



A Proposed Logic Model to Examine Innovation and Entrepreneurship to Support/Enhance Long-Term Resilience and Social/Economic Mobility in Rural Communities



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Submission: February 03, 2020; **Published:** February 18, 2020

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Keywords: Innovation; Entrepreneurship; Integrated system; Logic model

Introduction

Innovation and entrepreneurship have become the underpinning driving forces in supporting rural communities as income derived from the agriculture industry declined over time for most rural populations [1]. Some perceived disadvantages of enterprise development in rural communities are due to lack of access to market, infrastructure, information, healthcare, education, skilled labor, capital and finance, technology, and networks. Existing literature discusses entrepreneurship from three aspects - entrepreneurial mindset, entrepreneurial activities, and entrepreneurial opportunities. Entrepreneurship covers private and public sectors beyond business ownership. Many scholars have studied and compared the characteristics of entrepreneurs and the process of enterprise development in rural and urban environments. Some rural communities can flourish with above-average rates of new enterprise formation by engaging in and linking to multifunctional agricultural strategies such as agritourism, value-added, direct sales, and off-farm employment. The "enterprise innovation" refers to recognition and creation of new opportunities, which would stimulate new ways of doing business, new practices, new products/services, or new markets to improve and enhance long-term prosperity for individuals, families, and the community [2-6]. Social mobility is for individuals, families, households, or other categories of people to achieve statue characteristics in a society. Economic mobility is the ability of an individual, family, or some other groups to change their income, wealth, or employment. The integration

of rural enterprises refers to the levels, intensity, and purposes of connection and interactions of people, place, and prosperity concerning economic and social aspects.

While research has advanced our understanding of rural communities in general, there have been relatively few studies to integrate rural entrepreneurship, innovation, and creative strategies designed and implemented by public and private entities to improve rural wealth. There are knowledge gaps in understanding and examining the impacts of rural entrepreneurship on social/economic mobility, and how rural entrepreneurship links to innovative agricultural systems in the United States. There is a need to establish a systematic research on rural innovation and entrepreneurship in terms of rationale, process, characteristics, and linkages/interactions between People (entrepreneurs, residents, service providers, public agencies, institutions), Place (resources, communities, eco-systems), and Prosperity (income/profits, wealth, family well-being, quality of life).

Relationships between Entrepreneurship, Networks, and Social/Economic Mobility for Rural Communities

Historically, entrepreneurs have been credited with being the dynamic force leading to positive change and economic prosperity. Rural entrepreneurs have the potential to contribute to community social/economic viability and sustainability by providing creative solutions to enhance local income, employment, resources, and

well-being [7-9]. Entrepreneurial activities and innovativeness were often triggered by external/internal shocks relating to social and economic disturbance [3]. Entrepreneurship is particularly important to rural communities dealing with demographic shifts to re-envision and re-position their economic opportunities to retain and engage youth and new residents/businesses [10,11]. Scholars have argued the importance of supporting rural entrepreneurship since community culture, local resources, and social capital are integral and inseparable from economic development [12]. However, there is minimal information in the U.S. that consistently quantify the impacts of rural entrepreneurship on social/economic mobility at the community level.

Networks provide essential support to stimulate learning and knowledge advancement, which are crucial for rural communities to generate and access better opportunities for innovation [13-15]. Literature has discussed how to make business service markets work for the poor [16] and how to improve information systems and networks to enhance the learning capacity of rural areas [17,18]. Unfortunately, barriers exist for rural entrepreneurs, which prevent active engagement in e-commerce or information exchange due to the shortage of infrastructure [18,19]. Beyond internet issues, a limited number of programs offer social network opportunities such as empowerment-based entrepreneurial programs for women [20] and rural ethnic entrepreneurship networks [21]. There is a need to gather more information across communities to understand and examine types of networks existed or needed for various communities, and how these networks could facilitate and promote rural enterprise development.

A strong rural economy offers better opportunities to boost social/economic mobility, which leads to long-term resilience for individuals, families, and the community. Following [22,23], we define resilience as the capacity of a system to absorb disturbances and reorganize, while changing to retain essentially, the same function, structure, identity, and feedbacks. Scholars and practitioners are searching for cost-effective and adaptive approaches to inform policies that will enable rural communities to participate in a balanced, equitable, and integrated system development of mixed-scale production and consumption. Such a system would balance food sovereignty, local and regional economy, innovation, and prosperity. If properly tuned, the mixed-scales approach could increase internal resilience by buffering regions against many possible levels of shock to their local communities.

A Proposed Logic Model to Study Rural Innovation, Entrepreneurship, and Impacts on Social/Economic Mobility

One of the most efficient ways to define research questions, explain research objectives, craft research activities, and interpret research outcomes is to use a logic model. The USA Department of Agriculture presented a clear structure to organize a logic model,

and the following statement was quoted from the US Department of Agriculture logic model is a conceptual tool for planning and evaluation, which displays the sequence of actions that describes what the science-based program is and will do. "A logic model":

- a) Clarifies the linkages between investments and activities, outputs and expected outcomes of the policy, program or initiative.
- b) Communicates externally about the rationale, activities and expected results of the policy, program or initiative.
- c) Tests whether the policy, program or initiative "makes sense" from a logical perspective; and
- d) Provides the fundamental framework on which the performance measurement and evaluation strategies are based (i.e., determining what would constitute success). There are many variations on the specific composition of a logic model. For its purposes, NIFA has developed a generic logic model that includes the following components:

Situation: A description of the challenge or opportunity. The problem or issue to be addressed, within a complex of socio-political, environmental, and economic conditions.

Inputs: What is invested, such as resources, contributions, and investments that are provided for the program.

Activities: Activities are what the program does with its inputs to services it provides to fulfill its mission.

Outputs: Products, services and events that are intended to lead to the program's outcomes.

Outcomes: Planned results or changes for individuals, groups, communities, organizations or systems. Types of outcomes include:

Change in knowledge: Occurs when there is a change in knowledge, or the participants learn.

Change in behavior: Occurs when there is a change in behavior, or the participants act upon what they have learned.

Change in condition: Occurs when a societal condition is improved.

External factors: Variables that may influence the portfolio, program, or project but which cannot be changed by the managers of the portfolio, program, or project.

Assumptions: The premises based on theory, research, evaluation knowledge, etc. that support the relationships of the elements of the logic model and upon which the success of the portfolio, program, or project rests.

The following graph describes a proposed logic model for researchers, practitioners, and stakeholders to design, develop, and implement a plan to link rural innovation and entrepreneurship to

enhance social/economic mobility and community wealth (Figure 1). We can develop several objectives to use this logic model to

support our goals, test our hypotheses, and incorporate research, teaching, and outreach aspects. For example,

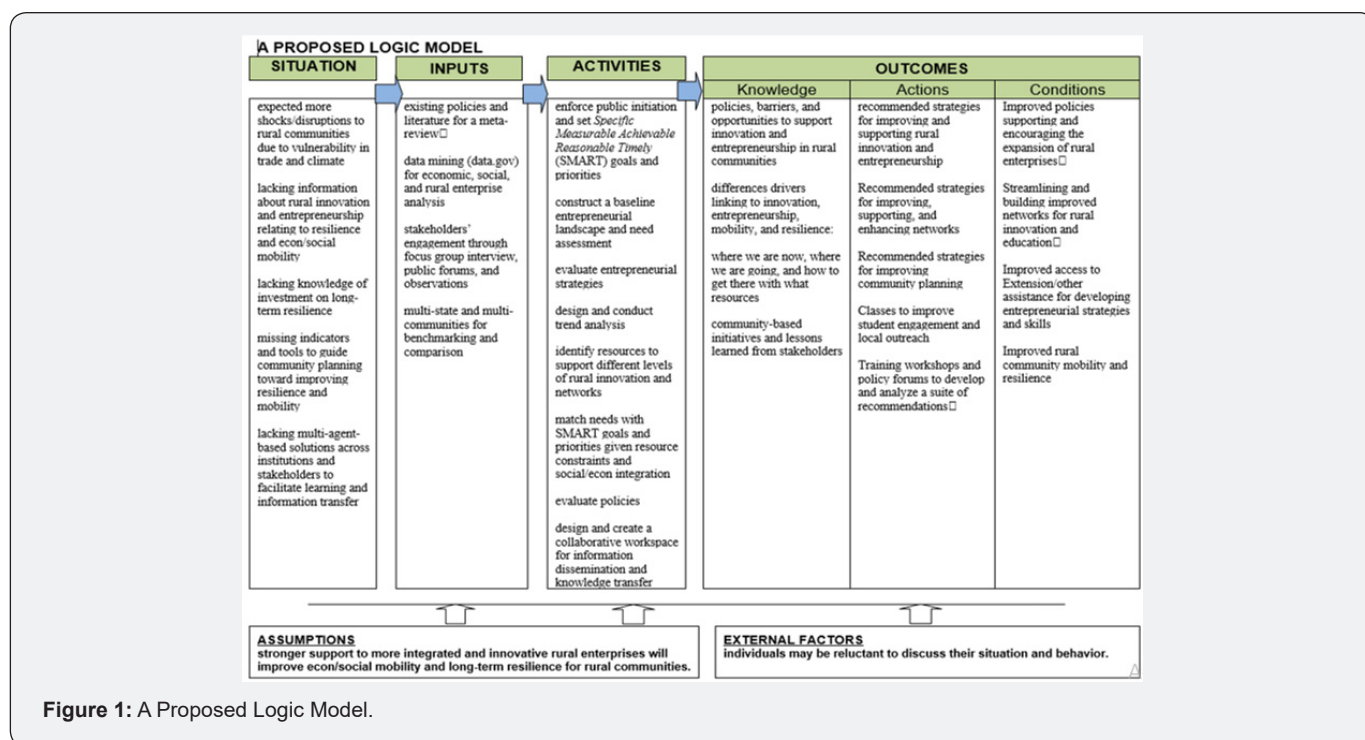


Figure 1: A Proposed Logic Model.

- a) To determine the strengths, weaknesses, opportunities, and threats (SWOT) of the landscape of innovation for rural enterprises within different rural communities.
- b) To characterize levels of innovation established by rural enterprises and their linkages to people, place, and prosperity regrading social/economic mobility.
- c) To analyze the effects of existing policies and institutions on rural enterprises and their innovative practices.
- d) To develop a framework for integrated policy analysis and practices of rural enterprise development associated with innovation, community resilience, and mobility.
- e) To establish collaborative approaches to support long-term rural entrepreneurship research, education, and outreach.

The proposed logic model and sample objectives focus on understanding innovation and entrepreneurial activities at the community level - who, what, why, how, and the impacts on individuals, family, organization, and community. They will address the following suite of recognized knowledge and service gaps:

- a) Institutional structures currently tend to favor large-scale operations, and do not provide adequate guidance for mixed scales of operations when considering rural community

resilience and entrepreneurial development for individuals and non-conventional enterprises.

- b) Rural development strategies often promoting or supporting enterprises employing 20+ workers. It would be critical to recognize the impact of smaller enterprises or sole proprietors, and the importance of smaller-scale innovations and technology adaptations and developments.

- c) Global markets are not able to adjust quickly to changes in operations, whereas small enterprises in rural communities offer unexplored potential for closer connections with their consumers and greater adaptive nimbleness in the face of diverse external shocks.

- d) No currently usable or practical frameworks exist to explore how and to what degree rural entrepreneurs using innovative strategies to promote social and economic mobility in a way that could help policymakers, service providers, or communities across regions assess their current and future prospects to become resilient in the long term.

It is a complex issue to tackle deficiencies of innovation, entrepreneurship, and mobility in an integrated system [24-27]. Some required elements to build a cohesive approach to deploy this logic model include:

- a) To use a trans-disciplinary and inter-disciplinary characterization of benefits from sustaining rural

entrepreneurship and innovations in mixed production and consumption scales.

b) To capitalize on the small scale of community networks, which, if given greater institutional and policy support, would contribute to social/economic mobility and resilience efficiently.

c) To distinct the levels of interactions and transitions between global markets versus a system relying more consistently on a small scale of supply, demand, and entrepreneurship development.

d) To establish a consistent cross-regional comparison, looking at emerging issues in a variety of rural communities in the U.S., respectively.

Expected Outcomes

The proposed logic model would lead to several outcomes if adopted by an integrated team of researchers, practitioners, and stakeholders with a holistic perspective. For example:

Research

a) A better understanding of strategic opportunities and challenges presented to rural enterprises for increasing income, wealth, employment, and innovative opportunities based on the multi-state cross-sectional study.

b) A better understanding and categorization of factors driving and driven by rural entrepreneurship in agricultural and non-agricultural sectors, including interactions with individuals, organizations, and institutions above and below the regional level.

c) A better understanding of how institutions and policies interact to support or undermine the contributions of rural innovation to food security and other community issues.

d) A better understanding of cross-regional variation in rural entrepreneurship and innovation, and the linkages of rural innovation, community characteristics, networks, and disparity in income, employment, and opportunities.

e) A better understanding of the design and implementation of an integrated framework to study resilience and social/economic mobility from community initiations.

Education

a) Engaging in workforce development across regions through school systems and labor training services and leveraging existing resources of intra-regional efforts.

b) Development of courses and policy forums coordinated across multiple communities, states, and institutions to stimulate new educational programs and opportunities to empower youth, practitioners, and decision makers in diverse

cultures and demographic settings to create and support rural enterprises.

Extension/outreach

a) Development of a virtual collaborative workspace for economic development professionals, community development and planning professionals, policymakers and stakeholders.

b) Development of complementary outreach materials and guides for cooperative extension agents to deliver effective programs to achieve resilience and mobility.

c) Development of multiple policy briefs and white papers to inform decision makers and practitioners of policy constraints and opportunities.

Acknowledgment

The information presented in this article is derived from projects funded by Kellogg Foundation and the USDA NIFA program.

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DOI: [10.19080/ARTOAJ.2020.23.556248](https://doi.org/10.19080/ARTOAJ.2020.23.556248)

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