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Published in:
Journal of International Financial Markets, Institutions and Money

DOI:
[10.1016/j.intfin.2003.06.002](https://doi.org/10.1016/j.intfin.2003.06.002)

IMPORTANT NOTE: You are advised to consult the publisher's version (publisher's PDF) if you wish to cite from it. Please check the document version below.

Document Version
Publisher's PDF, also known as Version of record

Publication date:
2004

[Link to publication in University of Groningen/UMCG research database](#)

Citation for published version (APA):

Garretsen, H., Lensink, B. W., & Sterken, E. (2004). Growth, financial development, societal norms and legal institutions. *Journal of International Financial Markets, Institutions and Money*, 14(2), 165-183.
<https://doi.org/10.1016/j.intfin.2003.06.002>

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Int. Fin. Markets, Inst. and Money 14 (2004) 165–183

Journal of
INTERNATIONAL
FINANCIAL
MARKETS,
INSTITUTIONS
& MONEY

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Growth, financial development, societal norms and legal institutions*

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Received 12 November 2002; accepted 25 June 2003

Abstract

Do societal norms help to explain cross-country differences in financial development? We analyze whether societal norms, in addition to legal institutions, have an impact on financial development. In particular, we address the implications of the inclusion of societal norms on the analysis of the impact of financial development on economic growth. Our first conclusion is that societal norms indeed are important in explaining stock market capitalization, while this is not the case for the supply of bank credit. Secondly, the value added of including societal norms in models that explain financial development or, indirectly, economic growth largely coincides with the inclusion of formal institutions, like legal variables.

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JEL classification: G15; K4; Z1

Keywords: Finance; Growth; Institutions

1. Introduction

There is a renewed interest in the old debate on the relationship between financial development and economic growth. A central issue in this debate is whether the development of stock markets or banks is more appropriate to promote economic growth. Nowadays, proponents of the so-called legal view of financial development argue that the distinction between a bank and a market-based financial system is as such irrelevant. For instance, Levine (1998,

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2000, 2001) and Levine et al. (2000), using cross-country data from La Porta et al. (LLSV hereafter, 1997, 1998) on differences in corporate law, regulation and law systems, show that it is more important to establish a general legal environment in which financial systems can operate efficiently. The legal view argues that only that part of financial development that is dependent on the legal system is important for fostering economic growth.

We examine whether the inclusion of societal norms should be considered in this type of analysis. We treat societal norms as candidate additional determinants of financial development and investigate whether both informal and formal institutions are relevant in explaining cross-country differences in financial development and its impact on economic growth. We do not attempt to provide a definite answer to the relevance of societal norms for financial development, but we merely want to point out that if institutions are thought to be relevant for financial development, it may be worthwhile to include informal institutions as well.

This paper is organized as follows. In the next section we explain why it is relevant to consider societal norms in explaining financial development. In Section 3, we discuss to what extent a cross-country classification based on societal norms differs from a classification based on legal indicators. This provides information on societal differences and similarities between and within legal origin groups. In Section 4, we present estimation results of the relevance of societal norms and legal rights in explaining stock market and banking development. In Section 5, we investigate the relevance of these norms together with legal institutions in explaining the importance of the (exogenous part of) financial development for economic growth. Section 6 summarizes and concludes.

2. Why consider societal norms in explaining financial development?

Culture is defined to be the collective programming of the mind, which distinguishes the members of one group or category of people from another. As known, culture is learned, not inherited. Cultural differences manifest themselves in various ways: the deepest manifestation of culture is the set of values. Values are broad tendencies to prefer certain states of affairs over others. Norms are the standards for values that exist within a group or category of people. More superficial differences in culture can be found in symbols and rituals. Values are at the core of economic behavior and could help explain differences in financial development and partly complement (or substitute for) the effect of legal indicators.

We propose to include societal norms in the analysis of financial development. One first argument to study societal norms in addition to, e.g. legal indicators comes from the interest shown by other studies in this field. For instance, Berglof and Von Thadden (1999) argue that countries can develop non-legal institutions, such as moral sanctions or worker participation in management, for stopping expropriation. Rajan and Zingales (2000) stress the role of the political structure rather than specific legal rules in explaining differences in the degree of investor protection. If other institutions than the legal ones emphasized in the LLSV-work matter, countries might be classified wrongly if the classification is based solely on the legal indicators as suggested by LLSV, and it is here that the potential relevance of informal institutions comes to the fore. The Netherlands, for instance, is classified in the French legal origin group and indeed shows weak investor protection. However, The Netherlands has a

well-developed financial system and, at least in the 1990s, had an above average economic growth performance.

As LLSV (1997, pp. 1149–1150) suggest, it might be that trust substitutes for legal institutions. Usually it is argued that societies with greater trust demonstrate a greater cooperation among agents that meet infrequently. Fukuyama (1995) stresses the need of cooperation between strangers (outside shareowners) for the success of large firms. Putnam et al. (1993) argues that trust is founded in horizontal networking and hindered by vertical hierarchic relationships. Beugelsdijk and Van Schaik (2001) test Putnam's (1993) thesis and find evidence for its relevance for a cross-section of 54 European regions. Guiso et al. (2001) show for the case of Italy that societal capital is a main determinant of financial development and, based on the work of Knack and Keefer (1997), these authors also report cross-country regressions showing that the ratio of stock market capitalization to GDP is significantly determined by trust. Inglehart et al. (1998) construct data on trust based on the World Value Survey that supports the view that The Netherlands has a high score (56% of the respondents has trust in people) as compared to the French legal origin countries (with an average of 24%). Other recent approaches that emphasize the importance of societal norms or, generally speaking, culture when investigating cross-country differences in financial systems are Stultz and Williamson (2001) and Licht et al. (2001).

Another argument to study societal norms is more specific with respect to the application of the legal view to the question whether or not financial development stimulates economic growth. In cross-country growth regressions wherein an indicator of financial development is one of the explanatory variables, legal indicators like those in the LLSV data set are often used as instrumental variables (IV) in order to be able to isolate the exogenous part of financial development. This is important due to the potential endogeneity of financial development in the sense that economic growth might stimulate financial development instead of the other way around. A problem with the IV-approach in general is how to isolate reasonable and sufficiently strong instruments. Consequently, there is a need for more instruments and particularly more powerful instruments. One way to do this is to exploit the time-series dimension of the data and opt for panel estimation. This is what Beck and Levine (2001) and Levine et al. (2000) do. A panel approach allows the use of lagged values of the explanatory variables to serve as instruments. Another solution is to stick to cross-section estimations and to try to come up with additional instruments. In this paper we will try to show that the inclusion of societal norms may be a fruitful way of acquiring more and better instruments for use in a cross-section analysis of the relevance of financial development for economic growth.

3. Societal norms, legal origin and judicial rules

3.1. Societal norms and legal origin

The societal indicators we use are from Hofstede (1980). The reason for this choice is simply that they are widely used in research on culture and economics. Hofstede's study consists of survey data about the values of people working in local subsidiaries of IBM in more than 50 countries and identified four problems common in all answers:

1. Societal inequality, including the relationship with authority;
2. The relationship between the individual and the group;
3. Concepts of masculinity and femininity;
4. Ways of dealing with uncertainty (including aggression and emotion).

The actual surveys used in Hofstede (1980) date back to 1968. Updates and extensions have re-affirmed its main conclusions (see notably Hofstede, 1991). The fact that the data are now more than 30 years old need not to be a major concern under the assumption that culture typically changes very slowly over time.¹ Another reason to use these data is that they pertain to *general* features of culture for the 50 countries in the sample. This suits our research objective since we don't want to analyze norms that are specific to financial markets in general or the stock market in particular. Instead we want to emphasize the role of societal norms that are more general and hence not specific to certain markets or transactions (see Licht et al., 2001, for a similar observation).

On the basis of concepts 1–4, Hofstede defines the following “societal” indicators:²

1. *PDI*: power distance is defined as the extent to which the less powerful members of institutions and organizations within a country expect and accept that power is distributed unequally. It measures to a certain extent societal inequality.
2. *IDV*: individualism pertains to societies in which the ties between individuals are loose: everyone is expected to look after himself. Collectivism pertains to societies in which people from birth onwards are integrated into groups, which throughout their lives continue to protect them in exchange for unquestioning loyalty.
3. *MAS*: masculinity: this property shows the desirability of assertive behavior against the desirability of modest behavior. It appears that in some societies there are strong differences in answers given by men or women. In the “modest” countries the differences in gender are weak, but in “assertive” countries differences are strong.
4. *UAI*: uncertainty avoidance is defined as the extent to which the members of a culture feel threatened by uncertain or unknown situations. It is not risk avoidance: the latter is defined with respect to a certain object. Uncertainty avoidance is more general.

We used the data on these four societal variables for 43 countries (the specific data are not shown here, but are available on request). In order to compare scores on the societal norms with the legal origin scores from the LLSV studies, the countries were classified into four legal origin groups. With respect to legal origin, LLSV distinguish between common law

¹ The fact that culture changes only slowly over time is also confirmed by the fact that Hofstede's update and extension of his initial survey, see Hofstede (1991, 1994), by and large leads to similar conclusions. The main difference is that in his more recent work Hofstede added a 5th factor (long-term orientation) to adjust for Asian values. As will become clear below this addition turned out not to make a difference for our handling of the Hofstede data. In our societal clustering variable (which is based on the scores in Hofstede (1980)) that will be used in our estimations, we single out a group of Asian countries because their scores differ markedly from those for the other countries. Finally, even though culture often changes only slowly over time (if at all), we acknowledge that “sudden” changes in variables like trust are possible (for a good illustration of this see a recent article by Purdy in *The Atlantic Monthly* (January/February 2003) which reports a massive decrease in the trust US citizens have in other people).

² A description of the survey questions, on which the indices were constructed and the actual scores for each country, can be obtained on request.

and civil law countries. The civil law comes from Roman law and relies heavily on legal scholars to formulate its rules, whereas the common law originates from English law and relies on judges to resolve disputes. It is common to further distinguish between French, German and Scandinavian civil law countries. LLSV (1997, 1998) argue that common law countries protect both shareholders and creditors the most. French civil law countries give the weakest protection, whereas German and Scandinavian civil law countries are somewhere in between.

In order to make a comparison with the legal origin country classification of LLSV, we first clustered the countries according to their scores on some common factor of the Hofstede variables and then compared the outcome of this clustering exercise with the scores on legal origin families. For our present purposes this clustering is deemed relevant because we want to bring across that societal norms *in general* might matter for financial development. Our goal is *not* to argue whether for instance *PDI* is more relevant than *IDV*. The societal clustering is based on a factor analysis on *PDI*, *IDV*, *MAS* and *UAI*. The factor analysis supports the idea that there is one common factor: its eigenvalue is 1.189, with 0.115 for the second largest factor. Principal component analysis also supports the idea of one dominant factor (the first eigenvalue explains 45% of the total variance). We use the factor loading to construct a country classification based on societal norms specifically: we use 0.48 as a weight for *PDI*, -0.48 for *IDV*, 0.20 for *MAS* and 0.24 for *UAI*. We use the weighted scores to classify the countries in our data set into five subgroups. Between parentheses (see below) are the scores on the weighted ranking. Finally, these weighted scores enable the construction of the variable *FACTOR* (which gives the score for each country). *FACTOR* is used as an explanatory variable in the models presented in Sections 4 and 5. We can also use *FACTOR* to group individual countries as follows (ranks of individual countries on the *FACTOR*-score between parentheses):

1. The Nordic countries: Denmark (1), Sweden (2), Netherlands (3), Norway (4) and Finland (10);
2. The Anglo-Saxon countries: Great Britain (5), New Zealand (6), Australia (7), USA (8) and Canada (9);
3. Continental countries: Austria (12), Belgium (17), Germany (13), Italy (14), France (15), Spain (17) and the large Latin-American countries Argentina (19) and Brazil (23), as well as Israel (11) and Jamaica (15);
4. Asian culture: India (20), Singapore (21), Hong Kong (22), Turkey (24), Thailand (25), Japan (26), Taiwan (27) and Pakistan (29);
5. A remaining group of countries that show less communality: Chile, Colombia, Egypt, Greece, Indonesia, Jordan, Korea, Morocco, Mexico, Malaysia, Nigeria, Peru, Philippines, Portugal, and Venezuela.

We included Finland in the Nordic group since its scoring pattern resembles the other Scandinavian countries. Jamaica and Israel show scores very similar to the group of continental countries. Note that in our classification the Asian group is clearly identifiable, as Hofstede (1994) suggests. Our classification has a disadvantage in having a relatively large group of countries that cannot be classified, except for scoring rather extremely on all the societal norms.

After we classified the countries into these five groups we compared this classification with the legal origin classification from LLSV (1997, 1998). Table 1 cross-tabulates the societal and legal origin classifications. From this table it can be seen that the two classifications are rather different, except for the Scandinavian-Nordic matching.

Licht et al. (2001) use the Hofstede data and compare these data with the legal origin classification from the work by LLSV. Their societal classification of countries corresponds rather well with the one in Table 1. It is also interesting to compare our classification with one that does not stem from the Hofstede data. Inglehart et al. (1998, p. 150) use the World Value Survey to classify 43 societies/countries along two key values:

- Traditional authority versus secular-rational authority. Is there obedience to a traditional authority, or is authority legitimated by rational-legal norms?
- Survival values versus well-being values. Is there a shift from scarcity norms, emphasizing hard work and self-denial, to quality of life?

These two dimensions clearly give a clustered group of Scandinavian countries plus The Netherlands, Anglo-Saxon countries, Catholic Europe and Latin American countries and Asian countries (as well as Eastern European countries, but these are not included in our sample). This finding strongly correlates with the classification given in Table 1.

3.2. Societal norms and shareholder rights

So far our analysis is based on a fairly general comparison between legal families and societal norms. We proceeded by examining whether our country clustering employing societal norms corresponds to differences in explicitly specified shareholder rights from LLSV (1998). For the sake of comparison we closely followed the LLSV set-up and distinguished:

- *ONE*: one share-one vote: equals 1 if it is not allowed to separate voting rights from dividend rights.
- *PROXY*: proxy voting by mail: equals 1 if allowed.
- *BLOCK*: shares blocked before the shareholder meeting: equals 1 if the law does not require depositing shares several days prior to the meeting to avoid trade.
- *VOTE*: cumulative voting for directors: some countries allow cumulative voting for directors. This provides more power to minority shareholders: equals 1 if cumulative voting is allowed.
- *OPP*: oppressed minority: give minority shareholders legal mechanisms to be used against perceived oppression, equals 1 these mechanisms exist.
- *PRE*: preemptive rights to new issues: equals 1 if so.
- *PERC*: percentage of capital needed to call an extraordinary shareholder. The higher this percentage the lower the legal protection. We use a dummy variable: if *PERC* is less than or equal to 10%, the dummy variable equals 1.
- *ANTI*: anti-director rights: summation of *ONE*, *BLOCK*, *VOTE*, *OPP*, *PRE*, and *PERC*.
- *MAND*: mandatory dividend: some laws require the distribution of a minimum dividend percentage.

LLSV have examined whether shareholder rights indicators are significantly different between legal families (see in particular LLSV, 1998, pp. 1130–1131). LLSV conclude that

Table 1
Societal clusters and legal families

Country	Common law origin	French civil law origin	German civil law origin	Scandinavian civil law origin
Denmark	0	0	0	1
Finland	0	0	0	1
Netherlands	0	1	0	0
Norway	0	0	0	1
Sweden	0	0	0	1
Nordic-origin	0.00	0.20	0.00	0.80
Australia	1	0	0	0
Canada	1	0	0	0
Great Britain	1	0	0	0
New Zealand	1	0	0	0
United States	1	0	0	0
Anglo-Saxon-origin	1.00	0.00	0.00	0.00
Argentina	0	1	0	0
Austria	0	0	1	0
Belgium	0	1	0	0
Brazil	0	1	0	0
Germany	0	0	1	0
Spain	0	1	0	0
France	0	1	0	0
Israel	1	0	0	0
Italy	0	1	0	0
Continental-origin	0.11	0.67	0.22	0.00
Hong Kong	1	0	0	0
India	1	0	0	0
Japan	0	0	1	0
Pakistan	1	0	0	0
Singapore	1	0	0	0
Thailand	1	0	0	0
Turkey	0	1	0	0
Taiwan	0	0	1	0
Asian-origin	0.63	0.13	0.25	0.00
Chile	0	1	0	0
Colombia	0	1	0	0
Egypt	0	1	0	0
Greece	0	1	0	0
Indonesia	0	1	0	0
Jordan	0	1	0	0
Korea	0	0	1	0
Mexico	0	1	0	0
Malaysia	1	0	0	0
Nigeria	1	0	0	0
Peru	0	1	0	0
Philippines	0	1	0	0
Portugal	0	1	0	0
Venezuela	0	1	0	0
Other origin	0.14	0.79	0.07	0.00
Sample average	0.32	0.46	0.12	0.10

Table 1 (Continued)

	Common law origin	French civil law origin	German civil law origin	Scandinavian civil law origin
<i>P</i> -values				
Nordic vs. Anglo-Saxon	0.00	0.37	1.00	0.02
Nordic vs. Continental	0.35	0.11	0.17	0.02
Nordic vs. Asian	0.01	0.95	0.13	0.02
Nordic vs. Other	0.16	0.04	0.34	0.02
Anglo-Saxon vs. Continental	0.00	0.00	0.17	1.00
Anglo-Saxon vs. Asian	0.08	0.35	0.17	1.00
Anglo-Saxon vs. other	0.00	0.00	0.34	1.00
Continental vs. Asian	0.03	0.02	0.90	1.00
Continental vs. other	0.83	0.56	0.37	1.00
Asian vs. other	0.04	0.00	0.34	1.00

common law countries protect shareholders better than civil law countries. It is noteworthy that our classification gives at least the same percentage of differences between subgroups as the LLSV legal classification does. LLSV find for 31 of the 63 comparisons a significant mean difference at the 10% significance level. For our present purposes, we investigated whether the aforementioned shareholder rights variables are significantly different between our five *societal origin* families. We compared 90 means and found 38 significant differences at the 90% confidence level (data available upon request). The distribution over the indicators is about the same as for the legal classification. We do not find significant differences in the “Pre-emptive Right to New Issues”. The most pronounced differences are found in “Proxy by Mail” and “Shares not Blocked Before Meeting”. Our Anglo-Saxon group is more homogeneous than the LLSV common law countries sub-group; the same holds for the Nordic group as opposed to the Scandinavian group, but to a lesser extent. The distinction between the Anglo-Saxon and the common law group becomes stronger as it concerns anti-director rights. To conclude, the societal classification leads to heterogeneity between subgroups with respect to shareholder rights. This heterogeneity is at least comparable to the legal origin classification. Licht et al. (2001) come to a similar conclusion when they estimate the impact of the individual Hofstede-variables on the anti-director rights variable, claiming that the path-dependency of culture is so strong that one must view legal institutions such as anti-director rights as being determined by cultural variables.

A main conclusion is that, although the differences in shareholder protection might to a large extent be related to legal origin, societal norms might as well explain (part of) the differences. If societal differences are able to explain differences in shareholder rights, they might also indicate other differences in attitudes that can be relevant to stock market development. It can be the case, for instance, that a high trust country does not strive for sharp legal institutions to cover the weak spots of financial contracting. Sometimes this leads to differences in insights. The Netherlands, officially belonging to the French legal origin class, truly behaves like a Nordic country. The Asian common law countries show different legal institutions with respect to shareholder rights compared to the Big-5 common law countries. Although they adopted the British legal system, other societal norms typically make them different. These findings support the idea that it is worthwhile to analyze the role of societal norms (alongside with the legal variables) in explaining stock market development.

3.3. Societal norms and creditor rights

We also confronted our clustering of countries with the country-specific creditor rights. These creditor rights are found to be significant (Levine, 1998) when it comes to explaining cross-country variations in the other main component of financial development, namely banking development. As with shareholder rights, our data on creditor rights are taken from LLSV (1998), so we can distinguish:

- *RES*: restrictions for going into reorganization, equals 1 if reorganization procedures imposes restrictions, such as creditors consent, to file for reorganization;
- *AUTO*: no automatic stay on assets, equals 1 if the reorganization procedure does not impose an automatic stay on assets on the firm's assets;
- *SEC*: secured creditors first paid, equals 1 if secured creditors are ranked first in the distribution of the proceeds in case of bankruptcy;
- *MAN*: management does not stay in reorganization, equals 1 if this is the case;
- *CRED*: creditor rights, index aggregating the four aforementioned creditor rights, ranges from 0 to 4; and
- *LEG*: legal reserves required as percentage of capital, minimum % of total share capital mandated to avoid dissolution of the firm, equals 0 if there is no such restriction.

Based on their legal origin classification, LLSV (1998, pp. 1136–1137) find significant differences between creditor rights of especially common law and civil law countries (with higher scores on creditor rights for the former group of countries). The same holds for differences between English and French legal origin countries. Differences between English and German or Scandinavian legal origin countries are much smaller and mostly not significant. This last conclusion also holds for the differences in creditor rights based on our classification of countries based on societal origin (though the similarity is less compared to shareholder rights). Only for the Asian group (see for instance the scores on the composite *CRED* variable) there is a significant difference with the other groups of countries (typically, the Asian countries have relatively higher scores on creditor rights). In the LLSV set-up, most of these Asian countries are included in the legal English-origin group, which explains the higher scores for this group in their analysis compared to our societal Anglo-Saxon-origin group (again, underlying data are available upon request).

4. Stock market and banking development and societal norms

In this section we present estimation results for the relevance of legal indicators and societal norms for stock market and banking development. These regressions illustrate whether informal institutions like our societal norms help explaining financial development by means of (cross-country differences in) institutions. To this end we look at one indicator for stock market development and one indicator for banking development.³

³ We have also tested the relevance of societal indicators for an alternative measure for stock market development, total value traded (*TVT*). Although results were not exactly the same as for *MCAP*, the main conclusion also holds for *TVT*: societal norms are important for explaining stock market development. The results for *TVT* can be obtained on request.

- *MCAP*: stock market capitalization, as a measure of the size of the stock market defined as the value of listed domestic shares on domestic stock exchanges divided by GDP;
- *BPY*: bank credit, stock of credit by commercial and deposit-taking banks in the private sector divided by GDP.

These indicators are widely used in the recent literature on financial development and economic growth. Data for these indicators are taken from the dataset provided by Levine and Zervos (1998). The data refer to the period 1976–1993.

We concentrate on the impact of both legal variables and societal norms on stock market development. In the base model we control for the log of real output per head in 1976, the initial year in our sample (*LRGDP*), average annual output growth during 1976–1993 (*GYP*) and an enforcement variable called “efficiency of the judicial system” (*EFJS*). By including these variables in our basic specification we actually replicate the specification used by LLSV (1997, pp. 1134–1135, 1141).⁴ We estimate three models for *MCAP* and *BPY*. In Tables 2 and 3 the six corresponding regressions can be found in the respective columns. The difference between these two tables is that in the former we use the four individual Hofstede variables whereas in the latter we use the variable *FACTOR*, which results from our factor analysis upon which the grouping of countries according to societal origin (recall Table 1) was largely based. The set-up of Tables 2 and 3 is similar. In the first specification (columns (1) and (4)), we include *ANTI* (or *CRED*) and *EFJS*. These results represent the legal view. In the second specification (columns (2) and (5)), we include the proxies for the societal norms, respectively the four Hofstede-variables in Table 2 and the variable *FACTOR* in Table 3. In the third set of regressions (columns (3) and (6) in both tables), we include both the formal legal indicators and the societal norms. The three models for *MCAP* and *BPY* do not cover all the possible combinations among all the variables, but they highlight the most important results.⁵

Before we discuss the results a few words on the expected signs of the parameters. We expect from previous results that legal protection of investors and enforcement will increase stock market development and banking development. So the impact of anti-director rights (*ANTI*), efficiency of the judicial system (*EFJS*) and the creditor rights (*CRED*) on financial development should be positive. For the societal norms these signs are more ambiguous and we certainly do not want to claim too much here. The main point is that societal norms do seem to be relevant in explaining stock market capitalization *MCAP*. The precise impact is certainly left for future research. Countries with a low Power Distance Indicator (*PDI*),

⁴ We do not include other indicators for enforcement (presented in LLSV), since the different enforcement indicators are highly collinear. It should be noted that we have also tested whether our classification based on societal norms gives significantly different means with respect to “efficiency of the Judicial System” (*EFJS*). It appears that differences between subgroups are considerable. These results are not presented for reasons of space. The *EFJS* variable ranges from 0 to 10, with higher scores representing a more efficient judicial system.

⁵ Note that we also ran regressions in which, in the case of *MCAP*, the composite shareholders rights variable *ANTI* (or, in the case of *BPY*, its equivalent *CRED*) is replaced by the legal origin variables. Since a number of the legal origin variables are highly correlated with *ANTI* and *CRED*, we have not included these variables simultaneously. Notably for the variables English legal origin and French legal origin, there is a clear correlation with anti-director rights as well as with creditor rights. For the English legal origin, there is a clear positive correlation with both *ANTI* (0.58) and *CRED* (0.55), whereas the corresponding correlation coefficients are negative for French legal origin countries with *ANTI* (−0.45) and *CRED* (−0.54).

Table 2
 Estimation results for *MCAP* and *BPY* using four Hofstede variables

Variable \ dependent variable	Model 1: <i>MCAP</i>	Model 2: <i>MCAP</i>	Model 3: <i>MCAP</i>	Model 4: <i>BPY</i>	Model 5: <i>BPY</i>	Model 6: <i>BPY</i>
Constant	−0.48 (0.23)	−1.1 (0.28)	−1.5 (0.28)	−1.2 (0.34)	−1.6 (0.66)	−2.0 (0.92)
<i>LRGDP</i>	−0.020 (0.038) [−0.091]	0.10 (0.045) [0.45]	0.13 (0.046) [0.59]	0.19 (0.059) [0.57]	0.24 (0.061) [0.71]	0.27 (0.083) [0.82]
<i>GYP</i>	6.4 (2.4) [0.45]	5.6 (1.8) [0.38]	5.1 (1.4) [0.35]	9.7 (2.8) [0.46]	9.3 (2.9) [0.44]	8.0 (3.3) [0.38]
<i>EFJS</i>	0.081 (0.024) [0.58]	0.066 (0.019) [0.48]	0.050 (0.021) [0.36]	0.028 (0.032) [0.13]	0.036 (0.034) [0.17]	0.029 (0.037) [0.14]
<i>ANTI</i>	0.050 (0.021) [0.23]		0.062 (0.016) [0.28]			
<i>CRED</i>				0.019 (0.041) [0.057]		0.049 (0.053) [0.15]
<i>PDI</i>		0.0051 (0.0019) [0.38]	0.0061 (0.0018) [0.45]		0.0013 (0.0034) [0.067]	0.0027 (0.0041) [0.13]
<i>IDV</i>		−0.0032 (0.0021) [−0.27]	−0.0035 (0.0019) [−0.29]		−0.0031 (0.0033) [−0.17]	−0.0034 (0.0034) [−0.20]
<i>MAS</i>		0.0029 (0.0015) [0.18]	0.0028 (0.0013) [0.17]		0.0024 (0.0031) [0.10]	0.0022 (0.0031) [0.090]
<i>UAI</i>		−0.0051 (0.0014) [−0.40]	−0.0045 (0.0011) [−0.35]		−0.00085 (0.0027) [−0.045]	0.00070 (0.0032) [0.0036]
Adjusted R^2	0.52	0.71	0.78	0.54	0.49	0.49
<i>n</i>	41	40	40	42	41	41

Corrected standard errors between parentheses. Standardized coefficients between square brackets.

Table 3
 Estimation results for *MCAP* and *BPY* using *FACTOR*

Variable\ dependent variable	Model 1: <i>MCAP</i>	Model 2: <i>MCAP</i>	Model 3: <i>MCAP</i>	Model 4: <i>BPY</i>	Model 5: <i>BPY</i>	Model 6: <i>BPY</i>
Constant	−0.48 (0.23)	−0.90 (0.33)	−1.3 (0.36)	−1.2 (0.34)	−1.7 (0.56)	−2.1 (0.74)
<i>LRGDP</i>	−0.020 (0.038) [−0.091]	0.0029 (0.035) [0.013]	0.041 (0.037) [0.19]	0.19 (0.059) [0.57]	0.21 (0.062) [0.64]	0.26 (0.085) [0.78]
<i>GYP</i>	6.4 (2.4) [0.45]	6.3 (2.6) [0.43]	5.8 (2.3) [0.40]	9.7 (2.8) [0.46]	9.7 (2.6) [0.46]	8.0 (3.1) [0.38]
<i>EFJS</i>	0.081 (0.024) [0.58]	0.11 (0.025) [0.81]	0.093 (0.024) [0.67]	0.028 (0.032) [0.13]	0.049 (0.028) [0.24]	0.037 (0.032) [0.18]
<i>ANTI</i>	0.050 (0.021) [0.23]		0.067 (0.019) [0.31]			
<i>CRED</i>				0.019 (0.041) [0.057]		0.056 (0.049) [0.17]
<i>FACTOR</i>		0.0044 (0.0018) [0.35]	0.0058 (0.0019) [0.45]		0.0042 (0.0035) [0.22]	0.0061 (0.0039) [0.32]
Adjusted R^2	0.52	0.57	0.60	0.54	0.53	0.53
n	41	40	40	42	41	41

Corrected standard errors between parentheses. Standardized coefficients between square brackets.

for instance, apparently will show a larger trust, since there is more value in horizontal relationships. A higher trust could therefore be looked upon as making the development of a stock market less necessary, so a higher *PDI* (lower trust) could be thought of as accompanying a more pronounced stock market development. Note, however, that Guiso et al. (2001) argue that trust enhances stock market development. A higher individualism (*IDV*) should have a positive impact (*ceteris paribus*) on stock market development. Individualism points to the efficiency of a market as a coordinating device. The sign of *MAS* is less clear even though Licht et al. (2001), following Hofstede himself, emphasize that more masculinity “is compatible with equipping all shareholders with the rights and means to determine their position” (p. 27), which suggest that in more masculine societies stock markets are more developed. Finally, Uncertainty Avoidance (*UAI*) might be thought of as being negatively correlated with stock market development to the extent that, compared to for instance bank deposits, stocks are perceived as a more risky investment (see De Jong and Semenov (2001) for this view). One could also argue that stock markets provide both insurance and risk-seeking opportunities. As with *MAS*, the sign of *UAI* is therefore less clear, which is the main argument to include the results for the factor analysis as a composite measure of societal norms. In any case we need to be careful when directly interpreting the parameters, because a factorization of the four Hofstede variables into one variable makes sense, and at least two of the indicators, *PDI* and *IDV*, are correlated as was discussed in Section 3. We therefore include all four variables simultaneously in the model in Table 3 and by means of the variable *FACTOR* analyze their joint contribution.

Tables 2 and 3 show that economic growth is a significant determinant of financial development. The standardized coefficient of economic growth (*GYP*) is about 0.4: a 1 percentage-point higher growth rate leads to a 0.4 percentage-point increase of *MCAP* and *BPY*. Column (1) in Table 2 shows that the anti-director rights variable (*ANTI*) has a clear positive impact on market capitalization. More importantly, columns (2) and (3) show that market capitalization is significantly determined by the societal variables (compare with the fit of the model in column (1)). *PDI* can be looked upon as being negatively correlated with trust and the positive coefficient for *PDI* thus suggests (as opposed to Guiso et al., 2001) that less trust goes along with a higher degree of stock market capitalization. Similarly, we find that a higher degree of uncertainty avoidance goes along with a lower degree of stock market capitalization. From the standardized coefficients, we learn that the impact of the four Hofstede variables on *MCAP* is quite strong (note that the four societal indicators vary from 0 to ~100), so societal norms matter for stock market development. The general conclusion from the first three columns of Table 2 is thus that societal variables like the four Hofstede variables are potentially important in explaining stock market development, even though we at present lack a theoretical model which links societal norms to financial development. This last observation, combined with the previous observation that there is a common factor in these four variables, leads us to put at least as much weight on the estimation results reported in Table 3. Here we also see that the societal norms, now jointly presented in the variable *FACTOR*, contribute significantly to stock market capitalization. The standardized coefficient for *FACTOR* also suggests that societal norms matter.

Additional evidence (not shown here, but briefly explained) supports this conclusion. First, if we use legal origin instead of anti-director rights in our regressions, we find a robust significant contribution of societal norms. Secondly, as we explained in Section 3,

it is possible to use the Hofstede variables to classify countries into five subgroups. When we use these five subgroups or the common factor itself instead of the underlying Hofstede variables, we also find that these variables have a significant impact on *MCAP* and that the fit of the model improves significantly in case these variables are included. Thirdly, in a similar analysis Licht et al. (2001) find that the relevance of the societal variables is not due to the use of the Hofstede data, but also holds when another well-known data set (the so called Schwartz (2001) data set) is used. So, the main conclusion that can be derived from Tables 2 and 3 is that societal norms are significant determinants of stock market capitalization, but at the same time the inclusion of these norms does *not* imply that formal institutions (here, *ANTI* and *EFJS*) are no longer relevant. It thus seems that at least for stock market development, here proxied by *MCAP*, informal institutions complement formal institutions.

To finish our discussion on the potential relevance of societal norms for financial development, we turn to the development of bank credit *BPY*. The basic model is the same as with stock market capitalization, except that we now include creditor rights (*CRED*) instead of anti-director rights (*ANTI*). Again, it is difficult to predict on beforehand what the sign of the various coefficients of the societal variables should be, but we generally expect that variables like power distance or uncertainty avoidance are less important in the case of financial intermediation compared to public capital markets. The estimation results in Table 2 do not only confirm this notion, but are even stronger: none of the societal variables are now significant (see columns (5) and (6)). This is also true (see Table 3) if we use the composite variable *FACTOR* instead of the four individual Hofstede variables. Note that the insignificance also holds for creditor rights and the efficiency of the judicial system. Additional regressions, not presented for reasons of space, show that the legal origin variables are, however, significant in the *BPY*-regressions.⁶ Also, when we used the classification of countries into five societal subgroups, we did not find a significant effect of the alternative “societal norms” variables on *BPY*. At any rate, legal as well as societal institutions seem to be relatively less relevant for banking than for stock market development. More precisely, both for stock market capitalization and bank credit the inclusion of societal norms do not lead to a different impact of institutions on financial development. In all our specifications we never find that societal norms are significant but that the LLSV variables are not (note that the reverse is not true).

The next question is of course whether these conclusions with respect to banking and stock market development also arise when one analyzes the impact of financial development on economic growth, which is what the legal view literature on financial development and economic growth is ultimately about. It is to this issue that we finally turn.

⁶ Levine (1998, p. 604) concludes that *CRED*, *EFJS* or legal origin are significant determinants of bank credit. His specification differs however from those in columns (1) and (4) of Tables 2 and 3 and our main point here is not that the LLSV-variables are never relevant in explaining bank credit (since we also came up with specifications in which they are significant), but instead we want to emphasize that for *BPY*, and clearly opposed to *MCAP*, we were not able to discern a significant impact for societal norms in any specification.

5. Economic growth, financial development and societal norms

The goal of this section is not to “prove” whether financial development matters for economic growth. We merely want to analyze whether the extension of the legal view with our societal norms leads to different conclusions regarding the explanation of financial development. To this end we present results of cross-country growth regressions in which, besides a set of conditioning variables, the financial indicators *MCAP* or *BPY* are the main explanatory variables. In addition, and in line with the legal view literature, we consider *MCAP* and *BPY* to be endogenous variables. This leads to a second equation that needs to be estimated where *MCAP* or *BPY* are a function of the variables specified in the previous section. In fact, the three basic specifications we use to estimate *MCAP* or *BPY* are the same as those in Tables 2 and 3. To deal with endogeneity we estimate the system of two equations by 3SLS wherein the set of instruments consists of the set of conditioning variables and, depending on the specification used, the LLSV variables and/or our societal norms. For the latter we use the variable *FACTOR* in order to minimize the probability of overidentification.

This set-up of our cross-section growth regressions is standard in the legal view literature (see for instance Levine, 1998, p. 605 or Levine, 2000); see Table 4 for further information on the various variables and specifications. Economic growth, *GYP*, is measured as the average annual real per capita GDP growth rate and the set of conditioning variables (initial output, secondary school enrolment, revolution and coups, the government consumption share of GDP, inflation, and the black market exchange rate premium) are taken from the Levine-Zervos database. All other variables have already been described before.

We proceeded in three steps and the content of Table 4 reflects these successive steps. First, we tested for the endogeneity of the financial variables in the growth equation using a Hausman-test. The results support the endogeneity of both stock market capitalization and bank credit to the private sector as a percentage of GDP. Next we estimated the growth regressions based on the abovementioned two equations and using inter alia the efficiency of the judicial system *EFJS*, the shareholder rights *ANTI* (or the creditor rights *CRED*) or the societal norms by means of the variable *FACTOR* as instruments. Just as with the estimations in the previous section (see Table 3), we use three main specifications in our growth regressions. The differences between the various specifications are completely due to the variation in the use of the LLSV indicators and the variable *FACTOR*. As in Table 3, we therefore end up with six models, depicted by columns (1)–(6) in Table 4. As a third and final step, through the application of a simple overidentification test we test for all models whether or not the inclusion of the respective LLSV variables or the variable *FACTOR* among the set of instruments makes sense.

The first row of Table 4 gives the results for the endogeneity test. First, we estimate the financial indicator on all exogenous model variables (here we vary across our three model specifications for both financial indicators). Next, we include the respective residuals in the economic growth regression. The first row of Table 4 gives the estimated parameter of the residual term in the growth equation. A significant coefficient indicates that *MCAP* and *BPY* are indeed endogenous, and this turns out to be the case in most of the specifications. Hence, the use of instruments is called for. Indeed, and not surprisingly, we have to reject exogeneity of both *MCAP* and *BPY*.

Table 4
Estimation results for growth regressions

	Model 1: <i>MCAP</i>	Model 2: <i>MCAP</i>	Model 3: <i>MCAP</i>	Model 4: <i>BPY</i>	Model 5: <i>BPY</i>	Model 6: <i>BPY</i>
Hausman-test	0.037 (0.0073)	0.042 (0.0085)	0.046 (0.011)	0.019 (0.0070)	0.028 (0.0075)	0.018 (0.0075)
<i>MCAP</i>	0.059 (0.015) [0.083]	−0.0013 (0.015) [−0.019]	0.0053 (0.013) [0.078]			
<i>BPY</i>				0.072 (0.024) [1.5]	0.0052 (0.028) [0.11]	0.054 (0.016) [1.1]
<i>EFJS</i>	0.081 (0.022) [0.59]	0.12 (0.023) [0.84]	0.097 (0.021) [0.70]	−0.0071 (0.010) [−0.070]	0.050 (0.033) [0.24]	−0.0058 (0.015) [−0.028]
<i>ANTI</i>	0.051 (0.025) [0.23]		0.068 (0.024) [0.31]			
<i>CRED</i>				0.029 (0.040) [0.091]		0.069 (0.053) [0.21]
<i>FACTOR</i>		0.0050 (0.0021) [0.39]	0.0064 (0.0020) [0.50]		0.0042 (0.0031) [0.22]	0.0026 (0.0027) [0.13]
Overidentification test (McFadden, 1999)	9.1	12.0	8.5	38.0	6.6	9.6
<i>N</i>	41	40	40	42	41	41

Corrected standard errors between parentheses and standardized coefficients between square brackets. Each of the six models consists of two equations:

$$GYP = c_0 + \beta_1(FIN) + \beta_2X$$

and $FIN = c_1 + \beta_3LRGDP + \beta_4GYP + \beta_5EFJS + \beta_6INSTIT$, where (in addition to the variables already been described before in the paper) *GYP* is average real per capita growth; *FIN* is either *MCAP* or *BPY*; *X* the set of conditioning variables (initial output, school enrollment, revolutions and coups, government consumption share of *GDP*, and the black market exchange rate premium; all from the Levine-Zervos database); *INSTIT* the combination of *ANTI* (*CRED*), *EFJS* and *FACTOR*. Estimation method: 3SLS.

The next step concerns the growth regressions (estimating in each of the six cases a set of two equations, one for *GYP* and one for *MCAP* (*BPY*). Rows (3)–(8) in Table 4 give the most important results. In each case we report the estimated parameters of *MCAP* or *BPY* in the growth equation and the coefficients for the corresponding LLSV variables or *FACTOR*, the societal norms variable, in the equation for *MCAP* or *BPY*. It turns out, see row (3), that (the exogenous part of) stock market capitalization is not important for economic growth whereas (the exogenous part of) bank credit, see row (4), significantly affects economic growth. While these are interesting results, they are not our prime concern here. Instead, we want to focus on the comparison of the results for each of the three models for *MCAP* and *BPY*. Two findings stand out. First, just as in Table 3, societal norms (here, *FACTOR*) are significant determinants in the models that explain *MCAP* and not for *BPY*. Also as in Table 3, inspection of the standardized coefficients shows that *FACTOR* matters to stock market capitalization. But our main point is that in all six models it is also the case that the impact of *FACTOR* is very much like that of the formal institutions, *ANTI* (*CRED*) and *EFJS*. If the latter variables are (in)significant so is *FACTOR* and the inclusion of *FACTOR* never leads to different conclusions with respect to the impact of (the exogenous part of) our two financial indicators on economic growth. Just as in the previous section we therefore conclude that the inclusion of societal norms does not lead to different insights compared to the case where only formal institutions (here *ANTI* (*CRED*) or *EFJS*) are looked at.⁷

Finally, row (10) of Table 4 gives the results for a test on the appropriateness on including *ANTI* (*CRED*) or *FACTOR* in the three model specifications on which Table 4 is based. We tested for overidentification as follows. We have two sets of instruments: a limited one *Z* and a broad one *W* (including *Z* and the candidate additional instruments). First we estimate *MCAP* or *BPY* on *Z* and retrieve the fitted values. Next we estimate the economic growth equation on all determinants and the fitted values of the auxiliary equation. We use an F-test to compare the Sum of Squared Residuals (SSR) of this model with the SSR of the unrestricted model that uses *W* as instrument (see also McFadden, 1999). This F-test is equivalent to an overidentification test in GMM models. A relatively low coefficient in row (10) means that (the) addition of the respective instrument(s) becomes more valid because the instruments are then relatively more powerful. We are especially interested in the value added of including *FACTOR* in the list of instruments. Table 4 shows that *CRED* is a rather poor instrument in the model with *BPY* (as also observed using the Hausman test for model 4). Adding our composite societal norms variable *FACTOR* to the model contributes both to the endogeneity and the explanation of economic growth. Adding both *FACTOR* and *CRED* does not improve these results, though. It should be noted that the overidentification test still indicates weakness of the instrument set as a whole. For *MCAP* we observe that *ANTI* is a better instrument than *FACTOR*. All in all, the results of our overidentification tests indicate that the power of the instruments *ANTI* (*CRED*) and *FACTOR* is rather limited.

⁷ This conclusion is reinforced by our growth regressions in which *MCAP* and *BPY* were included in the same growth regression, either as two independent variables (like in Levine and Zervos, 1998 or Levine, 2001) or as one composite variable “financial development” (= *MCAP* + *BY*, like in Levine, 2000). In all cases, we found that the impact of growth regressions with societal norms as instruments is similar to that of regressions with only the LLSV variables (and not the societal norms) in the list of instruments.

6. Conclusions

Using the examples of stock market capitalization and bank credit, we have analyzed the potential relevance of societal norms in explaining financial development and the impact of financial development on economic growth. Our starting point was the observation that the recent legal view literature on financial development and economic growth might take too narrow a view of the role of institutions and that informal institutions are perhaps unduly neglected. We first pointed out that the classification of countries according to their legal institutions with respect to the protection of shareholders and creditors is to a considerable extent similar to the classification of countries based on societal norms. There are, however, notable differences between the classification when one looks more closely at various specific legal and societal indicators. This comparison led to an analysis of the relevance of societal norms in addition to (as well as separate from that of) legal institutions on stock market capitalization and bank credit and also on economic growth. Based on our composite indicator for societal norms we find that societal norms are a significant determinant of stock market capitalization but not of bank credit. In particular we find that the impact of societal norms is very similar to that of the legal institutions. Compared to the latter, the value added of societal norms seems to be rather small when it comes to understanding the role of institutions at large for financial development. In our growth regressions we find that the exogenous part of stock market capitalization is not, but that of bank credit is significant for economic growth. But again, the way that societal norms (now in their role as an instrumental variable) enter growth regressions is similar to that of the legal institutional variables. Also, as is often a problem in cross-section regressions, the power of both societal norms and legal institutions as instruments is not very strong. This suggests that the way forward in the research on the relevance of financial development for economic growth is not so much to be found in extending the legal view with informal institutions, but perhaps more in exploiting the time-series dimension of the data, like in [Beck and Levine \(2001\)](#). In the end we find societal norms to be largely interchangeable with the legal variables (or that the latter to perform better). The usefulness of including societal norms alongside legal institutions is found to be limited not only when it comes to their impact on financial development and economic growth, but also where it concerns the search for powerful instruments in the growth regressions.

Acknowledgements

We would like to thank the editor, an anonymous referee, Richard Gigengack, Ross Levine, Radislav Seminov and seminar participants at Emory University, the University of Nijmegen and the 2002 meeting of the European Economic Association (EEA) in Venice for useful comments on an earlier version of (parts of) this paper.

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