BUILDING THE EVIDENCE BASE FOR WOMEN’S ENTREPRENEURSHIP IN THE ENERGY SECTOR (RA7)

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Lack of access to electricity
1 Billion
87% rural

Lack of access to clean cookstoves/fuels
3 Billion
77% rural
WOMEN’S ENGAGEMENT IN ENERGY SECTOR VALUE CHAINS

• Women represent over 40% of labor force worldwide, but only about 25% of energy sector employment with less than 5% of executive level positions (USAID 2017)

• Women hold 20-25% jobs in renewable energy, varying from 19-20% in Hydropower sector to 27% in Solar energy sector, again concentrated in lower level administration (IRENA 2018; IFC 2018; Solar Fdn 2017)

• Women are key decision-makers for HOUSEHOLD energy use, but energy industry is focused heavily on the INDUSTRY market

• Women are target market for clean cooking and fuels – selling/distributing cookstoves and fuels, repairs – but sector participation is LOW compared to men

IS WOMEN’S ENERGY ENTREPRENEURSHIP THE SOLUTION?
RESEARCH QUESTIONS

• INCREASED ENERGY ACCESS? – What is the evidence that women’s energy entrepreneurship is a viable way to increase access for underserved populations?

• BENEFITS FOR WOMEN? – What is the evidence that being an energy entrepreneur is good for women and their families?

• WHAT WORKS? – What current programs or business models demonstrate positive impact?

• WHAT IS MISSING? – What are the gaps in research and programs to adequately engage women in this sector?
SYSTEMATIC COMPARATIVE LITERATURE REVIEW
(Tsafnat et al. 2014; Tranfield, Denyer, & Smart 2003)

- Searched 15 databases
- With 15 pre-defined keywords
- For dates 1998-2018
- n=238 filtered from 12,474,493 results
- Excluded newspaper articles, blog posts, legislation, interviews, magazine articles
- Excluded terms such as “pregnant,” “overweight,” “consumption,” and “diet.”

Google Scholar; EconLit; Elsevier; JSTOR; Gender and Development; Science Direct; PubMed; Web of Science; Scopus; Research Papers in Economics (RePEc); PsycINFO; African Journals Online (AJOL); Eldis; Global Health; Psychology’s Feminist Voices

(gender OR women) and combinations of the following keywords: energy; clean energy; entrepreneurship; policy; small and medium (enterprise OR business) OR SME; financing. In total, 15 separate search terms were used: 1) (gender OR women) AND energy entrepreneur; 2) (gender OR women) AND energy; 3) (gender OR women) AND entrepreneurship; 4) (gender OR women) AND clean energy; 5) (gender OR women) AND clean energy entrepreneurship; 6) (gender OR women) AND entrepreneurship policy; 7) (gender OR women) AND energy policy; 8) (gender OR women) AND clean energy policy; 9) (gender OR women) AND (small and medium (enterprise OR business) OR SME); 10) (gender OR women) AND (small and medium (enterprise OR business) OR SME) AND energy; 11) (gender OR women) AND (small and medium (enterprise OR business) OR SME) AND clean energy; 12) (gender OR women) AND entrepreneurship AND financing; 13) (gender OR women) AND entrepreneurship AND financing; 14) (gender OR women) AND clean energy entrepreneurship AND financing; 15) (gender OR women) AND (small and medium (enterprise OR business) OR SME) AND energy AND financing.
Culture interacts with other factors at each level and across levels of analysis to influence individual choices, behaviors, and the allocation of key resources.
KEY FINDINGS

• Very little research on the role of women’s entrepreneurship (WE) in facilitating energy access for all (mostly prescriptive and descriptive, with little theoretical or methodological rigor)
  • Data from developed countries – focused on formal businesses
  • Data from developing countries – focused on the informal sector

• Need to draw EVIDENCE from larger literature on GENDER and ENTREPRENEURSHIP as well as from emerging literature on sustainability and entrepreneurship

• Women tend to start businesses with a stronger emphasis on social value compared to male peers, which has important implications for profitability, social and economic impact, and population patterns
<table>
<thead>
<tr>
<th>Level of Analysis</th>
<th>Key Factors for Entrepreneurship</th>
<th>Unique to Women</th>
<th>Unique to Energy</th>
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</thead>
<tbody>
<tr>
<td>Institutional/Policy</td>
<td>entrepreneurial culture, economic conditions, capital markets, taxes and banking regulations, pricing controls/incentives</td>
<td>gender culture, women's rights to property, political representation, employment incentives/protections, childcare/eldercare support</td>
<td>awareness/priority of energy solutions, energy supply, energy access/proximity, disaster relief, energy subsidies/incentives</td>
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<td>Social/Community</td>
<td>occupational prestige for entrepreneurship, entrepreneurial role models &amp; mentors, local markets and economies, political stability, local infrastructure (telecom, transport, banking &amp; investment), business networks &amp; associations, education and training programs, professional and commercial services</td>
<td>gender culture, security, women's unions, tolerance for domestic violence, acceptance of female leadership and business activity; women-focused mentoring/training programs</td>
<td>energy awareness; STEM education &amp; training; local energy stewardship</td>
</tr>
<tr>
<td>Business</td>
<td>industry/market sector (size, maturity, profitability), product/service, innovation, business age &amp; size, organizational goals &amp; strategy, business models, access to growth capital, labor supply, domain expertise, business advisors, training/mentoring, commercial and professional services</td>
<td>gender culture, acceptance of female leadership, social value creation, gender composition of occupation/industry/market, qualifications for financial access, access to social networks, women-only networks/programming, management skills/styles</td>
<td>energy awareness, energy occupational/industry market, capital-intensive industry; STEM expertise; product/service innovation</td>
</tr>
<tr>
<td>Household</td>
<td>occupational prestige for entrepreneurship, household income, organizational goals &amp; strategy, family size and support, urban/rural location, access to transportation, telecom, etc.</td>
<td>gender culture, household division of labor, household income, financial control &amp; bankability, property ownership norms, domestic violence, childcare/eldercare arrangements</td>
<td>energy use/awareness/access, technology needs or wants, decision-making</td>
</tr>
<tr>
<td>Individual</td>
<td>occupational prestige for entrepreneurship, education, skills, experience, gender, age, immigrant status, status within household, family role, time demands, alertness to opportunity, optimistic, fear of failure, confidence/agency (locus of control, self-efficacy)</td>
<td>gender culture, social dominance, access to education, carework burden, mobility, security, time poverty, perceptions, confidence, etc.</td>
<td>energy awareness, STEM education &amp; experience; status awareness</td>
</tr>
</tbody>
</table>
WOMEN’S ENGAGEMENT IN THE ENERGY SECTOR
A DIFFERENT PERSPECTIVE

1. Community-based self-help groups
2. Community cooperatives in energy businesses
3. Micro-energy entrepreneurs
4. Small and medium sized energy enterprises
5. High potential energy enterprises

Sales agents
Employees
INTER-SECTORAL INTERVENTIONS TO CATALYZE PROGRESS FOR ENERGY ACCESS

- One SIZE does NOT fit ALL
- Integrated interventions are more likely to succeed (that simultaneously address different aspects of the gender system)
- Need to be ‘Women-Focused’ offerings
  - Mobile-based financial services (eg pay for use models)
  - In kind support vs cash for business
  - Personalized coaching and mentoring, role models
  - Strengthen social networks
  - Address confidence, personal initiative, agency