

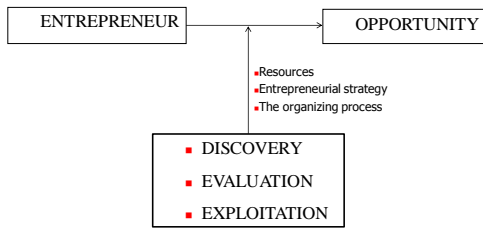
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Energy Matters for Business Development: E4D Entrepreneurial Aspects

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Entrepreneurship: What it is

- A process involving the nexus of the Individual entrepreneur & the entrepreneurial opportunity



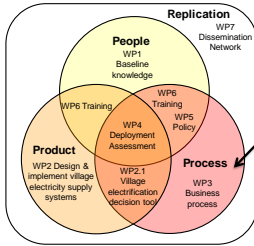
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Entrepreneurship: Why it Matters

- Wealth creation & poverty eradication
- Social & economic empowerment of communities
- Societal development

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Entrepreneurship in the E4D Project



Entrepreneurship

development of wealth-generating and socially beneficial business processes

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Entrepreneurial Aspects: Key Issues

- Revenue-generating models & innovations - to support the Energy Project Organization
 - Co-operative
- Business models to empower communities & villages
 - Micro-enterprises at the trading centre
- Lessons from rural energy projects for successful implementation and scaling up
 - Record of lessons learnt

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How does Energy facilitate Micro-Enterprises?

- New entrepreneurial opportunities partly due to technological changes
- Extension of working hours due to lighting
- Facilitation of production of goods by enabling the operation of activities that require electricity

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Entrepreneurial Aspects: Methodology

- Experimental setting: Deployment (Kitonyoni) & control (Mwania) villages
- Survey through face-to-face interviews with entrepreneurs at baseline (March – May 2011) & endline (June – August 2014)
- Questions on businesses incorporated in the household survey

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Impact of Electrification on Business Development

- Entrepreneurial Opportunities

Entrepreneurial Opportunities		Kitonyoni	Mwania	F test/T test p value
Firm > 2 years - wave 2	No	33	20	0.034
	Yes	14	22	
Number of business activities in 2012		1.46	1.37	0.59
Number of business activities in 2014		1.55	1.83	0.132
Number of extended hours of operation in the past 2 years		3.88	2.16	0.03

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Impact of Electrification on Businesses (1)

- Entrepreneurial Outcomes

Entrepreneurial Outcomes	Kitonyoni	Mwania	F test/T test p value
Daily income at wave 1	1474.444	721.6	0.366
Daily income at wave 2	2711.702	1000	0.004
Daily expenditure at wave 1	1255.556	528.6	0.295
Daily expenditure at wave 2	2235.106	513.095	0.002

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Impact of Electrification on Businesses (2)

■ Entrepreneurial Outcomes

Entrepreneurial Outcomes	Kitonyoni	Mwania	F test/T test p value
Daily profit at wave 1	343.704	193	0.351
Daily profit at wave 2	476.6	753.57	0.13
Customers from village (%) - wave 1	82.593	80.08	0.648
Customers from village (%) - wave 2	67.708	85.952	0
Self-rated performance - wave 2	3.184	3.473	0.058

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Implication of Electrification for Business Owners

- Growth of Kitonyoni trading centre – more businesses, more activities
- Extended hours of operation
- Increased income for Kitonyoni entrepreneurs
- More customers from outside the village

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Households: Difference-in-differences (1)

Outcome Variable	Control	Treated	Diff. in baseline	Control	Treated	Diff. in endline	Diff.-in-diff.
Basic concerns	1.378	1.409	0.031	1.303	1.271	-0.032	-0.062
p> t	0	0	0.494	0	0	0.495	0.335
Financial situation in the past three years (q5_3)	2.726	2.256	-0.47	3.162	3.28	0.118	0.588
p> t	0	0	0.000***	0	0	0.103	0.000***
Financial situation in the next 12 months	3.509	2.826	-0.683	3.684	3.773	0.089	0.772
p> t	0	0	0.000***	0	0	0.167	0.000***

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*** p<0.01; ** p<0.05; * p<0.1

Households: Difference-in-differences

Outcome Variable	Control	Treated	Difference in baseline	Control	Treated	Difference in endline	Difference-in-differences
Basic concerns	1.378	1.409	0.031	1.303	1.271	-0.032	-0.062
std. error	0.03	0.033	0.045	0.032	0.034	0.047	0.065
t	-0.96	-0.35	0.68	-0.86	-0.40	-0.68	-0.97
p > t	0	0	0.494	0	0	0.495	0.335
Financial situation in the past three years (q5_3)	2.726	2.256	-0.47	3.162	3.28	0.118	0.588
std. error	0.046	0.051	0.069	0.05	0.053	0.071	0.1
t	-8.79	-43.76	-6.8	-63.79	-62.1	1.63	5.88
p > t	0	0.000**	0	0	0	0.107	0.000**
Financial situation in the next 12 months	3.509	2.826	-0.683	3.684	3.773	0.089	0.772
std. error	0.041	0.045	0.061	0.044	0.047	0.065	0.089
t	-84.85	-62.62	-11.16	-83.33	-80.04	1.39	8.62
p > t	0	0.000**	0	0	0	0.167	0.000**
Household position on the social ladder	3.741	3.514	-0.227	3.81	4.037	0.227	0.454
std. error	0.069	0.076	0.103	0.073	0.078	0.107	0.149
t	-54.26	-45.79	-2.21	-51.87	-51.78	2.12	3.06
p > t	0	0.000**	0	0	0	0.033**	0.002**
Life-satisfaction	2.755	2.507	-0.247	3.49	3.643	0.152	0.4
std. error	0.044	0.049	0.066	0.047	0.051	0.069	0.096
t	-61.94	-50.82	-3.72	-73.71	-72.41	2.21	4.12
p > t	0	0.000**	0	0	0	0.028**	0.000**
Total income	1,108,484	9154,916	-1,608,403	1,005,104	9846,881	2,044,712	1206,203
std. error	630,285	700,623	843,076	671,789	714,199	880,479	1,060,165
t	17.03	13.07	-1.89	15.11	13.79	-0.31	0.95
p > t	0	0.000**	0	0	0	0.754	0.343

*** p<0.01 ** p<0.05 * p<0.1