YOUTH ENTREPRENEURSHIP IN SWAZILAND

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UNU-WIDER, Helsinki

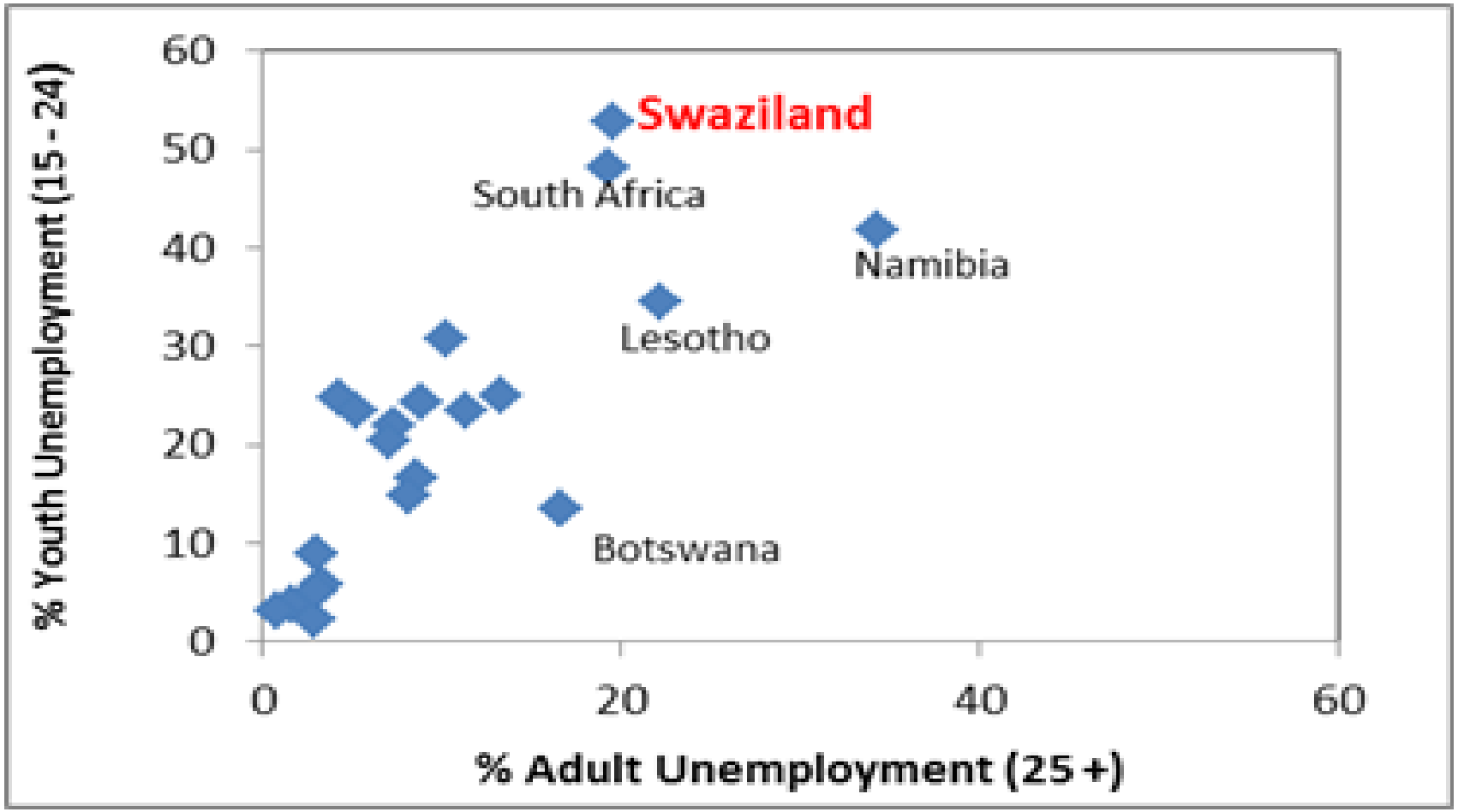
September 20, 2013

Outline of the Presentation

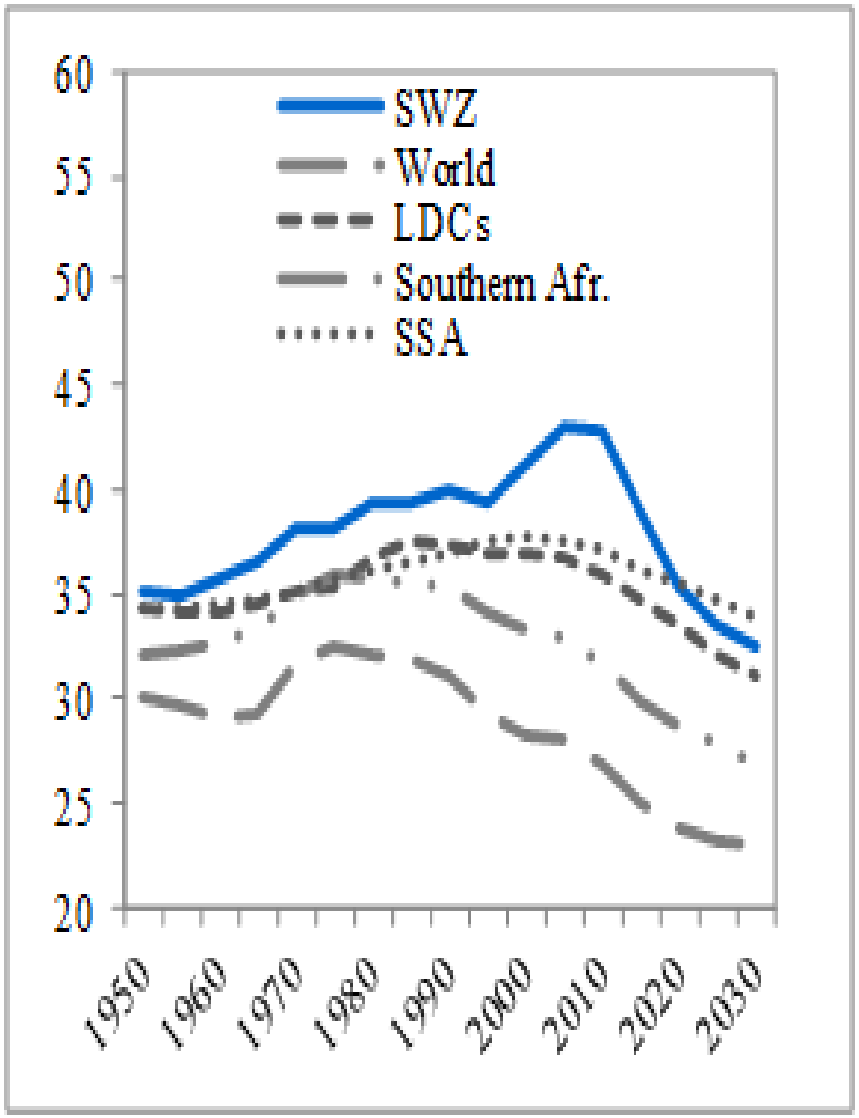
- Youth unemployment, obstacles to entrepreneurship in Africa
- Analytical framework
- Comparing the results with data from Swaziland
- Experiences of other countries with interventions

Youth and Adult Unemployment in Selected African Countries

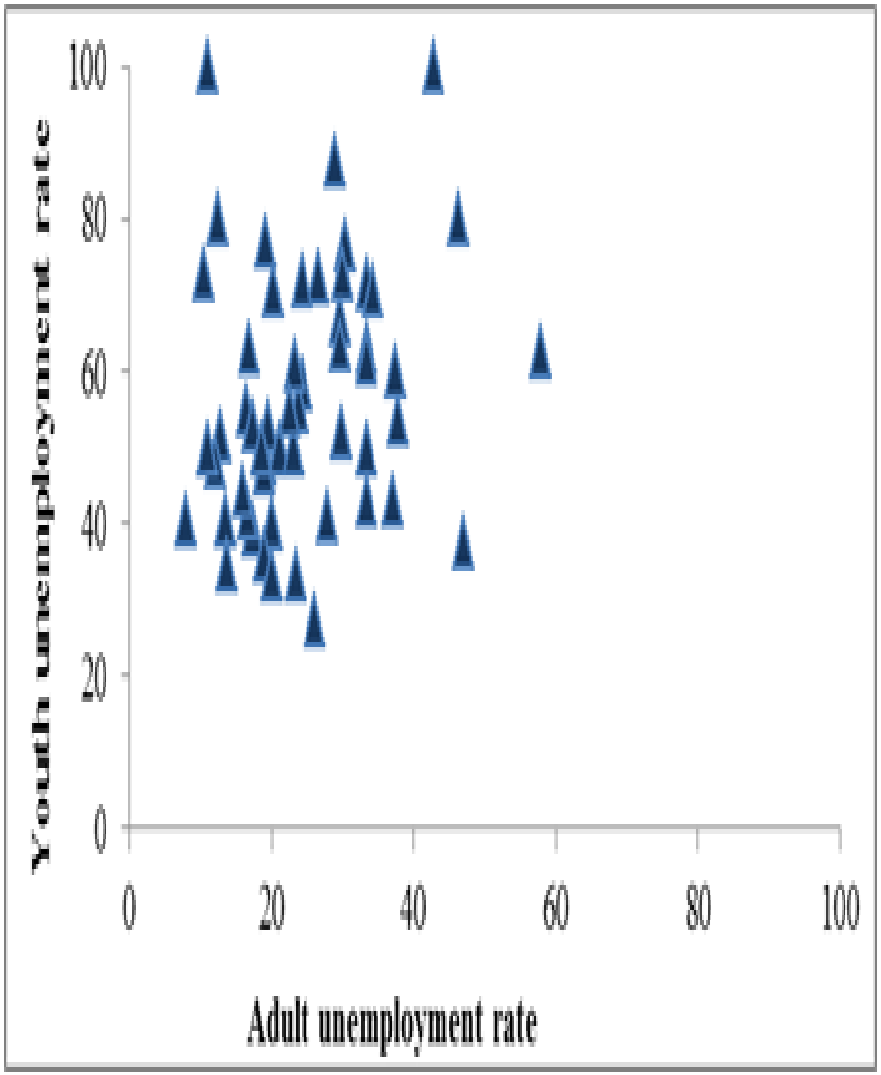
Source: African Economic Outlook 2012



Share of Youth in Working Age Population (%)



Unemployment by area (% of LF)

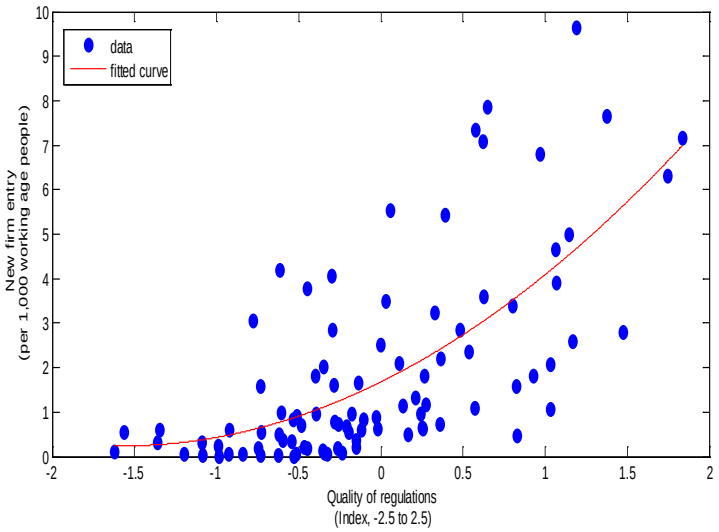


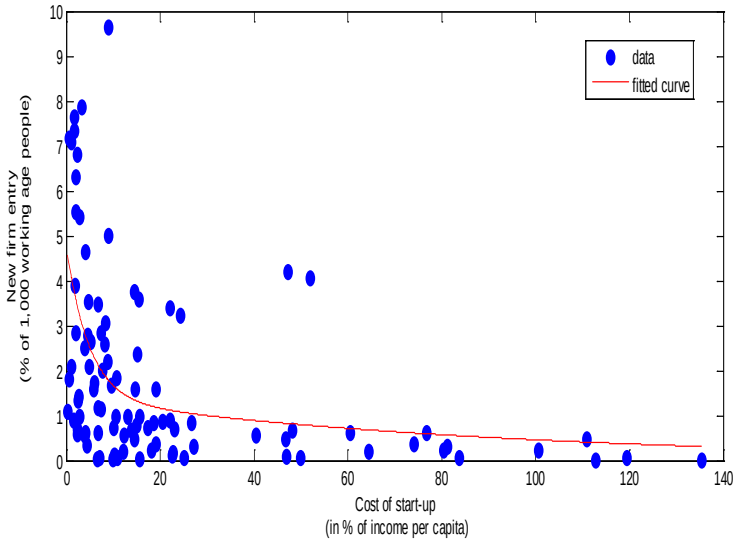
Constraints to Entrepreneurship in SSA

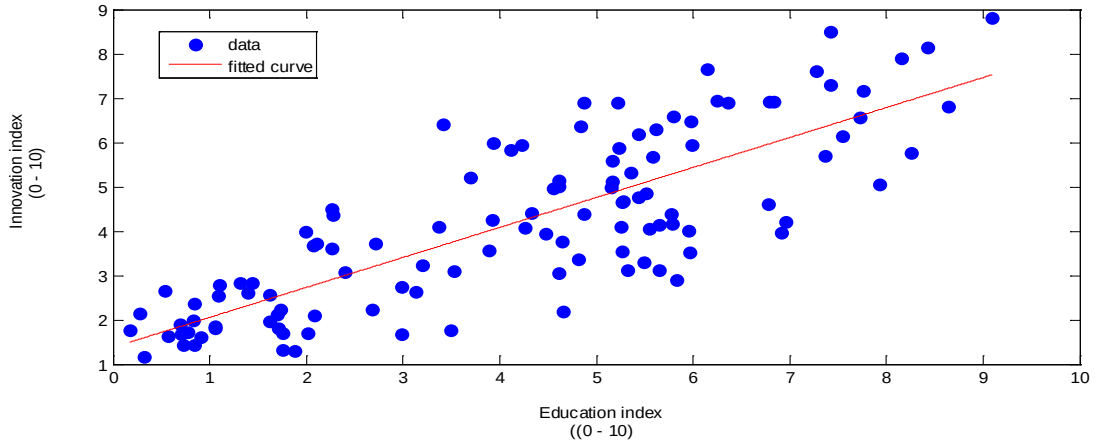
- After the global financial crisis, productive entrepreneurship is high on policy agenda as a potential driver of inclusive growth;
- Key questions: (i) what are some of the impediments to productive entrepreneurship and (ii) how can policies help overcome them?;
- According to the WB Enterprise Surveys, constraints on the side of firms -- infrastructure and the limited access to credit -- impede firms at the earlier (e.g., factor driven) stage of development;
- Constraints on the side of workers -- the lack of skilled labor, labor regulations -- are more binding in the later stages (e.g., at the efficiency-driven and the innovation-driven stage of development);

Factors impacting rate of start ups:

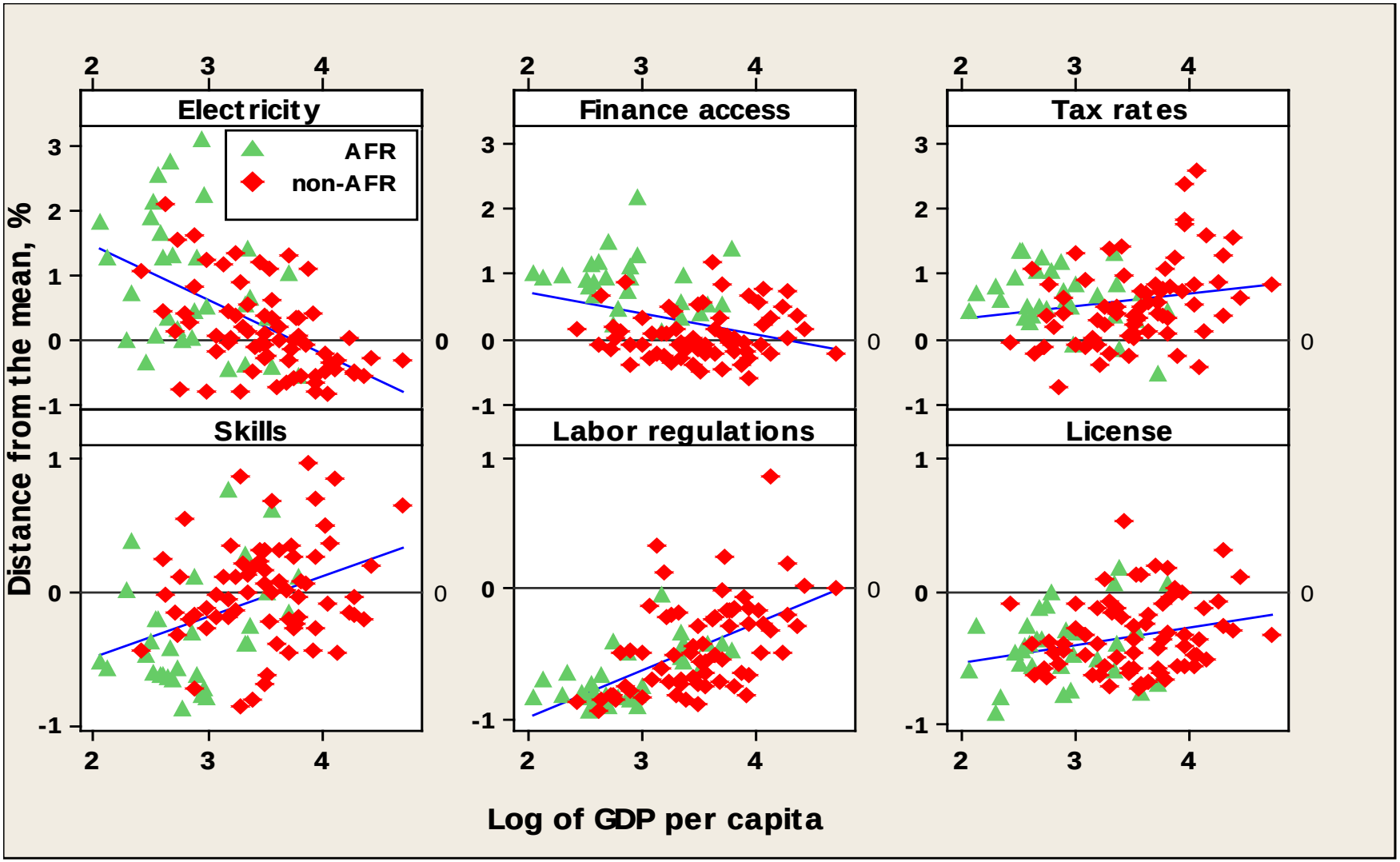
Regulations, Start-up Cost, Education/Innovation, 2004 - 2011







Relative Constraints on Firm Activities and the Level of Development, 2005-08



Constraints to youth entepreneurship

- The lack of involvement of youth in the economic activities;
- The need for changed societal attitudes to young people who are often underestimated;
- **The lack of start-up capital**; the limited access to finance;
- **The lack of skills** in identifying business opportunities and turning them into firms;
- Entrepreneurship training programsnot geared towards youth;
- Limited supportive infrastructure such as incubators for youth business ideas.

The Model – Set Up

a one-period economy with the population size normalized to one.

two types of agents, entrepreneurs and workers, with population shares μ and $1-\mu$, respectively

a portion *1-p* of both entrepreneurs and workers are adults and portion *p* are young people

All agents receive $\overline{w}$ amount of consumption good, *c*, from their domestic or informal sector production.

isk neutral preferences in consumption $E(c)$ where *E* denotes the expectations agents form at the beginning of the period about the income they will receive from their activities.

The Model – Set Up

At the beginning of the period, entrepreneurs search for opportunities to open firms and incur cost equal to $d(x_i) = x_i^2 / 2\gamma_i$, where $i = A,Y$ for adults and youth, respectively

γ is a search efficiency parameter that takes on two values: γ_Y for the young entrepreneurs (that is with probability *p*) and γ_A with probability *1-p*, where $\gamma_A > \gamma_Y > 0$

The search results in probability x_i , $i = A,Y$ of opening a business which then produces output *y* using n amount of labor as follows:

$$y = \frac{1}{1-\alpha} z^{\alpha} n^{1-\alpha}$$

With entrepreneurs paying workers a market-determined (competitive) wage w, each entrepreneur running a firm earns profit amounting to $\pi = \frac{1}{1-\alpha} z^{\alpha} n^{1-\alpha} - wn$.

The market clearing condition for entrepreneurs is $\mu = m + m_u$ where *m* denotes aggregate number entrepreneurs who run a business and m_u are entrepreneurs self-employed in the informal sector.

Entrepreneurs who do not find a business opportunity to open a business become self-employed in the informal sector and earn income *b*.

At the beginning of the period, workers acquire skills for the private sector at a cost of $k(q_i) = q_i^2 / 2\theta_i$, where $i = A,Y$ while θ again takes on two values: θ_Y for youth and θ_A with probability *1-p*, with $\theta_A > \theta_Y > 0$.

Workers' learning efforts result in probability q_i , $i = A,Y$ of obtaining skills and job in the private sector at wage w , which reflects their marginal product of labor.

Denoting N as the total labor working in the private sector n (e.g., $N = nm$), the market clearing condition is $1 - \mu = N + N_u$, where N_u are the unemployed

The entrepreneur of type $i = Y, A$, where Y denotes young and A denotes adult, solves:

max $E(c_i)$

s.t. $c_i \leq \overline{w} + x_i \pi + (1 - x_i) b - \frac{x_i^2}{2\gamma_i}$

Similarly, the worker of type $i = Y, A$ solves:

max $E(c_i)$

s.t. $c_i \leq \overline{w} + q_i w - \frac{q_i^2}{2\theta_i}$

Decentralized solution

$$\frac{\bar{x}}{\bar{\gamma}} = \pi - b = \frac{\alpha}{1-\alpha} z \left[\frac{(1-\mu)\bar{q}}{\mu \bar{x} z} \right]^{1-\alpha} - b$$

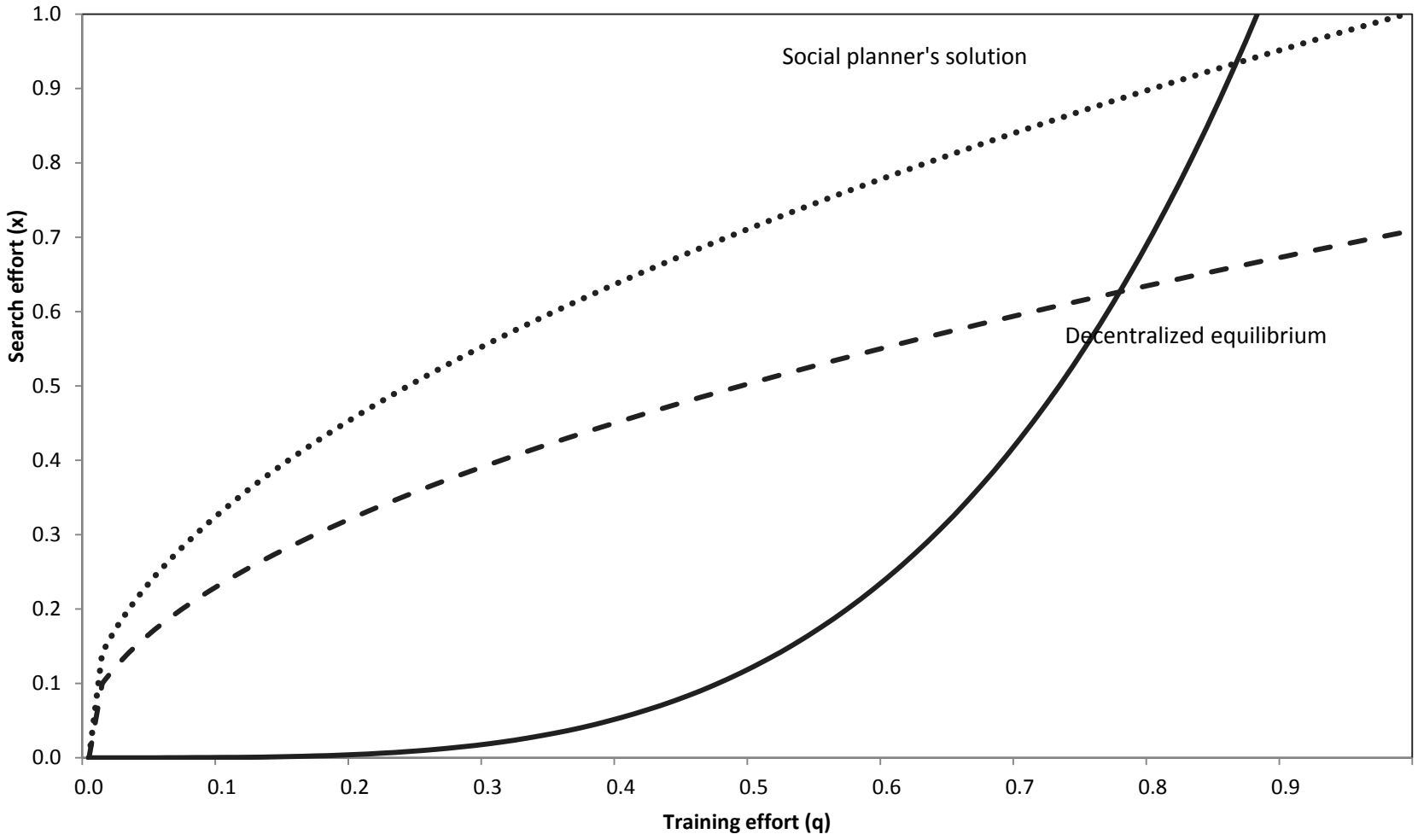
$$\frac{\bar{q}}{\bar{\theta}} = w = \left[\frac{\mu \bar{x} z}{(1-\mu)\bar{q}} \right]^{\alpha}$$

Optimal solution

$$\max \left(m \left[\frac{z^{\alpha}}{1-\alpha} \right] n^{1-\alpha} - \mu \frac{\bar{x}^2}{2\bar{\gamma}} - (1-\mu) \frac{\bar{q}^2}{2\bar{\theta}} \right)$$

s.t. $m = \mu \bar{x}$; $n = \frac{(1-\mu)\bar{q}}{\mu \bar{x}}$; $0 < \bar{x}, \bar{q} < 1$

Decentralized and social planner's solution



Policies towards entrepreneurship

Start-up subsidies

$$\max_{0<x_i<1}\left(\overline{w}+x_i\pi+(1-x_i)b-\frac{x_i^2}{2\gamma_i}+sx_i\right);\ i=Y,A$$

$$\frac{\overline{x}}{\overline{\gamma}}=(\pi-b)=\left\{\frac{\alpha}{1-\alpha}z\left[\frac{(1-\mu)\overline{q}}{\mu\overline{x}z}\right]^{1-\alpha}-(b-s)\right\}$$

$$s=b$$

Support for training

$$\max_{0<x_i<1}\left((\overline{w}-z)+x_i\pi+(1-x_i)b-\frac{(1-\sigma)x_i^2}{2\gamma_i}\right);\ i=Y,A$$

$$\frac{(1-\sigma)\overline{x}}{\overline{\gamma}}=(\pi-b)=\left\{\frac{\alpha}{1-\alpha}z\left[\frac{(1-\mu)\overline{q}}{\mu\overline{x}z}\right]^{1-\alpha}-b\right\}$$

$$\sigma=\overline{\gamma}b/\overline{x}$$

Equity considerations

When the government subsidizes search of adult entrepreneurs by the amount *b*, the equal search effort of young entrepreneurs would be achieved through subsidy to young entrepreneurs that exceeds *b*, $s_Y > b$, amounting to:

$$s_Y = b + \frac{\gamma_A - \gamma_Y}{\gamma_Y}$$

where $s_Y > s_A = b > 0$ since $\gamma_A > \gamma_Y$.

In the *government-sponsored entrepreneurial training*, youth should be prioritized for the training:

$$\frac{\gamma_Y}{\gamma_A} = \frac{1-\sigma_Y}{1-\sigma_A}$$

It follows from (11) that since $\gamma_A > \gamma_Y$, the government needs to sponsor training for young entrepreneurs more so that youth search efficiency rises more than that of adults: $\sigma_Y > \sigma_A$.

Optimal solution with social costs of (youth) unemployment

When the society experiences disutility from unemployment, the social planner's objective function then changes to:

$$\max\left(m\left[\frac{z^{\alpha}}{1-\alpha}\right]n^{1-\alpha} - \mu\frac{\bar{x}^2}{2\bar{\gamma}} - (1-\mu)\frac{\bar{q}^2}{2\bar{\theta}} - \frac{A}{2}(\mu-\mu x)^2 \right)$$

s.t. $m = \mu\bar{x}$; $n = \dfrac{(1-\mu)\bar{q}}{\mu\bar{x}}$; $0 < \bar{x}, \bar{q} < 1$

where $\dfrac{A}{2}m_u^2 = \dfrac{A}{2}(\mu-\mu x)^2$ is cost of unemployment; with m_u denoting entrepreneurs who did not find a productive business opportunity and are unemployed/in the informal sector. Solution is characterized by:

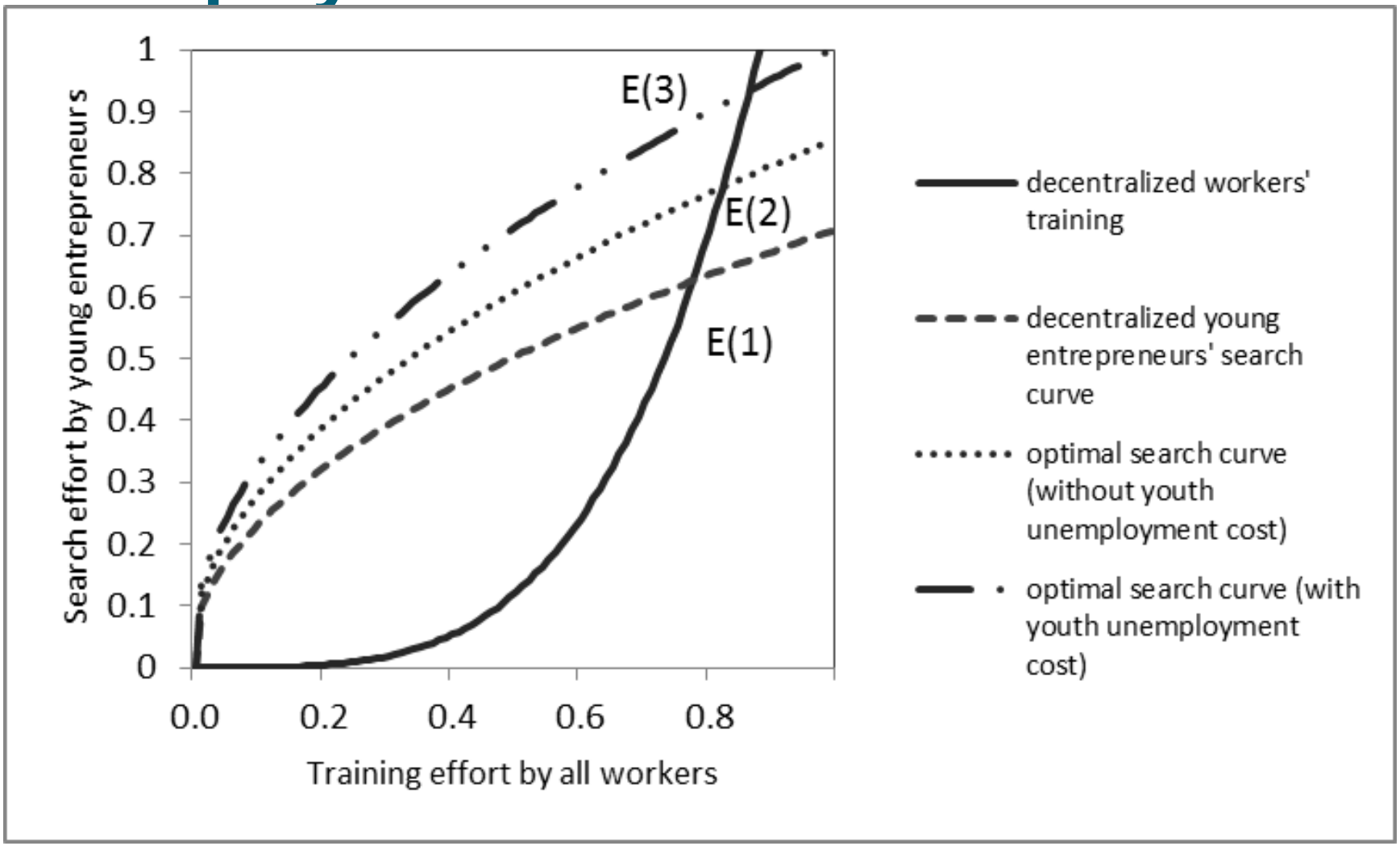
$$\frac{\alpha}{1-\alpha}z\left[\frac{(1-\mu)\bar{q}}{\mu\bar{x}z}\right]^{1-\alpha} = \frac{\bar{x}}{\bar{\gamma}} + A\mu^2(x-1)$$

When the society assigns social costs to youth unemployment only, problem becomes:

$$\max\left(m\left[\frac{z^{\alpha}}{1-\alpha}\right]n^{1-\alpha} - \mu\frac{\bar{x}^2}{2\bar{\gamma}} - (1-\mu)\frac{\bar{q}^2}{2\bar{\theta}} - \frac{A}{2}(\mu p-\mu p x_Y)^2 \right)$$

s.t. $m_Y = p\mu x_Y$; $m_A = (1-p)\mu x_A$ $n = \dfrac{(1-\mu)\bar{q}}{\mu\bar{x}}$; $0 < \bar{x}, \bar{q} < 1$; and $m = m_Y + m_A$

Optimal search with and without youth unemployment cost

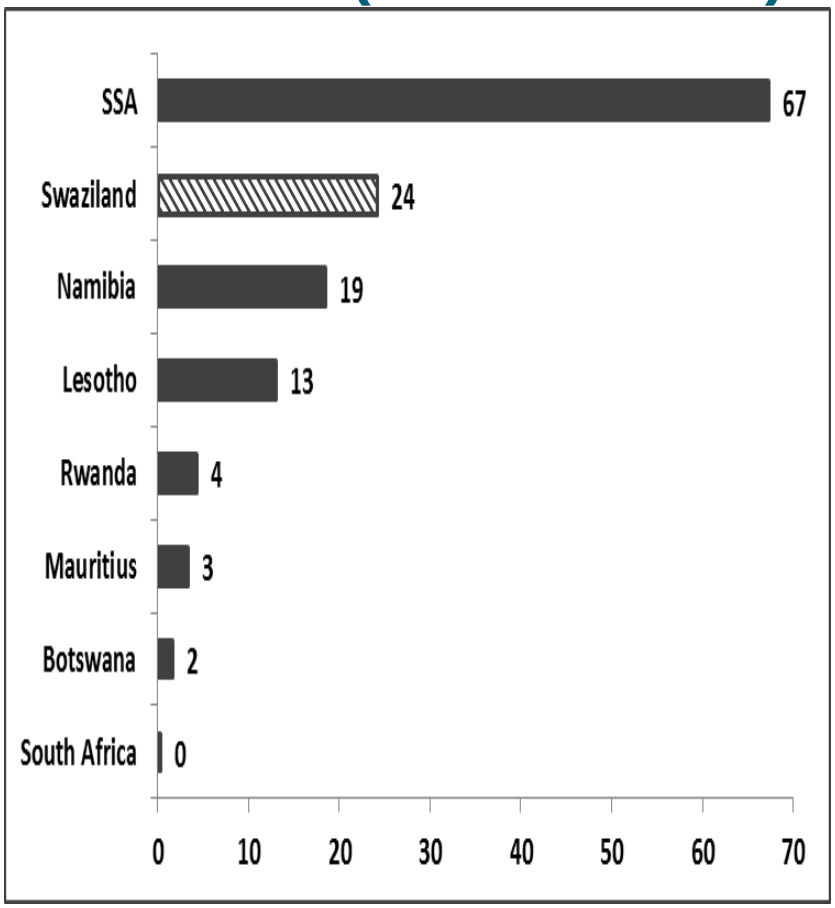


Underdeveloped private sector -- The size of the private sector in Swaziland and other SACU countries (1996-2008)

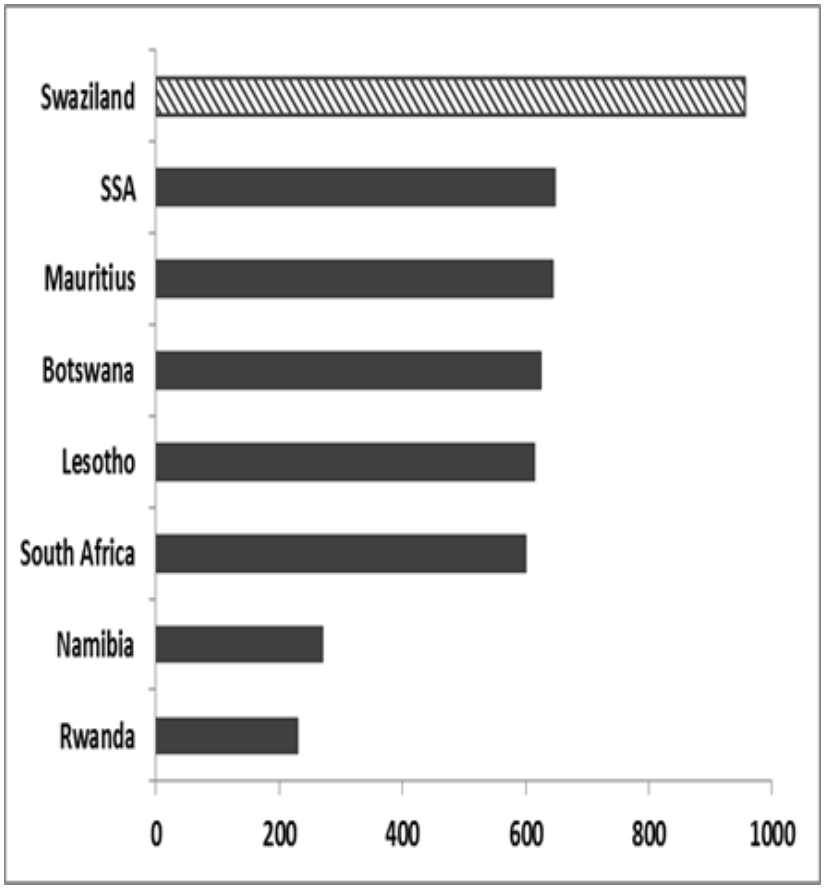
	Private Investment, 1996 - 2008		Change in Private Investment	Private Sector Credit
	% of Total Investment	% of GDP	% of Total Investment 1/	% of GDP, 1996 - 2008
Botswana	65	25	17	17
Lesotho	88	29	-1	25
Nambia	65	15	5	29
South Africa	71	12	-1	64
Swaziland	**61**	**10**	**-19**	**18**

Cost of doing businesses in Swaziland

Cost of Starting a Business (% of income)



Enforcing Contracts (days)



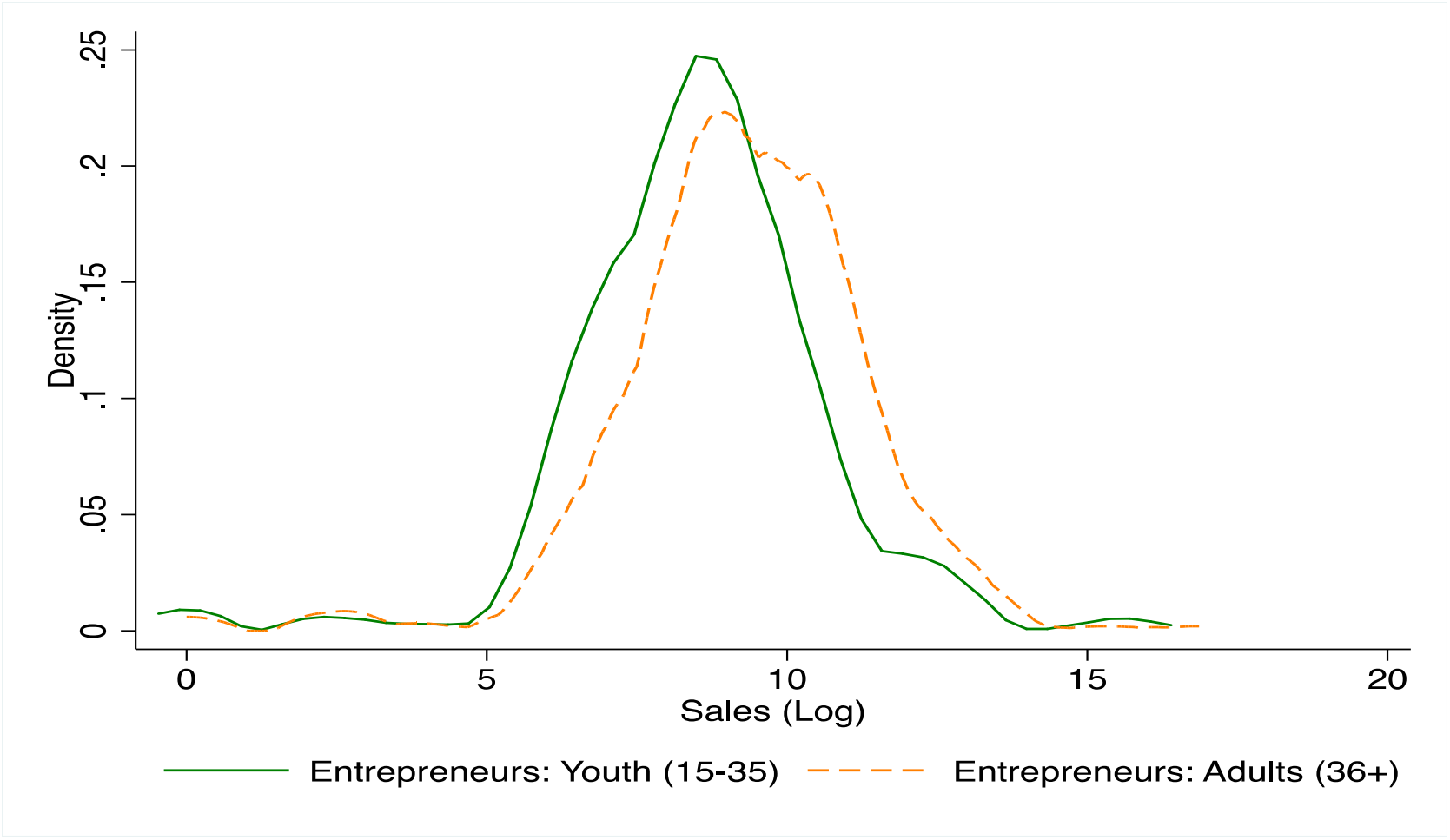
Differences in human capital

Education and business experience	**Young Entrepreneurs**	**Adult Entrepreneurs**	**SE**
Tertiary education	36.5	49.4	[0.0196] ***
Previously owned another business	7.7	16.8	[0.0123] ***
Previously employed	37.8	57.8	[0.0199] ***
Received business training	49.8	49.1	[0.0197] *
If yes, training received was useful	27.4	23.2	[1.600]
Owns only one business	87.6	80.4	[0.0302] ***
First business	92.3	83.2	[0.01481] ***

Differences in outcomes

	Young	Adult	SE and stat. sign.
Av. monthly sales in 2012 (E)	71,215	110,111	[0.01183] **
No. of months at full capacity in 2012	9.5	10.5	[0.1371] ***
Av. no of employees in 2012	2.0	2.7	[0.1494] ***

Kernel density estimate of sales in a regular month



International Experiences with Youth Entrepreneurship Support Programs

- *Project Baobab in Kenya* targeted low income youth in rural areas and provides them with basic business skills in entrepreneurship

- *Jua Kali Voucher Program in Kenya* was administered as a pilot program by the SME training and technology project in the late 1990s – early 2000s.

- *Self-employment program in Bulgaria* showed increases in employment for high-potential youth, that is highly educated and with short spells of unemployment.

- *Young micro entrepreneurs' qualification program in Peru* aimed to counteract significant skill shortages among youth entrepreneurs. The training focused on developing business plans

- *Youth promotion project in Bosnia and Herzegovina* raised attractiveness of agribusiness entrepreneurship and reduced

Lessons from international experiences

- The OECD (2012) study of youth entrepreneurship interventions in *Europe* emphasized support for high potential young entrepreneurs, in order to stimulate high and inclusive growth. The following lessons were emphasized:
- (i) importance of selectivity to ensure that youth with viable projects are supported;
- (ii) preference of more intense support per entrepreneur rather than spreading resources thinly; and
- (iii) integrated packages of support are more effective than a single instrument. However, the focus on high potential young entrepreneurs may exacerbate the disparities in income and human capital between different groups of youth.

- The importance of integrated service packages rather than isolated measures is a also key lesson
- Another lesson is that if start-up subsidies are involved, credible exit strategy needs to be developed and implemented.
- Moreover, training schemes are more effective when administered by the private sector, even though the government needs to provide incentives the existence of these programs in the first place

Thank you.