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Finance and growth: an investigation into the role of internal, bank and equity finance

Abstract: This paper has used the findings of the recent World Bank Enterprise Survey to provide some, admittedly tentative, further evidence on the relationship between financial development and economic growth, by incorporating the impact of internal finance. The inclusion of the variable internal finance should go some way to mitigate the possible bias due to the omission of an important variable from empirical work.

By doing so, we aimed at providing some further evidence either in favour or against two puzzling results emerging from recent empirical works. The first puzzle regards the negative impact of banks upon growth in the short-term, although the impact reverts to positive on the long-term. This puzzle is reinforced by seemingly contradictory evidence stemming from micro-level studies, which indicate a positive impact of external finance on firms' growth, while empirical tests at macro level do not unanimously support this positive impact. The second puzzle, concerns the relatively stronger impact of stock markets upon growth. Given the objective difficulties and costs encountered in accessing both bank credit and equity as documented in the paper, the above puzzles required further tests.

Our, tentative, results provide some evidence that banks still have a negative impact upon short-term growth, while stock markets do not appear to contribute to growth in a significant manner once the effect of internal finance is included.

Finally, internal finance itself does not appear to boost growth in a statistically significant manner. These tentative findings are in need of further research.
Keywords: financial development, stock exchanges, banks, internal finance, economic growth.
JEL codes: O1; O16.

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Introduction

This paper starts from the very simple premises that most firms, in both developed and developing countries, finance themselves from internal sources. Indeed, as Ayyagari et al. [2010] clearly report, there does not seem to be any difference in the reliance on retained earnings between firms located in low-, middle- and high income OECD countries[1]. This is due to a multitude of reasons ranging from choice, as postulated by the Pecking order theory, to necessity when access to external sources (credit or equity) is unavailable, restricted and/or very expensive. This simple fact is supported by a comprehensive survey carried out by the World Bank (World Bank Enterprise Survey).

The findings of this survey will be analysed and incorporated into our, admittedly, tentative empirical tests to contribute to the burgeoning literature on the nexus between finance and growth to provide some evidence on the impact of internal finance upon economic growth. In particular, the ultimate objective of the paper is to provide further support to (or refute) two recent puzzling empirical findings: the first, is that banks do not appear to have a positive and significant impact upon economic growth in the short-term, although they may still exert a positive influence in the long-run [Beck & Levine 2004; Loayza & Rancière 2006; Saci et al. 2009]. The second puzzle refers to the finding that, relatively speaking, stock markets appear to have a more significant impact upon economic growth than banks when both variables are included in the growth model [Atje & Jovanovic 1993; Beck and Levine 2004; Shen & Lee 2006; Saci et al. 2009]. Minier [2009] provides evidence that opening a stock exchange, even with few companies, can have a significant and positive impact upon economic growth.

In recent years, the literature on the finance and growth relationship has also looked at the relationship at a micro or firm level and found a positive impact of finance on growth. One of the important conclusions of the papers in this field [Demirgüç-Kunt & Maksimovic 1998; Beck et al. 2001; Beck et al. 2008] is that the firms that have better access to external finance grow faster than others. However, Hudson [2002] argues that internal finance was crucial for industrial revolution in England, while in a recent study by Guariglia et al. [2011], it was found that a large numbers of Chinese private firms that were unable to use external finance, still managed to grow using internal finance.

It is therefore important to include and examine the role of internal finance in the finance and growth nexus because it is possible to object that the results obtained from the empirical literature may suffer from the problem of an omitted (financial) variable if firms managed to achieve growth even without access to external fund-

[1] See table 1, panel A and panel B on page 3060–3061 of the paper, based on Investment Climate Surveys covering over 40,000 firms located in 67 countries.

ing, effectively magnifying the statistical effect of limited access to external funds. Unfortunately, lack of time-series data on internal finance hampers any attempt to remove the possible problem stemming from omitted variable.

In this respect, the World Bank Enterprise Survey has allowed us, tentatively, to incorporate the effect of internal finance into our analysis and empirical work.

The paper is organized as follows. The next section will provide some background information related to the data of the World Bank Enterprise Survey. The section also presents some facts related with listing criteria in exchanges of some countries around the world. Section three presents the data and variables used in the empirical investigation carried out by this paper to test the relationship between internal, bank and equity finance upon economic growth. Section four will comment on results and finally section five will summarise the main conclusions.

1. Background

As shown in Table 1, internal finance covers almost two thirds of the financial needs of the companies surveyed by the World Bank[2]. Although this share admittedly varies from 12.9% (Peru survey for 2002 that jumps to 47% in a more recent and larger survey) to 95% (Uzbekistan), nonetheless it seems to be quite stable across the entire sample of countries with a coefficient of variation (i.e. the standard deviation divided by the mean) of 0.24, the lowest of all other forms of financing. This shows that the degree of convergence is quite high. At the other end of the spectrum, companies access capital through equity only in barely four cases out 100 (3.7%), although the coefficient of variation at 1.98 is the highest in table 1, which shows a relatively higher degree of variation among the countries.

Finally, bank finance accounts for only 15% of finance with a reasonably high level of convergence. At least for the countries surveyed by the World Bank we think that Table 1 provides sufficient evidence of the importance of internal finance and that its exclusion may exaggerate the impact of other sources of finance upon growth.

The high level of reliance on internal funding and to a lesser extent to bank credit should not be entirely surprising given the fact that borrowing from banks usually requires the availability of collateral assets.

Table 2 shows that on average the size of collaterals is 135.7% of the size of loans with a very low variation (coefficient of variation is 0.30). The other side of the coin

[2] Enterprise Surveys of the World Bank provides the most comprehensive firm-level data in emerging markets and developing economies. For the elaborations in Table 1 and Table 2 we used the results of a previous version of the survey, which allowed access to a detailed breakdown on collateral. However, the values reported both in Table 1 and 2 are consistent even if the more up-to-date version is used.

Table 1. Percentage of finance from various resources and coefficient of variation

Type of finance	Average (%)	Coefficient of variation
Internal finance	65.2	0.24
Bank finance	14.9	0.66
Informal	4.9	0.86
Leasing	2.9	1.49
State	1.1	1.41
Supplier Credit Finance	3.2	0.87
Credit Cards Finance	0.3	1.62
Equity	3.7	1.98
Others	3.3	1.49

Source: Enterprise Surveys, the World Bank (calculations by author).

Table 2. Size of collateral and coefficient of variation

Detail on Collateral	Average	Coefficient of variation
Size of collateral (% of the loan amount)	135.7	0.30
Proportion of loans requiring a collateral of which:	81	0.14
Land	45.4	0.52
Personal assets	12.6	0.53
Machinery	15.7	0.70
Intangibles	9.6	1.31

Source: Enterprise Surveys, the World Bank (calculations by author).

is that 81% of loans require collateral (in this case there is even a lower volatility of the figure). Land is the most important collateral. Also personal assets play an important role with low variability among countries (coefficient of variation 0.53). Machinery (0.70) and intangibles also play an important role but also experience a higher variability among countries (1.31).

Similarly, the low use of equity finance in many countries could be due to the listing criteria in stock exchanges. We found that the listing criteria in stock exchanges are equally demanding in both developed and developing countries. Table 3 and table 4 show the requirements for a selected number of developed and emerging countries and for a group of less developed/low income countries.

Table 3. Rules of listing in exchange in some developed and emerging economies

Stock exchange, country	Capital related requirement	Financial/ audit requirement	Public shareholding requirement
Australian securities exchange, Australia (ASE)	a) At least 500 holders each having securities with a value of at least $2,000 excluding restricted securities. Or b) 400 holders each having securities with a value of at least $2,000 excluding restricted securities	Aggregate profit from continuing operation for the last 3 years must be minimum $1 million. Or, Tangible assets of at least $2 million or a market capitalisation of at least $10 million	If capital related requirement is b) then 25% shareholding by not related parties of the entity
Bursa Malaysia Securities Berhad, Malaysia (BM)	For listing on the main board must have a minimum issued and paid up capital of RM60 million (Second board RM40 million)	The audited profit and dividend record for the past 5 years and the latest interim results	An applicant must have at least 25% of the total number of shares for which listing is sought in the hands of a minimum number of 1,000 public shareholders holding not less than 100 shares each
Hong Kong Stock Exchange, Hong Kong (HKEX)	At least 1,000 shareholders at the time of listing. A market capitalisation of at least HK$4 trillion at the time of listing	Revenue of at least HK $500 Million for the most recent audited financial year. Management continuity for at least the three preceding financial years	At least 25% of the issuer's total issued share capital must at all times be held by the public
Indonesia Stock Exchange, Indonesia (IDX)	Based on the last Audited Financial Report, the company must have at least an amount of Rupiah one hundred billion as Net Tangible Asset. The number of shareholders is at least 1,000 shareholders, who already have accounts in one of the Exchange Members	The company has been running its operational activities in the same core business for at least 36 months in sequence. Have audited the last three years Financial Reports, and have received Proper Opinion Without Exception for the last 2 years audited financial report and Interim Audited Income Statement (if exists)	The amount of shares owned by the minority shareholders after public offering is at least 100,000,000 (a hundred million) shares or 35% of paid up capital (depends on which one is smaller)

cont. Tab. 3

Korean Exchange, Korea (KRX)	The equity capital shall be at least KRW10 billion or the base market value shall be at least KRW20 billion (KRW30 billion, in case of Kosdaq-listed company). No of shares to be listed at least 1 million	Average sales for recent 3 years at least KRW20 billion or and the sales amount of the latest fiscal year shall be no less than KRW30 billion. Income: The income of the latest fiscal year shall be at least KRW2.5 billion and the sum of the incomes of recent 3 fiscal years shall be higher than KRW5 billion	The total number of shares and the number of voting shares owned by the minority shareholders shall be at least 25/100 of the total issued shares and total voting shares, respectively
London Stock Exchange, U.K. (LSE)	At least £700,000 for shares at the time of listing	At least 75% of the entity's business must be supported by a revenue earning record for the three years period	At least 25% of shares should be in public hands
Singapore Exchange, Singapore (SGX)	Market capitalisation of minimum S$80 million at the time of listing	Cumulative pre-tax profit of at least S$7.5 million over the last 3 consecutive years, with a pre-tax profit of at least S$1 million in each of those 3 years, or Cumulative pre-tax profit of at least S$10 million for the latest 1 or 2 year	The public float must be at least 25% if market capitalisation is less than $300 million, 20% if between $300 to $400, 15% if between $400 to $1 billion or 12% if over $1 billion (No of shareholders in all case at least 1,000)
The Stock Exchange of Thailand, Thailand (SET)	Has paid-up capital only in respect of ordinary shares in an amount not less than 300 million baht. Has not less than 1,000 small ordinary shareholders	There shall be net profit during the latest 2 or 3 years prior to the submission of an application in aggregate not less than 50 million baht, provided that the net profit in the last year prior to the submission of an application must be at least 30 million baht and that there must be an accumulated net profit in the period to the submission of an application	The small ordinary shareholders under (a) must hold shares in aggregate not less than 25 per cent of the paid-up capital, or not less than 20 percent of the paid-up capital in the event that the paid-up capital of the applicant in respect only of its ordinary shares is not less than 3,000 million Baht, and each of those shareholders must hold shares not less than 1 trading unit as prescribed by the Exchange for the trading of the ordinary shares

Source: Authors' elaboration on web pages of stock exchanges.

In both cases, it is worth noticing the stringency in the listing requirements for both groups of countries.

Table 4. Rules of listing in exchange in samples of some less developed/low income countries

Stock exchange, country	Capital related requirement	Financial/audit requirement	Public shareholding requirement
Colombo Stock Exchange, Sri Lanka	An issued and paid up capital of Rs75 million	A profit before tax for three consecutive years immediately preceding the date of application	25% of the issued capital must be held by/offered to the public
Dhaka Stock Exchange (DSE), Bangladesh	Minimum paid up capital Taka100 million	Operation for at least immediate last 5 years. Profit in 3 years out of the immediate 5 completed financial years	25% of the shareholding to be offered for sales within 30 trading days from the date of commending the normal trading
Malawi Stock Exchange, Malawi	A subscribed capital of at least K100 million	A satisfactory profit history for the preceding three financial years	25% of each class of equity shares shall be held by the public, unless otherwise agreed with the committee. No. of public shareholder should be minimum 300 for equity shareholding
Nairobi Stock Exchange, Kenya	The issuer shall have a minimum authorized issued and fully paid up share of KSh50 million. Net assets immediately before the public offering of shares should not be less than KSh100 million	The issuer must have declared positive profits after tax attributable to shareholders in at least three of the last five completed accounting periods to the date of the offer	Following the public share offering at least 25% of the shares must be held by note less than 1,000 shareholders excluding employees
Nepal Stock Exchange, Nepal	Paid up capital of minimum NPR2.5 million	Statement of audited accounts for the last 3 years	Issued capital if below NPR10 million – 25% to general public. issued capital if in between NPR10 million to 50 million – 20% to general public. issued capital in between NPR50 Million to 100 million – 15% to general public

cont. Tab. 4

Uganda Stock Exchange, Uganda	Issuer will have authorised, issued, paid up capital for a minimum of 50,000 currency points and net assets of 100,000 currency points before the public offering of shares (one currency point is equal to 20,000 Uganda shelling)	The issuers have published audited financial statements for a period of at least five years complying with international accounting standards	Immediately following the public share offerings at least 20% of the shares to be held by not less than 1,000 no of shareholders
Maldives Stock Exchange	It has an issued and paid up capital of a minimum of MRF5,000,000. For listing in secondary board issued and paid up capital is minimum MRF1,000,000	Continuing listing requirement include circulation of annual report which among others should include various debt and equity related financial information	There shall be a minimum of 250,000 shares open for subscription

2. Literature review

In recent years, the finance and growth nexus has also been empirically tested at micro or firm level. One of the important conclusions of the papers in this field [Beck et al. 2008; Beck et al. 2001] is that the firms that have better access to (external) finance tend to grow faster than others. These results, as mentioned earlier, appear to be contradicted by empirical evidence at macro level [Beck & Levine 2004; Loayza & Rancière 2006; Saci et al. 2009], pointing to a negative impact of bank finance upon economic growth. However, Guariglia et al. [2011] have found that Chinese private firms achieved high rates of growth (of assets) using internal finance. Also, Hudson [2002] argues that internal finance was key to industrial revolution in England. It is therefore important to include and examine internal finance in the finance and growth nexus, both at theoretical and empirical level.

The Pecking Order theory, usually overlooked by the empirical literature on finance and growth, stipulates that (preferential) access to internal finance may not necessary be the result of financial constraints, but the consequence of a conscious decision by firms. The pecking order theory of capital structure states that firms tend to rely on internal funds and then when outside funds are necessary, firms prefer debt to equity. Equity is issued in fewer cases because of lower information costs associated with debt. Myers [1984], Shyan-Sunder and Myers [1999] and de Jong et al. [2010] provide the theoretical and (some) empirical underpinnings for the theory. However, empirical literature on pecking order theory is mixed and in-

conclusive [Fama & French 2002; Prasad et al. 2001; Frank & Goyal 2003; Seifert & Gonenc 2008]. Some studies such as Brenan and Kraus [1987] and Vilasuso and Minkler [2001] however, refute the theory.

Another recent finding in the empirical literature on the nexus between finance and growth is that equity finance could be a better option than debt finance to promote economic growth. The empirical literature on the relationship between finance and growth appears to point out that stock exchanges have a positive and strong effect prompting Atje and Jovanovic [1993, p. 636] to state that:

> "We have found a large effect of stock markets on subsequent development. We have failed to find a similar effect of bank lending. That this differential effect should exist is in itself surprising. But if it is true, then it is even more surprising that more countries are not developing their stock markets as quickly as they can as a means of speeding up their economic development".

Also Beck and Levine [2004], Saci et al. [2009], Shen and Lee [2006] have provided evidence of positive effects of stock market development upon economic growth, while Minier [2009] has shown that the establishment of a stock exchange can boost economic growth even in the poorest regions of the world.

However, as shown above, internal finance is, by far, the most popular form of finance in developing countries. Among debt and equity finances, although empirical literature suggests that equity could be a better option for growth, debt financing is more commonly used. Some possible reasons as explained above are the complex rules (such as huge capital requirement) and time consumed (e.g. 3 years of financial statements) in listing which is possibly not feasible for smaller or even medium sized firms. We therefore consider these as major constraints in the development of exchanges in low income countries.

To empirically verify the above puzzles (negative impact of banks upon growth and significant and positive impact of stock exchanges) and to empirically test the impact of internal finance upon growth, we augment the standard economic growth model widely used in the literature by the variable internal finance.

3. Data, variables and empirical results

Data on the share of internal, debt and equity finances (in percent) are used as independent variables. The dependent variable is GDP per capita growth of next year. In order to select the control variables the variables Initial GDP per capita, Education, Government Expenditure, Capital Formation, Inflation and Dummy Legal Origin Variables from La Porta et al. [2008] have been used.

The sources of the data are listed in table 5.

Table 5. Definition of variables and sources of Data

Variables	Definition	Source of Data
GROWTH	Real GDP per capita growth rate	World Bank national accounts data, and OECD National Accounts data files
DEBT	Bank finance for investment (%)	Enterprise Surverys, The World Bank Group
INTERNAL	Internal finance for investment (%)	Enterprise Surverys, The World Bank Group
EQUITY	Equity, sale of stock for investment (%)	Enterprise Surverys, The World Bank Group
GOVERNMENT CONSUMPTION	Ratio of general government consumption expenditure to GDP	World Bank national accounts data, and OECD National Accounts data files
CAPITAL FORMATION	Ratio of gross capital formation to GDP	World Bank national accounts data, and OECD National Accounts data files
TRADE OPENNESS	Trade as percentage of GDP	World Bank national accounts data, and OECD National Accounts data files
INFLATION	Change in consumer price index	International Monetary Fund, International Financial Statistics and data files
EDUCATION	Total secondary enrolment, regardless of age, to the population of the age group that officially corresponds to that level of education	UNESCO
INITIAL INCOME	The current GDP per capita in US Dollars of the start year cummulatively increased by the US inflation rate	Made from current GDP in USD cumulatively increased by the US inflation rate. Data from World Bank national accounts data, and OECD National Accounts data files.
LEGAL ORIGIN DUMMIES	"1" for true and "0" for false where 1 implies countries following legal system of a particular country	La Porta et al. (2008)

We decided to omit any country with missing observations for any of the variables listed in table 5. Therefore, we had a complete set of data for all the variables for 69 countries. The list of the 69 countries is shown in Table 6.

Table 6. List of Countries

#	Country	#	Country	#	Country
1	Albania	24	Germany	47	Namibia
2	Algeria	25	Greece	48	Nicaragua
3	Armenia	26	Guatemala	49	Oman
4	Azerbaijan	27	Guyana	50	Pakistan
5	Bangladesh	28	Honduras	51	Panama
6	Belarus	29	Hungary	52	Peru
7	Benin	30	India	53	Philippines
8	Brazil	31	Indonesia	54	Poland
9	Bulgaria	32	Kazakhstan	55	Romania
10	Cambodia	33	Kenya	56	Russia
11	Cameroon	34	Korea	57	Senegal
12	Cape Verde	35	Kyrgyz Republic	58	Serbia
13	Chile	36	Latvia	59	Slovakia
14	China	37	Lesotho	60	Slovenia
15	Colombia	38	Lithuania	61	South Africa
16	Costa Rica	39	Macedonia, FYR	62	Spain
17	Croatia	40	Madagascar	63	Syria
18	Czech Republic	41	Malawi	64	Tajikistan
19	Ecuador	42	Mali	65	Thailand
20	El Salvador	43	Mexico	66	Turkey
21	Estonia	44	Moldova	67	Uganda
22	Ethiopia	45	Mongolia	68	Ukraine
23	Georgia	46	Morocco	69	Vietnam

In the empirical investigation, experiments were made by including and excluding India and China, but the regression output remained largely unaffected. In order to use a sample of countries of similar sizes, India and China have been excluded in the empirical analysis which makes the total number of countries 67. Given the nature of the World Bank database, only a pure cross-sectional analysis could be carried out. For some countries, the survey had more than one data point. In these cases, both observations were used, giving a total of 87 observations.

The empirical part is now discussed next.

The model to be estimated is in line with the existing literature**:**

$$GROWTH_i = \beta_1 + \beta_2\, INTERNAL_i + \beta_3\, DEBT_i + \beta_4\, EQUITY_i + \\ + \beta_5\, CONTROL_i + \varepsilon_i \ldots$$

where,

GROWTH : Real GDP per capita growth at time t+1,
DEBT : Debt Finance (%),
INTERNAL : Internal Finance (%),
EQUITY : Equity Finance (%),
CONTROL : Initial GDP per capita, Education, Government consumption, Capital formation, Inflation and Dummy legal origin variables (all at time t),
i : represents country.

The data for the variables are converted into natural logarithm.

The dependent variable is the GDP per capita growth of next year. So the finance variables (INTERNAL, BANK, and EQUITY) should explain the rate of growth of the economy one period later. The choice of one year ahead was fundamentally dictated by the availability of data, therefore caution should be exercised when interpreting the results.

The results of the estimation of the model are reported on table 7.

Table 7. Estimation Results

Method: Pooled Least Squares Included observations: 87	
Constant	–0.1460 *0.0399*
Debt finance	–0.1837 *0.0131*
Internal finance	–0.0264 *0.7405*
Equity finance	–0.0636 *0.4638*
Government consumption (government final consumption expenditure – % of GDP)	–0.0402 *0.0003*
Capital formation (gross capital formation – % of GDP)	0.0575 *0.0490*
Trade openness (trade – % of GDP)	0.0028 *0.7665*
Inflation (inflation, consumer prices – annual %)	–0.1909 *0.7951*
Education (seconadry school enrollment – %)	0.0472 *0.0001*
Income (initial GDP per capita)	–0.0069 *0.1104*
R-square	0.4497
Countries	67

Notes: *p*-values are reported in italics.

The results show that many of the control variables behave in the expected manner although some of them are not significant. GOVERNMENT CONSUMPTION, CAPITAL FORMATION and EDUCATION have expected signs and are significant,

Table 8. Estimation Results (Dependent Variable: Growth of GDP per capital)

Method: Pooled Least Squares **Included observations: 87**	
Constant	–0.1481 *0.1376*
Income > $1,587 (Initial GDP Per capita > median income $1,587)	–0.0272 *0.7975*
Debt finance	–0.2522 *0.0218*
Internal finance	–0.0289 *0.8243*
Equity finance	–0.0630 *0.6786*
Government consumption (government final consumption expenditure – % of GDP)	–0.0371 *0.0022*
Capital formation (gross capital formation – % of GDP)	0.0602 *0.0004*
Trade openness (trade – % of GDP)	0.0008 *0.9348*
Inflation (inflation, consumer prices – annual %)	–0.0113 *0.9882*
Education (seconadry school enrollment – %)	0.0460 *0.0002*
Income (initial GDP per capita)	–0.0055 *0.3835*
Interaction between income & debt finance (linearity) Initial Income > $1,587 x debt finance	–0.1359 *0.3635*
Interaction between income & internal finance (linearity) (Initial Income > $1,587 x internal finance)	–0.0096 *0.9550*
Interaction between income & equity finance (linearity) (Initial Income > $1,587 x equity finance)	–0.0120 *0.9482*
R-square	0.4654
Countries	67

Notes: *p*-values are reported in italics.

whereas TRADE OPENNESS, INFLATION and INITIAL Income have expected signs but are insignificant.

Based on the results discussed in the previous sections, we were expecting that bank finance would have a negative impact and would be significant. This has been supported by our, tentative, results.

Similarly, we were expecting that equity finance would have a positive and significant impact (based on the findings of the literature). However, this was rejected by our results.

Finally, internal finance had a negative and non-significant impact upon economic growth.

To further check the robustness to the results, we split the sample into two groups (above and below the median income per capita set at US Dollars 1.587) by including an interaction term. The inclusion of the interaction terms will enable us to confirm whether the relationship is linear and the results are different to different groups of countries. The results are reported on table 8. The results are very similar to the ones shown in Table 5 with the only exception of the variable income per capita, which is now positive and highly insignificant.

To sum up our results reported in tables 7 and 8, provide evidence of lack non-linearity and although they are only tentative results, they seem to indicate that the negative effect of credit in the short-term is still supported, since, in both estimations the variable bank finance has remained negative and significant supporting the findings of recent papers [Atje & Jovanovic 1993; Beck & Levine 2004; Favara 2003; Loayza & Rancière 2006; Shen & Lee 2006; Saci et al. 2009].

Internal financing, however, does not provide support to growth, while the impact of stock exchanges is not significant either.

Conclusions

Despite the fact that the Enterprise Surveys of the World Bank show that internal finance is the most preferred means of finance followed by debt and equity finances, with limited exceptions, the role of internal finance is usually overlooked by the empirical literature on finance and growth .

To fill this gap in the literature, we re-estimated the conventional finance-growth model by augmenting it with the variable internal finance. Our results, albeit tentative, indicate that internal finance does not appear to play an important role.

However, even after including it, banks appear to behave in line with recent findings. In other words, banks seem to have a negative impact upon short-term growth. The model was also tested for non-linearities, with the sample of countries split into two (around the median value). The results still confirmed a negative role for banks.

In connection to conclusion of some recent literature that promotes equity option superior to bank finance for economic growth, we could not establish any conclusive result on which option is more preferable (for growth). A firm conclusion can only be driven by enlarging the sample size. However, the empirical analysis rejected the hypothesis of banks finance as positive to economic growth which is in line with the findings of some recent literature.

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