AUBI Economic Modeling Tool

Version 1.0 | June 2025
Global Governance Framework - Aging Population Support

Overview and Instructions

Purpose and Scope

The AUBI Economic Modeling Tool provides comprehensive financial analysis for Adaptive Universal Basic Income implementation at community, regional, and national levels. The tool calculates:

- **Program costs** including base security, contribution recognition, and adaptive needs components
- **Revenue requirements** from diverse funding mechanisms
- **Economic returns** through healthcare savings, innovation dividends, and multiplier effects
- **Cost-benefit analysis** demonstrating financial sustainability and economic impact
- **Sensitivity analysis** testing program viability under different economic conditions

How to Use This Tool

Step 1: Data Collection

- Complete demographic analysis using provided worksheets
- Gather economic baseline data for target community/region
- Assess existing pension and social support systems
- Document current healthcare costs and aging-related expenses

Step 2: Parameter Setting

- Input target population size and demographic characteristics

- Set AUBI payment levels based on local cost of living
- Configure funding mix based on political and economic feasibility
- Adjust implementation timeline and rollout schedule

Step 3: Analysis and Modeling

- Run base case scenario with standard assumptions
- Conduct sensitivity analysis testing key variables
- Compare different funding and payment scenarios
- Generate policy recommendations and optimization suggestions

Step 4: Stakeholder Communication

- Use executive summary outputs for political advocacy
- Present cost-benefit analysis to government and business stakeholders
- Share multiplier effect projections with community organizations
- Provide implementation timeline and funding requirements

Key Features and Capabilities

Flexible Geographic Scope: Model AUBI implementation from neighborhood level (1,000 elders) to national level (10+ million elders)

Multiple Funding Scenarios: Test different combinations of automation taxes, carbon pricing, financial transaction taxes, and progressive taxation

Dynamic Economic Modeling: Calculate multiplier effects, innovation returns, and feedback loops between AUBI and economic development

Cultural and Economic Adaptation: Adjust parameters for different economic development levels, family structures, and cultural contexts

Political Feasibility Assessment: Model implementation timelines and political strategies for sustainable AUBI deployment

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Model Parameters and Assumptions

Demographic Parameters

Target Population Definition

- **Age Threshold**: Default 60+ years (adjustable based on local retirement age and life expectancy)
- **Eligibility Criteria**: Residency requirements, citizenship status, and income thresholds
- **Population Growth**: Annual aging population growth rate (typically 2-4% in developed countries)
- **Life Expectancy**: Average remaining years for AUBI recipients (affects long-term cost projections)

Elder Demographics and Characteristics

- **Income Distribution**: Current elder income levels and economic security status
- **Health Status**: Distribution of health conditions affecting care needs and adaptive payments
- **Geographic Distribution**: Urban vs. rural population affecting cost of living adjustments
- **Cultural Diversity**: Language communities and cultural adaptation requirements

Example Demographic Inputs

```
Target Community: Portland, Oregon Metro Area
Elder Population (60+): 245,000 (2025 baseline)
Annual Growth Rate: 3.2%
Average Life Expectancy: 22 years from age 60
Urban Population: 78%
Rural Population: 22%
Median Elder Income: $32,400
Below Poverty Line: 18%
```

AUBI Payment Structure

Base Security Layer

- **Minimum Payment**: $500/month baseline (adjusted for local purchasing power)
- **Cost of Living Adjustment**: Regional multipliers based on housing, healthcare, and living costs

- **Poverty Line Integration**: Ensure AUBI brings all elders above local poverty threshold
- **Currency Conversion**: For international modeling, convert to local currency with purchasing power parity

Contribution Recognition Layer

- **Maximum Recognition Payment**: $400/month for maximum contribution level
- **Contribution Categories**: Caregiving ($50-150), mentorship ($25-100), cultural preservation ($25-75), climate wisdom ($25-100), community organizing ($25-75), innovation ($50-200)
- **Documentation Requirements**: Blockchain ledger costs and verification expenses
- **Participation Rate**: Estimated percentage of elders engaging in recognized contributions (typically 60-80%)

Adaptive Needs Layer

- **Health Status Adjustments**: Additional payments for disability, chronic conditions, and care needs
- **Accessibility Modifications**: Home modifications and assistive technology support
- **Crisis Support**: Emergency payments during health crises, family emergencies, and economic disruption
- **Geographic Adjustments**: Rural isolation supplements and transportation support

Innovation Participation Layer

- **Elder Innovation Hub Participation**: Additional payments for innovation activities
- **Patent and Business Creation**: Revenue sharing from elder-generated intellectual property
- **Research Collaboration**: Compensation for participation in aging research and policy development
- **Technology Development**: Recognition for elder participation in technology design and testing

Economic Context Parameters

Baseline Economic Indicators

- **GDP per Capita**: Regional economic development level affecting funding capacity
- **Tax Revenue Base**: Existing government revenue available for AUBI funding

- **Automation Level**: Degree of automation affecting employment and productivity tax potential
- **Carbon Emissions**: Regional carbon footprint affecting carbon pricing revenue potential

Healthcare Cost Baselines

- **Current Elder Healthcare Spending**: Per-capita healthcare costs for aging populations
- **Emergency Intervention Costs**: Expensive crisis interventions AUBI aims to prevent
- **Mental Health Treatment**: Depression and isolation treatment costs
- **Long-term Care Expenses**: Nursing home and assisted living cost trends

Social Support System Costs

- **Existing Pension Payments**: Current government spending on elder economic support
- **Social Services**: Elder-focused social services and support programs
- **Housing Assistance**: Government spending on elder housing and accessibility modifications
- **Transportation Support**: Public and specialized transportation for aging populations

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Revenue Projection Framework

Automation and AI Productivity Tax (30% of AUBI funding)

Calculation Methodology

```
Automation Tax Revenue = (Productivity Gains from Automation) × (Elde

Where:
- Productivity Gains = Annual increase in output per worker due to au
- Elder Displacement Rate = Percentage of productivity gains from dis
- Tax Rate = 15% on automation productivity gains displacing elder wo
```

Data Inputs Required

- Regional automation adoption rate by industry sector

- Productivity increase per automated process or AI system
- Elder employment in automation-affected industries
- Corporate willingness to report automation gains (enforcement considerations)

Revenue Projections

```
Example: Portland Metro Area
Manufacturing Automation: $45M annual productivity gains, 35% elder d
Service Sector AI: $78M annual productivity gains, 28% elder displace
Healthcare Automation: $23M annual productivity gains, 40% elder disp
Total Automation Tax Revenue: $7.1M annually
```

Implementation Considerations

- **Corporate Reporting**: Requirements for businesses to document automation productivity gains
- **Enforcement Mechanisms**: Auditing and verification of automation tax compliance
- **Innovation Incentives**: Ensure tax doesn't discourage beneficial technological development
- **Small Business Exemptions**: Protect small businesses from excessive regulatory burden

Carbon Pricing and Elder Climate Contributions (25% of AUBI funding)

Carbon Tax Revenue Stream

```
Carbon Tax Revenue = (Regional Carbon Emissions) × (Carbon Price per

Where:
- Regional Carbon Emissions = Annual CO2 equivalent emissions in targ
- Carbon Price = $40-120 per ton CO2 (varies by jurisdiction and carb
- AUBI Allocation = 25% of carbon tax revenue directed to elder clima
```

Elder Climate Contribution Recognition

```
Climate Wisdom Bonus = (Elder Climate Knowledge Documentation) × (Ada
```

```
Categories:
- Environmental observation documentation: $25-50/month
- Climate adaptation strategy development: $50-100/month
- Disaster preparedness leadership: $25-75/month
- Traditional ecological knowledge sharing: $50-150/month
```

Revenue Calculation Example

```
Portland Metro Area (Population 2.5M):
Annual Carbon Emissions: 12.5 million tons CO2
Carbon Price: $65/ton
Total Carbon Tax Revenue: $812.5 million
AUBI Allocation (25%): $203.1 million
Elder Climate Recognition Payments: $18.4 million annually
Net Carbon Revenue for AUBI: $184.7 million
```

Financial Transaction Tax (Tobin Tax) (20% of AUBI funding)

Transaction Tax Framework

```
Transaction Tax Revenue = (Daily Trading Volume) × (Tax Rate) × (Trad

Where:
- Daily Trading Volume = Regional financial transaction volume
- Tax Rate = 0.1% on speculative financial transactions
- Trading Days = 250 annually
- AUBI Allocation = Percentage of transaction tax revenue for elder su
```

Implementation Specifications

- **Covered Transactions**: High-frequency trading, currency speculation, derivative trading
- **Exempted Transactions**: Retirement account management, small personal investments, business operations
- **Collection Mechanism**: Automated collection at point of transaction
- **Revenue Sharing**: Split between federal, state, and local AUBI implementation

Revenue Stability Analysis

- **Daily Trading Volume Trends**: Historical analysis of regional financial transaction patterns
- **Tax Avoidance Mitigation**: Preventing transaction migration to avoid tax
- **Economic Cycle Sensitivity**: Transaction volume changes during recessions and expansions
- **International Coordination**: Cooperation with other jurisdictions implementing similar taxes

Longevity and Aging Innovation Dividends (15% of AUBI funding)

Innovation Revenue Sharing

```
Innovation Dividend = (Elder Innovation Hub Revenue) + (Longevity Res

Components:
- Elder Innovation Hub Business Creation: Revenue sharing from elder-
- Longevity Bond Returns: Investment returns from successful aging ou
- Patent Revenue: Elder innovation intellectual property licensing
- Research Collaboration: University and corporate research partnersh
```

Longevity Bond Modeling

```
Longevity Bond Returns = (Bond Principal) × (Interest Rate) × (Longev

Where:
- Bond Principal = Initial investment in longevity research and aging
- Interest Rate = Base return rate (typically 3-5%)
- Longevity Success Multiplier = Additional returns based on healthsp
```

Innovation Revenue Projections

```
Portland Metro Example:
Elder Innovation Hubs (5 locations): $2.3M annual business revenue
Patent Licensing: $1.8M annually from elder innovations
Longevity Bond Returns: $4.2M annually from $70M bond issuance
```

```
Research Collaboration: $0.9M annually from university partnerships
Total Innovation Dividend: $9.2M annually
```

Progressive Wealth and Corporate Taxation (10% of AUBI funding)

Wealth Tax Implementation

```
Wealth Tax Revenue = (High Net Worth Assets) × (Progressive Tax Rate)

Tax Brackets:
- Assets $1-5M: 0.5% annual wealth tax
- Assets $5-10M: 1.0% annual wealth tax
- Assets $10M+: 1.5% annual wealth tax
AUBI Allocation: 25% of wealth tax revenue
```

Corporate Taxation Enhancement

```
Corporate AUBI Tax = (Corporate Revenue from Elder Markets) × (Elder M

Where:
- Elder Market Revenue = Corporate sales to 60+ demographic
- Tax Rate = 2% surcharge on elder market revenue
- Purpose = Recognition that corporations benefit from elder consumer
```

Revenue Sustainability

- **Asset Valuation**: Mechanisms for assessing wealth tax obligations
- **Capital Flight Prevention**: Policies preventing wealth relocation to avoid taxation
- **Corporate Compliance**: Tracking corporate revenue from elder consumer markets
- **Political Sustainability**: Building support for progressive taxation funding elder support

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Cost Analysis and Projections

Direct AUBI Payment Costs

Base Security Layer Costs

```
Annual Base Security Cost = (Eligible Elder Population) × (Average Bas

Calculation Example:
Portland Metro Elder Population: 245,000
Average Base Payment: $525/month (including cost of living adjustment
Annual Base Security Cost: $1.54 billion
```

Contribution Recognition Costs

```
Annual Contribution Recognition = (Participating Elders) × (Average Re

Participation Rates by Category:
- Caregiving: 45% of elders, average $75/month
- Mentorship: 35% of elders, average $50/month
- Cultural Preservation: 25% of elders, average $40/month
- Climate Wisdom: 20% of elders, average $60/month
- Community Organizing: 15% of elders, average $45/month
- Innovation: 10% of elders, average $125/month

Total Contribution Recognition: $267 million annually
```

Adaptive Needs Layer Costs

```
Annual Adaptive Needs = (Elders with Additional Needs) × (Average Addi

Need Categories:
- Disability accommodations: 18% of elders, average $150/month additio
- Chronic health conditions: 35% of elders, average $75/month additio
- Rural isolation: 22% of elders, average $50/month additional
- Crisis support: 8% of elders annually, average $200/month for 6 mon

Total Adaptive Needs: $89 million annually
```

Administrative and Infrastructure Costs

Technology Infrastructure

```
Annual Technology Costs = (Platform Development) + (Maintenance) + (Sc

Components:
- Blockchain contribution ledger: $2.5M setup, $800K annual maintenanc
- Payment processing system: $1.2M setup, $600K annual processing
- Elder-accessible interfaces: $3.1M development, $400K annual updates
- Technical support services: $1.8M annually for elder assistance
- Cybersecurity and privacy: $1.5M annually for data protection

Total Annual Technology Costs: $4.3M
```

Community Facilitation and Support

```
Annual Facilitation Costs = (Community Facilitators) + (Training) + (I

Staffing Requirements:
- Community facilitators: 150 FTE at $65K average = $9.75M
- Elder advocates: 50 FTE at $58K average = $2.9M
- Training and professional development: $800K annually
- Community outreach and education: $1.2M annually
- Cultural adaptation and interpretation: $600K annually

Total Annual Facilitation Costs: $15.25M
```

Program Administration

```
Annual Administration = (Government Staff) + (Oversight) + (Compliance

Administrative Components:
- Government program management: 75 FTE at $78K average = $5.85M
- Oversight and accountability: $1.5M annually
- Compliance and audit: $900K annually
- Research and evaluation: $1.8M annually
- Legal and regulatory: $600K annually
```

```
Total Annual Administration: $10.65M
```

Healthcare and Social Service Integration

Healthcare Cost Savings

```
Annual Healthcare Savings = (Preventive Care) + (Reduced Emergency) +

Savings Categories:
- Preventive care and early intervention: $45M annually
- Reduced emergency department visits: $23M annually
- Mental health treatment cost reduction: $18M annually
- Delayed nursing home placement: $67M annually
- Reduced family caregiver burden: $12M annually

Total Annual Healthcare Savings: $165M
```

Social Service Cost Reductions

```
Annual Social Service Savings = (Reduced Crisis Intervention) + (Hous

Service Categories:
- Elder protective services: $8M reduction annually
- Emergency housing assistance: $5M reduction annually
- Food security programs: $12M reduction annually
- Transportation assistance: $3M reduction annually
- Legal aid and advocacy: $2M reduction annually

Total Social Service Savings: $30M annually
```

Economic Development and Innovation Costs

Elder Innovation Hub Operations

```
Annual Innovation Hub Costs = (Facility Operations) + (Equipment) + ($
```

```
Hub Network (5 facilities):
- Facility lease and utilities: $1.8M annually
- Equipment and technology: $800K annually
- Professional staff: $2.4M annually (20 FTE)
- Programming and events: $400K annually
- Business development support: $600K annually

Total Innovation Hub Costs: $6M annually
```

Economic Development Investment

```
Annual Economic Development = (Business Support) + (Infrastructure) +

Investment Categories:
- Elder entrepreneur support: $3.2M annually
- Age-friendly infrastructure: $8.5M annually
- Economic development marketing: $1.1M annually
- Economic research and analysis: $800K annually
- Community development grants: $2.4M annually

Total Economic Development Investment: $16M annually
```

Economic Impact Assessment

Direct Economic Impact

Local Economic Stimulus

```
Annual Economic Stimulus = (AUBI Payments) × (Local Spending Multipli

Where:
- Total AUBI Payments = $1.896 billion annually (Portland example)
- Local Spending Rate = 85% (percentage spent locally)
- Economic Multiplier = 1.4 (additional economic activity per dollar s
```

```
Direct Economic Stimulus = $1.896B × 0.85 × 1.4 = $2.26 billion annua
```

Employment Impact

```
Job Creation = (Economic Stimulus) ÷ (Average Wage + Benefits)

Where:
- Economic Stimulus = $2.26 billion
- Average Regional Wage + Benefits = $72,000

Estimated Job Creation: 31,400 jobs annually
Elder Employment: 40% = 12,560 elder jobs
Intergenerational Employment: 60% = 18,840 non-elder jobs
```

Tax Revenue Generation

```
Additional Tax Revenue = (Economic Stimulus) × (Combined Tax Rate)

Tax Components:
- Income taxes on new employment: $156M annually
- Sales taxes on increased spending: $89M annually
- Property taxes on increased property values: $23M annually
- Business taxes on increased economic activity: $67M annually

Total Additional Tax Revenue: $335M annually
```

Innovation and Business Development Returns

Elder Innovation Economic Returns

```
Innovation Returns = (Patent Revenue) + (Business Creation) + (Knowle

Annual Innovation Impact:
- Patent licensing and intellectual property: $12M
- Elder-led business creation: $28M in revenue
- Knowledge transfer and consulting: $8M
- Research collaboration and grants: $6M
```

```
- Technology commercialization: $15M

Total Innovation Returns: $69M annually
```

Business Development Multiplier Effects

```
Business Development Impact = (Direct Business Revenue) × (Supply Cha

Calculations:
- Elder-owned business revenue: $28M annually
- Supply chain multiplier: 1.6 (additional business through elder bus
- Network effect: 1.3 (additional business through elder networks and

Total Business Development Impact: $58M annually
```

Healthcare and Social System Returns

Healthcare System Savings

```
Total Healthcare Returns = (Direct Medical Savings) + (Prevention Ben

Healthcare Impact Categories:
- Reduced emergency medical interventions: $23M annually
- Preventive care cost savings: $45M annually
- Mental health treatment reduction: $18M annually
- Delayed institutionalization: $67M annually
- Family caregiver stress reduction: $12M annually

Total Healthcare System Savings: $165M annually
```

Social Cohesion and Community Benefits

```
Social Return on Investment = (Crime Reduction) + (Civic Engagement) +

Social Impact Measurements:
- Reduced elder abuse and exploitation: $8M annually
- Increased civic participation value: $15M annually
- Intergenerational relationship strengthening: $22M annually
```

```
- Community resilience and disaster preparedness: $12M annually
- Cultural preservation and knowledge transfer: $18M annually

Total Social Return: $75M annually
```

Environmental and Climate Returns

Climate Adaptation Economic Value

```
Climate Adaptation Returns = (Disaster Prevention) + (Environmental Kn

Climate Impact Categories:
- Disaster preparedness and response: $25M annually in avoided costs
- Traditional ecological knowledge application: $8M annually
- Sustainable business development: $12M annually
- Carbon sequestration and conservation: $5M annually
- Climate-resilient infrastructure planning: $15M annually

Total Climate Adaptation Value: $65M annually
```

Environmental Justice and Sustainability

```
Environmental Returns = (Pollution Reduction) + (Resource Conservation

Environmental Benefits:
- Air and water quality improvements: $18M annually
- Resource conservation and efficiency: $12M annually
- Green technology innovation: $8M annually
- Environmental education and awareness: $6M annually
- Ecosystem preservation and restoration: $11M annually

Total Environmental Returns: $55M annually
```

Sensitivity Analysis and Scenarios

Base Case Scenario

Standard Implementation Assumptions

```
Base Case Parameters:
- Elder population: 245,000 (growing 3.2% annually)
- Base AUBI payment: $525/month
- Contribution recognition participation: 70%
- Healthcare savings: $165M annually
- Economic multiplier: 1.4
- Implementation timeline: 5 years to full deployment
```

Base Case Financial Summary

```
Annual Program Costs: $1.93 billion
Annual Revenue Generation: $2.15 billion
Annual Economic Returns: $2.26 billion stimulus + $234M savings
Net Annual Benefit: $565M
Return on Investment: 129%
Break-even timeframe: 2.3 years
```

Conservative Scenario

Conservative Assumptions

```
Conservative Parameters:
- Lower contribution participation: 50%
- Reduced healthcare savings: $125M annually
- Lower economic multiplier: 1.2
- Higher administrative costs: +15%
- Slower implementation: 7 years to full deployment
- Lower innovation returns: 50% of base case
```

Conservative Financial Summary

```
Annual Program Costs: $1.95 billion
Annual Revenue Generation: $2.12 billion
```

```
Annual Economic Returns: $1.89 billion stimulus + $155M savings
Net Annual Benefit: $215M
Return on Investment: 111%
Break-even timeframe: 3.8 years
```

Optimistic Scenario

Optimistic Assumptions

```
Optimistic Parameters:
- Higher contribution participation: 85%
- Increased healthcare savings: $210M annually
- Higher economic multiplier: 1.6
- Lower administrative costs: -10%
- Faster implementation: 3 years to full deployment
- Higher innovation returns: 150% of base case
```

Optimistic Financial Summary

```
Annual Program Costs: $1.91 billion
Annual Revenue Generation: $2.18 billion
Annual Economic Returns: $2.58 billion stimulus + $315M savings
Net Annual Benefit: $885M
Return on Investment: 146%
Break-even timeframe: 1.8 years
```

Crisis Resilience Scenario

Economic Downturn Testing

```
Crisis Parameters:
- Economic recession reducing tax revenue by 25%
- Increased elder need requiring 20% higher AUBI payments
- Reduced business and innovation activity: -40%
- Higher unemployment increasing AUBI enrollment by 15%
- Emergency support requirements: +$50M annually
```

Crisis Financial Summary

```
Annual Program Costs: $2.31 billion
Annual Revenue Generation: $1.61 billion
Annual Economic Returns: $1.45 billion stimulus + $125M savings
Net Annual Deficit: $145M
Crisis Reserve Fund Requirement: $725M (5-year buffer)
Recovery timeframe: 3.2 years to return to sustainability
```

Political Opposition Scenario

Reduced Political Support

```
Opposition Parameters:
- Federal funding reduced by 50%
- State funding eliminated
- Corporate tax avoidance increasing by 30%
- Wealth tax collection efficiency reduced to 60%
- Community resistance reducing participation by 25%
```

Political Challenge Financial Summary

```
Annual Program Costs: $1.85 billion (reduced scope)
Annual Revenue Generation: $1.45 billion
Annual Economic Returns: $1.67 billion stimulus + $145M savings
Net Annual Deficit: $75M
Required community funding increase: 15%
Political sustainability timeline: 2-3 election cycles
```

Return on Investment Calculations

Financial Return Analysis

Direct Financial ROI

```
Financial ROI = (Annual Economic Returns - Annual Program Costs) ÷ Ann

Base Case Calculation:
Annual Economic Returns: $2.494 billion (stimulus + savings)
Annual Program Costs: $1.93 billion
Financial ROI = ($2.494B - $1.93B) ÷ $1.93B = 29.2%
```

Government Budget ROI

```
Government ROI = (Tax Revenue + Cost Savings - Government Investment)

Government Calculation:
Additional Tax Revenue: $335M annually
Healthcare and Social Service Savings: $195M annually
Government Investment: $1.2B annually (assuming 60% government funding
Government ROI = ($335M + $195M - $1.2B) ÷ $1.2B = -55.8% (requires 3-
```

Social Return on Investment (SROI)

```
SROI = (Total Social Value Created) ÷ (Total Investment)

Social Value Calculation:
Economic stimulus value: $2.26B
Healthcare system improvements: $165M
Social cohesion benefits: $75M
Climate adaptation value: $65M
Innovation and knowledge value: $69M
Total Social Value: $2.634B

SROI = $2.634B ÷ $1.93B = 136.5%
```

Long-Term Investment Analysis

10-Year Net Present Value

```
NPV = Σ[(Annual Net Benefit) ÷ (1 + Discount Rate)^Year] - Initial Inv

Assumptions:
- Discount rate: 4%
- Annual net benefit growth: 2.5%
- Initial implementation investment: $150M
- Annual net benefit: $565M (base case)

10-Year NPV: $4.26 billion
Payback period: 2.3 years
Internal rate of return: 287%
```

Intergenerational Wealth Creation

```
Intergenerational Value = (Elder Wealth Preservation) + (Family Econor

Wealth Creation Components:
- Elder asset preservation through AUBI: $890M annually
- Family caregiver economic relief: $234M annually
- Community business and property development: $167M annually
- Innovation and intellectual property creation: $89M annually
- Cultural and knowledge asset preservation: $45M annually

Total Intergenerational Wealth Creation: $1.425B annually
```

Risk-Adjusted Returns

Political Risk Assessment

```
Political Risk-Adjusted ROI = (Base ROI) × (Political Sustainability F

Political Risk Factors:
- Electoral cycle risks: 15% discount
- Legislative change risk: 10% discount
- Bureaucratic implementation risk: 8% discount
- Community opposition risk: 5% discount
```

```
Risk-Adjusted ROI = 29.2% × (1 - 0.38) = 18.1%
```

Economic Risk Assessment

```
Economic Risk-Adjusted ROI = (Base ROI) × (Economic Stability Probabi

Economic Risk Factors:
- Recession impact: 20% discount
- Inflation effect on costs: 8% discount
- Funding source volatility: 12% discount
- Population demographic changes: 5% discount

Economic Risk-Adjusted ROI = 29.2% × (1 - 0.45) = 16.1%
```

Policy Optimization Recommendations

Payment Structure Optimization

Base Payment Level Recommendations Based on economic modeling across different scenarios:

Minimum Effective Base Payment: $450/month

- Provides basic economic security
- Generates positive ROI in all scenarios
- Maintains political sustainability

Optimal Base Payment: $525/month

- Maximizes economic multiplier effects
- Achieves best healthcare cost savings
- Balances affordability with effectiveness

Maximum Sustainable Payment: $675/month

- Upper limit for most economic contexts
- Requires optimal funding mix and political support
- Generates highest social returns but increased political risk

Funding Mix Optimization

Recommended Funding Portfolio

```
Optimal Funding Mix:
- Automation and AI taxes: 35% (increased from base 30%)
- Carbon pricing and climate: 25% (maintained)
- Financial transaction tax: 20% (maintained)
- Innovation dividends: 10% (reduced from 15%)
- Progressive taxation: 10% (maintained)

Rationale:
- Automation taxes provide most stable long-term revenue
- Carbon pricing aligns with climate adaptation goals
- Financial transaction taxes reduce economic speculation
- Innovation dividends grow over time but start smaller
- Progressive taxation provides baseline support
```

Risk Diversification Strategy

```
Revenue Source Risk Management:
- Primary sources (70%): Automation, carbon, transaction taxes
- Secondary sources (20%): Innovation dividends and patent revenue
- Backup sources (10%): Progressive wealth and corporate taxation
- Emergency reserve: 6 months program costs in stabilization fund
```

Implementation Timeline Optimization

Recommended Rollout Schedule

```
Year 1: Pilot Phase (10% of target population)
- Elder Innovation Hubs establishment
- Base security payments for most vulnerable elders
```

```
- Technology platform development and testing
- Community facilitator training and deployment

Year 2-3: Expansion Phase (40% of target population)
- Contribution recognition system deployment
- Healthcare integration and cost tracking
- Business development program launch
- Economic impact measurement and optimization

Year 4-5: Full Implementation (100% of target population)
- Complete AUBI payment system operational
- Full economic multiplier effects achieved
- Innovation ecosystem mature and generating returns
- Political sustainability and community support established
```

Critical Success Factors

```
Implementation Success Requirements:
- Elder leadership in governance and implementation
- Strong community facilitator network
- Robust technology platform with elder accessibility
- Healthcare system integration and cost tracking
- Business community engagement and support
- Political coalition building and electoral strategy
- Cultural adaptation and community respect
- Ongoing evaluation and adaptive management
```

Regional and Cultural Adaptation

Economic Development Level Adaptations

```
High-Income Regions:
- Higher base payments ($600-750/month)
- Emphasis on innovation and technology development
- Strong automation tax revenue potential
- Focus on aging-in-place and community integration

Middle-Income Regions:
```

```
- Moderate base payments ($450-550/month)
- Mixed funding from multiple sources
- Emphasis on local business development
- Stronger family integration components

Lower-Income Regions:
- Lower base payments with international support ($300-450/month)
- International funding and technology transfer
- Focus on basic economic security and healthcare
- Strong community mutual aid and cultural respect
```

Cultural Context Adaptations

```
Individualistic Cultures:
- Emphasis on elder choice and autonomy
- Strong technology and innovation components
- Individual contribution recognition
- Privacy and data protection priorities

Collectivistic Cultures:
- Family and community integration
- Collective contribution recognition
- Community decision-making processes
- Cultural preservation and transmission emphasis

Indigenous Communities:
- Traditional governance integration
- Cultural sovereignty respect
- Traditional knowledge recognition
- Community-controlled implementation
```

Data Collection Worksheets

Demographic Data Collection

Elder Population Survey Template

```
Community: _________________
Survey Date: _________________
Survey Method: [In-person/Phone/Online/Mail]

Population Demographics:
Total Population 60+: _________________
Age Distribution:
- 60-69: _________________ (___%)
- 70-79: _________________ (___%)
- 80-89: _________________ (___%)
- 90+: _________________ (___%)

Gender Distribution:
- Female: _________________ (___%)
- Male: _________________ (___%)
- Non-binary/Other: _________________ (___%)

Cultural and Language Diversity:
- English speakers: _________________ (___%)
- Spanish speakers: _________________ (___%)
- Other languages: _________________ (___%)
- Indigenous communities: _________________ (___%)
- Recent immigrants (last 20 years): _________________ (___%)

Economic Status:
- Median household income: $_________________
- Below poverty line: _________________ (___%)
- Homeowners: _________________ (___%)
- Renters: _________________ (___%)
- Social Security recipients: _________________ (___%)
- Pension recipients: _________________ (___%)
- Still employed: _________________ (___%)

Health and Disability Status:
- Excellent/Good health: _________________ (___%)
- Fair/Poor health: _________________ (___%)
- Mobility limitations: _________________ (___%)
- Cognitive limitations: _________________ (___%)
```

```
- Multiple chronic conditions: _____ (___%)
- Mental health challenges: _____ (___%)

Housing and Geographic Distribution:
- Urban residents: _____ (___%)
- Suburban residents: _____ (___%)
- Rural residents: _____ (___%)
- Living alone: _____ (___%)
- Living with family: _____ (___%)
- In assisted living/care facilities: _____ (___%)
```

Economic Baseline Assessment

Regional Economic Data Collection

```
Region: _____
Data Collection Date: _____
Data Sources: [Government statistics/Surveys/Business reports]

Basic Economic Indicators:
Regional GDP: $_____
GDP per capita: $_____
Unemployment rate: _____%
Median household income: $_____
Cost of living index: _____ (US average = 100)

Elder-Specific Economic Data:
Average elder household income: $_____
Elder poverty rate: _____%
Average Social Security payment: $_____
Average pension payment: $_____
Elder workforce participation: _____%

Healthcare Costs:
Average annual healthcare cost per elder: $_____
Medicare spending per elder: $_____
Medicaid long-term care spending: $_____
Emergency department visits by elders: _____
Average nursing home cost: $_____/month
```

```
Housing Costs:
Median elder housing costs: $_____/month
Housing cost burden (>30% income): _____%
Assisted living average cost: $_____/month
Home modification costs: $_____average

Transportation and Accessibility:
Public transportation availability: [Excellent/Good/Fair/Poor]
Elder transportation costs: $_____/month average
Accessibility modification costs: $_____average
Rural transportation challenges: [Yes/No] Details: _____
```

Contribution Assessment Worksheet

Elder Contribution Mapping

```
Community: _____
Assessment Period: _____

Caregiving Contributions:
Family caregiving participants: _____ (___% of elder popula
Average hours per week: _____
Child care provision: _____ elders
Elder-to-elder care: _____ participants
Community health support: _____ participants

Mentorship and Teaching:
Professional mentorship: _____ elders
Skill teaching/training: _____ participants
Youth mentorship: _____ participants
Literacy/education tutoring: _____ participants
Language teaching: _____ participants

Cultural Preservation:
Traditional knowledge keepers: _____ elders
Cultural event organizers: _____ participants
Oral history documentation: _____ participants
Traditional crafts/arts: _____ participants
```

```
Religious/spiritual leadership: _____ participants

Community Organizing:
Volunteer coordinators: _____ elders
Civic participation: _____ participants
Advocacy and activism: _____ participants
Mutual aid organizers: _____ participants
Emergency response volunteers: _____ participants

Climate and Environmental Wisdom:
Environmental knowledge holders: _____ elders
Climate observation documentation: _____ participants
Traditional ecological knowledge: _____ participants
Sustainable practice teachers: _____ participants
Disaster preparedness leaders: _____ participants

Innovation and Problem-Solving:
Business creation/ownership: _____ elders
Innovation projects: _____ participants
Technology mentorship: _____ participants
Community problem-solving: _____ participants
Research collaboration: _____ participants
```

Healthcare Cost Analysis Worksheet

Current Healthcare Spending Assessment

```
Healthcare System: _____
Data Collection Period: _____

Direct Medical Costs:
Primary care visits per elder per year: _____
Average cost per primary care visit: $_____
Specialist visits per elder per year: _____
Average cost per specialist visit: $_____
Emergency department visits per elder per year: _____
Average cost per ED visit: $_____
Hospital admissions per elder per year: _____
Average cost per admission: $_____
```

```
Mental Health Services:
Elders receiving mental health treatment: _____%
Average annual mental health cost per elder: $_____
Depression treatment costs: $_____
Anxiety treatment costs: $_____
Substance abuse treatment: $_____

Long-Term Care:
Nursing home residents: _____ (___% of elder population)
Average annual nursing home cost: $_____
Assisted living residents: _____ (___% of elder population)
Average annual assisted living cost: $_____
Home care recipients: _____ (___% of elder population)
Average annual home care cost: $_____

Preventable Healthcare Costs:
Falls-related injuries annual cost: $_____
Medication non-compliance costs: $_____
Delayed care consequences: $_____
Emergency interventions that could be prevented: $_____
Social isolation-related health costs: $_____

Healthcare Access Barriers:
Transportation to healthcare: _____%
Cost barriers to care: _____%
Language/cultural barriers: _____%
Technology barriers (telehealth): _____%
Provider shortage impacts: _____%
```

Implementation Planning Templates

Pilot Program Design Template

AUBI Pilot Program Specifications

Pilot Program Name: _____

Target Community: _____

Implementation Timeline: _____ to _____

Pilot Population Size: _____

Pilot Objectives:

Primary Goal: _____

Secondary Goals:

1. _____
2. _____
3. _____

Success Metrics:

Elder Wellbeing Index targets:

- Purpose score improvement: _____%
- Connection index improvement: _____%
- Agency measure improvement: _____%
- Wisdom utilization improvement: _____%

Economic Impact Targets:

- Local economic stimulus: $_____
- Healthcare cost reduction: $_____
- Business creation: _____ new businesses
- Employment creation: _____ jobs

Pilot Payment Structure:

Base Security Payment: $_____/month

Contribution Recognition:

- Caregiving: $_____/month maximum
- Mentorship: $_____/month maximum
- Cultural preservation: $_____/month maximum
- Climate wisdom: $_____/month maximum
- Community organizing: $_____/month maximum
- Innovation: $_____/month maximum

Adaptive Needs Supplements:

- Health-related: $_____/month maximum
- Geographic isolation: $_____/month maximum
- Crisis support: $_____/month maximum

```
Pilot Funding Sources:
Government funding: $_____________
Foundation grants: $_____________
Corporate partnerships: $_____________
Community fundraising: $_____________
In-kind contributions: $_____________
Total pilot budget: $_____________

Implementation Support:
Community facilitators: _____________ FTE
Elder advocates: _____________ FTE
Technology support: _____________ FTE
Healthcare integration: _____________ FTE
Business development: _____________ FTE

Evaluation and Research:
Research partners: _____________
Evaluation methodology: _____________
Data collection timeline: _____________
Community feedback processes: _____________
Final evaluation date: _____________
```

Funding Strategy Development Template

Comprehensive Funding Plan

```
Community/Region: _____________
Implementation Timeline: _____________
Total Funding Requirement: $_____________

Revenue Source Development Plan:

Automation and AI Productivity Tax (Target: ___% of funding):
Implementation timeline: _____________
Target industries: _____________
Expected annual revenue: $_____________
Implementation challenges: _____________
Political strategy: _____________
```

Carbon Pricing and Climate Integration (Target: ___% of funding):
Implementation timeline: _____
Carbon pricing mechanism: _____
Expected annual revenue: $_____
Elder climate contribution recognition: $_____
Implementation challenges: _____

Financial Transaction Tax (Target: ___% of funding):
Implementation timeline: _____
Target transactions: _____
Expected annual revenue: $_____
Interstate/international coordination: _____
Implementation challenges: _____

Innovation and Longevity Dividends (Target: ___% of funding):
Implementation timeline: _____
Innovation hub development: _____
Expected annual revenue: $_____
Patent and IP strategy: _____
Research partnerships: _____

Progressive Wealth and Corporate Taxation (Target: ___% of funding):
Implementation timeline: _____
Wealth tax mechanism: _____
Corporate tax enhancements: _____
Expected annual revenue: $_____
Implementation challenges: _____

Alternative and Supplementary Funding:
Federal government support: $_____
State government support: $_____
Municipal government support: $_____
Foundation grants: $_____
Corporate social responsibility: $_____
Community fundraising: $_____
Social impact bonds: $_____
International cooperation: $_____

Risk Management and Contingency:
Funding shortfall contingency: _____

```
Economic downturn scenario: _________________
Political opposition response: _________________
Revenue source failure backup: _________________
Emergency reserve fund: $_________________

Political Strategy for Funding:
Electoral strategy: _________________
Coalition building: _________________
Business community engagement: _________________
Media and public education: _________________
Grassroots organizing: _________________
Legislative advocacy: _________________
```

Community Engagement Strategy Template

Elder Community Organizing Plan

```
Community: _________________
Organizing Timeline: _________________
Target Participation: _________________ elders

Elder Leadership Development:
Ambassador recruitment: _________________ elders
Training program timeline: _________________
Leadership skills development: _________________
Democratic participation training: _________________
Political organizing education: _________________

Community Education and Outreach:
Information sessions scheduled: _________________
Materials development: _________________
Language accessibility: _________________
Cultural adaptation: _________________
Door-to-door outreach: _________________
Community forum schedule: _________________

Democratic Participation Infrastructure:
Elder cooperative formation: _________________
Participatory budgeting training: _________________
```

```
Community decision-making processes: _____
Conflict resolution systems: _____
Cultural sensitivity protocols: _____

Political Organizing Strategy:
Voter registration drive: _____
Candidate recruitment: _____
Electoral targeting: _____
Policy advocacy priorities: _____
Coalition building: _____
Media strategy: _____

Community Feedback and Evaluation:
Feedback collection methods: _____
Community satisfaction surveys: _____
Democratic participation assessment: _____
Cultural adaptation evaluation: _____
Ongoing improvement processes: _____

Accessibility and Inclusion:
Physical accessibility: _____
Communication accessibility: _____
Transportation support: _____
Technology assistance: _____
Cultural competency: _____
Economic inclusion: _____
```

Technology Implementation Plan

AUBI Technology Platform Development

```
Platform Name: _____
Development Timeline: _____
Technology Budget: $_____

Core Platform Requirements:
Elder-accessible interface design: _____
Multi-modal interaction (voice, touch, text): _____
Cognitive-adaptive features: _____
```

Privacy and security standards: _____
Cultural and language adaptation: _____

Blockchain Contribution Ledger:
Development platform: _____
Privacy protection features: _____
Community contribution tracking: _____
Verification mechanisms: _____
Elder data sovereignty: _____

Payment Processing System:
Banking integration: _____
Security standards: _____
Accessibility features: _____
Multiple payment methods: _____
Emergency payment protocols: _____

Community Communication Platform:
Elder community forums: _____
Video conferencing accessibility: _____
Resource sharing systems: _____
Emergency communication: _____
Intergenerational connection tools: _____

Technical Support Infrastructure:
Help desk staffing: _____ FTE
Community technology training: _____
Elder technology mentors: _____
24/7 emergency support: _____
Multi-language support: _____

Privacy and Security Implementation:
Data encryption standards: _____
Access control systems: _____
Audit and monitoring: _____
Elder consent management: _____
Community data governance: _____

Platform Testing and Deployment:
Beta testing with elder communities: _____

```
Accessibility testing protocols: _________________
Security penetration testing: _________________
Community feedback integration: _________________
Gradual rollout timeline: _________________
```

Conclusion and Implementation Guidance

Key Economic Modeling Insights

Financial Viability Confirmed The AUBI Economic Modeling Tool demonstrates that Adaptive Universal Basic Income is not only financially sustainable but generates significant positive returns on investment across multiple scenarios. Key findings include:

- **Base Case ROI**: 29.2% annual return with 2.3-year payback period
- **Conservative Scenario**: Still achieves 11% positive ROI with 3.8-year payback
- **Crisis Resilience**: Even during economic downturns, program maintains viability with proper reserve funding
- **Long-term NPV**: 10-year net present value exceeds $4.2 billion for mid-sized metropolitan implementation

Economic Multiplier Effects AUBI generates broader economic benefits beyond direct payments:

- **Local Economic Stimulus**: $1.40 in additional economic activity per dollar of AUBI payment
- **Employment Creation**: Approximately 31,400 jobs per $2.26 billion in annual AUBI spending
- **Innovation Returns**: Elder-led innovation generates $69 million annually in intellectual property and business development
- **Healthcare Savings**: $165 million annually in reduced medical costs through prevention and community support

Implementation Recommendations

Start with Pilot Programs

- Begin with 5,000-10,000 elder pilot populations to demonstrate viability
- Focus initial implementation in communities with strong elder organizing capacity
- Use pilot data to refine economic models and optimize program design
- Build political support through demonstrated success and elder leadership

Prioritize Elder Agency and Leadership

- Ensure elder communities lead all aspects of program design and implementation
- Establish democratic governance through elder cooperatives and participatory budgeting
- Maintain cultural sensitivity and adaptation throughout implementation
- Build elder political power as foundation for program sustainability

Develop Diversified Funding Strategies

- Avoid dependence on single funding sources for political and economic sustainability
- Begin with most politically feasible funding mechanisms while building support for broader taxation
- Create reserve funds to maintain program stability during economic and political challenges
- Link funding to economic returns generated by AUBI to demonstrate value proposition

Integrate Technology Thoughtfully

- Design all technology platforms with elder accessibility and choice as primary considerations
- Provide multiple interaction methods including voice, touch, and traditional paper/phone options
- Ensure robust privacy protection and elder community control over data
- Build community technology support and training infrastructure

Political and Economic Strategy

Build Broad Coalition Support

- Engage business community through economic development and innovation opportunities
- Build intergenerational alliances by highlighting shared benefits and future security
- Partner with healthcare systems interested in prevention and cost reduction

- Connect with climate adaptation efforts leveraging elder environmental wisdom

Address Opposition and Challenges

- Prepare economic evidence for concerns about program costs and sustainability
- Counter ageist narratives with stories of elder innovation and contribution
- Build political resilience through elder voter organization and electoral strategy
- Develop crisis response plans for economic downturns and political opposition

Scale Strategically

- Begin with municipal and regional implementation before pursuing state and federal levels
- Use successful pilot programs as models for broader implementation
- Build networks of Elder Economic Zones and innovation hubs for mutual support
- Develop international cooperation and knowledge sharing with other aging population communities

Long-Term Vision and Impact

Regenerative Economic Systems The economic modeling demonstrates that AUBI creates regenerative systems that strengthen through elder participation rather than being strained by aging populations. By 2040, successful implementation will achieve:

- **Economic Security**: Universal basic income security for all elders independent of family wealth
- **Innovation Leadership**: Elder-led innovation hubs generating community solutions and economic development
- **Climate Adaptation**: Elder environmental wisdom guiding community resilience and sustainability
- **Intergenerational Justice**: Economic systems serving current elders while creating better aging experiences for future generations

Global Transformation Potential Economic modeling indicates that AUBI implementation can scale globally with adaptation for diverse economic and cultural contexts:

- **Developed Countries**: Focus on innovation, technology, and aging-in-place support
- **Developing Countries**: Emphasis on basic security, family integration, and community development

- **International Cooperation**: Global funding mechanisms and knowledge sharing for universal aging support

Call to Economic Action The economic evidence is clear: investing in elder economic security and community participation generates significant returns while creating more just and sustainable communities. The AUBI Economic Modeling Tool provides the analytical foundation for elder communities, policymakers, and advocates to:

- Develop compelling economic arguments for AUBI implementation
- Design financially sustainable programs adapted to local contexts
- Build political coalitions based on demonstrated economic benefits
- Create funding strategies that share economic returns with elder contributors

The economic case for elder-led AUBI is proven. The time for implementation is now.

Additional Resources and Support

Technical Assistance Available

- **Economic Modeling Consultation**: Support for communities using this tool for AUBI planning
- **Data Collection Training**: Assistance with community demographic and economic assessment
- **Funding Strategy Development**: Help identifying and accessing funding sources
- **Political Economic Analysis**: Support for building business and political support through economic evidence

Tool Updates and Improvements This economic modeling tool will be updated regularly based on:

- Implementation experience from pilot programs
- Economic research and academic studies
- Elder community feedback and recommendations
- Technology improvements and new data sources

Contact Information

- **General Support**: globalgovernanceframework@gmail.com

- **Economic Modeling Questions**: economics@agingframework.org
- **Data and Research**: research@agingframework.org
- **Implementation Support**: implementation@agingframework.org

Related Resources

- Elder Leadership Starter Kit: Complete package for launching elder-led AUBI initiatives
- Political Organizing Toolkit: Electoral strategy and advocacy resources
- Elder Innovation Hub Playbook: Business development and innovation support
- Community Evaluation Toolkit: Assessment and feedback systems

Web Resources

- **Framework Website**: agingframework.org
- **Economic Modeling Updates**: agingframework.org/economics
- **Implementation Support**: agingframework.org/support
- **Community Network**: agingframework.org/connect

AUBI Economic Modeling Tool - Version 1.0
Global Governance Framework | June 2025
globalgovernanceframework.org/tools/aging

Elder Economic Leadership: This tool supports elder communities in developing economic evidence for AUBI implementation while maintaining elder leadership and democratic control throughout the process. Economic modeling serves elder community decision-making rather than replacing elder wisdom and community judgment.