

Business Registration: Cost-Benefit Analysis

I. Project Assumptions

Please fill in the YELLOW BOXES with your assumptions.

<u>Project Budget</u>	<u>Fill in</u>
1. IFC project budget (excluding in-kind)	\$200,000
2. Project fee paid by government (client) to IFC	\$5,000
3. Hours spent by government employees on IFC project	100
4. Hourly wage for government official	\$5.25
5. Value of other resources allocated by government to IFC project	\$5,000
6. Project contribution paid by donors to IFC	\$200,000
7. Cash and in-kind expenditures incurred directly by donors	\$20,000
8. Start-up costs for implementation of new registration system	\$100,000

<u>Economic and Fiscal Data</u>	<u>Fill in</u>
1. Tax rate	10.00%
2. Discount rate	5.00%
3. Population	4,000,000
4. PPP conversion factor (WDI database)	0.380

<u>Profitability and Displacement</u>	<u>Fill in</u>
1. Avg annual profit of a formal firm, pre-tax	\$50,000
2. Average annual profit of an informal firm	\$25,000
3. Displacement rate	90%

<u>Registration Reforms</u>	<u>Fill in</u>
1. Pre-reform official registration fee (US\$)	\$87
2. Post-reform official registration fee (US\$)	\$80
3. Pre-reform calendar days to register	40
4. Post-reform calendar days to register	30
5. Pre-reform company administrative costs	\$100
6. Post-reform company administrative costs	\$90
7. Pre-reform government admin. costs	\$70
8. Post-reform government admin. costs	\$65

Based on the project assumptions that you entered above, the project is expected to result in the following changes:

Expected Changes and Calculations

1. Change in number of calendar days (pre- to post-reform)	10
2. Change in official registration fee (pre- to post-reform)	\$7
3. Change in company administrative costs (pre- to post-reform)	\$10
4. Change in government administrative costs (pre- to post-reform)	\$5
5. Average annual profit/365, formal company	\$137
6. Average annual profit/365, informal company	\$68
7. 1 - tax rate	90.00%

II. Projected Growth in Business Registration

Please fill in the YELLOW BOXES with your assumptions.

1. How many companies are formally registered this year (before reform)?	10,000				
2. What is the projected annual growth rate for new company registration over the next 5 years, <u>without reform</u> ?					
GROWTH RATES	<u>Year 1</u>	<u>Year 2</u>	<u>Year 3</u>	<u>Year 4</u>	<u>Year 5</u>
<u>WITHOUT REFORM</u> :	5.00%	5.00%	5.00%	5.00%	5.00%
3. What is the projected annual growth rate for new company registration over the next 5 years, <u>with reform</u> ?					
GROWTH RATES	<u>Year 1</u>	<u>Year 2</u>	<u>Year 3</u>	<u>Year 4</u>	<u>Year 5</u>
<u>WITH REFORM</u> :	6.00%	7.00%	6.00%	6.00%	5.00%

According to your projected growth rates, 2,763 firms are expected to register even without reform, and 618 firms are expected to register as a direct result of reform (i.e. they would not register "but for" the reform). This is shown in the following table:

	<u>Projected Newly Registered Companies by Year</u>						<u>Total New</u>
	<u>Baseline</u>	<u>Year 1</u>	<u>Year 2</u>	<u>Year 3</u>	<u>Year 4</u>	<u>Year 5</u>	<u>Co.</u>
Without reform	10,000	500	525	551	579	608	2,763
With reform	10,000	600	742	681	721	637	3,381
Additional registrants as a direct result of reform	0	100	217	129	143	29	618

2,763 companies are expected to register even without reform. What percentage of these firms do you think would have operated informally while waiting to be formally registered?	Would have operated informally while waiting	Would not have operated until registration	
	90.0%	10.0%	100.0%
618 additional companies are expected to register as a direct result of reform. What percentage of these firms do you think would have operated informally (as opposed to never operating at all)?	Would have operated informally	Would never have come into existence	
	95.0%	5.0%	100.0%

The following table provides a break down of the four types of companies that are expected to formally register each year after the reform has been implemented:

<u>Four Types of Newly Registered Companies</u>					
	<u>Year 1</u>	<u>Year 2</u>	<u>Year 3</u>	<u>Year 4</u>	<u>Year 5</u>
Would have registered and operated informally while waiting	450	473	496	521	547
Would have registered but not operated informally while waiting	50	53	55	58	61
Would never have come into existence	5	11	6	7	1
Would not have registered but would have operated informally	95	206	123	135	28

What percentage of newly registered companies are expected to fail within their first five years following registration?	50%
--	-----

Based on the failure rate that you entered, the following table shows the number of newly registered companies expected to survive:

50% divided over 5 years: 10% failure rate per year over 5 years

<u>Newly Registered Companies Expected to Survive (Cumulative)</u>					
	<u>Year 1</u>	<u>Year 2</u>	<u>Year 3</u>	<u>Year 4</u>	<u>Year 5</u>
Would have registered and operated informally while waiting	450	878	1,281	1,660	2,013
Would have registered but not operated informally while waiting	50	98	142	184	224
Would never have come into existence	5	15	20	25	24
Would not have registered but would have operated informally	95	292	384	477	449

III. Estimated Benefits and Costs

This section is automatically generated based on the assumptions that you entered above.

<u>BCA from Perspective of Newly Registered Companies</u>	<u>Year 1</u>	<u>Year 2</u>	<u>Year 3</u>	<u>Year 4</u>	<u>Year 5</u>	<u>NPV</u>
<u>Benefits</u>						
1. Additional after-tax profit						
(a) Companies that would have registered and operated informally while waiting	\$246,575	\$258,904	\$271,849	\$285,442	\$299,714	
(b) Companies that would have registered but not operated informally while waiting	61,644	64,726	67,962	71,360	74,928	
(c) Companies that never would have come into existence	225,000	690,750	910,283	1,130,584	1,064,343	
(d) Companies that would not have registered but would have operated informally	1,900,000	5,833,000	7,686,830	9,547,152	8,987,784	
Total additional after-tax profit	2,433,219	6,847,380	8,936,924	11,034,538	10,426,769	
2. Reduction in registration fees paid to government	3,500	3,675	3,859	4,052	4,254	
3. Reduction in administrative costs incurred by company	5,000	5,250	5,513	5,788	6,078	
<i>Sub-total Benefits</i>	\$2,441,719	\$6,856,305	\$8,946,295	\$11,044,378	\$10,437,101	
<i>NPV Benefits</i>	\$2,325,447	\$6,218,871	\$7,728,146	\$9,086,237	\$8,177,742	\$33,536,443
<u>Costs</u>						
1. Reg. fees paid to government (incurred by co.'s that would not have otherwise registered)	\$8,000	\$17,360	\$10,342	\$11,403	\$2,355	
2. Administrative costs (incurred by companies that would not have otherwise registered)	9,000	19,530	11,634	12,828	2,650	
<i>Sub-total Costs</i>	\$17,000	\$36,890	\$21,976	\$24,232	\$5,005	
<i>NPV Costs</i>	\$16,190	\$33,460	\$18,984	\$19,935	\$3,921	\$92,491
<u>Net Benefits</u>	\$2,424,719	\$6,819,415	\$8,924,319	\$11,020,147	\$10,432,096	
<u>Present Value</u>	\$2,309,256	\$6,185,411	\$7,709,163	\$9,066,302	\$8,173,820	\$33,443,952

<u>PRE-TAX PROFITS FOR NEWLY REGISTERED COMPANIES</u>	<u>Year 1</u>	<u>Year 2</u>	<u>Year 3</u>	<u>Year 4</u>	<u>Year 5</u>
Additional pre-tax profit for newly registered companies					
(a) Companies that would have registered and operated informally while waiting	\$616,438	\$647,260	\$679,623	\$713,604	\$749,285
(b) Companies that would have registered but not operated informally while waiting	68,493	71,918	75,514	79,289	83,254
(c) Companies that never would have come into existence	250,000	767,500	1,011,425	1,256,204	1,182,603
(d) Companies that would not have registered but would have operated informally	4,750,000	14,582,500	19,217,075	23,867,881	22,469,460
Total additional pre-tax profit	5,684,932	16,069,178	20,983,637	25,916,979	24,484,602
Reduction in pre-tax profit for already existing companies	5,116,438	14,462,260	18,885,273	23,325,281	22,036,142

<u>BCA from Perspective of Government</u>	<u>Year 0</u>	<u>Year 1</u>	<u>Year 2</u>	<u>Year 3</u>	<u>Year 4</u>	<u>Year 5</u>	<u>NPV</u>
<u>Benefits</u>							

1. Additional registration fees paid by registered companies to government	\$0	\$8,000	\$17,360	\$10,342	\$11,403	\$2,355	
2. Reduction in administrative costs paid by government	0	2,500	2,625	2,756	2,894	3,039	
3. Additional taxes paid by registered companies to government	0	56,849	160,692	209,836	259,170	244,846	
<i>Sub-total benefits</i>	\$0	\$67,349	\$180,677	\$222,934	\$273,467	\$250,240	
<i>NPV Benefits</i>		\$64,142	\$163,879	\$192,579	\$224,982	\$196,070	\$841,652
<u>Costs</u>							
1. Loss in registration fees (for co's that would have registered without reform)	\$0	\$3,500	\$3,675	\$3,859	\$4,052	\$4,254	
2. Admin. costs paid by government (for co's that would not have otherwise registered)	0	6,500	14,105	8,403	9,265	1,914	
3. Client cost-share (cash)	5,000	0	0	0	0	0	
4. Client cost-share (in-kind staff)	525	0	0	0	0	0	
5. Client cost-share (in-kind other)	5,000	0	0	0	0	0	
6. Start-up cost for implementation of new registration system	100,000	0	0	0	0	0	
<i>Sub-total Costs</i>	\$110,525	\$10,000	\$17,780	\$12,261	\$13,317	\$6,168	
<i>NPV Costs</i>	\$110,525	\$9,524	\$16,127	\$10,592	\$10,956	\$4,833	\$162,556
<u>Net Benefits</u>	-\$110,525	\$57,349	\$162,897	\$210,673	\$260,150	\$244,072	
<u>Present Value</u>	-\$110,525	\$54,618	\$147,752	\$181,987	\$214,026	\$191,237	\$679,096

<u>BCA from Perspective of Previously Registered Companies</u>	<u>Year 1</u>	<u>Year 2</u>	<u>Year 3</u>	<u>Year 4</u>	<u>Year 5</u>	<u>NPV</u>
<u>Benefits</u>						
1. None	\$0	\$0	\$0	\$0	\$0	
<i>Sub-total Benefits</i>	\$0	\$0	\$0	\$0	\$0	
<i>NPV Benefits</i>	\$0	\$0	\$0	\$0	\$0	\$0
<u>Costs</u>						
1. Reduction in after-tax profit	\$2,189,897	\$6,162,642	\$8,043,232	\$9,931,085	\$9,384,092	
<i>Sub-total Costs</i>	2,189,897	6,162,642	8,043,232	9,931,085	9,384,092	
<i>NPV Costs</i>	\$2,085,616	\$5,589,698	\$6,948,046	\$8,170,328	\$7,352,682	\$30,146,370
<u>Net Benefits</u>	-\$2,189,897	-\$6,162,642	-\$8,043,232	-\$9,931,085	-\$9,384,092	
<u>Present Value</u>	-\$2,085,616	-\$5,589,698	-\$6,948,046	-\$8,170,328	-\$7,352,682	-\$30,146,370

<u>BCA from Perspective of Consumers and Society</u>	<u>Year 1</u>	<u>Year 2</u>	<u>Year 3</u>	<u>Year 4</u>	<u>Year 5</u>	<u>NPV</u>
<u>Benefits</u>						
1. Increase in consumer surplus	Non-quantifiable, but positive assuming price reduction (from + competition)					
2. Reduction in social costs of corruption	Non-quantifiable, but likely to be positive					

<i>Sub-total Benefits</i>	Non-quantifiable, but likely to be positive					
<u>Costs</u>						
1. None	\$0	\$0	\$0	\$0	\$0	
<i>Sub-total Costs</i>	\$0	\$0	\$0	\$0	\$0	
<u>Net Benefits</u>	Non-quantifiable, but likely to be positive					
<u>Present Value</u>	Non-quantifiable, but likely to be positive					Unknown

<u>BCA from Perspective of IFC</u>	<u>Year 0</u>	<u>Year 1</u>	<u>Year 2</u>	<u>Year 3</u>	<u>Year 4</u>	<u>Year 5</u>	<u>NPV</u>
<u>Benefits</u>							
1. Improvement in IFC image	Non-quantifiable						
2. Client cost-share (cash)	5,000						
3. Donor cost-share (cash)	200,000						
<i>Sub-total Benefits</i>	\$205,000						
<i>NPV Benefits</i>	\$205,000						\$205,000
<u>Costs</u>							
1. IFC project expenditures	\$200,000						
<i>Sub-total Costs</i>	200,000						
<i>NPV Costs</i>	\$200,000						\$200,000
<u>Net Benefits</u>	\$5,000						
<u>Present Value</u>	\$5,000						\$5,000

<u>BCA from Perspective of Donors</u>	<u>Year 0</u>	<u>Year 1</u>	<u>Year 2</u>	<u>Year 3</u>	<u>Year 4</u>	<u>Year 5</u>	<u>NPV</u>
<u>Benefits</u>							
1. Improvement in image	Non-quantifiable						
<i>Sub-total Benefits</i>	Non-quantifiable						
<i>NPV Benefits</i>							\$0
<u>Costs</u>							
1. Donor cost-share (cash)	\$200,000						
2. Other donor project expenditures	20,000						
<i>Sub-total Costs</i>	\$220,000						
<i>NPV Costs</i>	\$220,000						\$220,000

<u>Net Benefits</u>	- \$220,000	
<u>Present Value</u>	- \$220,000	- \$220,000

Summary of Project Costs and Benefits	
<u>Affected Party</u>	<u>Net Benefit (Cost)</u>
Newly Registered Companies	\$33,443,952
Previously Registered Companies	-\$30,146,370
Companies, net	\$3,297,582
Government	\$679,096
Consumers and Society	Unknown
IFC	\$5,000
Donors	-\$220,000
NPV OF PROJECT	\$3,761,678
NPV OF PROJECT PER CAPITA	\$0.940
NPV OF PROJECT PER CAPITA, PPP-ADJUSTED	\$2.475
B/C RATIO	1.12
NET BENEFITS / IFC COSTS	752.34
NET BENEFITS PER CAPITA / IFC COSTS	0.0001881