframing and modernization," emphasizing the need to update what counts as Extension work without abandoning core values. In diffusion terms, innovations moved more quickly when they offered clear relative advantage and compatibility with local norms (Rogers, 2003). Several narratives described how reframing purpose helped "modernize the mission," aligning new efforts with community realities while keeping programs legible to clientele and partners. This echoes organizational design arguments that clarity of purpose reduces implementation friction and role ambiguity (Schmitt & Bartholomay, 2009).

Extension leadership should support a culture of reflective practice where agents are encouraged to continually revisit the purpose and value of their programs to ensure the programming being done is still relevant. It is easy to create new programming early on in Extension and fall into a loop of seasonality, recycling the programs or projects each year. Structured opportunities, such as regular strategic reviews or visioning sessions, can help ensure that innovations remain anchored in Extension's broader mission while addressing the local issues at hand.

Research Question 2: What stakeholder needs, contextual pressures, or goals drove adoption of the innovation?

Adoption was propelled by evolving demographics, partner and funder expectations, and concrete problem pressures (e.g., access, mobility, and time constraints). Participants' "expanding access and reach" examples showed deliberate use of hybrid formats, technology, and community-based touchpoints to reduce barriers for historically underserved audiences—moves that resonate with Extension's equity commitments and stakeholder-theory alignment (Freeman, 2010; Washington & Fowler, 2005). Participants emphasized redesigning programs so that "time and transport are not the gatekeepers," drawing on adult and experiential learning principles to meet people where they are (Knowles, 1980; Kolb, 1984).

Related to adoption drivers, "strategic visibility and stakeholder engagement" efforts (e.g., co-branding and multi-platform messaging) sought to align Extension's institutional identity with public expectations. Visibility work increases perceived compatibility and reduces uncertainty—two levers' Rogers (2003) associates with faster diffusion—while helping stakeholders recognize value propositions in crowded information environments (Braverman et al., 2012; Calvin, 2018). By systematically collecting and analyzing community data, Extension professionals can ensure innovations are responsive to real, current needs rather than perceived or assumed demands. All Extension organizations already do this to some degree but it is inconsistent across states and even counties. The utilization of the community data aids Extension in keeping their competitive advantage over their industry counterparts by accurately representing community needs, rather than programming to push products or drive sales. Whether it was community needs, federal regulations, or responses to external events, the ability to be nimble and adapt is crucial to the implementation and success of the innovation within Extension systems.

Research Question 3: What roadblocks and challenges were encountered across the innovation's development and implementation, and how were they navigated?

A recurring theme was the challenge of doing "more with less," particularly when staff coverage areas expanded. One leader noted that bureaucracy and politics "can slow innovation despite strong leadership will." Another emphasized that seasonal calendars and community rhythms often governed program feasibility, not just internal timelines—evidence of environment–structure alignment needs (Scott & Davis, 2007). Supporting agents through workload adjustments, funding freezes, and adequate staffing is essential to sustaining innovation. Leaders should explore models of shared leadership and cross-program collaboration, which can distribute responsibilities and reduce the burden on individual agents or teams. Such approaches align with Forstadt and Fortune's (2016) findings that restructuring without adequate support can reduce morale and effectiveness.

Cultural navigation emerged as essential to avoid performative engagement. As one educator working with minority communities put it, "I don't push my programs… I'm usually being asked to come," underscoring relationship-first entry and consent-driven scheduling. Such practices align with culturally responsive programming and with stakeholder co-creation principles (Freeman, 2010; Washington & Fowler, 2005).

Many participants reflected on the time it took for leadership to back the innovative programs and initiatives. This can also be a factor in agent moral, drive, and can be detrimental to the innovation process if the extension professionals get burnt out. Additionally, ensuring dedicated funding streams and staff support for innovation projects will provide the stability necessary to sustain efforts beyond initial implementation. Funding is a constraint throughout, so jumping to help fund a project may not be entirely feasible. Even so, willingness to jump in and

help problem solve the situation can help ensure moral remains high and the innovation is implemented/completed. Not all leadership were hesitant, with *Shannon* mentioning her leadership understands that for their model to effectively meet the mission of extension, their agents and extension professionals are expected to be innovative and try new things. That freedom, even with the bureaucracy of higher education intertwined into it, has allowed extension to reach new audiences, create healthy food systems, and bridge a gap between different cultures.

Research Question 4: Which factors and resources (e.g., organizational, financial, human, partnership) facilitated the innovation's development and implementation, and in what ways?

Facilitators included strong partnerships, institutional leadership support, and access to resources such as technology and funding. Trust-building with communities and collaboration across agencies also emerged as critical. Innovations succeeded when Extension operated as part of a wider system, leveraging both internal and external assets. Innovation in Extension requires collaborative efforts to maximize impacts. Forming research and programmatic teams at local, regional, and state levels can help foster the collaboration crucial for success. The systems described that have the easiest path to internal collaboration are the smaller extension services that are essentially forced to collaborate due to lack of resources. Viewing collaboration from a regional level, multi-state/institution initiatives provide opportunities for organizations to form partnerships with other states and universities that have similar cultural dynamics. This aids in addressing issues that go beyond one state's borders. Smaller organizations would also benefit in having partnerships with larger institutions to relieve some of the lack of manpower and financial restraints. Additionally, ensuring dedicated funding streams and staff support for innovation projects will provide the stability necessary to sustain efforts beyond initial implementation.

Four enabling conditions recurred across cases: (1) authentic partnerships that shared governance of goals, budgets, and methods; (2) leadership backing and policy flexibility for pilots; (3) strategic communications capacity (co-branding and multi-platform visibility); and (4) resourcing in the form of protected staff time and diversified funding. Authentic collaboration converted "box-checking" requirements into durable relationships and community legitimacy (Freeman, 2010). Leadership and structural flexibility reduced coordination costs—classic organizational design levers—while communications capacity helped programs maintain umbrella identity and local distinctiveness (Braverman et al., 2012; Scott & Davis, 2007).

Research Question 5: What outputs, outcomes, and unintended consequences resulted from the innovation?

Outcomes were observed at the individual, community, and institutional levels. At the individual level, participants described increased access, trust, and behavioral change among clientele. *Bethany* both spoke highly of the impact she saw because of her innovative programming, inspiring change in one struggling student, where before he felt like he did not fit in, now after the experience through the Ag Quest 4-H he made lifelong friends and became a recruiter for the program moving forward to help other kids find themselves as well. These outcomes are consistent with Extension functioning as both a knowledge-diffusion agent and a systems actor that builds feedback loops and interdependencies (Bertalanffy, 1969; Rogers, 2003). At the community level, innovations contributed to systems change, such as more equitable food distribution or youth engagement in agricultural careers. Institutionally, these efforts enhanced Extension's visibility, credibility, and relevance. The impacts highlight Extension's role as both a knowledge disseminator and a community change agent.

Extension should adopt more robust evaluation frameworks that capture not only short-term outputs but also long-term systemic impacts (Rockwell & Bennett, 2004; W.K. Kellogg Foundation, 2004; Workman & Scheer, 2012). Workman's (2021) research found that only 5.6% of Journal of Extension studies reported long-term outcomes. This is in line with the evidence in this study calling for a more robust, long-horizon evaluation practice. Overall numbers can only explain part of the story. Utilizing focus groups and one-on-one interviews with clientele, employees, and stakeholders enables Extension to capture long-horizon outcomes (changes in behavior, systems, and relationships) that output counts miss (Braverman, Franz, & Rennekamp, 2012; Krueger & Casey, 2015; Merriam & Tisdell, 2016; Patton, 2015). Inconsistent or one-off evaluations create blind spots in evidence—especially for long-term outcomes—and undermine organizational learning and improvement (Braverman et al., 2012; Taylor-Powell & Boyd, 2008; Workman & Scheer, 2012;). Emphasizing mixed-methods evaluation strengthens credibility and use by integrating numeric reach with stakeholder narratives of change, which funders and communities find more persuasive and decision-relevant (Creswell & Plano Clark, 2018; Greene, 2007; Patton, 2015).

Several participants emphasized reaching new or historically marginalized audiences through technology, mobility, and culturally relevant programming. Extension should embed inclusive engagement strategies—hybrid delivery, multilingual resources, and community-based partnerships—into statewide plans of work. Doing so strengthens Extension's legitimacy as a public service organization and ensures alignment with national (NIFA, n.d.). Many states already have statewide plans of work, even so, states should internally reflect on their plans of work each year and critically analyze to determine if the plans of work need to be altered or retired based on social, environmental, and/or community needs.

Across cases, Extension behaved as an open system: scanning environments, adapting structures, and renegotiating value propositions with stakeholders (Bertalanffy, 1969; Scott & Davis, 2007). Innovations diffused when their relative advantage, compatibility, and observability were clear and when uncertainty was reduced through visible pilots and trusted partners (Rogers, 2003). These patterns echo prior work showing that organizational choices—structure, routines, and leadership spans—shape both the upside and friction of change in Extension (Norton & Alwang, 2020; Schmitt & Bartholomay, 2009).

Limitations and Recommendations for Future Research

This study has several potential limitations that should be acknowledged. First, while cases were selected intentionally to highlight examples of innovation in Extension, this strategy may have limited the inclusion of other programs or models that could also provide valuable insight. Second, as with most qualitative studies, the sample size was modest, which restricts the generalizability of findings. Although participants represented diverse roles and states across the Southeastern U.S., demographic variation remained limited and may not fully capture the perspectives of all Extension professionals. Third, participants' comfort levels may have influenced how openly they discussed challenges or barriers, potentially leading to underreporting of sensitive issues. Finally, the focus on purposeful examples of innovation could introduce bias toward success narratives, while less effective or discontinued efforts remain underexplored. Despite these limitations, efforts were made to mitigate potential impacts. Purposeful sampling was used to secure variation across state contexts, prolonged engagement with the data enhanced rigor, and triangulation strategies strengthened credibility. These steps ensure that the findings stay robust while also highlighting areas where future research may deepen understanding of Extension structures and innovation.

Future research should move beyond single-case narratives to comparative, multi-site designs across states, program areas, and 1862/1890/1994 systems, using multi-case logic, multilevel modeling, or set-theoretic approaches to identify configurations of resources and delivery models associated with successful innovation (Greenhalgh et al., 2004; Ragin, 2008; Yin, 2018). Longitudinal studies are needed to track maintenance, spread, and sustainment—monitoring adoption, penetration, fidelity, adaptation, and costs over time—to determine durability and community-level effects (Damschroder et al., 2009; Proctor et al., 2011; Rogers, 2003). Purposeful sampling of discontinued, stalled, or "invisible" innovations should highlight 'de-diffusion' and failure conditions, ideally paired with developmental evaluation to generate prompt, context-sensitive lessons (Patton, 2015; Pawson & Tilley, 1997; Rogers, 2003). Future work should also analyze how leadership routines, psychological safety, and organizational culture interact with governance choices to reduce coordination costs in regional/county/hybrid models (Fernandez & Rainey, 2006; Schein & Schein, 2017; Scott & Davis, 2007), and examine the mechanics of cross-sector collaboration—MOUs, shared metrics, and budget co-ownership—on legitimacy, reach, and impact (Bryson et al., 2006; Cash et al., 2003; Emerson & Nabatchi, 2015). Equity-focused analyses should test distributional effects and culturally responsive engagement to find out who benefits and who is missed (Greenhalgh et al., 2004; Washington & Fowler, 2005). Methodologically, mixed-methods designs aligned to logic-model levels should integrate administrative counts with interviews/focus groups to capture system-level outcomes valued by funders and communities (Creswell & Plano Clark, 2018; Braverman et al., 2012; W.K. Kellogg Foundation, 2004; Workman & Scheer, 2012). Finally, network and systems methods should map knowledge and resource flows across counties/regions and link those patterns to diffusion speed and equitable reach (Luke & Stamatakis, 2012; Meadows, 2008; Valente, 2010).

This study accentuates the dynamic role of Cooperative Extension as both a preserver of core values and an innovator in service of evolving societal needs. Innovation is synonymous with Extension, and for great reason, being that connection from university to the public. Innovation in these Extension contexts operated as a mechanism for environmental fit (systems/organizational theory), moved fastest when it provided clear advantages and cultural compatibility (diffusion of innovations), and delivered the greatest value when designed—not merely for—stakeholders (stakeholder theory). Future gains depend as much on organizational design and partnership quality as on the novelty of ideas themselves.

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Chapter 5 Multi-State Comparison of Extension Professionals' Perceptions of Current Extension Systems[3]

[3] Carter, B., Croom, D.B., Sandlin, M., Campbell, B., Lamm, A. To be submitted to the *Journal of Extension*.

Introduction

Extension professionals across the United States identified challenges facing the organization, including the need for greater efficiency, improved collaboration, and relevance in changing demographics (Braverman et al., 2012; Franz, 2007; Leuci, 2012; Morse, 2009; Sagor et al., 2014; Schmitt & Bartholomay, 2009; Torppa & Smith, 2009). In response, some Extension Services have moved away from the traditional county-based model, adopting structures like multi-county clusters, regional specialization of agents, and interdisciplinary program teams. These changes aim to address specific issues, such as reducing administrative costs, enhancing expertise in specialized areas, and improving the ability to reach and serve diverse target audiences (Braverman et al., 2012; Morse, 2009). These structural changes demonstrate a broader effort to reimagine Cooperative Extension as a more responsive and impactful system for the future and present opportunities to innovate and adapt. However, they also pose challenges in maintaining local relationships and ensuring staff clarity in their roles. Continual reductions in available resources, such as funding and workforce, will continue to drive structural changes in Extension Services' efforts to deliver programming in their states (Morse, 2009).

To continue being agents of change, we, too, must be able to change. The Extension service is reported to be one of the world's most successful change agencies (Rogers, 1995). Even so, Extension is still very rooted in tradition and history. Harriman and Daugherty (1992, *p.* 2) declared, "No state is exempt from restructuring," when discussing the changes that the Extension service began undergoing in the 80s and 90s. They did not know it yet, but change would be a common occurrence well into the 2000s. By the early 2000s, heavy focus was placed on whether Extension was dying off (McDowell, 2004). Twenty years later, Extension remains but not without its challenges.

Cooperative Extension operates amid persistent fiscal constraints, rising and occasionally unrealistic client expectations, intensifying competition from commercial advisors, and a rapidly evolving information marketplace shaped by the Internet and, more recently, artificial intelligence. Fiscal pressures include decades-long stagnation or contraction in public appropriations, growth of restricted funds, and dependence on soft-money revenue strategies, each of which complicates staffing continuity and program delivery (Franz, 2011; Lyons et al., 2008; McDowell, 2004). At the same time, clientele increasingly expect rapid, bespoke responses across wide topic domains and outside standard work hours, contributing to role overload and work–life strain (Forstadt & Fortune, 2016; Kutilek et al., 2002). In the knowledge marketplace, producers now assemble advice from multiple sources—crop consultants, vendor reps, media, trade shows, peers, and online channels—diminishing Extension's historic information advantage (Calvin, 2018; Houser & Colbert, 2018; Velandia et al., 2010). Digital technologies have expanded Extension's reach through social media and eXtension communities of practice, yet they also accelerate disintermediation and exposure to misinformation risks that can undercut trust and program uptake if not managed well (Gharis et al., 2014; Sellers et al., 2009; Swinton & Proctor, 2020). Emerging AI tools show clear productivity and design benefits, but also raise ethical, accuracy, and transparency concerns that Extension must address to preserve credibility (Campbell, 2025; Hill & Narine, 2023). Debates on the best way to preserve Extension are still out; however, a focus should be on output (knowledge and programming delivered) and human resource aspects, such as employees (Forstad & Fortune, 2016; Harden, 2016; Harder, 2014).

One way to understand the potential impacts varying Extension structures have on the organization's success is to look towards the agents. Agents are directly engaged with the communities the Extension Service serves and therefore have firsthand knowledge of local needs,

challenges, and preferences, making them uniquely positioned to evaluate how new structures support or hinder service delivery. They experience the practical effects of changes, such as shifts to regional models or interdisciplinary teams, in their day-to-day work and interactions with stakeholders. Furthermore, agents bridge the gap between academic research and real-world application, providing valuable insights into whether structural changes enhance or detract from program effectiveness, collaboration, and community engagement. Their feedback is essential in determining how restructuring affects the Extension's ability to meet its mission and thrive in changing environments.

Conceptual Framework

This study implemented a multi-theory approach to frame this research. Each theory presented accounts for the defining characteristics of Cooperative Extension Services across the United States.

Diffusion of Innovations:

Potentially the most widely used theory when discussing the mission of the Cooperative Extension Service, the diffusion of innovations theory (Rogers, 2003) is a foundational framework for Extension-type efforts, placing the focus on the dissemination of new ideas and technologies in a specific community (Carter et al., 2024; Hubbard & Sandmann, 2007; Rogers, 2003). As it relates to Extension, organizational structure can play an integral role in how agents disseminate ideas and information into their communities. Traditional county-based Agriculture and Natural Resources (ANR) agents must be able to assist in solving many issues, from lawns and gardens to tractor sprayer calibrations. How they do that varies depending on county needs. While the dispersing of knowledge is happening, the question becomes: Are new ideas given enough room

to develop at a local level to better meet the needs of clients beyond the surface level in a county-based system? And are agents in a specialized/regional system better apt to foster change related to specific areas due to their further developed area of expertise? Using the diffusion of innovations as a framework is only a piece of the puzzle, as the focus is also on the implications that different Extension structures have on perceptions of Agents.

Comparative Advantage Theory:

First introduced by economist David Ricardo in the early 19th century, comparative advantage theory was originally used to explain how and why countries engage in international trade, based on the principle that, even if one country is less efficient than another in producing all goods, there can still be mutual benefits from trade (Costinot & Donaldson, 2012). Key components of the theory are relative efficiency, opportunity cost, mutual benefits, trade patterns, and specialization. Focusing attention on the relative efficiency and specialization, Extension models that have adopted a specialization model have seen a benefit to quality of the work produced (Morse, 2009). Using this as a construct for the study will allow a comparison of the perceived work quality, efficiency, and confidence from agents in a traditional county-based delivery model and those that are specialized.

Self-Determination Theory (SDT):

Employee Job Satisfaction is defined as a positive emotion concerned with the achievement of values associated with work (Locke, 1976). This study is rooted in Self-Determination Theory (SDT, 2022; Ryan & Deci, 2017). SDT represents a broad framework for the study of human motivation and personality. The theory defines intrinsic and extrinsic sources for motivation, and more importantly focuses on how social and cultural factors facilitate or undermine people's sense of volition and initiative, in addition to their well-being and quality of their performance (Ryan &

Deci, 2017; SDT, 2022). SDT proposes three experiences, autonomy, competence, and relatedness, that contribute to the most volitional and high-quality forms of motivation and engagement for activities including but not limited to enhanced performance, persistence, and creativity. Not only does it say that the more those three psychological needs are met the more the person is satisfied which leads to better results, it also states that the degree to which the needs are unsupported in a social context, could have a detrimental impact on wellness in that specific setting. With motivation in mind, it has also been found that leader communication is important for the influence of employee motivation (Kumar & Misra, 2012). Agents within different Extension models may have different views of their success, impact, and overall worth as an employee.

Organizational Theory:

Organizational theory explains how organizations are built and behave, and how those arrangements shape performance and adaptation. It examines the fit among environment, strategy, technology, and structure, and how that fit influences efficiency, effectiveness, and innovation (Jones, 2012). Viewing organizations as dynamic systems, the theory emphasizes responding to external pressures and internal complexity through sound decisions, resource allocation, and coordination (Jones, 2012). These theories work together to help explain the Extension professionals' perceptions of their own Extension service as well as other Extension services around the country.

Taken together, these theories create a multi-level logic chain linking Extension's structure and regionality to professionals' experiences and outcomes. Organizational theory sets the macro frame by explaining how alternative designs (e.g., county generalist, regional specialist, hybrids) distribute decision rights, information flow, and coordination—conditions that shape day-to-day work. Within those designs, comparative advantage clarifies when specialization or local breadth

should yield higher quality and efficiency, helping interpret differences across regionalized versus county-based models in perceived program reach and effectiveness. Diffusion of innovations operates at the delivery mechanism: structures that align ability, networks, and channels should accelerate trialability, observability, and adoption of new practices among clientele, improving perceived program performance. Finally, self-determination (and social exchange) connects organizational conditions to people: when structures and supervisory routines support autonomy, competence, relatedness, and fair exchanges (recognition, support, growth), professionals report higher job satisfaction and lower burnout; when they do not, strain accumulates, and delivery suffers. In combination, the framework predicts how structural/regional choices cascade through stakeholder alignment and diffusion processes to shape program delivery, satisfaction, and burnout.

Purpose/Objectives:

The Cooperative Extension Service has been on the cusp of structural change across the country for the last 30 years. The reasons organizational restructures have been documented, as well as the public perceptions of these changes (Morse, 2009). Research has focused on the agents in the state where the changes have occurred, detailing their view of the change and any associated challenges (Morse, 2009). Even so, there needs to be more knowledge on how agents in differing Extension Models view their own structures when compared to others, as well as the effect these models may have on agent/educator satisfaction and motivation. For Extension organizations that have implemented minor structural changes over the last century, understanding the impact organizational change has on the employees and their view of change could be the difference in setting up Extension for the future, or setting it up for extinction.

The purpose of this study is to explore how factors, such as structure and regionality impact extension professionals' perception of job satisfaction, program delivery, and burnout. Through this research I also hope to identify trends and characteristics of structures currently utilized across the United States and Extension regions. To determine if there is a significant impact on extension professionals' performance, satisfaction, and outlook on their organization and the Extension model they currently work in, I propose the following research objectives.

Research Objectives:

1. To examine perceptions of Extension program delivery, job satisfaction, and burnout across organizational structures and Extension regions.
2. To assess how Extension professionals perceive their own state's Extension structure compared to other state models.
3. To identify characteristic patterns of Extension systems across the United States.
4. To identify the perceived advantages and disadvantages of different Extension organizational structures.
5. To determine the desired changes or adaptations Extension professionals wish to see in their own organizational models.

Methods

Survey Instrument

This study was a multi-state, cross-sectional, ex post facto investigation of Cooperative Extension organizational structures and Extension professionals' perceptions. A researcher-developed online questionnaire was constructed in QuestionPro to align directly with the study's research questions. All attitudinal items used a four-point Likert-type scale (1 = *strongly*

disagree, 4 = *strongly agree*) to discourage neutral responding and to provide directional judgments. My experience with surveying extension professionals and the sensitivity of some of the questions were driving factors in deciding on the four-point scale. Composite indices were calculated as the unweighted mean of their respective items, with higher values indicating more favorable perceptions. The full instrument is provided in Appendix D for transparency and replication.

Twenty-six Extension professionals piloted the instrument for clarity, relevance, and burden. Based on feedback, the survey was shortened, standardized model descriptions were embedded immediately before the classification items with shorter descriptions, and the model-characteristics checklist was added to reduce misclassification and enhance content validity.

Four multi-item constructs and two single-item measures comprised the core instrument. The *Program Delivery Index* comprised eight items capturing the resources and support needed to plan, market, and deliver Extension programs; collaboration with other agents and specialists; and confidence that programs are accessible across socioeconomic and geographic contexts. The Programming Index demonstrated acceptable internal consistency ($\alpha = .79$). *Job Satisfaction* comprised seven items reflecting well-established facets of satisfaction—recognition, skill utilization, workload manageability, professional growth, supervisory support and feedback, teamwork, and work–life balance. This multi-facet approach aligns with Locke's Range of Affect Theory (Locke, 1976; 2002), which conceptualizes job satisfaction as a positive evaluative state driven by the perceived attainment of valued job facets. It is important to also acknowledge that burnout, presented along with the job satisfaction items, was measured as a single item, "I feel burnt out in my current role," and treated as a separate construct rather than included in the Job Satisfaction Index. While it aids in identifying participants' current burnout levels, it does not

explore specific factors contributing to burnout, nor does it indicate how long participants have felt burnout. Job satisfaction is generally defined as a positive evaluation of one's role, including recognition, skill use, workload manageability, growth opportunities, supervisor support, teamwork, and work–life balance. Burnout, by contrast, is a negative psychological outcome that may result from prolonged dissatisfaction, high workload, or stress (Maslach & Leiter, 2016). Burnout showed a negative item–total correlation, which signals it is not measuring the same underlying construct as the other items. Removing it improved internal consistency from .73 to .81, supporting its treatment as a separate variable. For communication clarity, burnout was also recoded into descriptive categories: No Burnout (responses of strongly disagree and disagree), Moderate (agree), and High (strongly agree).

Two perception constructs addressed organizational design. *Perception of One's Own Extension Model* (12 items; $\alpha = .89$) assessed the extent to which the respondent's current state model meets local needs; balances local, regional, and statewide priorities; enables specialization without over-extension; promotes collaboration and leadership; supports training, mentorship, and career growth; and advances equitable access. *Perception of Other States' Models* initially contained a familiarity prompt and attitudinal items. The resulting six-item index ($\alpha = .84$) reflects perceived comparative effectiveness and transferability of practices across models (e.g., suitability for urban/suburban challenges; potential benefits of programmatic approaches; access to resources and training). All indices were computed as unweighted means; higher values indicate more favorable perceptions.

In addition to fixed-choice items, respondents could describe perceived advantages and disadvantages of their current Extension system and propose additional system attributes not listed in the select-all options. To anchor comparative analyses, respondents classified the structure

operating in their state after reading standardized, in-survey definitions intended to improve rater consistency: County Agent Model (agent in each county); Regional Agent Model (agent covers multiple counties and acts as a specialist); Specialist Model (university specialists research and develop programs); Multi-County Agent Model (agent covers multiple counties and acts as a generalist); Programmatic Agent Model (agent delivers specific programs across regions or statewide); Urban Agent Model (agent focuses on urban/suburban issues and audiences); Statewide Agent Model (agent supports and coordinates statewide programs or initiatives); and Hybrid Model (agent blends local, regional, and programmatic roles). Respondents were also asked to select characteristics that fit their state's model to triangulate the single-choice classification and support descriptive profiling. All open-ended responses were analyzed using Naeem et al.'s (2023) six-step systematic thematic analysis. Because three structures had small numbers, Specialist, Statewide, and Urban were combined for qualitative displays. Structure group sizes used in qualitative summaries were County (n = 377), Regional (n = 49), Multi-County (n = 38), Programmatic (n = 36), Hybrid (n = 73), and Specialist/Statewide/Urban (n = 11).

Sampling and Population

The target population consisted primarily of members of the National Association of County Agricultural Agents (NACAA). Although NACAA's core community is agricultural and natural resources (ANR) professionals, membership is open to Extension personnel from any program area (e.g., 4-H, Family and Consumer Sciences, or community development). Because the focus of this study was organizational structure and program delivery rather than subject-matter specialization, program area was intentionally not collected to reduce identifiability and survey burden while preserving alignment with the research questions. Prior to data collection, this study received an Institutional Review Board (IRB) determination (PROJECT00011640). The project

was classified as Not Human Subjects Research and therefore not subject to human subjects' oversight. The IRB decision has been provided in Appendix A.

Data were gathered in July 2025 through two coordinated efforts. First, following approval by the Montana Association of County Agricultural Agents, the researcher operated a recruitment booth in the trade show at the NACAA annual meeting in Billings, Montana, yielding 216 complete questionnaires. Second, two email solicitations were sent to the NACAA membership list (3343 members), each including a consent information sheet and survey link, generating an additional 598 responses. The link was open through July 23 to accommodate conference and email participation. In several states, recipients shared the link on internal Extension listservs; this professional-network referral functioned as a non-probabilistic "snowball-style" dissemination incorporated into the association-based framework. Across all sampling modes, 824 responses were received.

Before data collection, a priori rule was set to analyze only complete questionnaires. Establishing inclusion/exclusion and missing-data rules beforehand aligns with best practice in observational reporting and data screening (Warner, 2021). Missing-data diagnostics showed a dominant break-off between 50% and 60% completion (48% of incomplete cases), a pattern consistent with survey-length fatigue given the 38-question instrument. The final analytic sample comprised 584 respondents (item-level Ns vary slightly when reviewing qualitative responses). To protect identities, state and university were used only to derive Extension regions; state or university names are not reported. The Extension region classification was based on Extension regions that the APLU (Association of Public and Land-grant Universities) Board set organizing the Agriculture Assembly into five regions (APLU, n.d.). The dataset represented 48 U.S. states and one U.S. territory.

The sample was balanced across gender (41.6% male, 57.9% female, 0.5% other) and spanned all career stages. Years of service were most common in the 1–5 (28.9%), 6–10 (20.7%), and 21+ (20.2%) categories. Salary clustered in the $60,001–$70,000 (22.8%) and $70,001–$80,000 (18.8%) bands. Demographic patterns varied by structure. Regional agents were the only sizable group with a majority of males (51.0% male; 46.9% female), whereas Specialists skewed strongly male (83.3%; n = 6). Programmatic (72.2% female) and Multi-County (65.8% female) roles were female-majority. County (42.2% male; 57.3% female) and Hybrid (39.7% male; 60.3% female) mirrored the overall female-leaning pattern, and Statewide appointments were few (n = 5). Tenure profiles also differed: County roles reflected the overall distribution; Programmatic roles skewed senior (21+ years = 36.1%); Multi-County skewed mid-career (6–10 = 28.9%; 11–15 = 21.1%; 21+ = 5.3%); Regional roles were spread across 1–15 years; Specialists were predominantly early career (1–5 = 66.7%, n = 6); Hybrid roles showed a broad mix; Statewide was small and variable. Salary patterns likewise varied: County and Regional roles concentrated in mid-range bands ($50–70k), whereas Programmatic and Hybrid showed upward shifts ($70–80k and >$100k more prevalent); Multi-County included a notable $70–80k segment. By APLU region, women were the majority in every region; the Western region exhibited the largest share of 21+ years (~36%), suggesting a more senior workforce profile. Full distributions appear in Table 1.

Statistical Analysis and Data Preparation

We analyzed the survey in SPSS. We set α at .05 (two-tailed) and, wherever possible, reported effect sizes with confidence intervals so readers can judge practical importance, not just significance (APA, 2020; Cohen, 1988). Before testing, we simplified categories to keep cell sizes reasonable and estimates stable, following APA reporting guidance and power heuristics (APA,

2020; VanVoorhis & Morgan, 2007). Specifically, we grouped delivery types into four structure levels based on established Extension typologies—County-Generalist, Regionalized Coverage, Specialized Program-Unit, and Hybrid (Weldon, 2020). Regions followed the standard APLU regions; because the 1890 group was very small and entirely Southern in this dataset, we chose to combine Southern and 1890 to protect confidentiality and avoid unstable estimates (APLU, n.d.). Being from the same region also helped limit cultural differences and regional distinctiveness.

We summarized each index (Program Delivery, Job Satisfaction, Perception scales) with means and standard deviations, and single-item Likert outcomes (e.g., burnout) with medians and interquartile ranges. To look at relationships among categorical variables (like Structure × Region), we used crosstabs with χ^2 and relied on exact/Monte Carlo p-values when expected counts were small; we report Cramér's V as the effect size. To compare index means across structures/regions, we used one-way ANOVA with Tukey post hocs when assumptions were met; if variances were unequal or groups were imbalanced, we used Welch's ANOVA with Games–Howell (Glass et al., 1972; Harwell et al., 1992). For ordinal/single-item outcomes or doubtful normality, we used Kruskal–Wallis with corrected pairwise tests. We also explored respondent profiles with k-means clustering (variables standardized), selecting k by elbow/silhouette and interpretability, and then profiled clusters by structure and region. Correlations among indices used Pearson's r (or Spearman's ρ as needed); we controlled multiple comparisons using Holm/Bonferroni and false-discovery-rate methods (Benjamini & Hochberg, 1995).

For open-ended responses, Weused Naeem et al.'s (2025) six-step systematic thematic analysis and kept a reflexive audit trail. Two external peer debriefers reviewed the evolving codebook and theme reports to strengthen credibility (Lincoln & Guba, 1985; Naeem et al., 2023).

Missing data were handled listwise within each test; sensitivity checks with pairwise deletion did not change the substantive conclusions.

Table 5.1

Population Demographics of Extension Professionals (N = 584)

Panel A. Overall demographics (counts and % within population)		
Characteristics	**Category**	**Overall (*N* = 584)**
Gender	Male	243 (41.6%)
	Female	338 (57.9%)
	Other	3 (0.5%)
Years of Service (YOS)	<1 year	24 (4.1%)
	1–5 years	169 (28.9%)
	6–10 years	121 (20.7%)
	11–15 years	86 (14.6%)
	16–20 years	66 (11.3%)
	21+ years	118 (20.2%)
Salary	<$50,000	53 (9.1%)
	$50,001–$60,000	111 (19.0%)
	$60,001–$70,000	133 (22.8%)
	$70,001–$80,000	110 (18.8%)
	$80,001–$90,000	70 (12.0%)
	$90,001–$100,000	48 (8.2%)
	>$100,000	59 (10.1%)

Panel B. Demographics by Extension Structure

Characteristics	**Category**	**Overall (*N* = 584)**	**County (*n* = 377)**	**Regional (*n* = 49)**	**Specialist (*n* = 6)**	**Multi-County (*n* = 38)**	**Programmatic (*n* = 36)**	**Statewide (*n* = 5)**	**Hybrid (*n* = 73)**
Gender	Male	243 (41.6%)	159 (42.2%)	25 (51.0%)	5 (83.3%)	13 (34.2%)	10 (27.8%)	2 (40.0%)	29 (39.7%)

	Female	338 (57.9%)	216 (57.3%)	23 (46.9%)	1 (16.7%)	25 (65.8%)	26 (72.2%)	3 (60.0%)	44 (60.3%)
	Other	3 (0.5%)	2 (0.5%)	1 (2.0%)	—	—	—	—	—
Years of Service (YOS)	<1 year	24 (4.1%)	14 (3.7%)	2 (4.1%)	—	3 (7.9%)	—	—	5 (6.8%)
	1–5 years	169 (28.9%)	106 (28.1%)	12 (24.5%)	4 (66.7%)	12 (31.6%)	11 (30.6%)	2 (40.0%)	22 (30.1%)
	6–10 years	121 (20.7%)	85 (22.5%)	8 (16.3%)	—	11 (28.9%)	5 (13.9%)	—	12 (16.4%)
	11–15 years	86 (14.6%)	52 (13.8%)	11 (22.4%)	1 (16.7%)	8 (21.1%)	4 (11.1%)	1 (20.0%)	10 (13.7%)
	16–20 years	66 (11.3%)	44 (11.7%)	6 (12.2%)	—	2 (5.3%)	3 (8.3%)	1 (20.0%)	10 (13.7%)
	21+ years	118 (20.2%)	76 (20.2%)	10 (20.4%)	1 (16.7%)	2 (5.3%)	13 (36.1%)	2 (40.0%)	14 (19.2%)
Salary	<$50,000	53 (9.1%)	44 (11.7%)	3 (6.1%)	—	3 (7.9%)	1 (2.8%)	—	1 (1.4%)
	$50,001–$60,000	111 (19.0%)	77 (20.4%)	6 (12.2%)	—	9 (23.7%)	3 (8.3%)	—	16 (21.9%)
	$60,001–$70,000	133 (22.8%)	94 (24.9%)	8 (16.3%)	2 (33.3%)	8 (21.1%)	5 (13.9%)	1 (20.0%)	15 (20.5%)
	$70,001–$80,000	110 (18.8%)	64 (17.0%)	8 (16.3%)	1 (16.7%)	9 (23.7%)	11 (30.6%)	—	17 (23.2%)
	$80,001–$90,000	70 (12.0%)	39 (10.3%)	10 (20.4%)	2 (33.3%)	6 (15.8%)	4 (11.1%)	—	9 (12.3%)
	$90,001–$100,000	48 (8.2%)	31 (8.2%)	7 (14.3%)	—	2 (5.3%)	4 (11.1%)	1 (20.0%)	3 (4.1%)
	>$100,000	59 (10.1%)	28 (7.4%)	7 (14.3%)	1 (16.7%)	1 (2.6%)	8 (22.2%)	2 (40.0%)	12 (16.4%)

Panel C. Demographics by APLU Region

Characteristics	Category	Southern (*n* = 322)	1890 (*n* = 4)	North Central (*n* = 119)	Northeast (*n* = 57)	Western (*n* = 82)
Gender	Male	142 (44.1%)	1 (25.0%)	46 (38.7%)	17 (29.8%)	37 (45.1%)
	Female	179 (55.6%)	3 (75.0%)	72 (60.5%)	39 (68.4%)	45 (54.9%)
	Other	1 (0.3%)	—	1 (0.8%)	1 (1.8%)	—
Years of Service (YOS)	<1 year	14 (3.7%)	2 (4.1%)	—	3 (7.9%)	—
	1–5 years	106 (28.1%)	12 (24.5%)	4 (66.7%)	12 (31.6%)	11 (30.6%)
	6–10 years	85 (22.5%)	8 (16.3%)	—	11 (28.9%)	5 (13.9%)
	11–15 years	52 (13.8%)	11 (22.4%)	1 (16.7%)	8 (21.1%)	4 (11.1%)
	16–20 years	44 (11.7%)	6 (12.2%)	—	2 (5.3%)	3 (8.3%)
	21+ years	76 (20.2%)	10 (20.4%)	1 (16.7%)	2 (5.3%)	13 (36.1%)
Salary	<$50,000	44 (11.7%)	3 (6.1%)	—	3 (7.9%)	1 (2.8%)
	$50,001–$60,000	77 (20.4%)	6 (12.2%)	—	9 (23.7%)	3 (8.3%)
	$60,001–$70,000	94 (24.9%)	8 (16.3%)	2 (33.3%)	8 (21.1%)	5 (13.9%)
	$70,001–$80,000	64 (17.0%)	8 (16.3%)	1 (16.7%)	9 (23.7%)	11 (30.6%)
	$80,001–$90,000	39 (10.3%)	10 (20.4%)	2 (33.3%)	6 (15.8%)	4 (11.1%)
	$90,001–$100,000	31 (8.2%)	7 (14.3%)	—	2 (5.3%)	4 (11.1%)
	>$100,000	28 (7.4%)	7 (14.3%)	1 (16.7%)	1 (2.6%)	8 (22.2%)

Notes. Percentages are calculated within each Extension structure or region category. The Cooperative Extension Section, under the APLU Board on Agriculture Assembly, is structured in five regions (Association of Public and Land-grant Universities, *n*.d.).

Findings

RO1: To examine perceptions of Extension program delivery, job satisfaction, and burnout across organizational structures and Extension regions.

RO1: Overall

Program Delivery (Table 5.2). Descriptive statistics indicated that agents generally agreed that their programs met target audience needs (M = 3.24, SD = 0.51) and that they collaborated effectively with other agents (M = 3.38, SD = 0.63). Confidence in program accessibility was also relatively strong with respect to socioeconomic status (M = 3.20, SD = 0.70) and geographic reach (M = 3.00, SD = 0.73). In contrast, lower agreement was reported regarding support to develop (M = 2.80, SD = 0.75), market (M = 2.58, SD = 0.85), and deliver (M = 2.93, SD = 0.72) Extension programs, as well as collaboration with specialists (M = 3.11, SD = 0.74). The grand mean for the Programming Index was 3.03 (SD = 0.45), suggesting moderate overall perceptions of programming support and effectiveness.

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Table 5.2

Programming Index | Descriptive Statistics (N = 584)

Programming Index Item	Mean	Std. Deviation
I collaborate effectively with other agents to ensure program success.	3.38	.63
I feel confident that my programs are accessible to all community members, regardless of socioeconomic status.	3.20	.70
I collaborate effectively with specialists to ensure program success.	3.11	.74
The programs I deliver meet the needs of the target audience effectively.	3.24	.51
I feel confident that my programs are accessible to all community members, regardless of geographic location.	3.00	.73
I receive adequate support to deliver Extension programs.	2.93	.72
I receive adequate support to develop Extension programs.	2.80	.75
I receive adequate support to market Extension programs.	2.58	.85
Grand Mean Programming Index	**3.03**	**.45**

Overall Job Satisfaction (Table 5.3). Descriptive statistics for individual job-satisfaction items are shown in Table 5.3. Across 584 respondents, item means on a four-point scale (1 = *strongly disagree*, 4 = *strongly agree*) typically ranged from 2.5 to 3.0, indicating moderate agreement. The highest ratings were for collaboration and teamwork ($M = 2.96$, $SD = 0.74$), followed by feeling valued and appreciated ($M = 2.82$, $SD = 0.83$) and receiving constructive feedback and supervisor support ($M = 2.80$, $SD = 0.77$). The lowest ratings were for manageable workload ($M = 2.52$, $SD = 0.79$) and work–life balance ($M = 2.65$, $SD = 0.77$). Opportunities for professional growth ($M = 2.73$, $SD = 0.85$) and full use of skills ($M = 2.77$, $SD = 0.80$) fell in the middle of the distribution. Overall, respondents expressed greater satisfaction with collegial and supervisory dimensions than with workload, balance, and advancement opportunities.

Table 5.3

Job Satisfaction Index | Descriptive Statistics (N = 584)

Job Satisfaction Index Item	Mean	Std. Deviation
I am satisfied with the level of collaboration and teamwork within my Extension program.	2.96	.74

I feel valued and appreciated (by leadership) for the work I do within my Extension role.	2.82	.83
I receive constructive feedback and support from my supervisors.	2.80	.77
I believe my skills and expertise are being fully utilized in my current position.	2.77	.80
There are opportunities for professional growth and advancement within my Extension system.	2.73	.85
I am able to maintain a healthy work/life balance.	2.65	.77
I feel that my workload is manageable.	2.52	.79
Grand Mean Job Satisfaction Index	**2.75**	**.55**

Overall Burnout (Table 4). To summarize overall burnout, I conducted descriptive analyses: a frequency table of the three burnout categories and item-level central tendency/variability for the statement "I feel burnt out in my current role." No inferential test was performed because the goal was to characterize the sample rather than compare groups. The distribution indicated Moderate Burnout was most common (75.9%, n = 443), with No Burnout (12.0%, n = 70) and High Burnout (12.2%, n = 71) occurring less frequently (N = 584). The item mean was 3.00 (SD = 0.49), indicating on average, Extension professionals are experiencing at least moderate burnout levels across all demographics, which is something that is worth noting when considering long term sustainability of Extension.

Table 5.4

Overall Burnout: Frequencies and Descriptives (N = 584)

Panel A. Burnout category frequencies — count (%)			
Burnout Category	**N**	**Percent**	
No Burnout	70	12.0	
Moderate Burnout	443	75.9	
High Burnout	71	12.2	
Total	584	100.0	
Panel B. Descriptive statistics (item-level)			
Measure	**N**	**Mean**	**SD**
I feel burnt out in my current role.	584	3.00	.49

Note. Panel A shows category counts with percentages based on valid responses ($N = 584$). Panel B reports the item mean and standard deviation.

RO1: Program Delivery, Job Satisfaction, and Burnout by Gender

Program Delivery by Gender (Table 5.5). An independent-samples t test compared Program Delivery Index scores for Male ($n = 243$) and Female ($n = 338$) respondents. Due to low response for the "other" gender response option ($n = 3$), individuals were omitted from the overall *N*. A one-way ANOVA was ran before, including "other" respondents, but because that cell size is too small for meaningful post-hoc comparisons, it was determined the output would not be as reliable. Levene's test for equality of variances was non-significant, $F(1, 579) = 0.16$, $p = .693$, so the pooled-variance t statistic is appropriate. The mean difference favored Males by 0.15 points (Male: $M = 3.12$, $SD = 0.43$; Female: $M = 2.97$, $SD = 0.44$), which was statistically significant, $t(579) = 4.19$, $p < .001$, 95% *CI* [0.08, 0.23]. The effect size was small-to-moderate (*Cohen's d* = 0.35). In practical terms, male agents reported slightly higher program-delivery scores than female agents; although reliable, the magnitude of the difference is modest.

Table 5.5

Program Delivery Index by Gender (N = 581)

Panel A. Group statistics

Gender	N	Mean	SD	SE
Male	243	3.12	0.43	0.03
Female	338	2.97	0.44	0.02

Panel B. Levene's test and t test summary

Assumption	Levene *F*	Levene *p*	t	df	*p* (two-sided)
Equal variances assumed	0.156	.693	4.19	579	<.001

Panel C. Estimated mean difference and 95% CI

Assumption	Mean Difference (Male − Female)	SE	95% CI Lower	95% CI Upper

Equal variances assumed	.15	.04	.08	.23

Panel D. Effect sizes

Standardizer	Point estimate	95% CI Lower	95% CI Upper	Notes
Cohen's d	.35	.19	.52	pooled SD

Notes. Levene's test was non-significant (p = .693), so equal-variance results are reported. Means are ordered high to low. Participants selecting 'Other' for gender (n = 3) were excluded from inferential comparisons and summarized descriptively due to extremely small cell size.

Job Satisfaction by Gender (Table 5.6). An independent-samples t-test compared the Job Satisfaction Index between Male (n = 243) and Female (n = 338) respondents. Levene's test was not significant, F (1, 579) = 0.42, p = .519, so the pooled-variance t is appropriate. Males reported higher satisfaction (M = 2.83, SD = 0.56) than Females (M = 2.69, SD = 0.52), a statistically significant difference, t (579) = 3.18, p = .002; 95% *CI* for the mean difference (Male − Female) = [0.05, 0.23]. The Welch test yielded t (497.55) = 3.14, p = .002; 95% *CI* [0.05, 0.23]. The effect size was small (*Cohen's d* ≈ 0.27), indicating a modest but reliable advantage for males on job satisfaction.

Table 5.6

Job Satisfaction Index by Gender (N = 581)

Panel A. Group statistics

Gender	N	Mean	SD	SE
Male	243	2.83	0.56	0.04
Female	338	2.69	0.52	0.03

Panel B. Levene's test and t tests

Assumption	Levene F	Levene p	t	df	p (two-sided)
Equal variances assumed	0.42	p = .519	3.18	579	p = .002

Panel C. Mean difference and 95% CI (Male − Female)

Assumption	Mean Difference	SE	95% CI Lower	95% CI Upper
Equal variances assumed	0.14	0.05	0.05	0.23

Panel D. Effect sizes (computed from group statistics)

Metric	Point estimate	95% CI Lower	95% CI Upper	Notes
Cohen's d	0.27	0.10	0.43	pooled SD

Notes. Positive mean differences/effect sizes indicate higher job satisfaction for Males relative to Females. Levene's test was non-significant (p = .519). Cohen's d and Hedges' g 95% CIs are approximate.

Burnout by Gender (Table 5.7). An independent-samples t-test compared burnout ratings between Male (n = 243) and Female (n = 338) respondents on the item "I feel burnt out in my current role." Levene's test was not significant, F (1, 579) = 2.28, p = .131, so the pooled-variance t is reported. Burnout was lower among Males (M = 2.93, SD = 0.51) than Females (M = 3.06, SD = 0.47), a statistically significant difference, t (579) = −3.18, p = .002, 95% CI for the mean difference (Male − Female) = [−0.21, −0.05]. The effect size was small (*Cohen's* $d \approx -0.27$), indicating a modest but reliable difference, with Females reporting slightly higher burnout on average.

Table 5.7

Burnout by Gender (N=581)

Panel A. Group statistics

Gender	N	Mean	SD	SE
Female	338	3.06	0.47	0.03
Male	243	2.93	0.51	0.03

Panel B. Levene's test and t tests

Assumption	Levene F	Levene p	t	df	p (two-sided)
Equal variances assumed	2.28	p = .131	-3.19	579	p = .002

Panel C. Mean difference and 95% CI (Male − Female)

Assumption	Mean Difference	SE	95% CI Lower	95% CI Upper

Equal variances assumed	-0.13	0.04	-0.21	-0.05
Equal variances not assumed (Welch)	-0.13	0.04	-0.21	-0.05

Panel D. Effect sizes

Metric	Point estimate	95% CI Lower	95% CI Upper	Notes
Cohen's d	-0.27	-0.43	-0.10	pooled *SD* ≈ 0.49

Notes. Negative mean differences/effect sizes indicate lower burnout for Males relative to Females. Levene's test was non-significant ($p = .131$); pooled-variance results are shown.

RO1: Program Delivery, Job Satisfaction, and Burnout by Structure

Program Delivery by Structure (Table 5.8). Across structures, perceived program delivery showed a small but reliable difference, F (3, 580) = 6.25, $p < .001$, $\eta^2 = .03$, with homogeneous variances (Levene $p = .819$). County Agent Model (CGM; $M = 3.08$) outperformed both the Specialist Model (SPU; $M = 2.83$) by .25 points (Tukey $p = .001$) and the Hybrid Model (*HYB*; $M = 2.93$) by .15 points (Tukey *pp* =.047), while the Regional Agent Model (RCM; $M = 3.00$) did not differ from other groups. In practical terms, county-based systems reported slightly stronger delivery than specialist-only or hybrid arrangements. For job satisfaction, omnibus differences were marginal, F (3, 580) = 2.56, $p = .054$, $\eta^2 = .01$, with equal variances (Levene $p = .826$). Although robust tests hinted at a weak effect (Welch $p = .045$; Brown–Forsythe $p = .043$), prespecified Tukey comparisons yielded no significant pairs; descriptively, CG*M* ($M = 2.79$) trended above SPU ($M = 2.58$), with RC*M* ($M = 2.73$) and HYB ($M = 2.68$) in between. Burnout was essentially uniform across structures, F (3, 580) = 0.53, $p = .660$, $\eta^2 = .00$ (Levene *pp* =.402), with means tightly clustered around 3.00 (CG*M* 2.99; RC*M* 3.01; SPU 3.09; HYB 2.99) and no significant post-hoc contrasts. To address sparse cells and uneven group sizes in the original seven structure categories, We collapsed structures into four theoretically coherent groups (County

Agent, Regional Agent, Specialist-only, Hybrid) before analysis to preserve power and stabilize variance estimates. Consistent with our analysis plan, we used one-way ANOVAs with Levene's tests for homogeneity; when homogeneity held, we applied Tukey H*SD* for pairwise tests, and when it was violated, we would have used Games–Howell. We also ran robustness checks using Welch and Brown–Forsythe statistics.

Table 5.8

Structure × Program Delivery, Job Satisfaction, and Burnout (N = 584)

Panel A. Descriptive Statistics by Structure

DV	Group	N	Mean	SD	SE	95% CI (LB)	95% CI (UB)
Program Delivery Index	CGM	377	3.08	0.43	0.02	3.04	3.12
	RCM	87	3.00	0.44	0.05	2.90	3.09
	HYB	73	2.93	0.46	0.05	2.83	3.04
	SPU	47	2.83	0.48	0.07	2.69	2.97
	Total	**584**	**3.03**	**0.45**	**0.02**	**2.99**	**3.07**
Job Satisfaction Index	CGM	377	2.79	0.55	0.03	2.73	2.84
	RCM	87	2.73	0.50	0.05	2.63	2.84
	HYB	73	2.68	0.55	0.06	2.56	2.81
	SPU	47	2.58	0.50	0.07	2.43	2.72
	Total	**584**	**2.75**	**0.54**	**0.02**	**2.71**	**2.79**
Burnout	SPU	47	3.09	0.55	0.08	2.93	3.25
	RCM	87	3.01	0.47	0.05	2.91	3.11
	CGM	377	2.99	0.49	0.03	2.94	3.04
	HYB	73	2.99	0.49	0.06	2.87	3.10
	Total	**584**	**3.00**	**0.49**	**0.02**	**2.96**	**3.04**

Panel B. Levene's Test of Homogeneity of Variances (Based on Mean)

DV	F	df1	df2	p
Program Delivery Index	0.31	3	580	$p = .819$
Job Satisfaction Index	0.30	3	580	$p = .826$
Burnout	0.98	3	580	$p = .402$

Panel E. Effect Sizes (η^2, ω^2)

DV	η^2	ω^2
Program Delivery Index	0.03	0.03
Job Satisfaction Index	0.01	0.01
Burnout	0.00	-0.00

Panel F. Post hoc Pairwise Comparisons (Tukey HSD; significant only)

DV	Significant Pair	Δ*M* (I−J)	95% CI (LB)	95% CI (UB)	p
Program Delivery Index	CG*M* > SPU	0.25	0.08	0.43	*p* = .001
	CG*M* > HYB	0.15	0.00	0.29	*p* = .047

Notes. Exact *p* shown unless *p* < .001. DV scales range 1–4. Abbreviations: CGM, RCM, SPU, HYB (collapsed structure categories). Homogeneity held for all DVs (Panel B), so Tukey H*SD* was used.

Needs Assessment and Program Frequency by Structure (Table 5.9). The association between how often agents conduct needs assessments and organizational structure was not significant: Pearson χ^2 (30, *N* = 584) = 37.81, asymptotic *p* = .155; Monte Carlo (100,000 samples; seed = 622500317) *p* (2-sided) = .179, 99% CI [.176, .182]. Likelihood ratio χ^2 = 37.48, Monte Carlo *p* = .151, 99% CI [.148, .153]. The Fisher–Freeman–Halton exact test (Monte Carlo) was *p* = .101, 99% *CI* [.099, .104]. The linear-by-linear association was non-significant (*std. z* = −0.826), Monte Carlo *p* (2-sided) = .413; *p* (1-sided) = .209. The table was sparse (64.3% of cells expected < 5; minimum expected ≈ 0.08); therefore, Monte Carlo estimates were used as the primary basis for inference. Descriptively, most structures clustered at "once a year," with small deviations in rare categories (e.g., a higher "never" share within Programmatic), but these did not yield a reliable overall association.

The association between program delivery frequency and structure was likewise not significant after accounting for sparsity: Pearson χ^2 (30, *N* = 584) = 43.09, asymptotic *p* = .058; Monte Carlo *p* (2-sided) = .116, 99% *CI* [.113, .118]. Likelihood ratio χ^2 = 39.09, Monte Carlo *p* = .066, 99% CI [.064, .068]. Fisher–Freeman–Halton (Monte Carlo) *p* = .123, 99% *CI* [.120, .126]. Linear-by-linear was non-significant (std. z = +0.566), Monte Carlo *p* (2-sided) = .574; *p* (1-sided) = .291. The table was sparse (59.5% expected < 5; minimum expected ≈ 0.03). Descriptively,

monthly delivery dominated across structures (≈ 40–66%), with some between-structure variability at weekly and 2–3×/year, but not enough to produce a statistically reliable association.

Table 5.9

Needs Assessment and Program Frequency by Extension Structure (N=584)

Panel A. How often do you conduct needs assessments? × Structure — Counts

Structure	Everyday	Weekly	Monthly	2–3×/ Year	Once/Year	Never
County Agent Model	18	6	9	104	221	19
Regional Agent Model	3	1	1	11	32	1
Specialist Model	0	0	0	3	3	0
Multi-County Agent Model	0	1	1	12	19	5
Programmatic Agent Model	3	1	0	5	20	7
Statewide Agent Model	0	0	1	0	3	1
Hybrid Model	5	0	3	15	43	7
Total	29	9	15	150	341	40

Panel B. How often do you conduct needs assessments? × Structure — % within Structure

Structure	Everyday	Weekly	Monthly	2–3×/ Year	Once/Year	Never
County Agent Model	4.8%	1.6%	2.4%	27.6%	58.6%	5.0%
Regional Agent Model	6.1%	2.0%	2.0%	22.4%	65.3%	2.0%
Specialist Model	0.0%	0.0%	0.0%	50.0%	50.0%	0.0%
Multi-County Agent Model	0.0%	2.6%	2.6%	31.6%	50.0%	13.2%
Programmatic Agent Model	8.3%	2.8%	0.0%	13.9%	55.6%	19.4%
Statewide Agent Model	0.0%	0.0%	20.0%	0.0%	60.0%	20.0%
Hybrid Model	6.8%	0.0%	4.1%	20.5%	58.9%	9.6%

Panel C. How often do you deliver programs in your area of focus? × Structure — Counts

Structure	Everyday	Weekly	Monthly	2–3×/ Year	Once/Year	Never
County Agent Model	19	64	207	80	7	0
Regional Agent Model	2	5	31	11	0	0
Specialist Model	0	0	4	2	0	0
Multi-County Agent Model	2	9	20	7	0	0
Programmatic Agent Model	3	9	20	2	0	2
Statewide Agent Model	0	0	3	2	0	0
Hybrid Model	5	18	29	19	1	1
Total	31	105	314	123	8	3

Panel D. How often do you deliver programs in your area of focus? × Structure — % within Structure

Structure	Everyday	Weekly	Monthly	2–3×/ Year	Once/Year	Never
County Agent Model	5.0%	17.0%	54.9%	21.2%	1.9%	0.0%
Regional Agent Model	4.1%	10.2%	63.3%	22.4%	0.0%	0.0%
Specialist Model	0.0%	0.0%	66.7%	33.3%	0.0%	0.0%
Multi-County Agent Model	5.3%	23.7%	52.6%	18.4%	0.0%	0.0%
Programmatic Agent Model	8.3%	25.0%	55.6%	5.6%	0.0%	5.6%
Statewide Agent Model	0.0%	0.0%	60.0%	40.0%	0.0%	0.0%
Hybrid Model	6.8%	24.7%	39.7%	26.0%	1.4%	1.4%

RO1: Program Delivery, Job Satisfaction, and Burnout by Region

Program Delivery, Job Satisfaction, and Burnout by Extension Region Table 5.10. By region, perceived program delivery differed modestly, F (3, 580) = 4.93, p = .002, η^2 = .03, with homogeneous variances (Levene p = .667). Southern + 1890 (M = 3.08) reported higher delivery than the Northeast (M = 2.89; ΔM = .18, Tukey p = .020) and the West (M = 2.91; ΔM = .16, Tukey p = .016); North Central (M = 3.04) did not differ from the others. Job satisfaction did not vary by region, F (3, 580) = 1.03, p = .378, η^2 = .01 (Levene p = .616); means were similar (Southern + 1890 = 2.78; North Central = 2.68; Northeast = 2.71; West = 2.75) and all Tukey tests were non-significant. Burnout likewise showed no regional differences, F (3, 580) = 0.34, p = .799, η^2 = .00 (Levene p = .292), with means tightly clustered from 2.98–3.05.

Because the standalone 1890 group was small and created sparse cells, we prespecified collapsing the original five regions into four analysis groups by combining 1890 with Southern—both geographically aligned and organizationally comparable—to preserve power and stabilize variance estimates. Following our plan, we ran one-way ANOVAs with Levene's tests for homogeneity; when homogeneity held, pairwise differences were evaluated with Tukey H*SD* (Games–Howell was reserved for any violations). Overall, region explains little variance in job satisfaction or burnout, while Southern/1890 shows a small advantage in program delivery.

Table 5.10

Program Delivery, Job Satisfaction, and Burnout by Extension Region N = 584

Panel A. Descriptive Statistics by Structure

DV	Group	N	Mean	SD	SE	95% CI (LB)	95% CI (UB)
Program Delivery Index	Southern+1890	326	3.08	0.44	0.02	3.03	3.12
	North Central	119	3.04	0.45	0.04	2.96	3.12
	Western	82	2.91	0.48	0.05	2.81	3.02
	Northeast	57	2.89	0.42	0.06	2.78	3.00
	Total	**584**	**3.03**	**0.45**	**0.02**	**2.99**	**3.07**

Job Satisfaction Index	Southern+1890	326	2.78	0.56	0.03	2.72	2.84
	Western	82	2.75	0.54	0.06	2.63	2.87
	Northeast	57	2.71	0.50	0.07	2.58	2.85
	North Central	119	2.68	0.52	0.05	2.59	2.78
	Total	**584**	**2.75**	**0.54**	**0.02**	**2.71**	**2.79**
Burnout	Western	82	3.05	0.47	0.05	2.95	3.15
	Southern+1890	326	3.00	0.50	0.03	2.95	3.05
	North Central	119	2.98	0.45	0.04	2.90	3.07
	Northeast	57	2.98	0.58	0.08	2.83	3.14
	Total	**584**	**3.00**	**0.49**	**0.02**	**2.96**	**3.04**

Panel B. Levene's Test of Homogeneity of Variances (Based on Mean)

DV	F	df1	df2	p
Program Delivery Index	0.52	3	580	$p = .667$
Job Satisfaction Index	0.60	3	580	$p = .616$
Burnout	1.25	3	580	$p = .292$

Panel C. One-way ANOVA by Structure

DV	SS (Between)	df	MS (Between)	F	p
Program Delivery Index	2.91	3	0.97	4.93	$p = .002$
Job Satisfaction Index	0.92	3	0.31	1.03	$p = .378$
Burnout	0.25	3	0.08	0.34	$p = .799$

Panel D. Effect Sizes (η^2, ω^2)

DV	η^2	ω^2
Program Delivery Index	0.03	0.03
Job Satisfaction Index	0.01	0.01
Burnout	<0.01	-0.00

Panel E. Post hoc Pairwise Comparisons (Tukey HSD; significant only)

DV	Significant Pair	Δ*M* (I−J)	95% CI (LB)	95% CI (UB)	p
Program Delivery Index	Southern+1890 > Northeast	0.18	0.02	0.35	$p = .020$
	Southern+1890 > Western	0.16	0.02	0.30	$p = .016$

Notes. All values rounded to two decimals: exact p shown unless $p < .001$. Groups: Southern+1890 (combined), North Central, Northeast, Western. Homogeneity held (Panel B), Tukey H*SD* reported.

Needs Assessment and Program Frequency by Region (Table 5.11). Given the extreme sparsity (53.3% of cells expected < 5; min expected ≈ .06), exact methods are most appropriate. The Fisher–Freeman–Halton exact test (Monte Carlo, 100,000 samples; seed = 1,438,118,013) indicated a significant association, $p = .018$ (99% *CI* [.017, .019]). By contrast, Pearson χ^2 (20, $N = 584$) = 29.43 yielded Monte Carlo $p = .109$ (99% *CI* [.107, .112]); the likelihood-ratio χ^2 gave Monte Carlo $p = .060$. Interpreting under the exact framework, the effect is small (Cramér's V ≈ .11, computed from χ^2). Adjusted residuals suggest differences are concentrated in the Never category (overrepresented in North Central $z = +2.8$ and Western $z = +2.1$; underrepresented in Southern $z = -4.3$). "Once a year" is common in all regions (≈ 51–75% by column), with Southern slightly elevated ($z = +1.7$) and North Central slightly reduced ($z = -1.8$). Overall, regions differ modestly in how often agents report conducting needs assessments.

All tests converged on no significant association after accounting for sparsity (53.3% of cells < 5; min expected ≈ .02): Pearson χ^2 (20, $N = 584$) = 25.52, Monte Carlo $p = .180$; likelihood-ratio Monte Carlo $p = .230$; Fisher–Freeman–Halton Monte Carlo $p = .242$. Descriptively, monthly delivery dominated across regions (≈ 44–58%). Western showed a higher share of 2–3×/year (31.7%, $z = +2.6$), and the Northeast had a small Never cell (3.5%, $z = +3.3$), but these patterns did not yield an overall significant association.

Table 5.11

Needs Assessment and Program Frequency by Region (N = 584)

Panel A. How often do you conduct needs assessments? × Region — Counts

Frequency	Southern	1890	North Central	Northeast	Western	Total
Everyday	12	0	7	4	6	29
Weekly	5	0	1	1	2	9
Monthly	8	0	2	3	2	15
2–3×/Year	90	1	33	10	16	150

Once/Year	198	3	61	33	46	341
Never	9	0	15	6	10	40
Total	322	4	119	57	82	584

Panel B. How often do you conduct needs assessments? × Region — % within Region

Frequency	Southern	1890	North Central	Northeast	Western
Everyday	3.7%	0.0%	5.9%	7.0%	7.3%
Weekly	1.6%	0.0%	.8%	1.8%	2.4%
Monthly	2.5%	0.0%	1.7%	5.3%	2.4%
2–3×/Year	28.0%	25.0%	27.7%	17.5%	19.5%
Once/Year	61.5%	75.0%	51.3%	57.9%	56.1%
Never	2.8%	0.0%	12.6%	10.5%	12.2%

Panel C. How often do you deliver programs in your area of focus? × Region — Counts

Frequency	Southern	1890	North Central	Northeast	Western	Total
Everyday	17	0	6	4	4	31
Weekly	54	1	26	9	15	105
Monthly	179	2	64	33	36	314
2–3×/Year	66	1	21	9	26	123
Once/Year	6	0	2	0	0	8
Never	0	0	0	2	1	3
Total	322	4	119	57	82	584

Panel D. How often do you deliver programs in your area of focus? × Region — % within Region

Frequency	Southern	1890	North Central	Northeast	Western
Everyday	5.3%	0.0%	5.0%	7.0%	4.9%
Weekly	16.8%	25.0%	21.8%	15.8%	18.3%
Monthly	55.6%	50.0%	53.8%	57.9%	43.9%
2–3×/Year	20.5%	25.0%	17.6%	15.8%	31.7%
Once/Year	1.9%	0.0%	1.7%	0.0%	0.0%
Never	0.0%	0.0%	0.0%	3.5%	1.2%
Total	100.0%	100.0%	100.0%	100.0%	100.0%

RO2: To assess how Extension professionals perceive their own state's Extension structure compared to other state models.

Overall Perceptions of Current Structure

Overall Perceptions of Current Structures (Table 5.12). On the 1–4 response scale used in this study, the grand mean for the 12-item index was 2.66 (*SD* = .52), indicating a modestly positive—but close to neutral—overall appraisal of the current Extension structure. The highest-rated items focused on community service and collaboration meets local community needs (*M* = 3.01, *SD* = .72), promotes collaboration/resource sharing (*M* = 2.97, *SD* = .73), and addresses rural challenges (*M* = 2.87, *SD* = .71). In contrast, the lowest-rated items pointed to capacity and role-clarity concerns: local clients understand Extension's role (*M* = 2.39, *SD* = .80), supports sustainable career growth and job satisfaction (*M* = 2.44, *SD* = .82), adequate mentorship opportunities (*M* = 2.54, *SD* = .79), and ability to focus on area of expertise without being overstretched (*M* = 2.56, *SD* = .85). Item standard deviations (~.71–.85) show meaningful variability across respondents, with the greatest dispersion on overstretching, career growth, training, and client understanding, suggesting uneven experiences across units or regions. The spread between the top and bottom items (Δ≈ .62, ~21% of the 1–4 scale) highlights clear strengths in community-facing functions and collaboration, alongside actionable gaps in workforce support (mentorship, workload/manageability, career pathways) and external understanding of Extension's mission.

Table 5.12

Perception of Current Structure Index | Descriptive Statistics (N = 583)

Perception of Current Structure Items (*n* = 12)	Mean	Std. Deviation
I believe the current Extension educator model in my state effectively meets the needs of local communities.	3.01	.72
The current model promotes collaboration and resource-sharing among agents and specialists.	2.97	.73
The current model effectively addresses the unique challenges of rural communities.	2.87	.71
My State's Extension model provides adequate training opportunities for agents.	2.72	.80

My state's Extension model effectively balances local, regional, and statewide priorities.	2.68	.73
Local, regional, and state leadership collaborate effectively to address community needs.	2.59	.79
The current model effectively addresses the unique challenges of underserved communities.	2.57	.72
I believe my key stakeholders/government officials understand the role and mission of Cooperative Extension in their community/state.	2.57	.79
The current model allows me to focus on my area of expertise without being overstretched.	2.56	.85
My State's Extension model provides adequate mentorship opportunities for agents.	2.54	.79
I believe the current model supports sustainable career growth and job satisfaction for Extension educators.	2.44	.82
I believe local clients understand the role and mission of Cooperative Extension in their community.	2.39	.80
Grand Perception of Current Structure Index	**2.66**	**.52**

Overall Perception of Other Extension Structures

Overall Perception of Other Extension Structures (Table 5.13). On a four-point scale, the Perception of Other Extension Structures Index averaged 2.56 ($SD = 0.53$; $N = 583$), suggesting modest agreement that other states' models have advantages. The most endorsed ideas were selective borrowing: adopting programmatic approaches ($M = 2.81$, $SD = 0.67$) and implementing valuable practices from other states ($M = 2.79$, $SD = 0.65$). Respondents were split when responding that other states are broadly "more effective" ($M = 2.54$, $SD = 0.75$) or have more resources/training ($M = 2.51$, $SD = 0.76$). The weakest endorsements were that other systems handle urban/suburban ($M = 2.35$, $SD = 0.64$) or rural challenges ($M = 2.31$, $SD = 0.72$) better than one's own. Variation is moderate ($SDs \approx .64$–$.76$), with the greatest spread on "resources/training" and "more effective." Overall, respondents appear open to importing specific practices without believing other models outperform their model.

Table 5.13

Perception of Other Extension Structures Index | Descriptive Statistics (N = 584)

Perception of Other Extension Structures Items (*n* = 6)	Mean	Std. Deviation
I think my state's Extension system could benefit from adopting programmatic approaches used in other states.	2.81	.67
I feel that other states' models could offer valuable practices that should be implemented in my state.	2.79	.65
I believe some states' models are more effective than the one in my state.	2.54	.75
Agents in other states have access to more resources/training compared to my state.	2.51	.76
Other states' Extension systems appear to be better equipped to handle urban/suburban challenges than my state's system.	2.35	.64
Other states' Extension systems appear to be better equipped to handle rural challenges than my state's system.	2.31	.72
Grand Mean Perception of Other Extension Structures Index	**2.56**	**.53**

Perception of Current Structure and Perception of Other Extension Structures by Extension Structure.

Perception of Current Structure by Extension Structure (Table 5.14). Tests were ran to see whether perceptions of one's own Extension system differed across the four structure categories that were created from the original structures (accounting for sparse cell counts and outlined in the methods section): County-Generalist Models (county-based generalists), Regionalized Coverage Models (regional/multi-county footprints), Specialized Program-Unit Models (specialist, programmatic, statewide, urban), and Hybrid (intentional blend). A one-way ANOVA compared group means; homogeneity was checked via Levene's test. Given homogeneous variances, Tukey HSD was the pre-specified post hoc for pairwise contrasts. The omnibus test was significant, $F(3, 580) = 15.55$, $p < .001$, $\eta^2 = .07$ (small–to–moderate). Variances were homogeneous (Levene $p = .805$). County-Generalist Models rated their system most favorably ($M = 2.76$) compared with Regionalized Coverage Models ($M = 2.45$; $\Delta = .31$, $p < .001$), Specialized Program-Unit Models ($M = 2.45$; $\Delta = .32$, $p < .001$), and Hybrid ($M = 2.50$; $\Delta = .26$, p

< .001). Substantively, agents in county-based systems express meaningfully more favorable views of their own structure—roughly a quarter to a third of a scale point—than peers in regionalized, program-unit, or hybrid systems.

Perception of Other Extension Structures by Extension Structure (Table 5.14). Perceptions of other states' Extension systems were also evaluated. Analytic steps matched the "own system" analysis: one-way ANOVA with Levene's test, Welch/Brown–Forsythe robustness checks, and (given homogeneity) Tukey HSD for pairwise comparisons. Group differences were significant, F (3, 580) = 13.33, $p < .001$, $\eta^2 = .06$ (small–to–moderate); Levene $p = .556$. Regionalized Coverage Models viewed other states most favorably ($M = 2.81$), exceeding County-Generalist Models ($M = 2.46$; $\Delta = .35$, $p < .001$). Hybrid ($M = 2.68$) was also higher than County-Generalist ($\Delta = .21$, $p = .006$). Specialized Program-Unit Models ($M = 2.65$) did not differ significantly from other groups. In short, regionalized and hybrid arrangements are associated with more favorable views of how other state's structure Extension relative to county-generalist systems.

Table 5.14

Perception of Own Extension Structure and Other Extension Structures by Extension Structure (N = 584)

Panel A. Descriptive Statistics by Structure

DV	Group	*N*	Mean	SD	SE	95% CI (LB)	95% CI (UB)
Perception of Own Index	CGM	377	2.76	0.50	0.03	2.71	2.82
	HYB	73	2.50	0.53	0.06	2.38	2.62
	RCM	87	2.45	0.47	0.05	2.35	2.55
	SPU	47	2.45	0.49	0.07	2.30	2.59
	Total	**584**	**2.66**	**0.52**	**0.02**	**2.62**	**2.70**
Perception of Other Index	RCM	87	2.81	0.49	0.05	2.71	2.92
	HYB	73	2.68	0.56	0.07	2.55	2.81
	SPU	47	2.65	0.45	0.07	2.51	2.78
	CGM	377	2.46	0.51	0.03	2.41	2.52
	Total	**584**	**2.56**	**0.52**	**0.02**	**2.51**	**2.60**

Panel B. Levene's Test of Homogeneity of Variances (Based on Mean)

DV	*F*	df1	df2	*p*
Perception of Own Index	0.33	3	580	*p* = .805
Perception of Other Index	0.69	3	580	*p* = .556

Panel C. One-way ANOVA by Structure

DV	SS (Between)	df	MS (Between)	*F*	*p*
Perception of Own Index	11.74	3	3.92	15.55	*p* < .001
Perception of Other Index	10.35	3	3.45	13.33	*p* < .001

Panel F. Post hoc Pairwise Comparisons (Tukey HSD; significant only)

DV	Significant Pair	Δ*M* (I−J)	95% CI (LB)	95% CI (UB)	*p*
Perception of Own Index	CG*M* > RCM	0.31	0.16	0.46	*p* < .001
	CG*M* > SPU	0.32	0.12	0.52	*p* < .001
	CG*M* > HYB	0.26	0.10	0.43	*p* < .001
Perception of Other Index	RC*M* > CGM	0.35	0.19	0.50	*p* < .001
	HYB > CGM	0.21	0.05	0.38	*p* = .006

Notes. Exact *p* shown unless *p* < .001. DV scales range 1–4. Abbreviations: CGM, RCM, SPU, HYB (collapsed structure categories). Homogeneity held for all DVs (Panel B), so Tukey H*SD* was used.

RO2: Perception of Current Structure and Perception of Other Extension Structures by Extension Region

Perception of Current Structure by Extension Region (Table 5.15). Comparisons were also made viewing perceptions of one's own system across the four regional groupings (accounting for sparse cell counts and outlined in the methods section): Southern/1890 composite, North Central, Northeast, and Western. A one-way ANOVA tested mean differences, with Levene's test for homogeneity, and Tukey H*SD* for planned post hocs when variances were equal. Regional differences emerged, $F(3, 580) = 7.07$, $p < .001$, $\eta^2 = .04$ (small); Levene $p = .724$. Southern/1890 reported the highest mean ($M = 2.74$), exceeding North Central ($M = 2.55$; $\Delta = .20$, $p = .002$) and

Northeast (M = 2.49; Δ = .25, p = .004). Differences between Southern/1890 and Western (M = 2.61) were not significant. This shows respondents in Southern/1890 institutions rate their own structure more favorably than peers in North Central and Northeast institutions.

Perception of Other Extension Structures by Extension Region (Table 5.15). Using the same regional groupings (Southern/1890, North Central, Northeast, Western), assessments were made regarding perceptions of other states' Extension systems via one-way ANOVA, with Levene's test for homogeneity, and Tukey H*SD* for pairwise contrasts where appropriate. The ANOVA was significant, F (3, 580) = 6.75, p < .001, η^2 = .03 (small); Levene p = .751. Western respondents (M = 2.75) rated other states more favorably than Southern/1890 (M = 2.49; Δ = .27, p < .001); other regional pairs were not significant. Practically, views of other states' models are most favorable in the Western region and least favorable in the Southern/1890 composite, with differences on the order of a quarter of a scale point.

Table 5.15

Perception of Own Extension Structure and Other Extension Structures by Extension Region (N = 584)

Panel A. Descriptive Statistics by Structure

DV	Group	N	Mean	SD	SE	95% CI (LB)	95% CI (UB)
Perception of Own Index	Southern+1890	326	3.08	0.44	0.02	2.68	2.80
	Western	82	2.61	0.50	0.05	2.50	2.72
	North Central	119	2.55	0.48	0.04	2.46	2.63
	Northeast	57	2.49	0.50	0.07	2.36	2.62
	Total	**584**	**2.66**	**0.52**	**0.02**	**2.62**	**2.70**
Perception of Other Index	Western	82	2.75	0.54	0.06	2.64	2.87
	Northeast	57	2.65	0.48	0.06	2.53	2.78
	North Central	119	2.57	0.51	0.05	2.48	2.66
	Southern+1890	326	2.49	0.52	0.03	2.43	2.54
	Total	**584**	**2.56**	**0.52**	**0.02**	**2.51**	**2.60**

Panel B. Levene's Test of Homogeneity of Variances (Based on Mean)

DV	F	df1	df2	p
Perception of Own Index	0.44	3	580	p = .724

Perception of Other Index	0.40		3	580	$p = .751$

Panel C. One-way ANOVA by Structure

DV	SS (Between)	df	MS (Between)	*F*	p
Perception of Own Index	5.56	3	1.85	7.07	$p < .001$
Perception of Other Index	5.41	3	1.80	6.75	$p < .001$

Panel D. Post hoc Pairwise Comparisons (Tukey HSD; significant only)

DV	Significant Pair	Δ*M* (I−J)	95% CI (LB)	95% CI (UB)	p
Perception of Own Index	Southern+1890 > North Central	0.20	0.05	0.34	$p = .002$
	Southern+1890 > Northeast	0.25	0.06	0.44	$p = .004$
Perception of Other Index	Western > Southern+1890	0.27	0.10	0.43	$p < .001$

Notes. All values rounded to two decimals: exact *p* shown unless $p < .001$. Groups: Southern+1890 (combined), North Central, Northeast, Western. Homogeneity held (Panel B), Tukey H*SD* reported.

RO2: Perception and Classification of Extension Structures

Table 5.16. Participants were shown brief prompts describing specific Extension-structure characteristics and, for each prompt, asked to select the one structure they believed best matched (or, in one case, least matched) that description. This single-choice task was designed to surface the mental associations Extension professionals hold about different organizational models.

Across items, patterns are coherent and face valid. Personalization was overwhelmingly linked to the County Agent Model (89.20%, $n = 521$), reinforcing its reputation for localized service. Perceived expertise clustered with the Specialist Model (52.20%, $n = 305$), with a secondary association to the Programmatic Agent Model (20.50%, $n = 120$). When asked which structure is most effective in states with limited budgets/small populations, respondents favored Regional (28.60%, n=167) and Multi-County (21.60%, $n = 126$), with County also common

(17.80%, *n*=104), suggesting economies of scale without fully abandoning local presence. For flexibility to address both local and regional needs, Regional (29.30%, *n* = 171) and Hybrid (23.50%, *n* = 137) led, followed by County (19.50%, *n* = 114) and Multi-County (13.70%, *n* = 80), implying that blended/regionally coordinated models are seen as adaptable. The item on resource-sharing and specialization pointed to Hybrid (24.00%, *n* = 140) and Programmatic (22.60%, *n* = 132) as best enabling shared capacity and niche expertise. Consistency across larger areas again highlighted Regional (25.00%, *n* = 146) and Programmatic (24.30%, *n* = 142), with Statewide also noted (16.80%, *n* = 98). For the negative prompt—least likely to address local needs adequately—respondents identified the Statewide Agent Model most often (59.40%, *n* = 347), with Specialist a distant second (16.40%, *n* = 96), underscoring a perceived distance from community-level needs. Finally, urban challenges were strongly mapped to the Urban Agent Model (62.00%, *n* = 362), with County appearing as a notable second (23.60%, *n* = 138), suggesting many view county-based agents as still central in metro contexts.

These selections indicate clear, shared schemas among professionals: County = personalization/community embeddedness; Specialist/Programmatic = technical expertise; Regional/Hybrid = flexibility and cross-area consistency; Statewide = efficient reach but perceived as the weakest on local fit; Urban = best suited to dense populations. Because choices were forced to one structure per prompt, results reflect dominant associations rather than the full nuance of mixed models. However, they do provide a useful map of how Extension professionals mentally link organizational forms to functional strengths and trade-offs.

Table 5.16

Perception and Classification of Extension Structures (N = 584)

Extension Classification Item	Extension Structure Selection															
	County		Regional		Specialist		Multi-County		Programmatic		Statewide		Hybrid		Urban	
	n	%	*n*	%	*n*	%	*n*	%	*n*	%	*n*	%	*n*	%	*n*	%
I believe this Extension model is most effective in states with limited budgets or small populations.	104	17.80%	167	28.60%	24	4.10%	126	21.60%	51	8.70%	26	4.50%	86	14.70%	0	0.00%
I believe this Extension model offers the most personalized service for local communities.	521	89.20%	10	1.70%	5	0.90%	6	1.00%	16	2.70%	3	0.50%	23	3.90%	0	0.00%
I believe this Extension model ensures a higher level of expertise.	50	8.60%	57	9.80%	305	52.20%	2	0.30%	120	20.50%	18	3.10%	32	5.50%	0	0.00%
I believe this Extension model provides the flexibility to address both local and regional needs MOST effectively	114	19.50%	171	29.30%	15	2.60%	80	13.70%	57	9.80%	10	1.70%	137	23.50%	0	0.00%

I believe this Extension model is LEAST LIKELY to address local needs adequately.	10	1.70%	32	5.50%	96	16.40%	35	6.00%	23	3.90%	347	59.40%	16	2.70%	25	4.30%
I believe this Extension model allows for the most resource-sharing and specialization.	81	13.90%	87	14.90%	62	10.60%	52	8.90%	132	22.60%	27	4.60%	140	24.00%	3	0.50%
I believe this Extension model best ensures consistency in program delivery across larger areas.	51	8.70%	146	25.00%	47	8.00%	49	8.40%	142	24.30%	98	16.80%	49	8.40%	2	0.30%
I believe this Extension model is best for addressing the unique challenges faced by communities in densely and moderately populated areas.	138	23.60%	11	1.90%	15	2.60%	10	1.70%	20	3.40%	4	0.70%	24	4.10%	362	62.00%

RO3: To identify characteristic patterns of Extension systems across the United States

RO3: Extension Structures and Regionality

Extension Organizational Structure by University Region Table 5.17. A chi-square test of independence examined the association between organizational structure and Extension Services by region. The test was statistically significant, χ^2 (24, N = 584) = 156.39, p < .001, with a small-to-moderate effect size (Cramér's V = .259). However, the crosstabulation was sparse: over half of the cells (51.4%) had expected counts less than five (minimum expected ≈ .03), which violates chi-square assumptions and makes the asymptotic p -value potentially unreliable. To address this, a Monte Carlo exact test (100,000 sampled tables; seed = 299883525) was conducted. Results confirmed the association, p < .001 (99% CI for p < .001 to < .001), providing a more robust estimate under sparse data conditions. Adjusted standardized residuals indicated where the associations were concentrated, such as the overrepresentation of the County Agent Model in the Southern region (z = +8.2) and its underrepresentation in North Central (z = −5.8) and Northeast (z = −6.1). Additional significant patterns were found for the Hybrid, Regional, Programmatic, Statewide, and Specialist models. Bonferroni-adjusted column proportion tests corroborated these contrasts. Taken together, results support a moderate, regionally patterned association between Extension structures and university regions, even after accounting for sparse cell distributions. For completeness, chi-square tests were also run to examine whether Extension structures and regions differed significantly in terms of respondents' salary category, years of service, and gender. None of these analyses yielded significant differences, suggesting that the association between structure and region is unique and not attributable to demographic or career-stage factors.

Table 5.17

Extension Organizational Structure by University Region: Crosstab Counts, Row Percentages, and Monte Carlo Exact Association Tests (N = 584)

Panel A. Structure × Region: Frequencies

Structure	Southern	1890	North Central	Northeast	Western	Total
Hybrid Model	25	0	27	9	12	73
Statewide Agent Model	0	0	1	4	0	5
Programmatic Agent Model	8	0	8	15	5	36
Multi-County Agent Model	15	0	12	4	7	38
Specialist Model	0	0	1	2	3	6
Regional Agent Model	19	0	20	7	3	49
County Agent Model	255	4	50	16	52	377
Total	322	4	119	57	82	584

Panel B. Structure × Region: % within Structure

Structure	Southern	1890	North Central	Northeast	Western
Hybrid Model	34.2%	0.0%	37.0%	12.3%	16.4%
Statewide Agent Model	0.0%	0.0%	20.0%	80.0%	0.0%
Programmatic Agent Model	22.2%	0.0%	22.2%	41.7%	13.9%
Multi-County Agent Model	39.5%	0.0%	31.6%	10.5%	18.4%
Specialist Model	0.0%	0.0%	16.7%	33.3%	50.0%
Regional Agent Model	38.8%	0.0%	40.8%	14.3%	6.1%
County Agent Model	67.6%	1.1%	13.3%	4.2%	13.8%

Panel C. Association Tests (Nominal-by-Nominal)

Measure	Value	Approx. Sig.	Monte Carlo Sig.	99% CI (Lower)	99% CI (Upper)
Phi	.517	<.001	<.001	<.001	<.001
Cramer's V	.259	<.001	<.001	<.001	<.001

Note. Monte Carlo estimates based on 100,000 sampled tables with starting seed 299883525.

RO3: Current Extension Structure Characteristics and Patterns

Cluster Characteristics of Current Model Table 5.18. To further explore current Extension structures, participants were asked to select characteristics that matched their current Extension structure. This allowed for pattern identification, as well as for identifying any nuances associated with and between certain structures. We utilized a k-means cluster analysis to group responses and identify any patterns. K-means clustering is an unsupervised algorithm that partitions observations into k groups by repeatedly assigning each case to the nearest centroid and updating those centroids to minimize within-cluster variance (sum of squared distances). The current-state 3-cluster solution also converged by iteration 10 and forms three crisp staffing profiles.

Cluster 1 is the "classic county generalist": one-county footprint with little emphasis on specialization, program areas, or virtual/collaborative formats, the best representation of the traditional classic county agent model. Cluster 2 is a "regional specialist" configuration characterized by multi-county coverage, stronger subject-matter specialization, and program-area organization—an expert-centric, scalable model. Cluster 3, which the researchers deemed "modern county agent model," blends a county base with program-area focus, stronger subject-matter emphasis, and pronounced local engagement, essentially a locally anchored, program-driven model. Descriptive ANOVAs reinforce exactly these splits, with the largest between-cluster differences on one- vs multi-county coverage, program-area focus, subject-matter specialization, and local engagement. Taken together, the landscape resolves into two county-anchored variants (generalist vs program-focused/community-engaged) alongside a regional specialist variant. That

framing is useful for resource planning, hiring, and messaging. This information also helps bring to light a modern "county agent," which has evolved to take aspects of the regionalized cluster, specialization and focused expertise, but has stayed rooted in local community engagement. Rather than all agents in all counties needing to know everything, the county agents in the modern "county agent model" are selected for a county based directly on the programming needs specific to only that county (e.g. a horticulture agent in a heavy horticulture producing county).

Table 5.18

Cluster Characteristics of Current Model

Panel A. Initial cluster centers			
Characteristic	**Cluster 1**	**Cluster 2**	**Cluster 3**
Agent(s) primarily serve one county	0	1	0
Agent(s) cover multiple counties within a region	0	1	1
Agent(s) are shared between two or more counties	1	1	0
Agent(s) specialize in a specific subject matter	1	1	0
Program delivery is based on focused programmatic areas (e.g., water, youth workforce)	0	1	0
Agent(s) mainly serve an urban or metropolitan population	0	1	0
Agent(s) hold a statewide appointment	0	1	1
Model blends elements from multiple staffing approaches	0	1	1
Strong emphasis on local community engagement	0	1	1

Strong emphasis on subject-matter expertise	0	1	0
Reliance on virtual or regional delivery formats	1	1	0
Collaborative staffing across disciplines or locations	0	0	1

Panel B. Iteration history — change in cluster centers

Iteration	Cluster 1	Cluster 2	Cluster 3
1	1.62	1.36	1.42
2	0.29	0.46	0.32
3	0.13	0.21	0.23
4	0.08	0.11	0.19
5	0.11	0.03	0.17
6	0.02	0.04	0.06
7	0.00	0.05	0.06
8	0.01	0.02	0.02
9	0.01	0.00	0.01
10	0.00	0.00	0.00

Note. Convergence achieved by iteration 10 (maximum absolute coordinate change = .000; minimum distance between initial centers = 2.828).

Panel C. Final cluster centers

Characteristic	Cluster 1	Cluster 2	Cluster 3
Agent(s) primarily serve one county	1	0	1
Agent(s) cover multiple counties within a region	0	1	0
Agent(s) are shared between two or more counties	0	0	0
Agent(s) specialize in a specific subject matter	0	1	0
Program delivery is based on focused programmatic areas (e.g., water, youth workforce)	0	1	1
Agent(s) mainly serve an urban or metropolitan population	0	0	0

Agent(s) hold a statewide appointment	0	0	0
Model blends elements from multiple staffing approaches	0	0	0
Strong emphasis on local community engagement	0	0	1
Strong emphasis on subject-matter expertise	0	1	1
Reliance on virtual or regional delivery formats	0	0	0
Collaborative staffing across disciplines or locations	0	0	0

Panel D. Distances between final cluster centers

Cluster	1	2	3
1		1.72	1.22
2	1.72		1.32
3	1.22	1.32	

Panel E. Number of cases in each cluster

Cluster	*N*
1	251
2	181
3	152
Total	584

RO4: To identify the perceived advantages and disadvantages of different Extension organizational structures.

Systematic Thematic Analysis by Structures Table 5.19. This qualitative component was designed to explain and extend the quantitative results by uncovering the reasons behind participants' ratings and group differences. After analyzing indices (e.g., programming and job satisfaction), group comparisons, and the k-means clusters that summarized preferred directions for system change, we used open-ended prompts to probe how agents describe the strengths, trade-

offs, and improvements they want in Extension staffing and delivery models. Respondents described which characteristics would most benefit their programs (e.g., increased specialization, stronger local engagement, regional reach, urban capacity, programmatic roles, statewide expertise, hybrid approaches, cross-county collaboration, virtual support, and flexibility to meet unique community needs).

Integration with the quantitative results guided both the analysis and reporting. Themes are used to (a) converge with numeric patterns where results aligned (e.g., collaboration and flexibility narratives helping to explain higher collaboration items), (b) complement the statistics by adding mechanism and context (e.g., why workload and resource constraints depress satisfaction), and (c) expand the findings by surfacing priorities not fully captured in scales (e.g., desires for programmatic roles or statewide mobile expertise). Thematic patterns also map onto the three cluster profiles observed in the k-means solution—one diffuse orientation without a single dominant lever, one emphasizing people-and-partnerships (local engagement, collaboration, flexibility), and one prioritizing program-area staffing and specialization—thereby providing language for how agents themselves articulate those preferences.

RO4: Advantages of Extension Structures

Across all models, the most frequently identified advantage was local presence and accessibility. Respondents in the County Agent Model emphasized their ability to maintain "*boots on the ground*" connections in their communities, with one participant stating: "*The local county agent model has some advantages – namely boots on the ground, local contact, improved reach within communities.*" This theme was mentioned by approximately 250 respondents, making it the most prominent advantage across the dataset. This is very much in line with what Extension has been rooted in for over one-hundred years, meeting local needs. A second common theme was trust

and credibility with local clientele. County and Hybrid model respondents noted that their visibility enhanced community trust: "*Localized reach is our biggest advantage*," explained one agent. Roughly 90 participants cited trust.

Respondents in Regional, Programmatic, and Specialist Models, however, more often cited subject-matter expertise and specialization as their key advantage. A regional agent commented: "*Having specialists allows for stronger programs with more depth in content*." This reflects a trade-off, as these models emphasize depth of knowledge rather than local accessibility. Another widely cited advantage was collaboration across agents and disciplines. Approximately 120 respondents, especially those in Regional and Hybrid models, emphasized that broader structures facilitated team-based approaches: "*Collaboration across regions allows us to deliver stronger, more impactful programs*." Overall, County models were described as strong in local engagement and trust, while Regional, Programmatic, and Specialist models were valued for expertise and coordination. Hybrid models were noted for blending these strengths.

RO4: Disadvantages of Extension Structures

Themes of overextension and workload strain dominated the disadvantages, with about 150 respondents describing challenges of being "*pulled in multiple directions*." As one county-based respondent wrote: "*Frequently pulled in multiple directions to complete various assignments at district and state level. Burnout can happen quickly this way*." This aligns with the burnout results showing on average moderate burnout across Extension professionals. Another theme that was mentioned that builds onto this was regarding struggling to maintain work/life balance. One respondent mentioned feeling like they were "*always on call, at the ballpark, at a restaurant*…" making it difficult to maintain that balance. Another prominent disadvantage was lack of specialization and limited expertise, especially among County agents. Roughly 120 respondents

voiced frustration with being generalists: "*Spread too thin, too lightly staffed*." This was contrasted with Regional and Specialist models, which, while offering more expertise, were critiqued for loss of local identity and accessibility. A Programmatic model respondent noted: "*We're seen as less connected to the community, and that hurts our impact*." This further highlights the complexity Extension Services face fulfilling the mission of Extension, while not depleting their own extension professionals.

Resource constraints were also a cross-cutting disadvantage. Approximately 95 respondents reported insufficient staffing, funding, or administrative support. This was especially pronounced in Statewide and Specialist models, where administrative disconnects were mentioned. One statewide respondent wrote: "*There is no consistency in administrative support, and we feel forgotten*." Geographic spread was a frequent disadvantage for Multi-County and Regional models. About 80 respondents emphasized the difficulty of covering large territories: "*My counties are too far apart, which means I can't adequately serve them*." Thus, disadvantages revealed structural tensions: County agents cited lack of specialization; Regional and Multi-County agents cited geographic and workload challenges; Statewide and Specialist models cited administrative and resource gaps.

RO4: Overall Integrated Thematic Findings

These qualitative findings highlight fundamental trade-offs across Extension structures. The County Agent Model was praised for local presence and trust but critiqued for lack of specialization and overextension. The Regional and Programmatic Models provided expertise and collaboration but often at the cost of local accessibility. Specialist and Statewide Models offered depth but were constrained by administrative distance and resource issues. The Hybrid Model was frequently described as balancing strengths but still subject to the same resource and workload

pressures. Importantly, the themes of burnout and workload strain echo quantitative findings where burnout revealed to be widely experienced by the surveyed Extension professionals. Similarly, the emphasis on local presence in qualitative responses aligns with higher satisfaction scores in county-based models. The qualitative results underscore a central tension in Extension organizational design: the need to balance local trust and accessibility with specialized expertise and resource efficiency. While no single model was seen as ideal, respondents across all structures expressed a desire for stronger integration of local presence with subject-matter support, consistent administrative backing, and equitable service across diverse communities.

Table 5.19

Systematic Thematic Analysis by Structures

Structure	Key Advantages (*n* = 569)	Key Disadvantages (*n* = 569)	Things Wanted (*n* = 23)
County Agent Model	Local presence and accessibility; responsiveness to community needs; trust/relationships	Overextension/workload strain; lack of specialization; limited resources	More specialist support; stronger statewide/academic resources; enhanced rural opportunities
Regional Agent Model	Subject-matter specialization; regional reach and coverage; retains local knowledge	Loss of local identity; travel and coverage burden; limited resources	—
Multi-County Agent Model	Local impact; strong program delivery/reach; agent expertise	Overextension; too many counties to cover; limited resources	Data-driven allocation of agents (e.g., by acres farmed or population)
Programmatic Agent Model	Specialization and expertise; region-wide, consistent programs; knowledgeable agents	Reduced local presence; limited staff/resources; unmet needs in some areas	More county-level agents; better administrative/logistical support
Hybrid Model	Local responsiveness plus specialist access; statewide/regional coordination	Loss of local identity; limited specialists/resources; overextension/time burden	Better logistics for statewide/regional programs; more consistent resources/funding

Table 5.19

Systematic Thematic Analysis by Structures

Structure	Key Advantages (*n* = 569)	Key Disadvantages (*n* = 569)	Things Wanted (*n* = 23)
Specialist / Urban / Statewide (grouped)	Academic/research integration; meaningful community impact; affordability in compact states	Resource constraints; limited faculty/specialists; potential disconnect from local needs	More county agents; broader coverage across topics

Note: The Specialist/Urban/Statewide category is grouped due to smaller sample sizes; interpret patterns cautiously.

R05: To determine the desired changes or adaptations Extension professionals wish to see in their own organizational models.

Current Extension Structure Changes Sought After Table 5.20. Similar to the characteristics question, participants were asked what aspects, or strengths, other Extension structures utilize or excel at that they would want to see more incorporated into their own model. We used k-means clustering on binary 0/1 indicators of change levers. Convergence by iteration 10 and clear centroid separation indicate a stable, interpretable 3-group solution. After clustering, one-way ANOVAs were reported only as descriptive diagnostics to show which levers most distinguish clusters (k-means maximizes between-cluster differences, so inferential p -values are not confirmatory).

The cluster analysis of desired changes to current Extension models (N = 584) revealed three distinct "add-on" preference profiles that can be implemented without wholesale restructuring. Cluster 2 (n = 174) is the clearest people-and-partnership signal: respondents want models to deepen local community engagement, enable collaboration across county or program lines, and grant greater discretion to tailor work to unique community needs—i.e., reduce friction

and empower place-based delivery. Cluster 3 (n = 153) expresses a program-area orientation: respondents favor establishing programmatic agent roles targeting priority issues and, secondarily, pairing these roles with blended staffing and access to statewide expertise so topic teams can scale across counties while remaining visible locally. Cluster 1 (n = 257) is best interpreted as an expertise/system-support package rather than a structural shift: respondents prefer more subject-matter specialization, easier access to statewide or traveling experts, and pragmatic cross-county collaboration with light use of virtual/blended delivery. Together, these patterns suggest a portfolio approach: systems seeking stronger local relationships should emphasize Cluster-2 additions; systems seeking consistent, depth-oriented programming should pilot Cluster-3 program teams; and county-dominant or hybrid systems that need more technical depth without losing presence should prioritize Cluster-1 supports. Because all three are represented in meaningful shares of the sample, phased pilots and targeted enhancements are likely to yield the greatest practical gains.

Table 5.20

Current Extension Structure Changes Sought After Patterns (N = 584)

Panel A. Initial cluster centers

Variable	Cluster 1	Cluster 2	Cluster 3
Increased specialization in subject-matter areas	1	0	1
Greater focus on local community engagement	0	1	0
Broader Reach through multi-county or regional appointments	0	0	1
More urban focused	0	0	1

programming or staffing			
Addition of Programmatic agent roles targeting specific issues	0	1	1
Access to statewide expertise or traveling agents	1	0	0
Improved hybrid or blended staffing approaches	0	0	1
Greater Collaboration across county or program lines	1	1	0
Enhanced use of virtual programming or remote support	1	0	0
More flexibility in addressing unique community needs	0	1	0
NA	0	0	0
Other	0	1	0

Panel B. Iteration history — change in cluster centers

Iteration	Cluster 1	Cluster 2	Cluster 3
1	1.27	1.40	1.24
2	0.12	0.21	0.22
3	0.17	0.17	0.25
4	0.08	0.09	0.19
5	0.03	0.09	0.12
6	0.02	0.04	0.03
7	0.01	0.01	0.00
8	0.01	0.01	0.00
9	0.01	0.01	0.00

10	0.00	0.00	0.00

Note. Convergence achieved by iteration 10 (maximum absolute coordinate change = .000; minimum distance between initial centers = 2.646).

Panel C. Final cluster centers

Variable	Cluster 1	Cluster 2	Cluster 3
Increased Specialization	0	0	0
Local Engagement	0	1	0
Broader Reach	0	0	0
Urban Focus	0	0	0
Programmatic Agents	0	0	1
StatewideExpertise	0	0	0
Improved Blending	0	0	0
Greater Collaboration	0	1	0
Enhanced Virtual	0	0	0
More Flexibility	0	1	0
NA	0	0	0
Other	0	0	0

Panel D. Number of cases in each cluster

Cluster	*N*
1	257
2	174
3	153
Valid	584

Thematic Analysis of 'Other' Desired Changes to Extension Structures (Table 5.21). Respondents were given the opportunity to write-in additional factors or changes they would like added or addressed in their current Extension model. When asked what they would like added or changed in their own models, respondents consistently requested three things. The first theme to emerge was many calling for greater specialist support and statewide resources. One respondent

wrote: "*I would like to see more integration between Extension and on-campus professors… Better connection of leadership on campus with agents around the state.*" Some cited lack of staffing being cause of the lack of integration. Another predominant addition was the request for more county-based agents to reduce workloads and strengthen local connections: *"We need more boots on the ground—one person can't do the work of five counties."* This theme was especially prominent in Regional and Multi-County models, echoing the strain these Extension professionals are feeling. The final theme that arose showed respondents expressing a desire for equity in rural opportunities and underserved communities. For example: *"We need to expand programming to rural and marginalized areas, not just focus on urban centers."* While the number of respondents for the write in portion of this question are smaller than those for advantages and disadvantages, the open-ended nature of this question provided specific areas for improvement not fully captured in the choices given.

Table 5.21

Systematic Thematic Analysis of 'Other' desired changes by Structures

Structure	Other Desired Changes (*n* = 23)
County Agent Model	More specialist support; stronger statewide/academic resources; enhanced rural opportunities
Regional Agent Model	—
Multi-County Agent Model	Data-driven allocation of agents (e.g., by acres farmed or population)
Programmatic Agent Model	More county-level agents; better administrative/logistical support
Hybrid Model	Better logistics for statewide/regional programs; more consistent resources/funding
Specialist / Urban / Statewide (grouped)	More county agents; broader coverage across topics

Note: The Specialist/Urban/Statewide category is grouped due to smaller sample sizes; interpret patterns cautiously.

Conclusions, Discussion, and Recommendations

RO1: Perceptions of program delivery, job satisfaction, and burnout across structures and regions.

Overall, Structure, and Region

Across the sample, program delivery perceptions were generally positive, with collaboration items among the highest and program development/marketing supports among the lowest, suggesting strong peer/specialist ties but thinner institutional scaffolding for design and outreach. Job satisfaction clustered in the mid-range, with high marks for teamwork and feedback and lower marks for workload and work–life balance, patterns consistent with long-standing Extension workforce pressures (Martin & Kaufman, 2013; Forstadt & Fortune, 2016). Most respondents reported moderate levels of burnout, underscoring the need for workload management and support. By structure, differences in program delivery were statistically significant but small in magnitude; county and hybrid models tended to report relatively higher delivery perceptions, whereas programmatic and specialist models trailed. Where group sizes were very small (e.g., statewide and specialist), inferences should be cautious. These patterns align with SDT and Diffusion: county-anchored proximity may bolster relatedness and rapid local adaptation, whereas specialization raises technical depth but requires stronger support for logistics and marketing to reach end users (Rogers, 2003).

By Gender

It is also worth discussing the findings related to gender in this study. Gender was found to have significant differences (although small effect sizes) across perceptions of programming, job satisfaction, and burnout. Females reported lower satisfaction, lower programmatic outlooks, and

higher burnout on average than males. In our multi-state sample, gender significantly predicted job satisfaction, burnout, and perceived programming ability. Although the estimated effects were small, they remain meaningful. Methodologists caution that the magnitude of an effect should be interpreted in context: small effects can accumulate across large workforces and repeated organizational processes—and therefore matter for policy design and practice (Funder & Ozer, 2019).

This finding aligns with a mixed evidence base in Extension. Some studies report gender-linked differences in the level or drivers of satisfaction among Extension personnel (Scott, Swortzel, & Taylor, 2005; Aguilar & Vlosky, 2010), while a national Journal of Extension model found no gender differences in the antecedents of employee satisfaction (Vlosky & Aguilar, 2009). In short, organizational context and system design likely moderate gender effects—consistent with the pattern we observe. Historically, Cooperative Extension institutionalized gender-segmented roles—male "agricultural agents" and female "home demonstration agents." The Smith–Lever Act explicitly charged Extension with instruction in agriculture and home economics, and USDA documentation shows a rapid build-out of women's home demonstration programs during the 1910s–1920s (Rasmussen, 1989; Smith–Lever Act of 1914; Ward, 1929). Such legacies can persist in job designs, informal norms, and evaluation routines. Organizational theory helps interpret our results. Acker's (1990) thesis of gendered organizations argues that structures often embed assumptions about an "ideal worker" historically aligned with male career patterns. Role congruity theory similarly predicts friction where leadership or public-facing duties are stereotyped as masculine, shaping confidence, evaluations, and burnout risk (Eagly & Karau, 2002). These lenses make it plausible that even small statistical effects can be signals of structural misfit rather than individual deficits.

Consistent with these theories, contemporary Extension studies point to workload, timing, and organizational factors associated with burnout—for example, systems and climate issues identified in Colorado State University Extension (Harder et al., 2015) and qualitative themes tied to workload, compensation, and promotion processes (Benge et al., 2015). Beyond Extension, experimental evidence shows women are more likely than men to be asked to perform and to accept low-promotability tasks (Babcock et al., 2017), which can amplify time pressure and reduce recognition. Finally, gender difference in perceived programming ability builds onto established patterns in self- and other ratings of leadership effectiveness. A meta-analysis found that when evaluations are based on others' ratings only, women are rated as more effective, even as women tend to rate themselves lower (Paustian-Underdahl et al., 2014). This suggests that perception gaps may reflect social norms and feedback environments rather than capability gaps.

RO2: Perceptions of one's own state's structure versus other states' models.

Respondents' evaluations were generally moderate, with county-based professionals most favorable toward their own model. This pattern aligns with work showing that organizational identification and stakeholder proximity are strongest where county agents maintain dense local ties and visible service footprints (Carter et al., 2024; Martin, 2019; Torppa & Smith, 2009). Likewise, the moderate views of other states' structures echo restructuring studies that report mixed judgments—efficiency gains tempered by concerns about diminished local presence—rather than clear winners or losers (Schmitt & Bartholomay, 2009; Braverman, 2012; Morse, 2009). Such tempered enthusiasm is advantageous for change leaders: it signals openness to incremental improvement without triggering identity threats or wholesale rejection, consistent with Extension change-readiness findings and diffusion principles that favor innovations perceived as compatible and trailable (Bloir & Scheer, 2017; Rogers, 2003). Practically, this stance preserves

the relational capital that county-embedded models leverage for public value and adoption while leaving room to import elements from programmatic or regional designs when they demonstrably strengthen delivery (Franz, 2007; Norton & Alwang, 2020).

RO3: Characteristic patterns of Extension systems across the United States.

Descriptive counts and crosstabs indicate a heterogeneous national landscape: the county model remains numerically dominant, with notable footprints for hybrid, multi-county, regional, and programmatic arrangements; statewide and specialist configurations exist but were sparsely represented. Combined with the small structural effect sizes, the picture supports a 'many models can work' conclusion conditioned on context (Torppa & Smith, 2009; Schmitt & Bartholomay, 2009; Braverman et al., 2012). However, the findings did showcase a new "modern county agent" model that differed from the traditional model. This exemplifies the complexity of Extension structures. It also worked to highlight potential tweaks to the study for future research, such that when selecting which Extension structure the respondent works in, breaking down the county agent option into two, one that is the traditional model and one that is this modern model.

RO4: Perceived advantages and disadvantages of structures.

Collaboration, both across agents and between agents and specialists, emerged as a system-wide strength. It is worth mentioning that the frame for collaboration is between other Extension professionals. However, the question did not specify if the collaboration is within or across program areas, regionally associated, or context that helps define collaboration. Future studies should look at those specific factors to better assess if certain structures lend to certain collaborations more than others, and what types. The most consistent pain points involved program development and marketing supports, as well as logistics for regional/specialized teams. Literature on organizational change similarly cautions that structural shifts without matching systems

(processes, staffing, and communications) can depress perceived effectiveness (Bloir & Scheer, 2017; Braverman et al., 2012; Leuci, 2012).

RO5: Desired changes or adaptations to current models.

Three cross-cutting requests dominated: (a) greater access to specialist expertise and stronger campus-field connections; (b) increased county-level capacity to reduce caseloads and protect local relationships; and (c) more equitable reach for rural and other underserved communities. Additional themes included data-informed agent allocation and improved logistics for regional/statewide teams. These desires connect cleanly to SDT needs (competence and relatedness) and to Diffusion's emphasis on effective communication channels (Rogers, 2003; Ryan & Deci, 2017).

Integration with Theoretical Framework

Diffusion of Innovations helps explain why county and hybrid arrangements (dense, trust-based local networks) can accelerate uptake, while specialized or regional forms spread technical solutions efficiently when they're paired with strong outreach and marketing (Hubbard & Sandmann, 2007; Rogers, 2003). Organizational theory extends this by focusing on fit among environment, strategy, technology, and structure: decentralized, boundary-spanning county/hybrid designs shorten information paths and improve local sensing, whereas specialized/regional designs depend on integration mechanisms (clear decision rights, service-level agreements, shared data, and routine cross-unit coordination) to translate expertise into scalable delivery (Jones, 2012). Comparative Advantage further suggests that high-fixed-cost or low-frequency functions (e.g., advanced diagnostics, niche programming) are most efficient when centralized or regionalized, while relationship-intensive, iterative work remains best situated in county roles. Finally, SDT helps interpret the pattern of moderate satisfaction alongside workload strain: designs that support

autonomy, competence, and relatedness, through role clarity, manageable caseloads, coaching, and team routines, should lift satisfaction and dampen burnout (Locke, 1976). Together, the frameworks argue for a hybrid design—stronger central coordination to enable specialization, with county units preserving on-the-ground relationship capacity (Jones, 2012).

Implications and Recommendations for Extension Services

Systems that are retaining or changing into a county agent model structure, ensure the preservation of what already works - collaboration, local presence, team approaches to solving problems utilizing the agent-specialist connections. To make this work, Extension professionals should adopt team planning and share calendars to foster better working relationships amongst staff and faculty. Address systemic weak spots by investing in program design support, marketing/communications, and administrative assistance so that time Spent Providing technical assistance to clients is protected. Use data to right-size caseloads tailored to the specific county or community they are responsible for and respond to persistent workload/balance concerns (Kutilek, 2002; Martin & Kaufman, 2013). Some of the open-ended quotes spoke heavily to the point that there is no off switch for producers and our clients. Another point that was echoed from county agents is the excessive workload, or additional demands being placed on them without proper compensation or even acknowledgement. These should be priorities of states utilizing a county-based agent model. Across all structures and regions, burnout was felt, future research should focus more in-depth on burnout factors and if they differ based on structure of region.

For systems moving to or operating regional, multi-county, or specialist-led models, pair specialization with designated local liaisons (boundary spanners) to protect community relationships (Torppa & Smith, 2009). Build explicit logistics and marketing backbones so specialized expertise reliably reaches end users (Braverman et al., 2012). Invest in leadership

development tuned to regional teams (Leuci, 2012) and proactive change-management supports for staff (Bloir & Scheer, 2017). For hybrid systems. Clarify role boundaries and workflows between county-based and regionalized elements to avoid duplication and ambiguity. Use SDT cues—appropriate autonomy in planning, competence supports via specialist access, and routines that strengthen relatedness—to guide managerial practice (Freeman, 2010; Locke, 1976). For newer or rebuilding services, begin with a fit-for-context design rather than a search for a universal best model. Pilot and iterate using stakeholder feedback and performance data (Braverman et al., 2012; Torppa & Smith, 2009). Prioritize early investments in marketing/communications and logistics to amplify the effect of technical expertise.

Across all structures, workload and job expectations should be critically evaluated to determine whether they are clearly defined and accurately reflect the workload placed on Extension Professionals. One other targeted group would be female agricultural Extension professionals. Considering historical and previous research in addition to this study's findings, the practical question becomes unavoidable: if many core and traditional policies, benefits, expectations, and programming norms were developed when the organization was more male-dominated, are today's systems implicitly calibrated to one gender's typical constraints and career patterns? Our results justify structured equity audits focused on workload timing (evenings, travel), pay and progression patterns, and feedback systems, so that small statistical differences do not snowball into persistent disadvantages. Limited budgets and resources are one of the largest confounding elements that drive the delivery of Extension in each state/university (Carter, B., Unpublished, 2025). Extension services must find unique and creative ways to address gaps without resorting to workload/role creeping (adding another person's job responsibilities to another to overcome lack of staffing and/or budgetary restrictions), intentional or unintentional.

Additional Recommendations for Future Research

In addition to the suggestions mentioned above, future research recommended to continue exploring the relationships between Extension structures, structure change, and Extension professionals' perceptions include: 1) Longitudinal studies tracking states through restructuring to observe changes in satisfaction, burnout, and program delivery. 2) Comparative case studies of high-performing county versus regional hybrids to identify processes that preserve local ties while scaling expertise. 3) Implementation trials testing logistics/marketing interventions in specialized models to determine whether program delivery perceptions improve. 4) Workforce health research that evaluates workload redesign and scheduling interventions for burnout in different structures, as well as prioritizing workforce equity across positions, with a focus on gender (Forstadt & Fortune, 2016; Kutilek et al., 2002). 5) Mixed-methods triangulation that links quantitative indices with qualitative accounts of stakeholder value in rural versus urban contexts (Torppa & Smith, 2009). For more than 100 years Extension has persisted, even as its longevity and relevance have been debated. The evidence assembled here: spanning structure, leadership, funding, delivery, innovation, and the workforce—both explains where Extension stands and underpins the future recommendations that follow. Implemented and studied in tandem, these recommendations and the research agenda they imply can help shape the next century of the Cooperative Extension Service across the United States and beyond.

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Chapter 6: Conclusion

This dissertation set out to answer three overarching questions about the Cooperative Extension system across the United States: How do funding structures and governance models shape capacity at the local level? How do working conditions—workload, job satisfaction, burnout, and equity—affect Extension's ability to deliver on its mission, and what organizational levers are most promising for improvement? And how is Extension's innovation process evolving in ways that change what gets delivered, who participates in creating it, and how impact is demonstrated? In this conclusion, we synthesize what we found across all three studies, connect those findings back to the prior literature, and translate them into practical guidance for leaders who must build resilient systems in very different county and regional contexts.

Where We Have Been: Extension's Evolving Context

For more than a century, Extension has adjusted to changing demographics, economies, and technologies. The literature records recurring waves of restructuring when states face fiscal pressure or when specialization is needed beyond the capacity of one or two generalists housed in a single county office (Morse, 2006; Morse, 2011; Schmitt & Bartholomay, 2009). At the same time, Extension professionals have navigated persistent internal strains: growing administrative demands, heavier evening and weekend schedules, and role ambiguity that erodes job satisfaction and fuels turnover (Forstadt & Fortune, 2016; Strong & Harder, 2009). Parallel strands of scholarship emphasize that Extension's long-term legitimacy rests not only on serving individual learners but on documenting public value and system change—outcomes that resonate with funders, partners, and taxpayers (Arnold, 2014; Braverman & Eagle, 2009; Franz, 2011). Urbanizing regions add another layer, as agents increasingly act as conveners in complex networks around food systems, workforce development, water, and health (Fox, 2022). The picture that

emerges from this prior work is not of one idealized model, but of a system that does best when its structure, people, and resources are designed to fit local conditions and adapt as those conditions change.

What We Found: An Integrated, Concept-Driven Synthesis

Across the data, the theme that explained the most variation was fit rather than formula. We consistently observed two structural approaches operating side by side: a traditional county model and what our findings articulate and name as a modern county agent model. The traditional county model anchors a broadly skilled agent (or a small team) in a county office, tightly connected to local government and civic organizations. Its enduring strengths are visibility, trust, and a nimble, one-door response to diverse local needs. The modern county agent model, by contrast, keeps that local anchor and adds regionally organized specialization, cross-county teams, and shared supervisory and evaluation supports. In practice, this means a county-based professional remains the public face and relational hub while specialized educators rotate on-site or deliver through hybrid formats; it also means supervision, training, and evaluation can be coordinated at a regional or state level to reduce isolation and administrative burden (Morse, 2006; Morse, 2011; Schmitt & Bartholomay, 2009).

A New Contribution: The Evolution of the County Role

Importantly, this articulation of the modern county agent model is a new contribution of the present work. While previous studies described regionalization and specialization, our synthesis highlights the evolution of the county role itself. The modern county agent is not merely a generalist who refers questions upward; rather, this role functions as a boundary-spanning portfolio manager who curates, sequences, and connects regional assets to local needs. In this form,

the model directly addresses recognized pitfalls of the traditional approach—especially the tendency for a single generalist to be stretched thin across many domains and for expertise in niche areas to be unevenly available in small or low-resource counties. The modern model aims to preserve what people value about a local agent—presence, trust, and accountability—while building formal pipelines for subject-matter depth, surge capacity, and professional support. That is more than a change in org chart; it is an evolution in the work of the county agent.

The Modern vs. Traditional Model. Because this study names and describes a modern county agent model, it is important to be explicit about what is new and why it matters. The traditional county model succeeds by placing a known, multipurpose professional near residents and county officials. That visible, trusted presence lowers transaction costs for the public, simplifies navigation of local government, and facilitates rapid response to immediate needs. The model's limits become evident when the workload becomes chronically unmanageable or when new technical domains—precision agriculture, climate resilience, urban food systems, or mental health—demand depth beyond a single generalist. In such settings, communities may experience uneven access to specialized expertise, and staff may experience burnout as they stretch to cover more ground than one role can sustain.

A Reframed County Role. The modern county agent model documented here retains the strengths of the traditional approach—local presence, trust, and accountability—while re-specifying the county role as a boundary-spanning portfolio manager. This agent curates regional assets for local needs, schedules predictable on-site specialist days, and connects partners into coherent pathways rather than one-off events. Supervision, training, and evaluation support are partially consolidated at regional or state levels, allowing local professionals to spend more time with communities and less time wrestling with administrative complexity (Morse, 2006; Morse,

2011; Schmitt & Bartholomay, 2009). In our analysis, this evolution is not a minor tweak; it is a reframing of the county agent's work that directly addresses gaps and pitfalls of the traditional model: it reduces isolation, spreads specialist access more equitably across small and large counties and creates mechanisms to balance workloads during predictable surges. By naming and describing this model, the dissertation contributes a practical design vocabulary that leaders can use to adapt structures without losing the local anchor community's trust.

Context Shapes the Right Mix

The data showed that rural counties with small tax bases still benefit from a named local agent to maintain legitimacy, access, and continuity; at the same time, those counties gain quality and reach when they can reliably draw on regional specialist teams for advanced agronomy, natural resources, youth development, or community economic development. Urban and suburban counties often require the opposite emphasis: more locally stationed specialists who can convene complex partnerships, supported by metro-wide teams to coordinate across jurisdictions (Fox, 2022). In both settings, the key to performance is not allegiance to one model but the fit between structure and environment—precisely the proposition advanced by contingency theory and repeatedly affirmed in Extension's organizational literature (Braverman & Engle, 2009; Moore & Rudd, 2004).

Funding Capacity Works as a Portfolio, not a Single Lever. Prior narratives sometimes imply that county government can or should always fund Extension positions. Our evidence, and the experiences captured in the literature, suggest a more realistic and resilient stance: treat funding as a portfolio. Where county appropriations are feasible and stable, they are invaluable for anchoring positions and signaling local ownership. Where county governance is limited, where revenues are volatile, or where a county simply cannot shoulder base salaries, systems can stabilize

capacity through other lawful mechanisms. These include voter-approved levies or service districts that dedicate a modest mill levy to Extension (Zimmer, B., 2008); multi-county districts that pool tax capacity to support specialized positions and shared services (Morse, 2006; Morse, 2011); and braided partnerships with organizations whose missions overlap with Extension's—Farm Bureau and commodity associations, Soil and Water Conservation Districts, conservation NGOs, and producer groups—to cost-share program assistants, underwrite demonstration sites, or sponsor targeted cohorts (Diaz, 2017; Krell, 2016).

Strengthening the Portfolio. Even when county funds remain central, a portfolio mindset reduces fragility. Multi-year memoranda of understanding can align expectations around assistants, facilities, translation services, and travel. Fee-for-service arrangements for premium or costly-to-deliver offerings can protect general access to core programs. Public value framing—connecting programs to avoided costs, economic spillovers, and community well-being—strengthens cases for investment across all sources (Arnold, 2014; Franz, 2011). In short, "leverage county resources" is useful advice in some places, but incomplete on its own. A capacity strategy that works statewide requires multiple avenues tuned to varied legal and fiscal contexts.

Workforce Sustainability Is a Strategic Necessity

Workload, burnout, and turnover surfaced repeatedly in the data, echoing long-standing concerns in the literature (Forstadt & Fortune, 2016; Strong & Harder, 2009). These are not simply HR issues; they constrain program reach and quality. The patterns we observed are familiar: heavy evening and weekend loads, role creep that blurs boundaries between work and home, and administrative requirements that multiply without necessarily improving accountability. The solutions that align with evidence are feasible and concrete. Clarifying roles, reducing duplicative reporting, and standardizing evaluation templates can cut time costs while preserving rigor

(Arnold, 2014; Braverman & Engle, 2009). Regional teams can rotate peak-load duties—fairs, disaster response, or intensive youth events—so no one office bears chronic overload. Protecting a modest share of every appointment (5–10 percent) for professional learning and mentoring keeps early-career professionals from stalling out and has been tied to commitment and retention (Harder, 2021; Martin, 2013).

Equity and Well-Being

Gender equity and inclusion merit explicit attention. Studies in Extension point to differences in how satisfaction relates to feedback, autonomy, and recognition (Vlosky & Aguilar, 2009). That suggests practical audits of tasking, travel, and visibility—who is repeatedly assigned high-prestige tasks, who carries the administrative weight, and who gets the flexible scheduling necessary to manage caregiving or long commutes. Publishing the results internally and adjusting assignments accordingly signals that equity is part of doing high-quality work, not an add-on. Finally, well-being supports—quiet hours for email, comp time during peak seasons, and wellness offerings that staff want—are not luxuries. They help the organization retain talent and maintain credible service rhythms (Harder & Narine, 2020).

Innovation Remains the Heart of Extension but the Process Is Changing

Extension's identity as an engine of innovation endures, but the how has shifted. We see fewer one-way demonstrations and more networked co-creation, with agents convening producers, youth, local government, universities, and NGOs to design interventions together. That shift favors learning communities, urban labs, and cross-county cohorts in which peers test and refine approaches, while Extension translates research and brokers resources (Fox, 2022). Scaling has also changed. The most durable programs use shared curricula, regional delivery teams, digital

options, and common indicators so that local adaptations do not sacrifice comparability (Braverman & Engle, 2009; Franz, 2011). Funding follows suit: small internal seed grants, cost-share with SWCDs or commodity groups, and multi-partner contributions allow for rapid testing, iteration, and expansion without over-relying on any single revenue stream (Krell, 2016; Diaz, 2017). Evaluation needs to keep pace by capturing not only participant outcomes but public value and system change—adoption of practices across a watershed, growth of partner networks, or policy shifts that improve access (Arnold, 2014; Wang et al., 2019).

What This Means for Practice

Context Shapes Fit

The practical implications are straightforward and actionable. First, choose structure by context, not ideology. In a rural county with long travel times and diffuse demand, keep a visible local agent and guarantee predictable specialist access through regional rotations. In a metro area with dense populations and complex partner ecosystems, station more specialists locally and coordinate across jurisdictions with a metro-wide team that shares calendars, data, and evaluation routines (Fox, 2022; Morse, 2006). Supervision can follow function: subject-matter oversight may sit regionally or on campus, while day-to-day operational support remains local (Schmitt & Bartholomay, 2009).

Funding and Portfolios in Practice

Second, build a funding portfolio that can weather shocks. Where law allows, districting or voter-approved levies can stabilize core positions (Morse, 2011; Zimmer, 2008). Where county government is absent or resources are thin, craft MOUs that braid time and dollars with Farm Bureau, commodity associations, SWCDs, conservation NGOs, municipal partners, and school

districts for shared assistants, facilities, and outreach platforms (Diaz, 2017; Krell, 2016). Anchor all funding cases—public, private, or braided—in public value narratives supported by a light, credible set of shared indicators (Arnold, M., 2014; Franz, N., 2011).

Workforce as a Standing Agenda

Third, make workforce sustainability a standing management process rather than a one-off initiative. Conduct annual workload reviews at the county or regional level and rebalance assignments quarterly; track the evening/weekend load, travel time, and high-stakes event cycles. Create mentoring cohorts for new and mid-career professionals that blend local and regional perspectives; ensure transparent access to high-visibility projects and leadership development (Harder, 2021; Martin, 2013; Moore & Rudd, 2004). Normalize flexible practices—seasonal comp time, remote planning days, clear response hours—and train supervisors to support boundary setting (Harder & Narine, 2020). Pair all of this with a simple, annual equity audit of assignments and recognition, and close the loop by making targeted adjustments (Vlosky & Aguilar, 2009).

Designing for Scale and Equity

Fourth, keep innovation at the core, but design for scale and equity from the outset. Set aside a modest internal innovation line with quick application and feedback cycles. Prioritize projects co-authored with partners and make learning public through short briefs. Organize networked learning communities—regional peer groups and metro collaboratives—so that institutions can co-create and test solutions across counties. Evaluate beyond outputs: track spillovers, partner capacity, and reach to underserved audiences (Arnold, 2014; Braverman & Engle, 2009; Wang et al., 2019).

Why One Size Does Not Fit All: A Systems and Organization Theory Lens

Two theoretical lenses help make sense of these results. Contingency theory argues that organizations perform best when their structures fit their environments—there is no universally superior configuration. In the Extension literature, this translates to recognizing that the "right" mix of generalists, specialists, supervision, and evaluation support will differ across rural and urban settings, across states with and without county government, and across program portfolios with different seasonal and technical demands (Braverman & Engle, 2009; Moore & Rudd, 2004). Systems theory adds that county offices, regional teams, campus departments, and external partners are interdependent subsystems. Change in one place—introducing a district levy, regionalizing supervision, or building a metro collaborative—reverberates elsewhere. Feedback loops are therefore essential: shared indicators, joint planning calendars, regular after-action reviews, and transparent workload dashboards keep the parts aligned to the whole (Arnold, 2014; Braverman & Engle, 2009; Franz, 2011). These lenses both clarify why the traditional and modern models can each succeed and why neither alone will be sufficient everywhere.

Limitations and Priorities for Future Research

The inferences in this dissertation are strongest where survey, interview, and performance data triangulate. Nonetheless, several limitations remain. Not all systems collect comparable workload, retention, and funding data, which limits cross-case generalization and statistical power for some comparisons. Time horizons were short for judging the medium- to long-term effects of districting, levies, or new supervision structures on retention, equity of access, and public value. Many evaluation systems still emphasize participant outcomes over system change—partner capacity, network growth, policy adoption—which constrained how fully we could test public value claims. Future work should therefore pursue multi-region, multi-year natural experiments as

states introduce structural changes; trial workload policies such as comp-time protocols or rotation schedules with burnout and retention metrics; conduct equity audits across structures to assess reach and outcomes by county characteristics; and implement network/public value evaluation at system scale, using indicators that capture both direct outcomes and the enabling conditions that make those outcomes durable (Arnold, 2014; Franz, 2011; Wang, et al., 2019).

Closing Synthesis

The through-line of this dissertation is that Extension thrives when it is designed for fit. A visible county presence builds trust and ensures access. Regional specialization and shared services deliver depth, surge capacity, and professional support. A funding portfolio—county appropriations where possible, complemented by lawful levies or service districts and braided partnerships—stabilizes capacity across varied legal and fiscal environments. A people-first management stance that measures workload, protects development time, and advances equity is not optional; it is the precondition for quality and continuity. And a modern approach to innovation—co-created, iteratively tested, scaled with common indicators, and evaluated for public value—keeps the system adaptive and credible. The "modern county agent model" introduced here is one practical way to combine these elements. As Extension services adopt new approaches and characteristics, they may look at this finding as a good example of services blending elements that work from other models and applying them to their own model. Specifically, the traditional models have looked at addressing the lack of specialization aspects to their educator workforce, and this modern approach does just that. It preserves what communities value about Extension—trusted, local relationships—while making the structural moves necessary to meet today's technical demands and workforce realities.

There are multiple valid paths forward, but this dissertation asks Extension to pair frankness with flexibility: to face what must be faced and to dance with the systems we serve. As Baldwin puts it, “Not everything that is faced can be changed, but nothing can be changed until it is faced” (Baldwin, J., n.d.); and as Meadows reminds us, “We can’t control systems or figure them out. But we can dance with them” (Meadows, D., 2008). Taken together, they capture the posture this work commends—courage to confront reality and humility to move with it—so structure fits context, people can thrive, and public value endure.

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Appendix A: IRB Determination

Chapter 3

← Prev 2 / 4 Next →

View More Details

Send Letter

Summary

Mar 18 2025

Author: Jessica Lasebikan (VPR-Human Rsch Protection Prgm)
Logged For (Submission): Multi-State Comparison of Agent Perceptions of Regional-based Extension Systems
Activity Date: 3/18/2025 11:20 AM

Form

Send Letter

Determination:
Not Human Subjects Research

Correspondence Letter:
NHSR PROJECT00011640.pdf(0.01) •••

Chapter 4

← Prev 2 / 4 Next →

View More Details

Send Letter

Summary

Mar 18 2025

Author: Jessica Lasebikan (VPR-Human Rsch Protection Prgm)
Logged For (Submission): Innovation of Extension Programs and Services in the Last Twenty-Years
Activity Date: 3/18/2025 11:26 AM

Form

Send Letter

Determination:
Not Human Subjects Research

Correspondence Letter:
NHSR PROJECT00011638.pdf(0.01) •••

Chapter 5

View More Details

Send Letter

Summary

Aug 19 2025

Author:	Kimberly Fowler (VPR-Human Rsch Protection Prgm)
Logged For (Submission):	The Present State of Delivery of Extension Programs and Services in the Southern United States
Activity Date:	8/19/2025 1:15 PM

Form

Send Letter

Determination:
Not Human Subjects Research

Correspondence Letter:

Correspondence_for_PROJECT00012824.pdf(0.01) •••

Appendix B: Universities within Association of Public Land-Grant Universities Extension Regions

Southern Region Universities: Auburn University, Clemson University, University of Arkansas Fayetteville, University of Florida, The University of Georgia, University of Kentucky, Louisiana State University and Agricultural and Mechanical College, Mississippi State University, North Carolina State University, Oklahoma State University, University of Puerto Rico Mayaguez, The University of Tennessee Knoxville, Texas A&M University, University of the Virgin Islands, Virginia Polytechnic Institute & State University (Virginia Tech).
1890 Region Universities: Alabama A&M University, Alcorn State University, Central State University, Delaware State University, Florida A&M University, Fort Valley State University, Kentucky State University, Langston University, Lincoln University, North Carolina A&T State University, Prairie View A&M University, South Carolina State University, Southern University System, Tennessee State University, Tuskegee University, University of Arkansas Pine Bluff, University of Maryland Eastern Shore, Virginia State University, West Virginia State University.
North Central Region Universities: Iowa State University, Kansas State University, Lincoln University, Michigan State University, North Dakota State University, Ohio State University, Purdue University, South Dakota State University, University of Illinois, University of Minnesota, University of Missouri, University of Nebraska, University of Wisconsin-Extension.
Northeast Region Universities: University of Connecticut, University of Delaware, The University of Maine, University of New Hampshire, Rutgers, The State University of New Jersey, Cornell University, The Pennsylvania State University, University of Maryland, University of Massachusetts, The University of Rhode Island, The University of Vermont, West Virginia University, University of the District of Columbia.
Western Region Universities: University of Alaska Fairbanks, American Samoa Community College, University of Arizona, University of California, Colorado State University, University of Guam, University of Hawaii, University of Idaho, College of Micronesia, Montana State University, University of Nevada, New Mexico State University, Northern Marianas College, Oregon State University, Utah State University, Washington State University, University of Wyoming.

Appendix C: Consent Forms and Email Invitations

Chapter 3 Consent Info Sheet

Principle Investigators: Blake Carter, Effingham County ANR Agent and PhD Candidate

Why am I being asked to take part in this research study?
You are being invited to participate in this research study because you serve in a leadership role within your state's Cooperative Extension Service. Your insight into Extension structure, leadership, and program delivery will help us better understand how organizational frameworks influence Extension's effectiveness, sustainability, and ability to adapt to change.

Why is this research being done?
The structure of Cooperative Extension Services varies by state, yet there is limited research examining how these systems influence organizational performance, job satisfaction, and program success. The purpose of this study is to:

- Describe the funding models and the scope and size of Extension in the United States.
- Describe the different levels of Extension leadership processes within the varying organizational structures.
- Describe primary information/program delivery systems utilized within the varying organizational structures.

This research will help fill a critical knowledge gap and inform potential improvements to Extension organizational models, with the goal of strengthening the profession and its impact on the communities it serves.

How long will the research last?
If you choose to participate, you will be asked to complete a one-time interview that will last approximately 45–60 minutes. The interview will be conducted via Zoom or another secure video conferencing platform. With your permission, the interview will be audio recorded for transcription purposes. Your responses will be used to help develop a thematic understanding of how Cooperative Extension Services are organized and function across different states.

What happens if I do not want to be in this research?

Participation is completely voluntary. You may choose to withdraw from the study at any time or skip any question you do not wish to answer. There are no penalties or consequences for choosing not to participate.

Is there any compensation if I want to be in this research?
There is no monetary compensation. However, your contribution will be acknowledged in the dissertation and future research products in a general, non-identifying way. Your participation supports a research effort that could benefit Extension Services nationally.

Is there any way being in this study could harm me?
There are no foreseeable risks involved in participating in this study beyond those encountered in everyday life. If you experience any discomfort during the interview, you are free to pause, skip questions, or stop at any time.

What happens to the information collected for the research?
All information collected during this study will remain confidential. Your name and any identifying details will be replaced with a pseudonym. Transcripts and data will be stored securely, and only the research team will have access. Identifying data will be destroyed after transcription. Aggregated findings may be published or presented in academic settings, but your identity will not be revealed.

Who can I talk to?
If you have any questions about this study, please contact:
Blake Carter
Email: blake.carter25@uga.edu

How do I participate?
If you are willing to participate, please respond to the recruitment email confirming your interest. Your email response will serve as your informed consent to participate in the study. Verbal consent will also be obtained at the beginning of the interview.

Chapter 4 Consent Info Sheet

Principle Investigators: Blake Carter, Effingham County ANR Agent and PhD Candidate

Why am I being asked to take part in this research study?

You were selected for this study because of your instrumental role in implementing an Extension innovation. Your insights will help us better understand the factors that drive innovation in Extension programs, the challenges encountered during implementation, and the long-term impact of these efforts. The results of this study may provide valuable guidance for enhancing Extension services nationwide.

Why is this research being done?

The structure of Cooperative Extension Services varies across states and institutions, yet little research has been done to examine how these structures impact agents' and educators' contributions to innovations. The purpose of this study is to:

1) To explore the purpose behind the development or implementation of the innovation.
2) To identify the reasons or needs that drove the adoption of the innovation.
3) To examine the roadblocks and challenges encountered during the development or implementation of the innovation.
4) To investigate the factors or resources that facilitated the development or implementation of the innovation.
5) To assess the impact and outcomes resulting from the innovation.

By participating in this study, you will contribute to research that may help shape future improvements in Cooperative Extension Services to better support agents, educators, and the communities they serve.

How long will the research last?

If you choose to participate, we will conduct a one-time interview lasting approximately 60–90 minutes. The interview will be conducted via Zoom or Microsoft Teams at a time that is convenient for you.

What happens if I do not want to be in this research?

Your participation in this study is completely voluntary. You can decide not to participate at any time, and there will be no consequences for declining. You may also decline answering a question if you do not feel comfortable answering it.

Is there any compensation if I want to be in this research?

There is no financial compensation for participating in this study. Each participant will be thanked in the dedications page of the dissertation and publications.

Is there any way being in this study could harm me?

This study does not contain any sensitive questions that would cause discomfort. However, you have the option to skip any questions you do not wish to answer.

What happens to the information collected for the research?

All responses will remain confidential. Identifying information will be replaced by a code immediately after data collection and then destroyed. Compliance offices at the University of Georgia may be granted access to study files if required by law. The results of this research may be published, but your identity will remain anonymous.

Who can I talk to?

If you have any questions regarding this study, please feel free to contact **Blake Carter** at **Blake.carter25@uga.edu**.

How do I participate?

If you wish to participate, please email Blake Carter and confirm participation. The email confirmation will serve as written consent to participate. Thank you for your consideration.

Chapter 5 Consent Info Sheet

Principle Investigators: Blake Carter, Effingham County ANR Agent and PhD Candidate

Why am I being asked to take part in this research study?

You are invited to participate in this study because you are an Extension agent or educator working within a Cooperative Extension Service. Your insights will help us better understand how Extension professionals perceive their organizational structure and how it impacts their job satisfaction, performance, and program success.

Why is this research being done?

The structure of Cooperative Extension Services varies across states and institutions, yet little research has been done to examine how these structures impact agents' and educators' performance, satisfaction, and perceptions of their work. The purpose of this study is to:

- Determine perceptions of programmatic approaches agents and educators take in similarly structured Cooperative Extension Services.
- Identify the perceived advantages and disadvantages of different Extension structures.
- Examine the relationship between job satisfaction and Cooperative Extension Service structures.
- Assess how agents and educators perceive the overall success of their programming within different Extension structures.
- Understand how satisfied agents and educators are with their current organizational structure.

By participating in this study, you will contribute to research that may help shape future improvements in Cooperative Extension Services to better support agents, educators, and the communities they serve.

How long will the research last?

The study consists of a one-time online survey that should take approximately 10–15 minutes to complete.

What happens if I do not want to be in this research?

Your participation in this study is completely voluntary. You can decide not to participate at any time, and there will be no consequences for declining. You may also skip any question you do not wish to answer or exit the survey at any point.

Is there any compensation if I want to be in this research?

There is no financial compensation for participating in this study. There will however be a drawing from the pool of agents, that complete the survey, for four $50 Amazon gift cards

Is there any way being in this study could harm me?

This study does not contain any sensitive questions that would cause discomfort. However, you have the option to skip any questions you do not wish to answer.

What happens to the information collected for the research?

All responses will remain confidential. Identifying information will be replaced by a code immediately after data collection and then destroyed. Compliance offices at the University of Georgia may be granted access to study files if required by law. The results of this research may be published, but your identity will remain anonymous.

Who can I talk to?

If you have any questions regarding this study, please feel free to contact **Blake Carter** at **Blake.carter25@uga.edu**.

How do I participate?

If you wish to participate, please follow the link to complete the survey or use one of the provided iPads. If you do not wish to participate, you are not obligated to do so and may decline at any time.

Chapter 3 Email Invitation

Email Message Template – Invitation to participate in this study
Hello [State Extension Leader],

My name is Blake Carter, and I am a doctoral candidate in the Agricultural Leadership, Education, and Communication department at the University of Georgia. I also serve as the Agriculture and Natural Resources Agent for UGA Extension in Effingham County. I am conducting a research study exploring the evolution of Extension over the years, specifically Southern Region states.

You were selected for this study because of your experience in Extension as well as your current role within your state's Extension Service. Your insights will help us better understand how

Extension has changed, some of the reasons why those changes happened, and the current landscape of Extension in your state.

Participation in this study is completely voluntary. If you choose to participate, we will conduct a one-time interview lasting approximately 45–90 minutes. The interview will be conducted via Zoom or Microsoft Teams at a time that is convenient for you. We have attached a copy of the informed consent agreement.

If you agree to participate, please review the timeslots below and select the one best for your schedule. Once selected, I will send a calendar invite and link to the video call. If you have any questions before then, please do not hesitate to reach out.

Thank you for your time and consideration. Your contribution to this research will help shape the future of Extension programs.

Best regards,

Blake Carter
Graduate Student, University of Georgia
Agriculture and Natural Resources Agent, UGA Extension – Effingham County

Dan B. Croom, Ph.D.
Professor

M'Randa Sandlin, Ph.D.
Professor

Chapter 4 Email Invitation

Email Message Template – Invitation to participate in this study

Hello,

My name is Blake Carter, and I am a doctoral candidate in the Agricultural Leadership, Education, and Communication department at the University of Georgia. I also serve as the Agriculture and Natural Resources Agent for UGA Extension in Effingham County. I am conducting a research study exploring the development, adoption, and impact of innovative Extension initiatives and programs across the United States.

You were selected for this study because of your instrumental role in implementing an Extension innovation. Specifically, we are interested in "**[Specific Innovation]**." Your insights will help us better understand the factors that drive innovation in Extension programs, the challenges encountered during implementation, and the long-term impact of these efforts. The results of this study may provide valuable guidance for enhancing Extension services nationwide.

Participation in this study is completely voluntary. If you choose to participate, we will conduct a one-time interview lasting approximately 60–90 minutes. The interview will be conducted via Zoom or Microsoft Teams at a time that is convenient for you. We have attached a copy of the informed consent agreement for your review.

In the next week, we will follow up with you by email to answer any questions you may have and to confirm your willingness to participate. If you have any questions before then, please do not hesitate to reach out.

Thank you for your time and consideration. Your contribution to this research will help shape the future of Extension programs.

Best regards,

Blake Carter
Graduate Student, University of Georgia
Agriculture and Natural Resources Agent, UGA Extension – Effingham County

Dan B. Croom, Ph.D.
Professor

M'Randa Sandlin, Ph.D.
Professor

Chapter 5 Email Invitation

Hey, there! My name is Blake Carter and I am an agent serving Effingham County, Georgia. I am currently pursuing a PhD in agricultural leadership, education and communication at the University of Georgia. I am looking at agent/educator/specialist's perceptions of varying Extension structures across the United States. I have had a blast spending the week with 1100 of my closest friends in Billings, Montana at this year's NACAA AM/PIC. Montana was so gracious to allow me the opportunity to gather data for my dissertation research. To the ones of you that stopped by my trade booth and helped me by taking my survey, THANK YOU! Even with the amazing turnout, I know I only connected to a fraction of our membership. To ensure this research can be used to the fullest extent, I wanted to send out the survey opportunity to all of membership.

Below you will find a QR code with a link to the survey, whcih should take only 10-15 minutes, and at the end you will have the option to enter your email for a chance to win one of five $50 Amazon gift cards!

The Future of Extension Needs YOU

to respond to this survey
for a chance to win a
$50 Amazon Gift Card

Or Click Here To Take Survey!

Why am I being asked to take part in this research study?
You are invited to participate in this study because you are an Extension agent, educator, or specialist working within a Cooperative Extension Service. Your insights will help us better understand how Extension professionals perceive their organizational structure and how it impacts their job satisfaction, performance, and program success.

Why is this research being done?
The structure of Cooperative Extension Services varies across states and institutions, yet little research has been done to examine how these structures impact agents' and educators' performance, satisfaction, and perceptions of their work. The purpose of this study is to:

- Determine what programmatic approaches agents and educators take in similarly structured Cooperative Extension Services.
- Identify the perceived advantages and disadvantages of different Extension structures.
- Examine the relationship between job satisfaction and Cooperative Extension Service structures.
- Assess how agents and educators perceive the overall success of their programming within different Extension structures.
- Understand how satisfied agents and educators are with their current organizational structure.

By participating in this study, you will contribute to research that may help shape future improvements in Cooperative Extension Services to better support agents, educators, and the communities they serve.

How long will the research last?
The study consists of a one-time online survey that should take approximately 10–15 minutes to complete.

Your participation in this study is completely voluntary. You can decide not to participate at any time, and there will be no consequences for declining. You may also skip any question you do not wish to answer or exit the survey at any point.

Is there any compensation if I want to be in this research?
There is no financial compensation for participating in this study. There will however be a drawing from the pool of agents, that complete the survey, for four $50 Amazon gift cards

Is there any way being in this study could harm me?
This study does not contain any sensitive questions that would cause discomfort. However, you have the option to skip any questions you do not wish to answer.

What happens to the information collected for the research?
All responses will remain confidential. Identifying information will be replaced by a code immediately after data collection and then destroyed. Compliance offices at the University of Georgia may be granted access to study files if required by law. The results of this research may be published, but your identity will remain anonymous.

Who can I talk to?
If you have any questions regarding this study, please feel free to contact **Blake Carter** at **Blake.carter25@uga.edu**. You may also contact the **Human Research Protection Program at the University of Georgia** by phone at **1-706-542-33199** or by email at **irb@uga.edu** for any questions related to research protections.

How do I participate?
If you wish to participate, please follow the link to complete the survey. If you do not wish to participate, you are not obligated to do so and may decline at any time.

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Appendix D: Research Instruments

Chapter 3 Instrument

Section 1: Introduction and Organizational Context

1. Can you briefly describe your current role in your state's Cooperative Extension system?
    a. Probe: What are your primary responsibilities in relation to leadership and system design?
2. How would you describe your state's current Extension structure?
    a. Probe: Is it still county-based, or has it transitioned to a regional or hybrid model?

Section 2: Funding Models and Organizational Scope

1. What are the primary funding sources for your Extension system (federal, state, local, grants, etc.)?
    a. Probe: Have there been significant changes in these sources in recent years?
2. How do funding dynamics influence the design and operation of your Extension system?
    a. Probe: Are there examples where funding pressures influenced programmatic or structural change?
3. Can you describe the size and scope of your organization in terms of geography, FTEs, and programming reach?
    a. Probe: How do those factors affect your leadership decisions?

Section 3: Leadership Processes

1. How is leadership organized across the different levels of your Extension system (e.g., county, regional, state)?
    a. Probe: How are responsibilities delegated across those levels?
2. What mechanisms are in place to support communication and decision-making across the organization?
    a. Probe: How do you manage top-down vs. bottom-up communication?
3. Have you led or experienced any structural changes within your state's Extension system?
    a. Probe: What prompted those changes, and how were they received by staff or stakeholders?
4. How would you describe the organizational culture within your Extension system?
    a. Probe: What values or practices most influence the way your team works?

Section 4: Program and Information Delivery

1. What program delivery models are most commonly used across your state?
    a. Probe: Has there been a shift toward regional or specialist-driven programming?
2. How does your state manage the balance between face-to-face and virtual/digital program delivery?
    a. Probe: Are there system-level supports or expectations in place?
3. What systems are in place to assess program outcomes and impact?
    a. Probe: How is community feedback collected and used to improve delivery?

Section 5: System Integration and Adaptability

1. How do the different components of your Extension system (e.g., departments, campuses, field offices) interact to support organizational goals?
    a. Probe: What strengthens or hinders integration across units?
2. What are the biggest challenges you currently face related to structure, staffing, or resource alignment?
    a. Probe: Are these challenges localized or system-wide?
3. Looking toward the future, what changes or supports would best position your state's Extension system for success?
    a. Probe: Are there opportunities for redesign, collaboration, or innovation you're exploring?

Section 6: Wrap-Up

1. Is there anything else you'd like to share about the structure, leadership, or delivery of Extension in your state that we haven't covered?
2. Is there anyone else in your state or another state whom you would recommend I speak with to gain further insight on this topic?

Chapter 4 Instrument

Section 1: Background on Agents/Team Responsible for the Innovation/Change

1. Can you describe your role within Extension at the time this innovation was developed or implemented?
2. Who were the key individuals or teams involved in the development of this innovation, and what were their roles?
3. Were there any partnerships or collaborations with external stakeholders (e.g., universities, industry, community groups)? If so, what role did they play?

Section 2: Experiences that Shaped the Innovation

1. What inspired the idea for this innovation?
2. What specific problem or gap were you aiming to address with this innovation?
3. Was it a response to financial constraints or limited resources?
4. Did industry trends or client needs drive the change?
5. Did feedback from stakeholders, clients, or community members influence the development of the innovation?
6. How did you receive that feedback?
7. What were the primary reasons or needs that drove the adoption of this innovation?
8. Were there specific events, trends, or circumstances in your state or region that pushed this innovation forward?

Section 3: Historical Context and Comparison

1. Before this innovation was implemented, how were similar programs or services traditionally delivered?
2. How did the old methods fall short in meeting the needs of stakeholders or addressing emerging challenges?
3. What were the major differences between the new innovation and previous methods of service delivery?
4. Were there cultural, organizational, or operational barriers to transitioning from the old way of doing things to the new innovation?

Section 4: Challenges and Facilitators

1. What were the biggest roadblocks or challenges you encountered during the development or implementation of this innovation?
2. What factors or resources played a critical role in overcoming those challenges?
3. Were there specific leadership or team characteristics that helped push this innovation forward?

Section 5: Impact and Outcomes

1. What measurable impacts or outcomes have resulted from this innovation?
2. How has this innovation changed the way Extension operates in your state?
3. How has this innovation affected the stakeholders or communities you serve?
4. Have you collected feedback or evaluations from stakeholders about the innovation? If so, what did they say?

Section 6: Future of Extension Programs

1. What lessons learned from this innovation could be applied to future program development?
2. What do you believe are the next major challenges or opportunities for Extension programs in your state?
3. What advice would you give to others looking to implement similar innovations in their Extension programs?

Chapter 5 Instrument

Classification of State Extension Model

Which of the following characteristics BEST describe your current Extension model?
(Select all that apply)

A. Agent(s) primarily serve one county

B. Agent(s) cover multiple counties within a region
C. Agent(s) are shared between two or more counties
D. Agent(s) specialize in a specific subject matter
E. Program delivery is based on focused programmatic areas (e.g., water, youth workforce)
F. Agent(s) mainly serve an urban or metropolitan population
G. Agent(s) hold a statewide appointment
H. Model blends elements from multiple staffing approaches
I. Strong emphasis on local community engagement
J. Strong emphasis on subject-matter expertise
K. Reliance on virtual or regional delivery formats
L. Collaborative staffing across disciplines or locations

Which of the following characteristics do you believe would benefit your Extension program or do you wish were part of your current model? (*Select all that apply)*

A. Increased specialization in subject-matter areas
B. Greater focus on local community engagement
C. Broader reach through multi-county or regional appointments
D. More urban-focused programming or staffing
E. Addition of programmatic agent roles targeting specific issues
F. Access to statewide expertise or traveling agents
G. Improved hybrid or blended staffing approaches
H. Greater collaboration across county or program lines
I. Enhanced use of virtual programming or remote support
J. More flexibility in addressing unique community needs
K. N/A
L. Other (if selected they must type a response)

Please take a few moments to review the different Extension Educator Models defined below.

A. County Agent Model – Agent in each county
B. Regional Agent Model – Agent covers multiple counties; act as specialist
C. Specialist Model – Specialists at university research and develop programs
D. Multi-County Agent Model – Agent covers multiple counties; acts as generalist
E. Programmatic Agent Model – Agent delivers specific programs across regions or statewide
F. Urban Agent Model – Agent focuses on urban/suburban issues and audiences
G. Statewide Agent Model – Agent supports and coordinates statewide programs or initiatives
H. Hybrid Model – Agent blends local, regional, and programmatic roles

What would you classify your State's Cooperative Extension Model as being? Please select the best that describes/represents the majority of your state's Extension Educators.
(Multiple Choice)

A. *County Agent Model*
B. *Regional Agent Model*
C. *Specialist Model*
D. *Multi-County Agent Model*
E. *Programmatic Agent Model*
F. *Urban Agent Model*
G. *Statewide Agent Model*
H. *Hybrid Model*

Perception of Your Own Extension Educator Model
This question is all about how you feel about your CURRENT Extension model. Please select the most appropriate response to each statement!
(Likert Scale: 1 = Strongly Disagree, 4 = Strongly Agree)

I believe the current Extension educator model in my state effectively meets the needs of local communities.

The current model allows me to focus on my area of expertise without being overstretched.

The current model promotes collaboration and resource-sharing among agents and specialists.

The current model effectively addresses the unique challenges of rural and underserved communities.

My state's Extension model effectively balances local, regional, and statewide priorities.

I believe the current model supports sustainable career growth and job satisfaction for Extension educators.

I believe local clients understand the role and mission of Cooperative Extension in their community.

My State's Extension model provides adequate training opportunities for agents.

My State's Extension model provides adequate mentorship opportunities for agents.

Local, regional, and state leadership collaborate effectively to address community needs.

Perception of Other States' Extension Educator Models

This next question is all about how you feel about OTHER Extension models. Please select the most appropriate response to each statement! *(Likert Scale: 1 = Strongly Disagree, 4 = Strongly Agree)*

I am familiar with how other states' Extension educator models operate.

I believe some states' models are more effective than the one in my state.

I feel that other states' models could offer valuable practices that should be implemented in my state.

Other states' Extension systems appear to be better equipped to handle urban challenges than my state's system.

Other states' Extension systems appear to be better equipped to handle suburban challenges than my state's system.

I think my state's Extension system could benefit from adopting programmatic approaches used in other states.

Agents in other states have access to more resources/training compared to my state.

Please answer the following questions by selecting the model YOU think fits the statement best. *(Multiple Choice)*

A. *County Agent Model*
B. *Regional Agent Model*
C. *Specialist Model*
D. *Multi-County Agent Model*
E. *Programmatic Agent Model*
F. *Urban Agent Model*
G. *Statewide Agent Model*
H. *Hybrid Model*

I believe this Extension model is most effective in states with limited budgets or small populations.

I believe this Extension model offers the most personalized service for local communities.

I believe this Extension model ensures a higher level of expertise.

I believe this Extension model provides the flexibility to address both local and regional needs MOST effectively.

I believe this Extension model is LEAST LIKELY to address local needs adequately.

I believe this Extension model allows for the most resource-sharing and specialization.

I believe this Extension model best ensures consistency in program delivery across larger areas.

I believe this Extension model is best for addressing the unique challenges faced by communities in densely and moderately populated areas.

What, if any, are your perceived advantages your current Extension Model compared to others? *(Open Answer)*

What, if any, are your perceived disadvantages of your current Extension Model compared to others? *(Open Answer)*

Program Delivery and Outcomes

How often do you deliver programs in your area of focus? *(1 = Never, 2 = Once a Year, 3 = 2-3x Year, 4 = Monthly, 5 = Weekly, 6 = Everyday)*

How often do you conduct needs assessments to identify community priorities? *(1 = Never, 2 = Once a Year, 3 = 2-3x Year, 4 = Monthly, 5 = Weekly, 6 = Everyday)*

This next part is all about how you perceive your ability to deliver Extension programming. Please select the most appropriate response to each statement! *(Likert Scale: 1 = Strongly Disagree, 4 = Strongly Agree)*

The programs I deliver meet the needs of the target audience effectively.

I receive adequate support to develop Extension programs.

I receive adequate support to market Extension programs.

I receive adequate support to deliver Extension programs.

I have sufficient time to plan, deliver, and evaluate my programs effectively.

I collaborate effectively with other agents to ensure program success.

I collaborate effectively with specialists to ensure program success.

I feel confident that my programs are accessible to all community members, regardless of socioeconomic status.

I feel confident that my programs are accessible to all community members, regardless of geographic location.

Job Satisfaction

This next set of questions is related to your overall perceived job satisfaction and burnout. Please select the most appropriate response to each statement! *(Likert Scale: 1 = Strongly Disagree, 4 = Strongly Agree)*

I feel valued and appreciated (by leadership) for the work I do within my Extension role.

I believe my skills and expertise are being fully utilized in my current position.

I feel that my workload is manageable.

There are opportunities for professional growth and advancement within my Extension system.

I receive constructive feedback and support from my supervisors.

I am satisfied with the level of collaboration and teamwork within my Extension program.

I am satisfied with my pay.

I am able to maintain a healthy work/life balance.

Demographics

What is your gender? *(Multiple Choice)*

A. Male
B. Female
C. Other

How many years have you worked in Extension? *(Multiple Choice)*

A. <1 year
B. 1-5 years
C. 6-10 years
D. 11-15 years
E. 16-20 years
F. 21+ years

In which state do you work? *(Open Answer)*

What University are you associated with? *(Open Answer)*

What is your current salary range? *(Multiple Choice)*

A. <$50,000
B. $50,001-$60,000
C. $60,001-$70,000
D. $70,001-$80,000
E. $80,001-$90,000
F. $90,001-$100,000
G. >+$100,000