



The World Bank Group  
DECRG

# Entrepreneurship and the Financial Crisis

An overview of the 2010 Entrepreneurship Snapshots (WBGES)

Presentation prepared by

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# 1

# Introduction & Methodology

## 1.1 Why a dataset on entrepreneurship?

- To meet the demand of governments and policymakers for:
  - *Diagnosis of private sector development and growth*
  - *Monitoring and evaluation of policy reforms*
  - *Data to motivate reforms to increase participation in the formal sector*



Baseline information for predicting the impact of business registration reforms

- To evaluate the impact of macroeconomic and financial shocks on new firm registration

## 1.2 What is Measured?

- What is Entrepreneurship?

*The activities of an individual or a group aimed at carrying out commercial activities in the formal sector under a legal form of business*

- Unit of Measurement

*Private companies with limited liability.* Notably, this is the same definition used by the World Bank's Doing Business report. It is also the most prevalent business form in most economies around the world (Doing Business, 2010).

- Variable of interest

*Entry Density*, calculated as the number of newly registered limited-liability firms in the corresponding year as a percentage of the country's working age population (ages 15-65), normalized by 1,000.

## 1.3 Survey & Methodology

### Survey:

- Number of newly registered limited liability firms, by year
- Questions about registration process
- Translated into four languages (English, Spanish, French, Russian)

### Methodology & Data:

- Sent directly to data sources by email and fax
- Follow-up phone calls
- Data checking from outside sources, previous versions of WBGES
- Sent to over 150 countries and received 125 responses
- Comparable data for 112 countries

## Business Registries

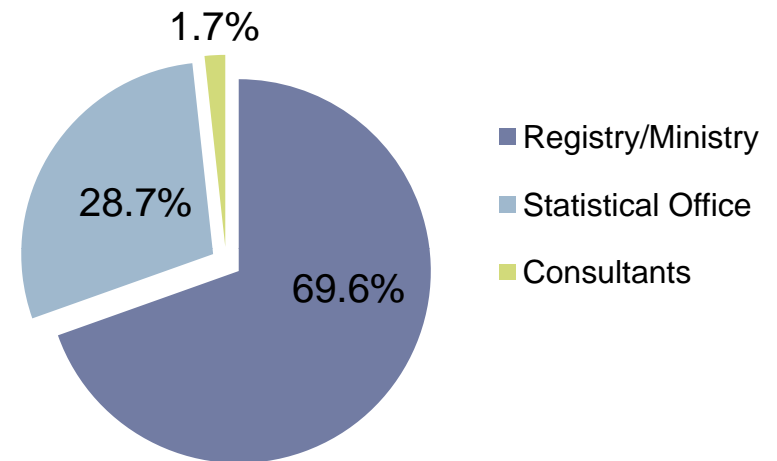
### Reasons

- Documents entry into the formal sector
- Information source for other government agencies

### Challenges

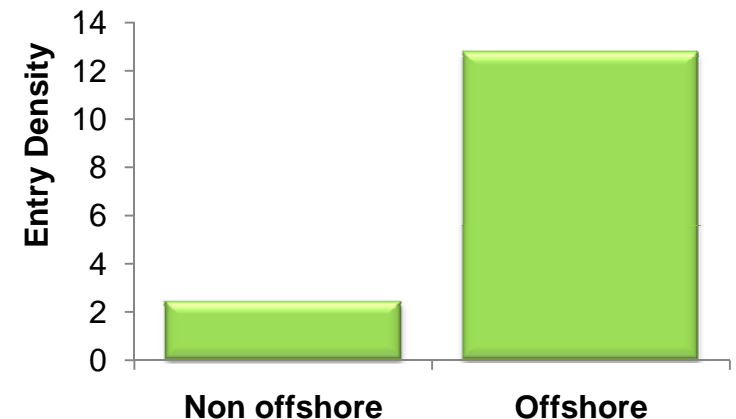
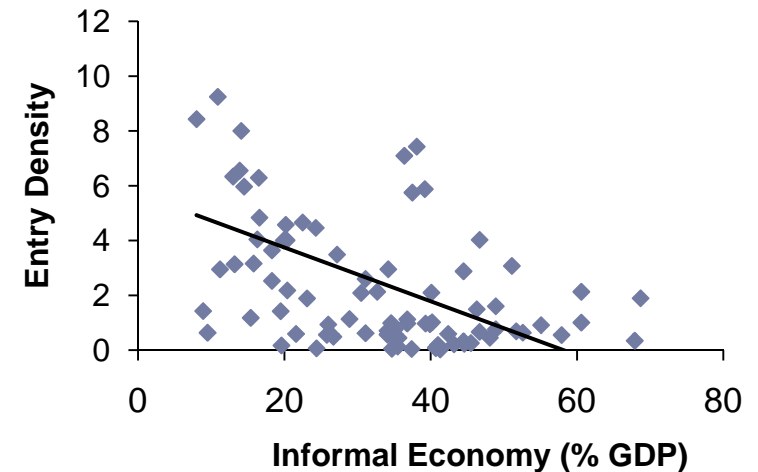
- Different registration and annual filing requirements
- Available legal forms
- Identification of exited firms
- Re-registrations
- Paper-based registries
- Decentralized registry systems

Data Sources



## Final Data Excludes:

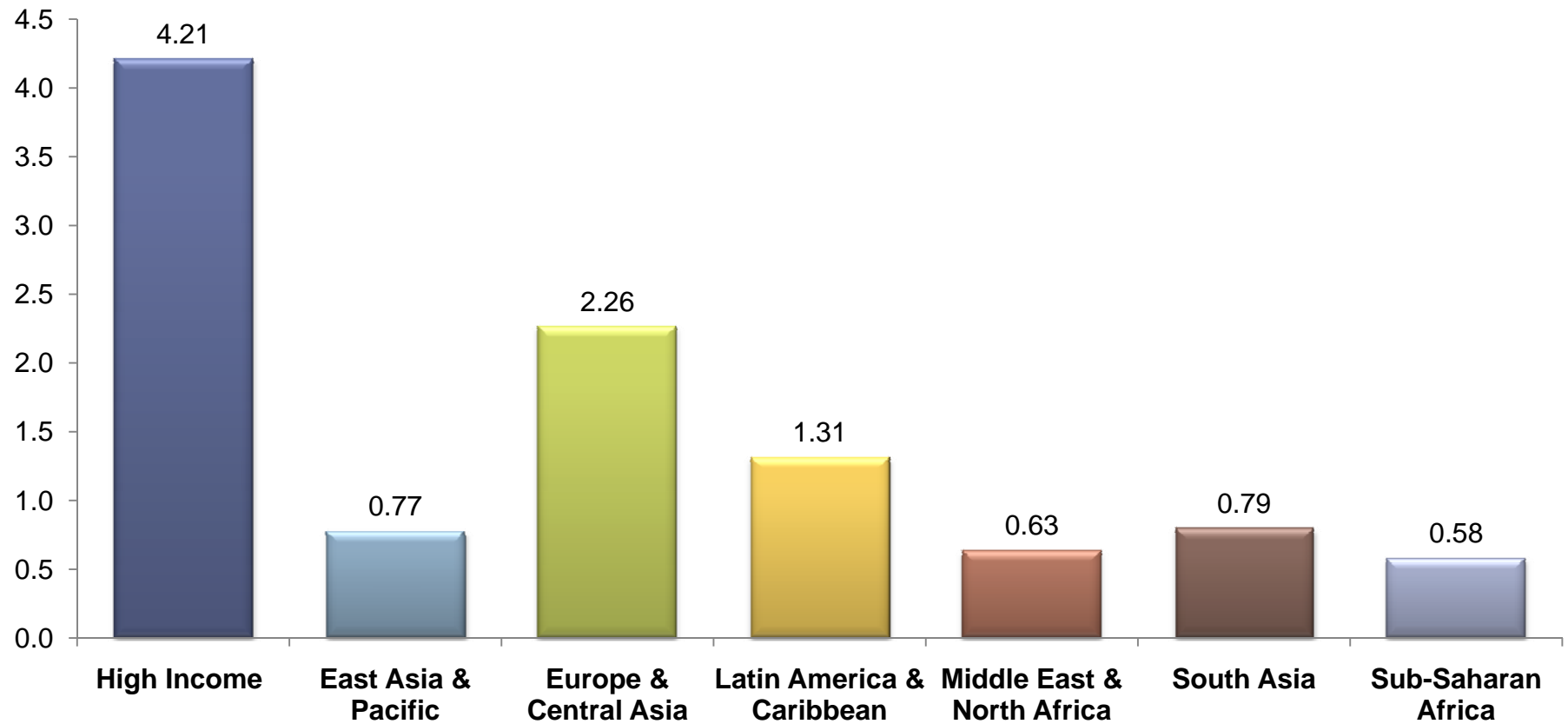
- **Informal Sector**  
*Data not gathered, despite relevance →*
- **Sole proprietorships, partnerships**  
*Data not gathered, not uniform across countries*
- **Measures of active & closed firms**  
*Data gathered but excluded because of reliability issues due to different definitions / procedures*
- **Countries classified as offshore financial centers by the IMF**  
*Data gathered but excluded because some firms not representative of entrepreneurship →*



# 2

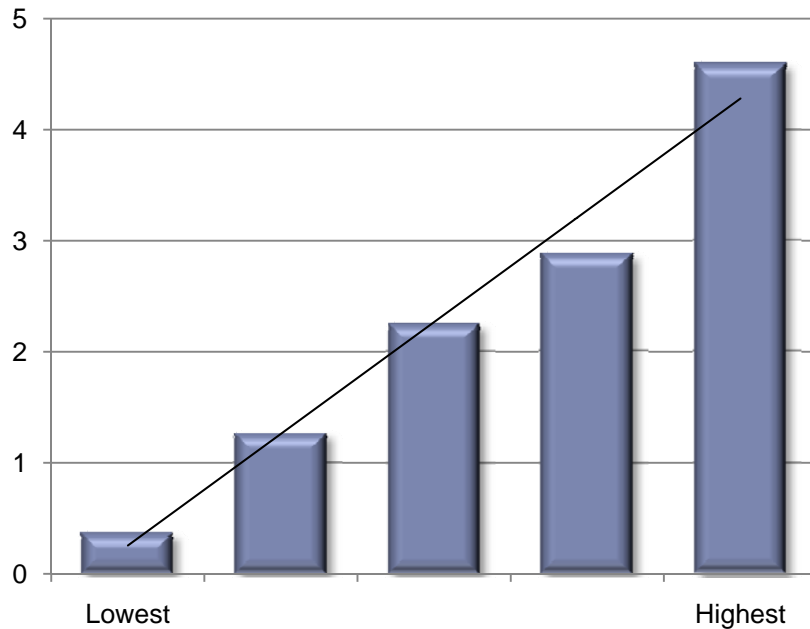
## Summary Statistics

## 2.2 Summary Statistics, by region, 2004-2009 averages



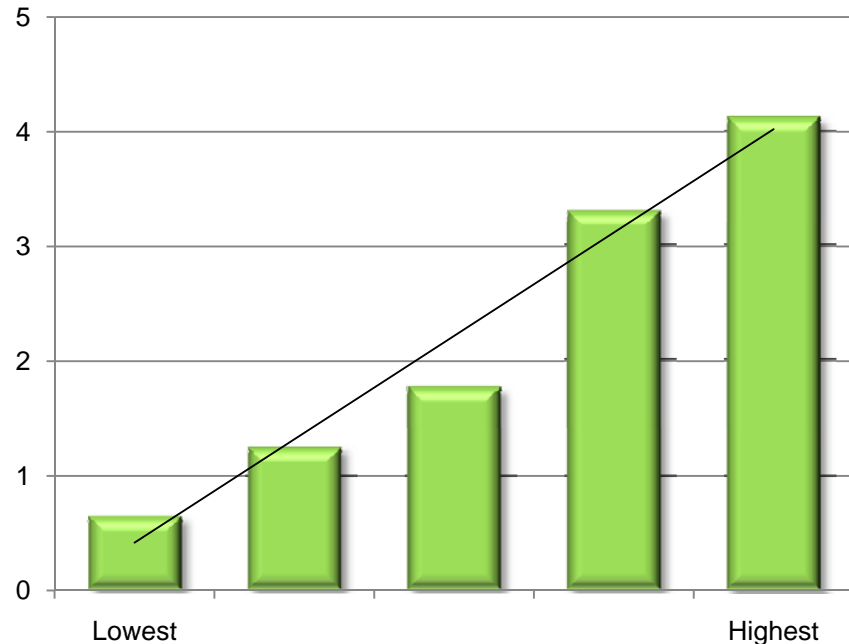
### Entry Density, GDP per capita, and Financial Development

Entry density



Economies ranked by GDP per capita (2000 US\$), quintiles

Entry density



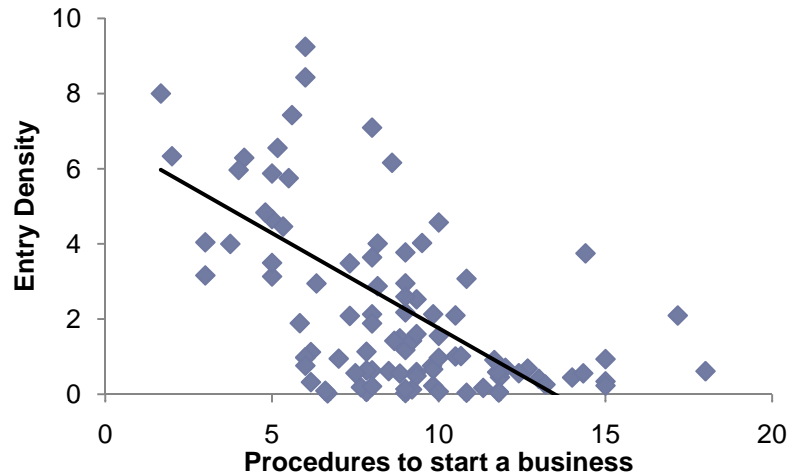
Economies ranked by financial development (measured by domestic credit as % of GDP), quintiles

# 3

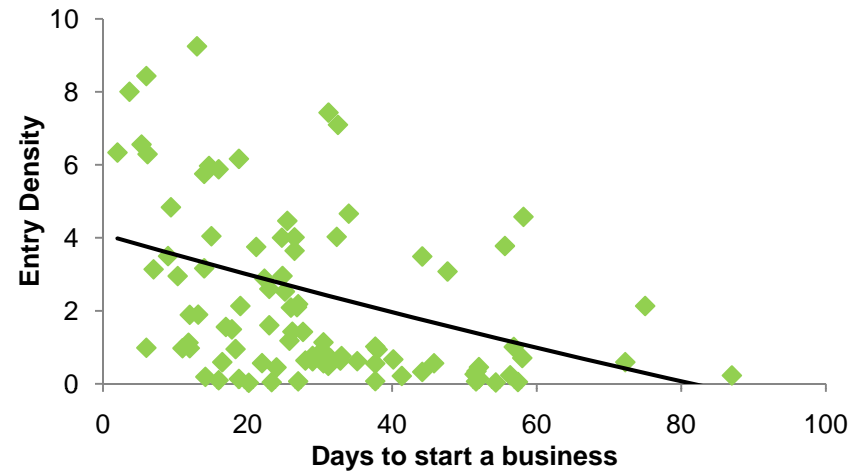
## Registration, Reforms, and the Business Environment

# 3.2 Ease of Starting a Business

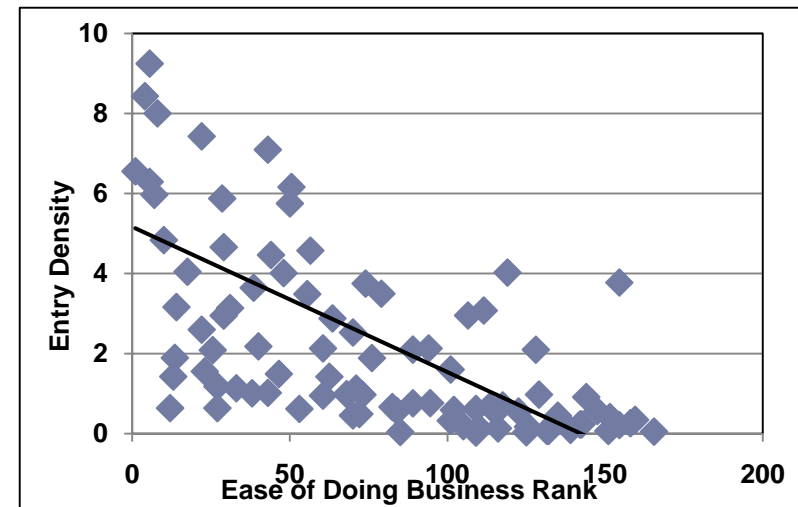
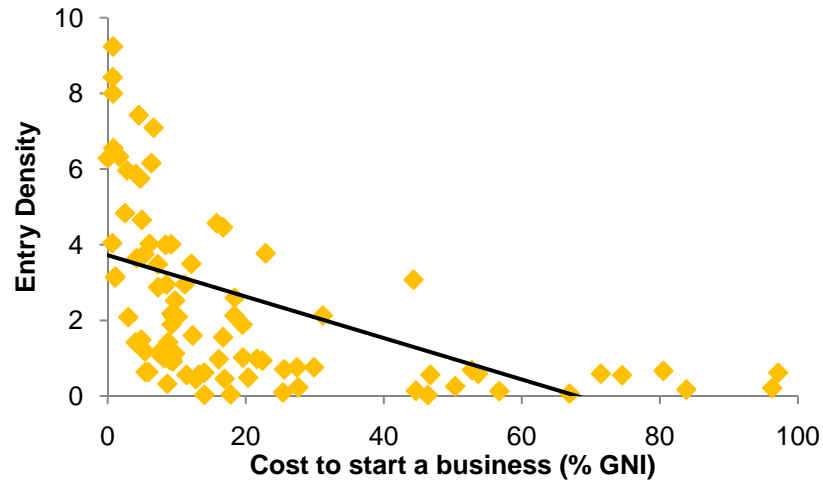
**Panel A: Number of Procedures**



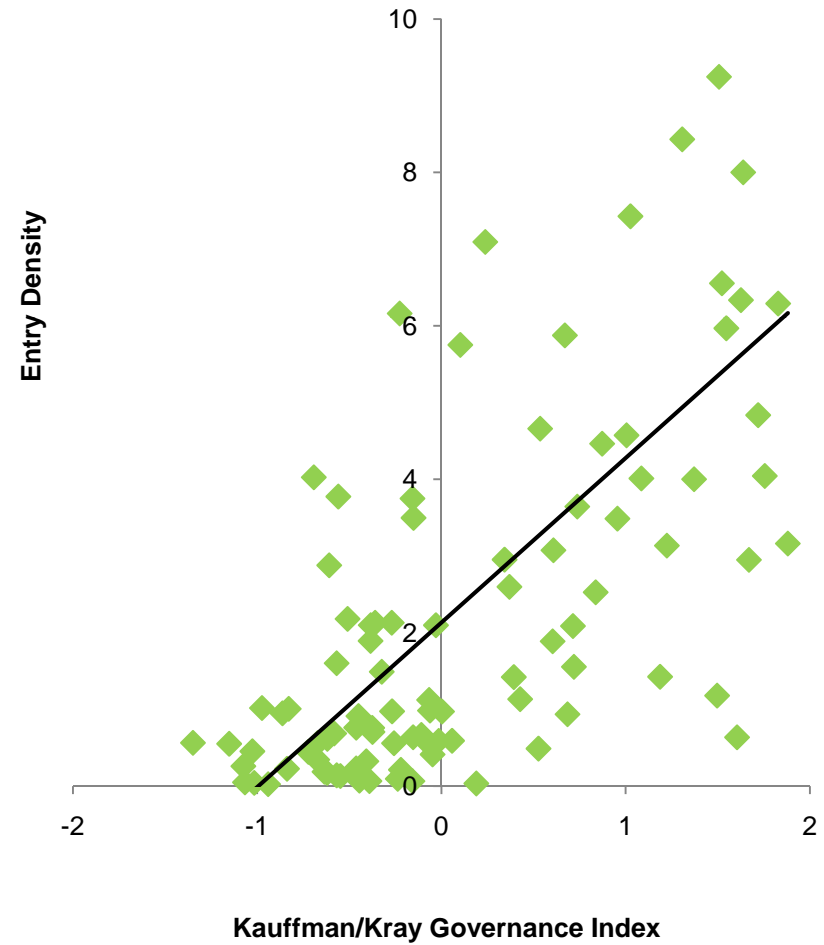
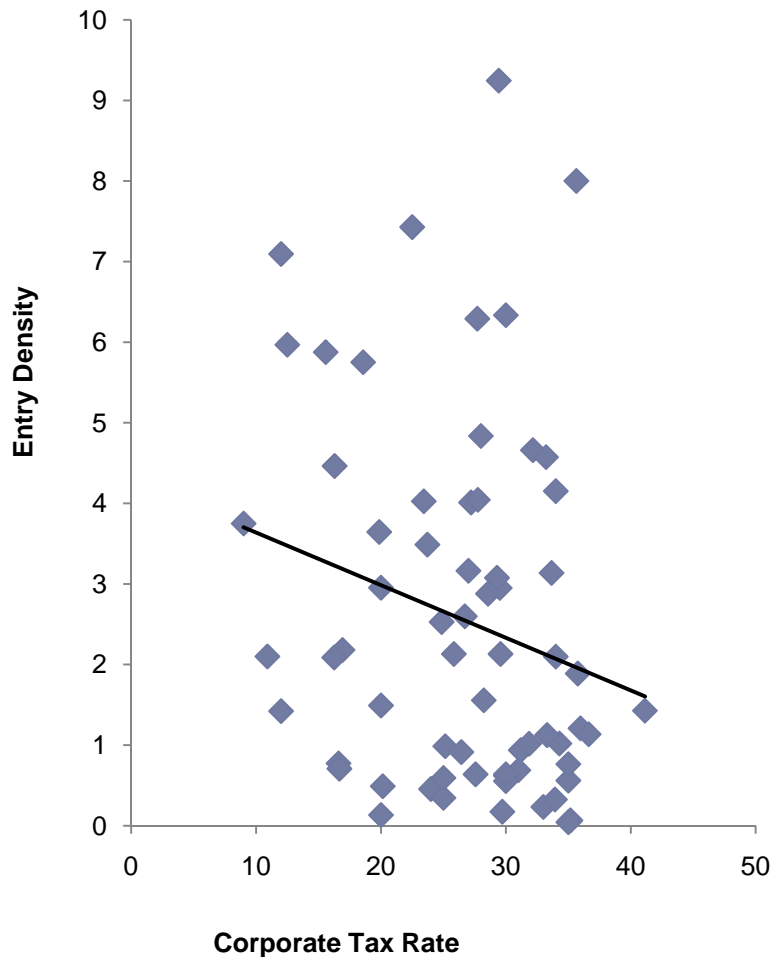
**Panel B: Time (in days)**



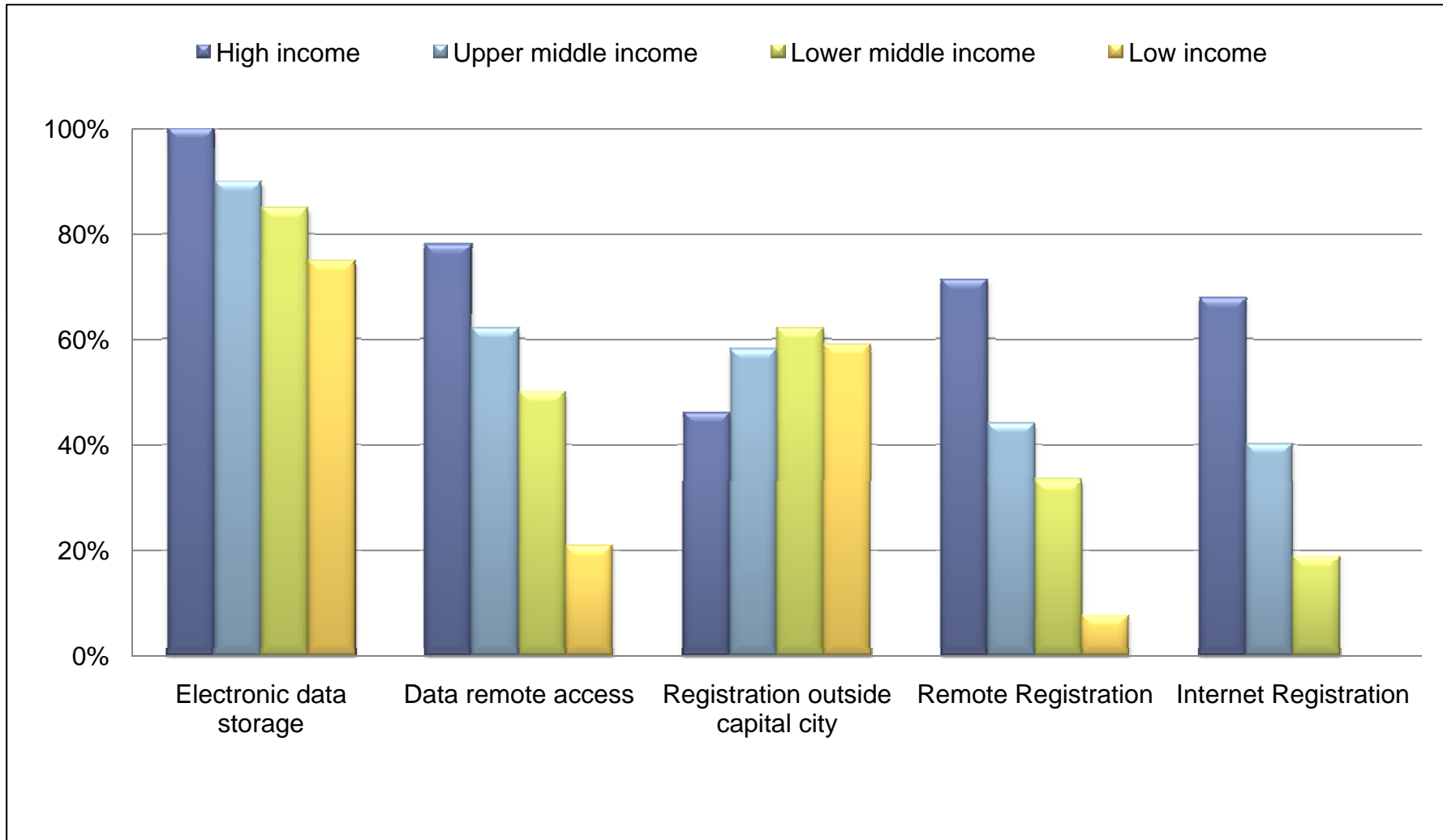
**Panel C: Cost of starting a business**



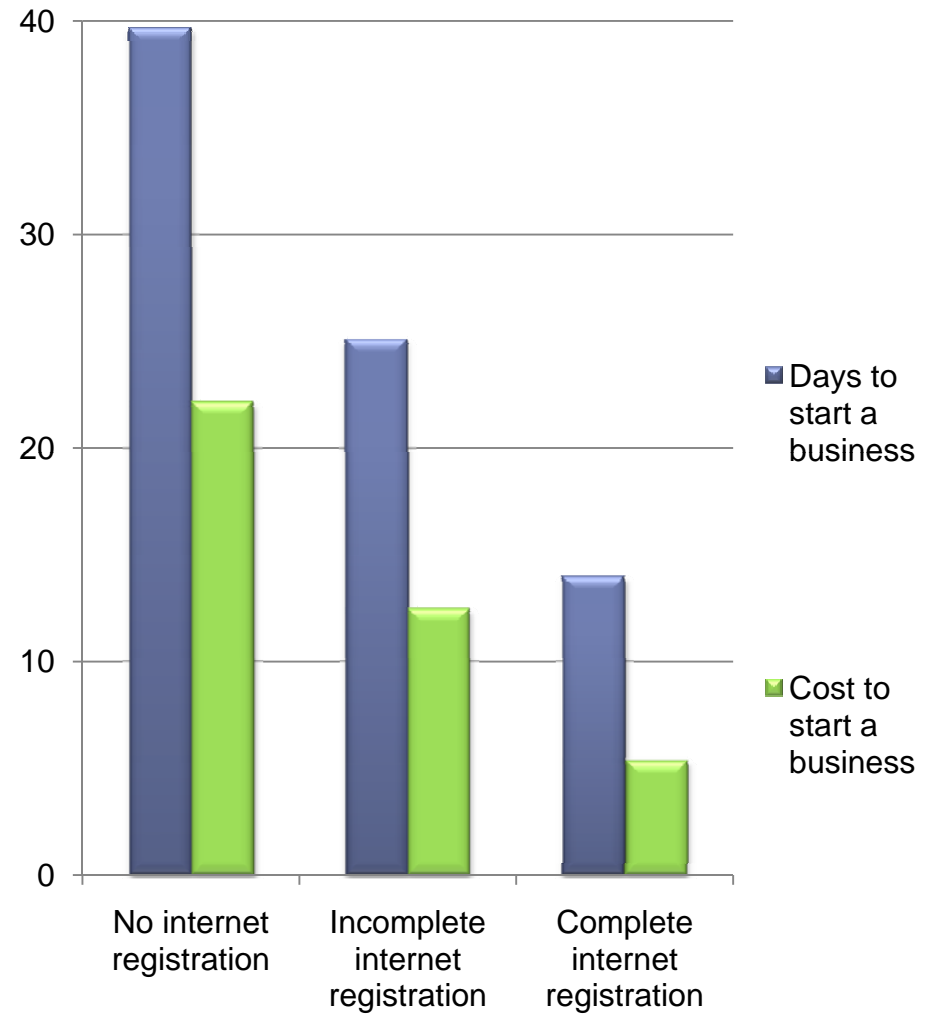
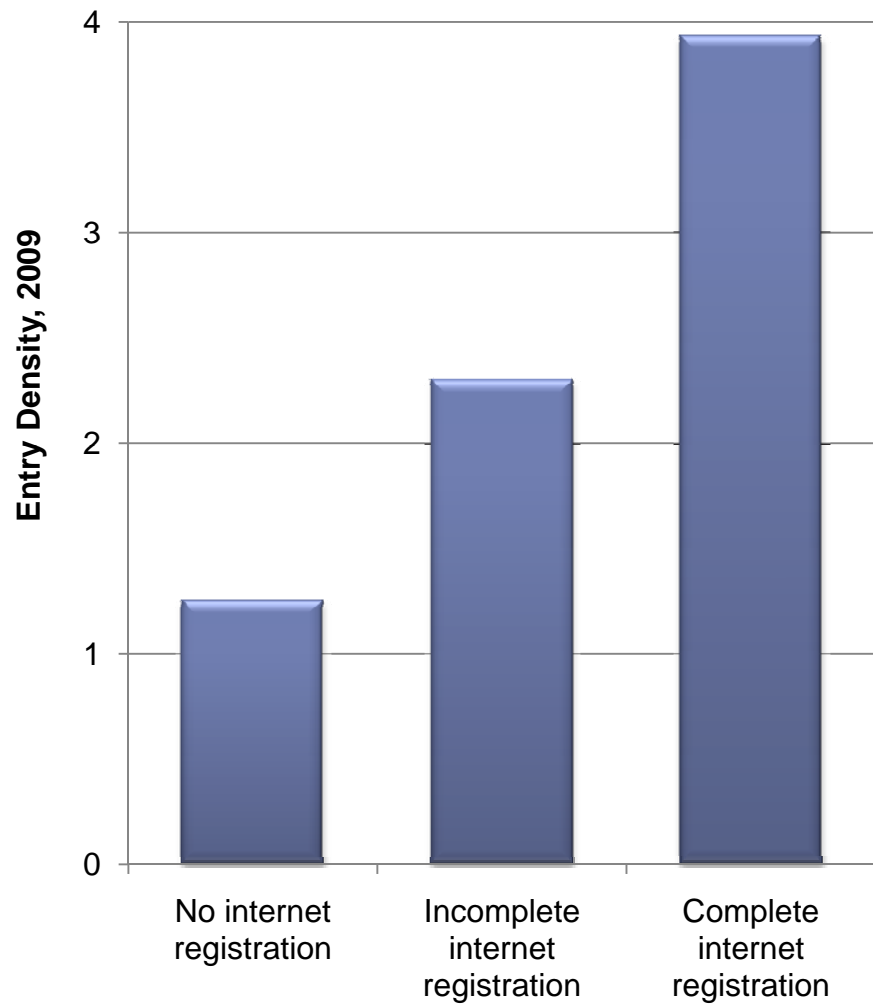
# 3.3 Corporate Tax Rate & Governance



# 3.4 How do Firms Register?



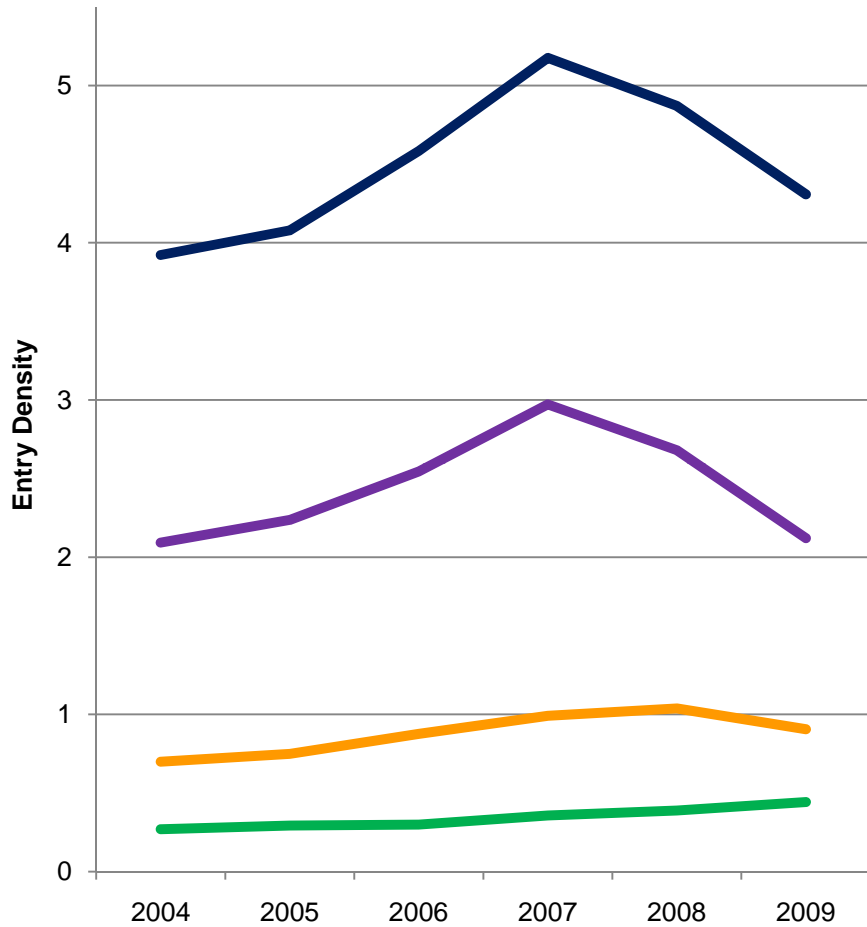
# 3.5 Internet Registration



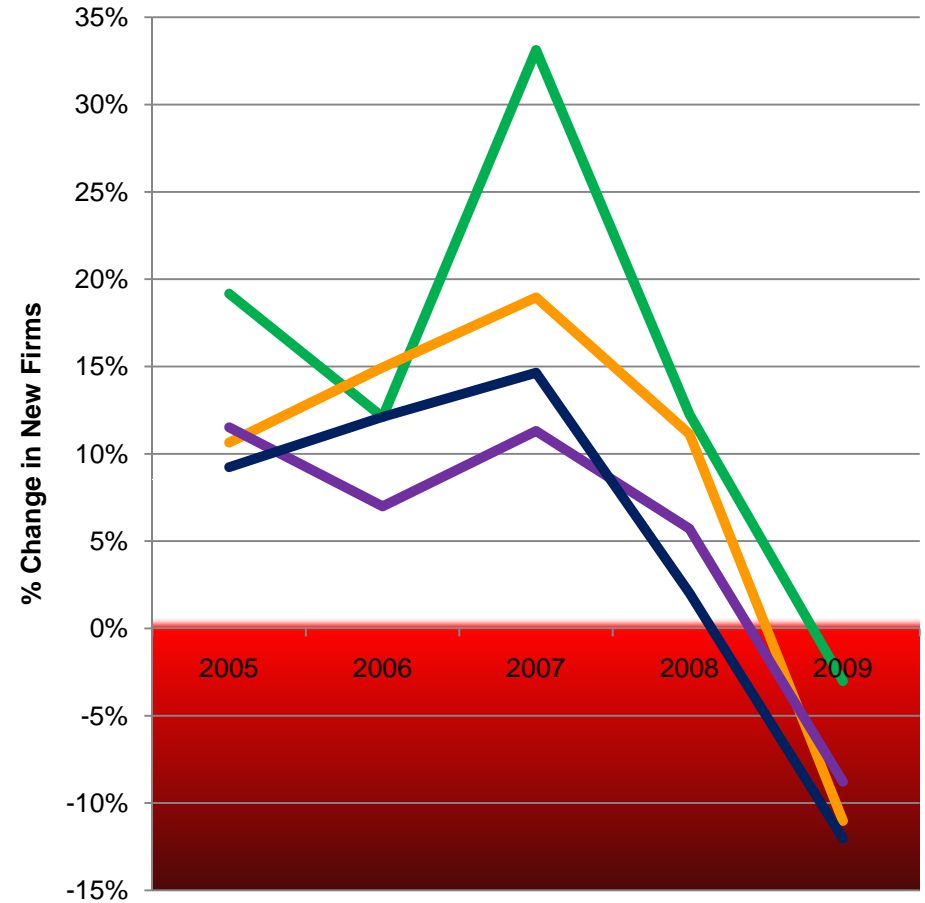
# 4

## **Entrepreneurship and the Financial Crisis**

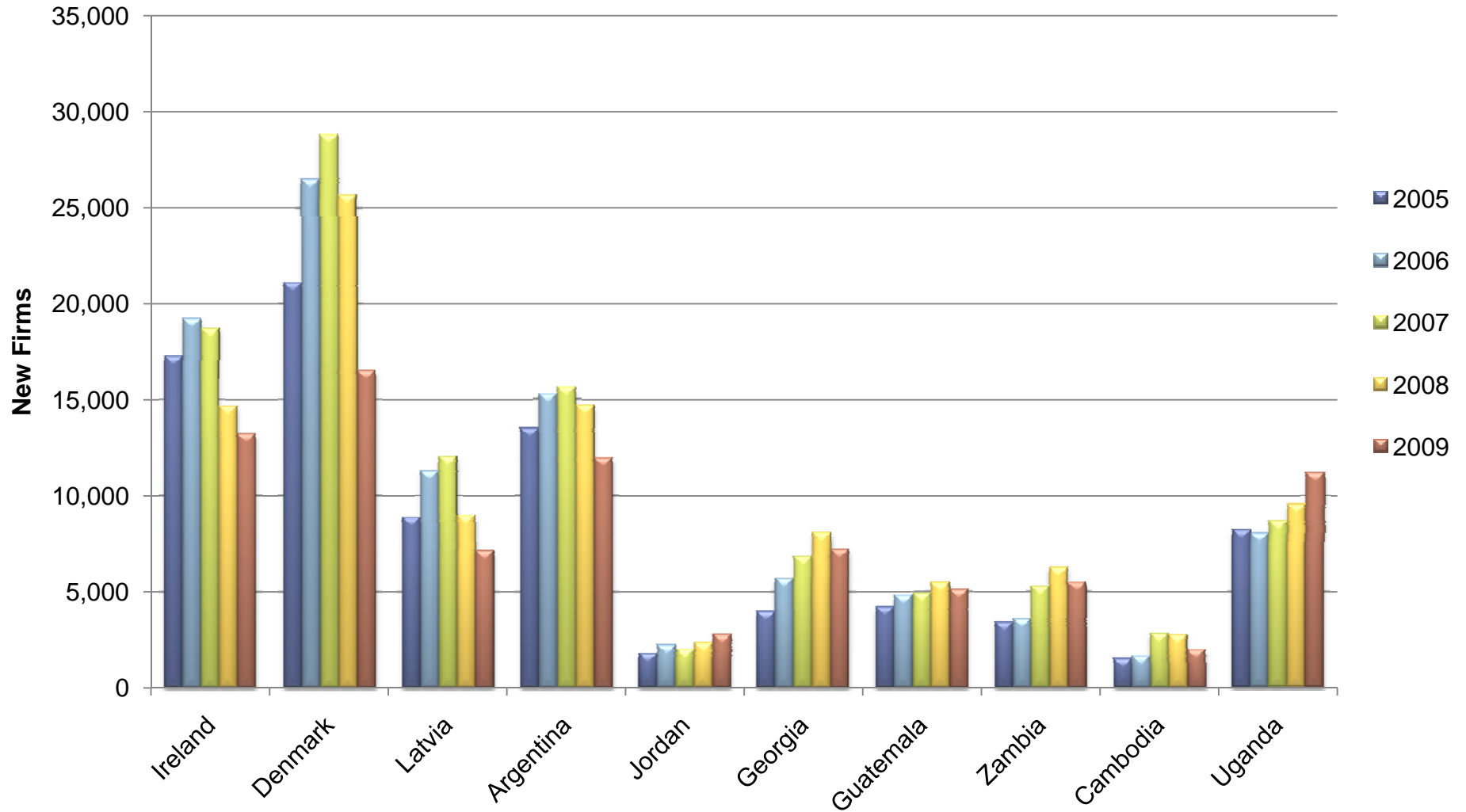
# 4.1 Impact of the Crisis, by income group



■ High income   
 ■ Upper middle income   
 ■ Lower middle income   
 ■ Low income



## 4.2 Impact of the Crisis, selected countries



## Model 1: Crisis and Trend

$$\text{Entry Density}_{it} = a_i + b_1 \text{Crisis}_t + b_2 \text{Trend}_t + e_{it}$$

## Model 2: Heterogeneous responses

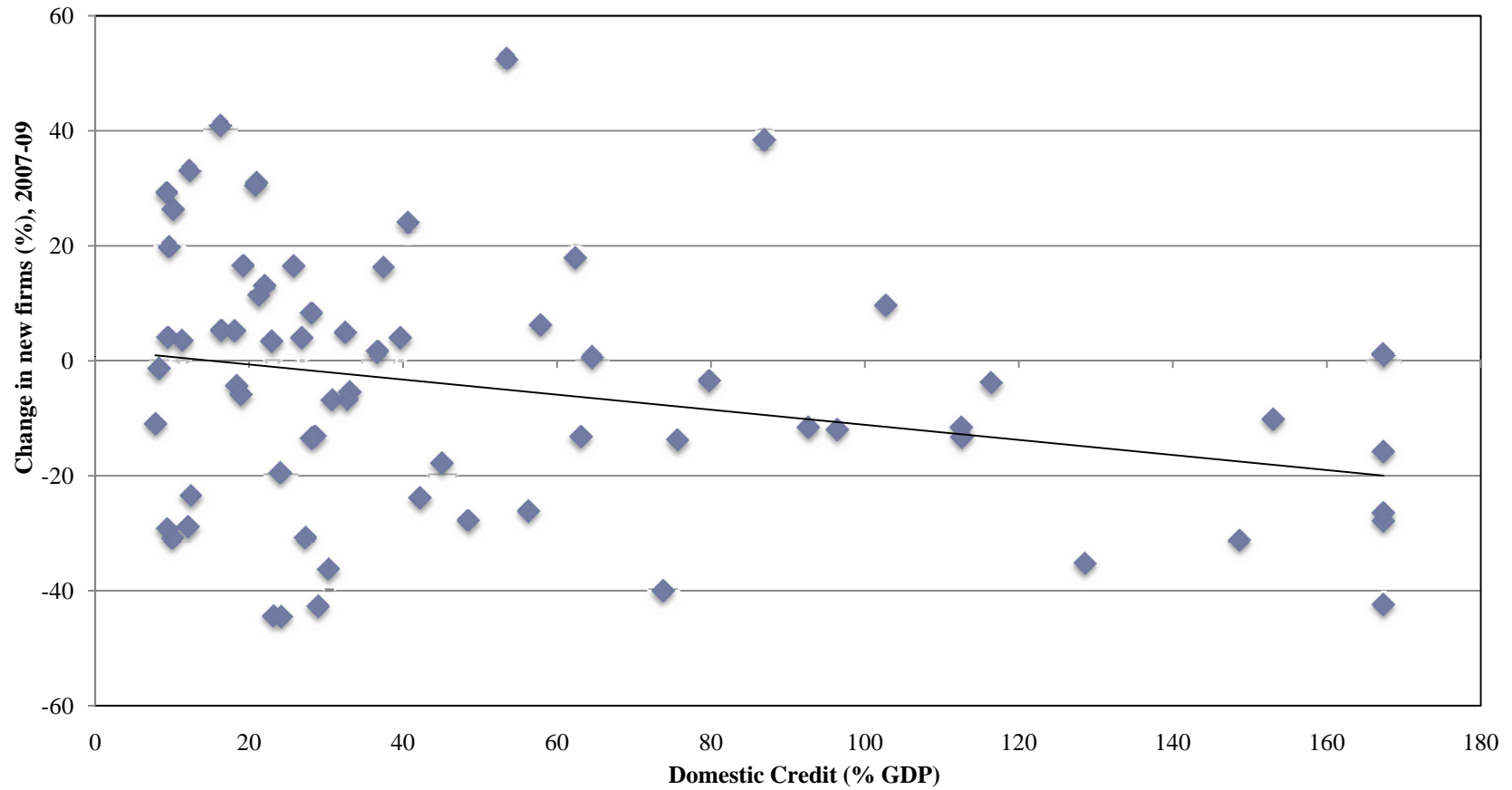
$$\text{Entry Density}_{it} = a_i + b_1 \text{Crisis}_t + b_2 \text{Crisis}_t * X_i + b_3 \text{Trend}_t + e_{it}$$

	1	2	3	4	5	6
Variables	Full sample		High Income		Low/Middle Income	
Crisis Dummy-2009	-0.570*** [0.000]	-0.774*** [0.000]	-0.905*** [0.002]	-1.210*** [0.007]	-0.436*** [0.001]	-0.582*** [0.004]
Crisis Dummy-2008		-0.254*** [0.009]		-0.398* [0.104]		-0.178* [0.069]
Trend	0.147*** [0.000]	0.199*** [0.000]	0.242*** [0.000]	0.317*** [0.000]	0.107*** [0.000]	0.144*** [0.001]
Constant	1.636*** [0.000]	1.531*** [0.000]	3.178*** [0.000]	3.027*** [0.000]	1.016*** [0.000]	0.939*** [0.000]
Observations	516	516	150	150	366	366
R-squared	0.955	0.956	0.935	0.937	0.942	0.943
Adjusted R-squared	0.945	0.946	0.92	0.922	0.929	0.929

# Regression Results: Domestic Credit and Turbulence

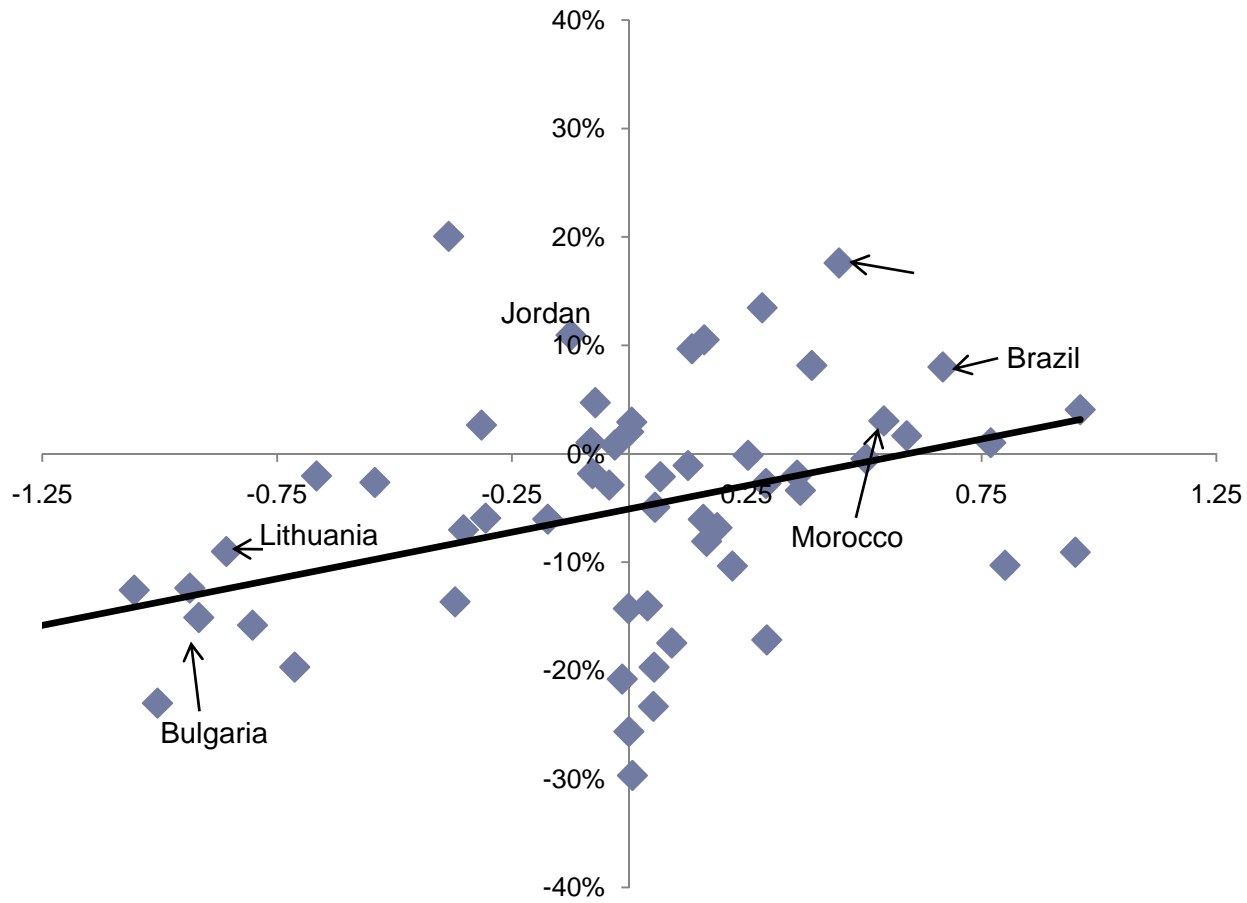
Variables	1	2	3	4	5
Crisis Dummy, 2009	0.281 [0.481]	-0.318** [0.022]	-0.506 [0.198]	-0.229 [0.260]	-0.816 [0.154]
Crisis09 *Log GDP per capita (2004-2007)	-0.110** [0.048]		0.027 [0.662]		0.079 [0.283]
Crisis09* PC/GDP per capita (2004-2007)		-0.005** [0.011]	-0.006** [0.039]	-0.006** [0.014]	-0.007*** [0.009]
Crisis09 *Financial Turbulence (2009)				0.383** [0.026]	0.375** [0.034]
Trend	0.150*** [0.000]	0.150*** [0.000]	0.151*** [0.000]	0.176*** [0.000]	0.176*** [0.000]
Constant	1.653*** [0.000]	1.648*** [0.000]	1.666*** [0.000]	2.138*** [0.000]	2.138*** [0.000]
Observations	510	510	504	332	332
R-squared	0.955	0.956	0.956	0.955	0.955
Adjusted R-squared	0.945	0.946	0.946	0.944	0.944

# Firm entry and Financial Development



# 4.4 Firm Entry and Crisis Turbulence

Avg. Yearly % Change in New Firms 2007-2009



Crisis Turbulence Index (Didier, 2009)

# 5

## Future Work and Conclusion

## 5.1 Conclusion

The 2010 *World Bank Group Entrepreneurship Snapshots* facilitate a more comprehensive examination of the relationship between business registration, the business environment, and the recent financial crisis.

The findings suggest:

- Dynamic business registration occurs in countries that provide entrepreneurs with reduced red tape and a stable investment climate.
- Nearly all countries experienced a sharp drop in business entry during the crisis, and that the degree to which the crisis impacted new firm registration is highly correlated with measures of crisis severity.

The WBGES database will continue to be updated on a biennial basis for the foreseeable future. Forthcoming editions of the WBGES database will provide insight into how the fiscal and monetary policies implemented by governments in response to the crisis affected the revival of new firm registration. It will also be possible to examine the pre-crisis financial and institutional characteristics that encouraged a rapid and strong recovery in new business registration in the wake of the crisis.

### **The Impact of Business Environment Reforms on New Firm Creation** *Klapper & Love, 2010*

- Uses panel data on the number of new firm registrations in 95 countries to study how the magnitude of reforms affects its impact on new firm registrations
  - Create 'buckets' of reforms, based on percent changes, and occurrences of simultaneous and sequential reforms
- Small reforms, in general less than 40%, do not have a significant effect on new firm creation.
- There are important synergies in multiple reforms of two or more business environment indicators
- Countries with relatively weaker business environments require relatively larger reforms in order to impact new firm growth.