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Estimation of Social Capital in the World

Time Series by Country

Fundación **BBVA**

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■ Abstract

This working paper presents a new database covering an extensive set of countries from all over the world, compiled by the BBVA Foundation and the Instituto Valenciano de Investigaciones Económicas (Ivie) using the methodology developed in Pérez García et al. (2005). It also updates the database previously presented in the above-mentioned monograph corresponding to Organisation for Economic Co-operation and Development (OECD) countries. The new database comprises an unbalanced panel of 78 countries for the period 1970-2005, the same period covered by the OECD database. This working paper describes the theoretical and empirical methodology on which the measure of social capital is based. Finally, we include an appendix with the new series.

■ Resumen

Este documento de trabajo presenta una nueva base de datos elaborada por la Fundación BBVA y el Instituto Valenciano de Investigaciones Económicas (Ivie) de acuerdo con la metodología desarrollada en Pérez García et al. (2005) correspondiente a un conjunto de países de todo el mundo, así como la actualización de la base de datos ya presentada previamente en la citada monografía, referida a los países de la Organización para la Cooperación y el Desarrollo Económicos (OCDE). La nueva base de datos recoge un panel incompleto de 78 países de todo el mundo para el período 1970-2005. La base de datos de la OCDE se ha actualizado de forma que incluye también el período 1970-2005. Este documento describe la metodología teórica y empírica sobre la cual está basada la medida del capital social aquí desarrollada. Por último, se presentan las nuevas series en el apéndice.

■ Key words

Social capital, investment, social networks, database.

■ Palabras clave

Capital social, inversión, redes sociales, base de datos.

C O N T E N T S

1. Introduction

THE high degree of complexity in all types of relationships in modern developed societies, not only in the economic context, but also in social, labour and other spheres, is combined with remarkable efficiency in such a way that these complexities do not prevent the economy from functioning properly. While this efficiency may stem from various factors, such as improved technologies, it may also derive from behaviours of cooperation in firms, institutions or markets. These behaviours are fostered by the trust among individuals that their commitments will be met. The level of trust achieved in social and economic relationships therefore acts as an intangible factor of production, and represents real social capital. This type of capital leads to improved efficiency at work and in other productive assets, such as physical or human capital.

In general terms, social capital may be said to stem from social relationships, and consists of the expectation of benefits deriving from preferential treatment and cooperation between individuals and groups. The role social capital plays in development has received a great deal of attention over recent years in various areas of the social sciences. Sociologists, social psychologists, political scientists and economists have all taken an interest in its characteristics, measurement and effects. Institutions look for ways of developing policies that will favour the accumulation of this capital, which is dependent on the social climate and the institutional environment.

The commonly used measures of social capital are based on associational membership, following the works of Putnam (Putnam et al., 1983; Putnam, Leonardi and Nanetti, 1993; Putnam, 1995), or on surveys, in which the target population responds to the question of whether, in general, others can be trusted (see, for example, the World Values Survey by Inglehart et al., 2004 or the North American *General Social Survey* [see Davis, Smith and Marsden, 2004]). Although these indicators are widely used in the economic literature as well as by other social scientists, they generally attempt to quantify social capital either through its antecedents or causes, or through the consequences resulting from attitudes of cooperation. On the whole, their theoretical groundings as measures of capital are not solid and they do not allow a clear causal relation to be established between the concept and its measure.

In numerous studies, social capital is regarded as a result of experiences of cooperation in non-economic spheres, such as the family, voluntary associations or citizens' movements. However, Pérez García et al. (2005) consider that the economic sphere is also a medium that can foster the accumulation of social capital, particularly when individuals personally experience sustained economic growth and can therefore benefit from the improvements this growth brings. This consideration forms one of the cornerstones of our methodology, which is detailed in the following section. The reason why relationships of trust are generated in these experiences, widespread in developed countries, is that individuals recognise that the efficiency attained in economic activity in advanced societies cannot be reached without the cooperation, albeit self-interested, of the majority. And it is easier to cooperate when one trusts others.

The most important differences between the approach used in the BBVA Foundation-Instituto Valenciano de Investigaciones Económicas (Ivie) project and the indicators most commonly used in the literature are twofold. First of all, there is the recognised role of economic relationships in the generation of cooperation experiences. In this context, the expectations of cooperation in economic activities are extremely important for the generation and generalisation of trust. The second difference lies in the procedure used to measure social capital stock, which is similar to that used by economists to measure other types of capital. According to this approach, the value of assets is based on the flow of expected future payments that possession of these assets will yield, once the costs associated with obtaining them have been deducted. This criterion explains the reason for investing: investors expect to recover their initial investment.

For a good to be considered as capital, it is assumed to have three characteristics that distinguish it from other available goods and services. First, it must be produced. This means that it is not a natural resource, but rather, it has been created through the costly investment of resources in a good that is accumulated. Second, it must be productive; in other words, it must contribute to the generation of positive outcomes; in the case of social capital, this productivity operates through a network of trust relationships that reduce transaction costs. Finally, it must be lasting; this requirement means that the service the capital provides must continue through various time periods, and not be consumed on one single occasion, although it will usually depreciate with use. Hence, a sound measure of social capital must be based on a modelling of the investment process and must explain both how individual decisions of trust are integrated, and the aggregate effect of cooperation. This modelling is done by means of a methodology similar

to that used to measure physical capital (Organisation for Economic Co-operation and Development [OECD], 2001).

In our opinion, these two economic dimensions form an important grounding for any measure of social capital. Some studies, not only by economists, have considered social capital as a productive asset (see Bordieu, 1980, 1985; Coleman, 1988, 1990; Putnam, 1995), and many others have highlighted the beneficial effects it has on economic growth and productivity (Knack and Keefer, 1996; La Porta et al., 1997; Zak and Knack, 2001; Alesina and La Ferrara, 2002; Sobel, 2002, among others) or on the functioning of institutions (Williamson, 1993). However, hardly any research presents a theoretical development that allows us to identify the determinants of what creates social capital.

Pérez García et al. (2005) model the process by which social capital is created and accumulated from a perspective that stresses these two economic aspects. This formal modelling is used to specify an empirical model that allows social capital to be estimated, using proxies of determinant variables for it. Unfortunately, there are no indicators that directly measure all the concepts we want to quantify, and consequently the selected variables are only approximations. The databases presented here should therefore be considered tentative, and subject to revision as new information and better proxies become available. Despite these limitations, the series presented allow us to begin to assess the characteristics of social capital as we understand them here—both in terms of their evolution over time and of the differences between economies—, to analyse the sensitivity of the estimations given by the selected proxies, and to evaluate their capacity to explain economic growth (see Pérez et al., 2006).

The main innovation in this document is a new database that covers 78 countries from all over the world (81% of the total world population), in the form of an unbalanced panel spanning the period 1970-2005. The research also updates, to 2005, and improves the database of OECD countries presented in the monograph by Pérez García et al. (2005). The improvements we introduce are due primarily to the publication of new data on some of the variables used and enhancements to the demographic information required to calculate the life expectancy of the average population age for the set of OECD countries. Other improvements are methodological and consist of differentiating between the income elasticities of social capital and other productive factors for different geographic areas, since we consider these may vary among countries rather than remaining constant for the whole sample, as was the case in the first version.

The working paper is structured as follows. Section 2 briefly outlines the theoretical model on which the measure of social capital is based. In section 3 we describe the empirical application of the theoretical model and revise the proxies of the relevant variables. The main results of the estimation of social capital for the OECD database are presented in section 4. The new database of countries from all over the world is presented in section 5. Finally, conclusions are drawn in section 6.

2. Methodology for the Estimation of Social Capital: Theoretical Model

As mentioned above, Pérez García et al. (2005) formulate a model based on two key principles: first, the consideration that economic relations are an essential channel in the generation of social capital; and second, that this is the result of a process of accumulation of costly investments which generate economic returns. Social capital is therefore evaluated in the same way as any other type of economic activity: according to its expected future profitability. This dual-perspective approach to social capital has two immediate consequences. First, as indicated by Glaeser, Laibson and Sacerdote (2002), similar quantification to any other asset requires an optimal decision model in which an individual will invest in social capital if the future payments associated with this asset are greater than the investment costs. This investment flow accumulates to form social capital stock, which also undergoes processes of depreciation.

The second consequence that can be deduced is that once the investment decision and its accumulation in net social capital stock (or wealth capital stock, according to Organisation for Economic Co-operation and Development [OECD] terminology) have been analysed, its contribution to the production process must be evaluated. To do this, following the same methodology as that used to measure physical capital (see OCDE, 2001), the flow of social capital services must be calculated. In the same way that physical capital flow depends on the extent to which it is used (capacity utilisation), social capital flow also depends on the intensity with which the asset is used; in other words, the degree of connection in the social relationships network. This means that an individual's contribution of social capital to the production process will be higher, the denser his or her individual relationship network and that of the rest of society are. In contrast, if an individual is completely isolated and has no trust relationships with others, the social capital he or she may have will not contribute to generating positive economic results.

Finally, the aggregation of individual social capital presents similar problems to those existing in the aggregation of physical capital assets,

which can be resolved with the help of a suitable price system, in other words, with the corresponding user cost for social capital.

From these elements, an indicator is constructed that is a function of a set of variables which facilitate a more reliable approach to the empirical estimation of social capital than traditional measures do. To formalise these ideas, Pérez García et al. (2005), following Glaeser, Laibson and Sacerdote (2002), consider social capital to be directly associated with the individual, resulting from a process of investment and accumulation. Hence, the optimal investment, *Is,* in social capital, *ks,* made by an individual *i* derives from the problem of maximising the future (net) income expected by the investor. It is therefore necessary to develop hypotheses on the income an individual receives and the costs borne as a result of his or her investment in social capital.

At this point, we introduce the second basic assumption underlying the methodology: the consideration that economic relations are essential to the generation of social capital. Hence, in a context of abundant social capital, transaction and supervision costs, together with uncertainty, will be lower than in other societies, or other moments in time, with lower social capital. This favourable environment will generate higher income levels than those that would correspond to the contribution of production factors (capital and labour) individuals make. Individuals will associate these higher income levels with the fact that they belong to the society, in which—as long as they are not excluded for reasons of existing inequality—their attitudes of cooperation will be remunerated. In contrast, if these expectations are disappointed and the expected incomes are not obtained, social capital will depreciate at rate *d.*

In sum, the problem of profit (π) maximisation for the representative individual, in order to reach the optimal level of investment in social capital, is determined by the following expression:

$$Max_{Is_{it \in [0, ..., T]}} \pi = \sum_{t=0}^{T} \left[\frac{1}{(1+\rho)^t} \left(y_{it} \left(1 - G\right) - rk_{it} - \bar{w}_t \left(1 + C\left(Is_{it}\right)\right) \right) \right] \qquad (2.1)$$

$$\text{s.t. } ks_{it+1} = \delta \, ks_{it} + Is_{it} \qquad (2.2)$$

where *k* is the physical capital stock per worker, *r* is the return of capital, G an inequality index, $\bar{w}$ salary and *C (Is)* the costs associated with social capital investment.

The objective function of the individual shown in expression (2.1) shows that he or she will invest in social capital in such a way as to maximise

the difference between the value of future net incomes, y, which exceeds the remuneration corresponding to his or her contribution to production factors $rk + \bar{w}$, duly discounted by the factor ρ, from the present moment t through a period T, derived from the investment in this asset. The duration of the future period, $T - t$, will be given by the time the person is expected to remain in the society. In addition, when evaluating expected net incomes, the individual will take into account the risk that these may not be obtained. The risks considered will include that of being excluded from the results of the society and not reaching the average income, due to existing inequality. The average incomes are therefore corrected with the Gini inequality index (G), by calculating the income that all individuals would receive if no inequality existed: $y (1 - G)$.

The individual will also bear costs associated with investment in social capital. These costs are represented by the increasing and convex function $C (Is)$ that quantifies the cost of cooperating in terms of its opportunity cost (the time devoted to cooperating), evaluated by the wage $\bar{w}$.

Equation (2.2) establishes that social capital, like other capitals, cannot follow just any path, but will depend on past and present investments and on its survival rate $(\delta = 1 - d)$.

The productive nature of social capital is reflected in the part it plays in production, in which it intervenes like any other production factor. Assuming a Cobb-Douglas technology with constant returns to scale, the per capita production function at a moment in time t can be written according to the following expression.

$$y_t = A_t k_t^{\alpha} h^{\phi} \frac{KS_t^{\beta}}{L_t^{\beta}} \tag{2.3}$$

where h is the human capital stock per worker, and α, ϕ, and β are the income elasticities of the physical, human and social capital, respectively. KS is the flow of services of the aggregate social capital and depends on two factors: first, on the contribution of individual social capital to production; and second, on how individual social capitals are aggregated. In the first case we assume that, unlike physical capital, social capital does not lose efficiency over time, although it will depreciate at rate d. We also assume that the degree of use of social capital depends on how extensive trust networks among individuals are. Based on graph theory, an indicator, c, is proposed for the degree of connection in the social network. This indicator is bounded between zero and one, in such a way that the larger c is, the greater the contribution of social capital to production will be, due to both a greater connec-

tion among the participants in the social network and to the fluidity of information within it. Therefore, the flow of individual social capital services (fks_i) will be given by the following expression:

$$fks_i = c_i ks_i \qquad (2.4)$$

With regard to the aggregation of social capital of each of the N individuals who belong to the society, the size of the social network is considered and a Tornqvist index is used. The individual social capital is aggregated multiplicatively through this index, using as weighting factors the weight of the value of the productive services of each individual's social capital (v_i) in the total [1]. Thus, the flow of services of aggregated social capital is given by equation (2.5).

$$KS = N \prod_{i=1}^{N} c_i^{vi} \, ks_i^{vi} \qquad (2.5)$$

All the above allows us to rewrite the individual's maximisation problem using equations (2.1)-(2.5) as follows:

$$Max_{Is_{it \in [0, ..., T]}} \pi = \sum_{t=0}^{T} \left[\frac{1}{(1+\rho)^t} \left(y_{it} \left(1 - G \right) - rk_{it} - \bar{w}_t \left(1 + C \left(Is_{it} \right) \right) \right) \right]$$

$$\text{s.t. } ks_{it+1} = \delta \, ks_{it} + Is_{it} \qquad (2.6)$$

$$y_t = A_t k_t^\alpha h^\phi \, \frac{KS_t^\beta}{L_t^\beta} = A_t k_t^\alpha h^\phi N^\beta \, \frac{\left(\prod_{j=1}^{N} c_j^{vj} \, ks_{jt}^{vj} \right)^\beta}{L_t^\beta}$$

The first order conditions are, for each period t considered, as follows:

$$\frac{1}{(1+\rho)^t} \, \bar{w}_t C'(Is_{it}) = \beta \left(1 - G \right) \sum_{l=0}^{T-t-1} \frac{\delta^l}{(1+\rho)^{t+l+1}} \, y_{it+l+1} \left[\sum_{j=1}^{N} v_j \frac{\lambda_{ij}}{ks_{jt+l+1}} \right] \quad (2.7)$$

where $\lambda_{ij} = \dfrac{\partial Is_{jt}}{\partial Is_{it}}$ is the conjectural variation that measures the expectation individual i has about the change that will occur in the social capital invest-

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1. For further details on the aggregation of individual social capital, see Pérez García et al. (2005), section 3.6.

ment decision taken by another individual *j*, against changes in his or her own social capital investment.

According to this condition, investment in *ks* is made until the point in which the marginal cost attributed to the effort of cooperating in the period (reflected on the left hand side of the expression) is equal, at the present value to the marginal income expected over time (right hand side).

Depending on how we assume the reaction of the other individuals will be to the variations in the deciding agent's social capital investment, the first order condition may take a different form. If we assume the case of an agent representative of a society in which all individuals have equal endowments of social capital *(ks_j = ks ∀ j)*, bear equal costs of use *(v_j = 1/N ∀ j)* and respond in the same way to variations in one individual's social capital *(λ_ij = λ ∀ j ≠ i)*, the condition defined by equation (2.7) can be written as follows:

$$\bar{w}_t C'(Is_{it}) = \beta \left(\frac{1 + \lambda (N-1)}{N} \right) \frac{y_t}{ks_{it}} (1 - G) \frac{1 - \left(\frac{\delta}{(1+\rho)} \right)^{T-t}}{1 + \rho - \delta} \qquad (2.8)$$

This expression will give us the social capital stock aggregated to the economy:

$$KS_t^* = \beta c \left(1 + \lambda (N-1) \right) \frac{y_t}{\bar{w}_t} \frac{(1 - G)}{C'(Is_{it})} \frac{1 - \left(\frac{\delta}{(1+\rho)} \right)^{T-t}}{1 + \rho - \delta} \qquad (2.9)$$

Social capital therefore depends on the following factors. First, the cost of investing in social capital, measured as working time equivalent to the effort involved in cooperating, and the opportunity cost of this time, proxied by the wage $\bar{w}$. Second, the benefits expected from the investment, determined by the well-being associated with the mean income workers expect *(y)* corrected for inequality $(1 - G)$. It is also influenced by the contribution of social capital to income *(β)*; the survival rate of social capital stock *(δ)*; the time horizon of the flow of net income from social capital *(T − t)*; the discount rate to be applied to future incomes *(ρ)*; the degree of connection in the social network *(c)* and finally, the variation in other individuals' social capital investment against changes in one individual's social capital investment *(λ)*.

Expression (2.9), which defines the optimal stock of social capital, can be expressed as a function of the income-elasticities of the production function:

$$KS_t^* = \frac{\beta}{\gamma}\, c \left(1 + \lambda\,(N-1)\right) \frac{(1-G)}{C'(Is_{it})}\ \frac{1 - \left(\dfrac{\delta}{(1+\rho)}\right)^{T-t}}{1 + \rho - \delta} \tag{2.10}$$

Equation (2.10) is the base for estimating social capital stock. Since this depends on the parameters of the production function, these can be assumed to be constant over time and, if suitable proxies are used for the remaining variables included in this equation, the *volume indexes of social capital* can be constructed. Taking year *b* as the base year, the volume index of social capital can be expressed as follows:

$$IVKS_t^* = \frac{KS_t^*}{KS_b^*}\ 100 \tag{2.11}$$

This expression allows us to compare the paths of social capital over time for a specific geographical area. However, comparisons between countries, while plausible—taking a geographical area in a given moment in time as a reference—involves assuming that all countries present production functions with the same coefficients. To do this, the data presented in the annex to this document are calculated as volume indexes, based on the value in each country in 1990 (or the first available year after this date).

3. Empirical Estimation of Social Capital. Statistical Sources Used

Eᴏᴜᴀᴛɪᴏɴs (2.10) and (2.11), and the proxies specified for each of the variables in the theoretical model described in the previous section allow us to calculate the value of social capital. In this section, we describe the variables used, their statistical sources and their construction. We focus on the methodological novelties introduced with respect to the previous version of the Organisation for Economic Co-operation and Development (OECD) database in Pérez García et al. (2005). The database now includes all OECD countries with the exception of Iceland for the years 1970 to 2005, and exploits the abundant statistical information available for this set of countries. Among the methodological improvements it is worth mentioning that the population data used in the previous version of the database to calculate some of the variables have been updated, particularly the variable used to proxy the time horizon during which an individual belongs to the society *(T − t)*. The Gini indexes for OECD countries estimated from United Nations data have also been revised in accordance with the updated version of the UN inequality database.

However, the main innovation in this document is the world database. The new international database comprises an unbalanced panel of 78 countries from all over the world for the period 1970-2005. The countries and the time periods for each of them included in this new database were determined by the availability of information on the variables used. To guarantee the widest possible geographical and temporal scope of the new database, each variable has been worked on for all the countries in the world between 1970 and 2005. The final scope of the database corresponds to the intersection of the availability of all the necessary variables. Because it covers a wider range of countries, statistical sources other than those provided by the OECD were used, with the result that on occasions, higher levels of heterogeneity in the statistical information had to be accepted.

We now detail the proxies and the methodology used to calculate them for the two databases considered.

3.1. Degree of connection in the social network, *c*

In accordance with the methodology proposed in the previous section, the degree of connection in the social network is just one of the elements that must be considered when measuring social capital, even though much of the literature considers it to be a direct indicator of social capital. The degree of connection in the social network can be proxied in various ways: using density of voluntary associations, asking people about the extent of their social networks, or by a widely used question in the social capital literature of whether, in general, others can be trusted. However, when creating a database of various countries covering a protracted time period, complete and thorough data on this aspect is not available. Consequently, to measure the degree of connection in the network, Pérez García et al. (2005) propose the use of the Credit/GDP ratio. That is to say, the relation between the volume of credit with respect to the total amount of economic transactions (GDP). However, later on in this document we analyse the robustness of the indexes obtained against the use of trust as a proxy variable for degree of connectedness in the network.

The importance of bank credit as a percentage of GDP is used because financing activities in general, and credit in particular, are highly intensive in trust relationships [2]. Hence, the volume of extended credit as a percentage of all economic transactions is considered as a proxy of the level of trust connections in the network of economic relations. A great deal of information is available on this indicator over time, with wide geographical disaggregation.

Two statistical sources were essentially used for the data on the OECD. The credit variable was taken from the International Monetary Fund *International Financial Statistics* database, specifically, the *Domestic Credit* series (codes 32..ZF and 32..ZW) included in the *Monetary Survey*. Because the vol-

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2. The term *relationship lending* is frequently used in the banking literature to refer to the importance of repeated interaction and the establishment of trust relationships between clients and banking entities to solve the problems of uncertainty and asymmetric information typical of financial activity. It is therefore a concept that is very similar to that of social capital, yet tied to a specific type of economic transaction. A summary of the literature on relationship banking and its links with the concept of social capital can be found in Pérez García and Fernández de Guevara (2006).

ume of domestic credit in the database has discontinuities for certain countries, it was adjusted by assuming that in the year where there was a break in the series, the variation rate corresponded to the mean of the two previous and the two subsequent years. The variation rates were retained for the years previous to the adjustment, and were used to adjust the levels. The countries and years for which data were corrected appear in table 3.1.

TABLE 3.1: **Adjustments made to the International Monetary Fund credit series in the OECD database**

Country	Years
Austria	1998
Belgium	1970-1991 and 1998
Denmark	1970-1999 and 1999-2000
France	1970-1977, 1998
Greece	1970-1977
Netherlands	1970-1987 and 1998
Ireland	1970-1981 and 1981-1994
Luxembourg	1970-1977
Mexico	1970-1996
Norway	1970-1986 and 1987-1997
New Zealand	1970-1984 and 1985-1987
Poland	1970-1982 and 1982-1989
United Kingdom	1970-1986
Sweden	1970-2000

In the case of Luxembourg, the procedure differed from that used for other countries, and also from the procedure used in the previous version of the database, since the version of the International Monetary Fund's *International Financial Statistics* consulted does not provide information for the period 1998-2005. As a result, alternative information sources were sought; specifically, for the period 1978-2005, we used data published in the United Nations *World Development Indicators*. Previous years were obtained from the rates of variation in the predictions of an exponential regression model where the credit volume was dependent on a constant and a tendency. In the Netherlands, since the IMF only provide credit data up to 2004, the credit/GDP ratio for 2005 was estimated from the variation rates for this ratio from the World Bank's *World Development Indicators*.

Because the credit/GDP ratio provides values above unity for some of the sample countries, the ratios were rescaled for all countries to the maximum ratio in the sample (Switzerland in 1999).

The source of information for the world database is the *World Development Indicators* published by the World Bank. Domestic credit granted by the banking sector to the private sector as a percentage of GDP was used as an indicator of the degree of connection in the social network. As discontinuities in the credit/GDP ratio also appear in this database, due to methodological changes in the original series, the same adjustment procedure was used as for the OECD database. The countries and periods adjusted are presented in table 3.2.

TABLE 3.2: **Adjustments to the Credit/GDP variable in the world database**

Continent	Country	Years
Africa	Tunisia	1970-1986
America	Argentina	1990
	Brazil	1970-1993
	Colombia	1970-1989
	Costa Rica	1970-1982
	Dominican Republic	1970-1985
	Ecuador	1970-1995
	Nicaragua	1970-1994
	Uruguay	1970-1981
	Venezuela	1970-1998
Asia	Armenia	1992-1993
	China	2005
	Iran (Islamic Republic of)	1970-1986
	Japan	1970-1997
	Malaysia	1970-1992
Europe	Austria	1998
	Belarus	1994, 1998
	Belgium	1970-1991, 1998
	Bulgaria	1991-1997
	Denmark	1999-2000
	France	1970-1985
	Germany	1970
	Greece	1970-1977
	Ireland	1970-1994
	Netherlands	1970-1987
	United Kingdom	1971-1986
Oceania	Australia	1988-1989
	New Zealand	1970-1987

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Domestic credit extended by the banking sector was not available for Botswana, Canada, the United States, Mexico, Trinidad and Tobago, Turkey, Luxembourg, Sweden or Ukraine, and other information sources therefore had to be sought (either total credit extended to the private sector—WDI— or the IMF *Domestic Credit* data). Once again, the data were adjusted to standardise the variable in the interval (0,1).

3.2. Marginal cost of investment in social capital, *C' (Is)*

A society's human capital was used as a proxy for the indicator of the marginal cost of social capital investment. The education system is assumed to transmit values, norms and attitudes shared by the whole society, increasing the underlying commonality of all the individuals who participate in it and facilitating communication among its members. It would therefore seem reasonable to suppose that the higher the population's level of education, the closer individuals in the same society will be in terms of understanding of life, common values and preferences, thus leading to lower cooperation costs. Given the fact that the model requires a measure of the cost of investing in social capital, it is calculated as the value 100 minus the percentage of the population with secondary level education or above.

We used the information provided by Barro and Lee (2000) available at http://www.cid.harvard.edu/ciddata/ciddata.html in both the OECD and world databases. This database provides five-yearly data, available only for the years 1970, 1975, 1980, 1985, 1990, 1995 and 2000. The observations for intermediate years were interpolated, as this variable does not present sharp oscillations. The values for 2000 were also used for subsequent years. Specific attention was required on data for certain countries. The United States series showed discontinuity between the data for 1975 and 1980. Information was therefore taken directly from the *US Census Bureau* (http://www.census.gov/population/www/socdemo/educ-attn.html). Because the Barro and Lee (2000) database does not include information on Luxembourg, we chose to use values from the Netherlands for this country. It was also necessary to construct the series for Germany in the years previous to 1991, when the Federal Republic and the Democratic Republic were unified. Information was also lacking for some former Soviet Union, now independent, republics. Barro and Lee (2000) do however provide information for the USSR, which we used for Armenia, Azerbaijan, Belarus, Georgia, Russia, Ukraine and Moldavia.

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3.3. Social capital depreciation rate d and survival rate δ

Other types of capital, as in the case of physical capital, are assumed to lose value through use or with the passing of time. In the case of social capital, as argued by Pérez García et al. (2005), it is not appropriate to assume that trust will be lost simply because of the passing of time or according to a determined depreciation function. However, it would seem logical to assume that events in the lives of individuals that lead to loss of trust will lead to the depreciation of social capital. Given the economic approach we take to measure social capital, it would seem appropriate to assume that being unemployed, particularly if this continues for a long period, or if the unemployment rate is high, would be one of the main causes leading to loss of trust in others and in society as a whole. This assumption is based on the fact that unemployed status excludes individuals from the basic source of income, and the main form of social relationship (economic) in developed societies, namely the labour relationship. Therefore, the rate of unemployment is used as a proxy for the rate of depreciation.

Unemployment rates for the countries covered in the OECD sample were obtained from information on the number of unemployed and of the active population in the OECD *Labour Force Statistics* database. Gaps in information for certain countries, particularly for the initial sample years, led us to complete data using the growth rates for unemployment rates published in the *Economic Outlook (OECD)* database. Table 3.3 shows the periods and countries for which unemployment rates were estimated. Both the unemployed and active population series in Germany present discontinuities after 1991, due to German reunification. Prior to this year, only data on the Federal Republic was computed, whereas following unification, the two were computed together and adjustment was required.

TABLE 3.3: **Adjustments to the unemployed and active population series to estimate the unemployment rate for the OECD database**

Country	Years
Belgium	1970-1998 and 2000-2003
Greece	1970-1976, 2003
Netherlands	1970-1974, 2003
Portugal	1970-1973
United States	2003

In order to obtain a larger number of countries and years to construct the world database, data were taken from the International Labour Organization (ILO) database Laborsta (http://laborsta.ilo.org/). This database gathers a vast amount of information on practically all the world's labour markets from a variety of national sources (labour force surveys, employment registers, official estimates, etc.). Economically Active Population surveys were taken from the Laborsta database as our primary information source for each country. Other sources were used only when no information was available in these primary sources. Therefore, the International Labour Organization unemployment rate data was completed with the growth rate (or directly the date) of these alternative sources of information, if there was no information in the Economically Active Population Surveys. The alternative statistical sources used are *International Financial Statistics* (IMF), *World Development Indicators* (World Bank), and the OECD's *Labour Force Statistics* and *Economic Outlook*. Furthermore, the methodological notes to the International Labour Organization data indicate the existence of methodological discontinuities in the series for certain countries. To construct the social capital database, these discontinuities were corrected by following a similar procedure to that explained for the case of credit. In table 3.4 we present the countries and periods for which adjustments were made.

3.4. Size of the social network, *N*

It is assumed that the social network is made up of the individuals who participate in the production process, the workers, as from the basic assumptions presented in the previous section, economic relationships are considered to be the main source of social capital generation, and the workforce is the group with the most active participation in these relationships.

In the OECD database, the same data source and the same procedure to complete information gaps were used as those employed to construct the proxy for the depreciation rate of social capital stock. Specifically, these were the *Labour Force Statistics* (OECD), completed in the same years as the unemployment rate with *Economic Outlook* (OECD). The German series also required adjustments due to the reunification. In the world database, the same statistical sources were used as for the case of the unemployment rate, with the exception of the *World Development Indicators,* which do not provide information on employment. As with the unemployment rate, adjustments were required because of methodological changes that led to discontinuities in the series. Table 3.5 shows the adjusted countries and periods.

TABLE 3.4: **Adjustments to the International Labour Organization (ILO)**
unemployment rate series

Continent	Country	Years	Source used in adjustment
Africa	Algeria	1988-2000, 2005	IMF
	Botswana	1997, 1999, 2002	Interpolation
	Egypt	1976, 1985-1988, 1996	Interpolation
		2004	IMF
	Mauritius	1995-2003	IMF
	Tunisia	1994	IMF
		1990-1993, 1995-1996, 1998	Interpolation
America	Argentina	1970-1996	Methodological change
	Bolivia	2003	IMF
	Brazil	1980, 1991, 1994, 2000	Interpolation
		Previous adjustment to 1992	
	Canada	1970-1983	OECD
	Colombia	1970-2001	Methodological change
	Dominican Republic	1991-1995	IMF
	El Salvador	1981-1984, 1987	Interpolation
	Honduras	1983-1985,1988-1989, 1993-1994 y 2000	Interpolation
	Jamaica	1970-1971	Interpolation
	Mexico	1989-1990,1992,1994	Interpolation
	Nicaragua	1992-1994	Interpolation
	Panama	1980, 1981, 1990	Interpolation
	Paraguay	1981, 1995, 1997-1998, 2001	Interpolation
	Peru	1988-1990	Interpolation
	Trinidad and Tobago	1972, 1976	Interpolation
		2003-2005	IMF
	Uruguay	1985	Interpolation
		1984	WDI (World Development Indicators -UN-)
	Venezuela	2003-2005	IMF
Asia	Bangladesh	1987-1988,1991-1995,2001-2002	Interpolation
	China	1979	Interpolation
		2005	IMF
	Georgia	1997	IMF
	India	1999	Interpolation
	Indonesia	2003-2004	WDI
	Iran (Islamic Republic of)	2003	Interpolation
		1999-2001	WDI
	Malaysia	1991-1994	Interpolation
		2004-2005	IMF
	Philippines	1970	Interpolation
	Singapore	1990, 2000	Interpolation
	Turkey	1970-1984	OECD
		1982, 1986, 1987	Interpolation

TABLE 3.4 (continuation): **Adjustments to the International Labour Organization (ILO) unemployment rate series**

Continent	Country	Years	Source used in adjustment
Europe	Austria	1970-1986	OECD
	Belgium	1970-1982	OECD
	Bulgaria	1990-1992, 2003-2005	IMF
	Croatia	1981-1995	ILO
	Czech Republic	1990-1992	OECD
	Denmark	1970-1993	OECD
	France	1970-1990	ILO
		2005	OECD
	Germany	1970-2005	OECD
	Greece	1970-1980	OECD
	Ireland	1970-1982	OECD
	Italy	2004-2005	IMF
	Luxembourg	1970-1975	OECD
	Netherlands	1970-1986	OECD
	Norway	1970,1971	OECD
	Poland	1990, 1991	IMF
		1992	WDI
	Portugal	1988	Interpolation
		1970-1973	OECD
	Romania	1991-1993	ILO
	Slovakia	1991-1993	ILO
	Slovenia	1986-1992	ILO
	Spain	1970-1972	OECD
	Switzerland	1970-1990, 2005	OECD
	United Kingdom	1970-1986	OECD
Oceania	New Zealand	1970-1985	OECD

TABLE 3.5: **Adjustments to the International Labour Organization (ILO) employment series**

Continent	Country	Years	Source used in adjustment
Africa	Algeria	1980-2000	IMF
	Botswana	1985-1997	IMF
		1999,2002	Interpolation
	Egypt	1976, 1985-1988,1996	Interpolation
		2004	IMF
	Mauritius	1985-2003	IMF
	Tunisia	1986-1994	IMF
America	Argentina	1985-1989	Interpolation
	Bolivia	2001	Interpolation
	Brazil	1974-1975, 1980,1991, 1994, 2000	Interpolation
	Canada	1970-1985	OECD
	Dominican Republic	1991-1995	IMF
	El Salvador	1976-1977, 1981-1984, 1986-1991,1993	Interpolation
	Honduras	1970-1985	ILO
		1986-1987, 1993-1994, 2000	Interpolation
	Jamaica	1970-1971	Estimation
	Mexico	1990-1994	Interpolation
	Nicaragua	2002	Instituto Nacional de Estadísticas y Censos of Nicaragua
	Panama	1980-1981, 1990	ILO
	Paraguay	1994-1999	IMF
		2001-2004	Interpolation
	Trinidad and Tobago	1972-1976	Interpolation
	Uruguay	1981, 1984-2005	Interpolation
	Venezuela	2003	Interpolation
Asia	Armenia	1993-2005	ILO
	Bangladesh	1987-1988,1991-1995,2001-2002	Interpolation
	China	2003-2004	IMF
	Georgia	1997-2005	IMF
	India	1985-1993, 2001-2002	IMF
	Indonesia	1981,1993, 1984	Interpolation
	Malaysia	1991-1994	Interpolation
	Singapore	2000, 1990, 1971, 1972	Interpolation
	Sri Lanka	1991-1994, 1982-1984	Interpolation
		2005	IMF
	Turkey	1970-1984	OECD

TABLE 3.5 (continuation): **Adjustments to the International Labour Organization (ILO) employment series**

Continent	Country	Years	Source used in adjustment
Europe	Belarus	2004	Interpolation
	Belgium	1970-1983, 2005	OECD
	Bulgaria	1997-2000	Interpolation
		1981-1992	Official estimates obtained from ILO
	Denmark	1980-1982	Interpolation
	France	1970-1990, 2005	OECD
	Greece	1970-1980	OECD
	Germany	1970-1991	OECD
	Hungary	1991	OECD
	Ireland	1969-1982	ILO
	Italy	2004	Interpolation
	Luxembourg	1992-1993	Interpolation
		2004-2005	OECD
	Netherlands	1986-1970	OECD
	Norway	1970,1971	OECD
	Poland	1970-1992	OECD
	Portugal	1970-1973	OECD
	Republic of Moldova	1989-1998	IMF
	Romania	1971-1993	ILO
	Slovenia	1992	IMF
	Sweden	Previous to 1993	OECD
	Switzerland	1970-1990, 2005	ILO
	Ukraine	1987-1994	ILO
	United Kingdom	1986-1970	OECD
Oceania	Australia	1970-1977	OECD
	New Zealand	1970-1986	OECD

3.5. Income inequality rate, *G*

The task of obtaining information on the degree of inequality in the economies analysed was complicated and estimations had to be used. This is due to the fact that no research has been conducted which calculates, using uniform methodology, the degree of inequality in all the countries included here, and less so for such a protracted time period.

The base information used for the estimation comes from the Gini indexes on inequality of income distribution provided in the database *World*

Income Inequality Database, V 2.0a [3] (WIDER 2.0a) published by the United Nations. This database comprises a compilation of the results from a diverse range of studies related to income distribution. It therefore lacks a common methodology on statistical sources, the income indicator used, and the reference population group (individuals, households, families, etc.), to calculate the Gini indexes. This limitation is recognised in the database methodology. Thus, as the only possible solution, we propose that the conceptual base used to calculate all data included in the database should be detailed and specified with complete accuracy. In version 2.0a of the database, a revision process was carried out on the indexes it contains, and observations included in the previous version (v1.0) were eliminated if they offered only limited guarantees on the quality of their calculations. Furthermore, new observations have been included that both improve and update the database.

Given the abovementioned limitations to the base information used, comparisons, both among countries and over time, should be read with caution. Furthermore, periods cannot be thoroughly completed, as there are years and countries for which no information exists. We proceeded as follows to obtain an annual series on the degree of inequality from the data contained in the database. A regression model was specified for each of the two samples we are working with (OECD and world database), in which the Gini indexes selected from WIDER 2.0a were dependent on four variables: a trend; public expenditure as a percentage of the GDP in each country; GDP per capita (in prices and purchasing power parity for 2000) and the unemployment rate. Fixed effects for each country were also included in the regression. The Gini index predictions obtained in this way are those used to estimate the volume index of social capital. All the variables used in this specification are described in this section, with the exception of public expenditure. In the case of the public expenditure variable for the OECD database, the series was taken from the *Government final consumption expenditure* section of the OECD *National Accounts.* The main source of information for the world database is the World Bank's *World Development Indicators.* Where information is not available for a country for a certain year, data were estimated using the variation rates for the same variable, but provided by the International Monetary Fund *(International Financial Statistics)* or the OECD *(National Accounts).* The GDP per capita data for the world database are mainly taken from the United Nations WDI, although they were also com-

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3. The database can be consulted at http://www.wider.unu.edu/wiid/wiid.htm.

pleted with the International Monetary Fund *International Financial Statistics* and the OECD *National Accounts* databases.

3.6. Time during which a person belongs to the society, $T - t$

Life expectancy at the average age of the population is the variable used to proxy the time horizon for the period a person belongs to a society and invests resources to generate social capital.

In the case of the OECD database, various statistical sources were used to estimate the variable. There are certain methodological differences from the database presented in Pérez García et al. (2005), essentially because new data have been published since the previous version was compiled, which modify the data previously used.

Given the problems of proxying this variable, we used the information provided by the OECD on life expectancy for the population at the age of 40 published in *Health Data* (OECD). Since this information is presented separately for men and women, the weighted average of the two was calculated. The proportion of the total number of men and women at 35 and 44 years old in each country and year *(Labour Force Statistics,* OECD) was used as the weighting factor. Where this information was not available, the distribution of men and women in the total population of the country was used.

In order to account for the differences in age structures among countries, the difference between 40 years and the average age was added to the life expectation of individuals at the age of 40. The following statistical sources were used to estimate the average age. *Eurostat* was the source for most of the countries analysed. Data for the United States and Korea were constructed from the population by simple age groups provided by the *US Census Bureau (US Population Estimates by Age, Sex, Race, and Hispanic Origin)* and by the *Korea National Statistical Office* (population projections for five-yearly groups from 1970 to 2005), respectively. Data on the average age of New Zealand's population is taken from the publication *Demographic Trends 2005 (Statistics New Zealand),* which is available on its website. However, the information necessary to construct the average age series for other countries was not available and assumptions had to be made. The average age for Canada, Japan and Turkey was taken as the mean of the average age of all the OECD countries for which this information existed. Finally, the average age for Mexico was taken as the mean of the quintile comprising the countries with the lowest average age in the sample OECD countries.

The United Nations population statistics were used to construct the world database, for which a different calculation procedure was employed. In this case, two large blocks of data were used, taken from the information contained in the *Demographic Yearbooks* (United Nations Statistics Division). The first block refers to life expectancy according to age groups. The second contains information on the country's population, also according to age groups. This latter information is used to calculate the average age of population. Because the age groups for life expectancy and for population are not the same, life expectancy could not be calculated as explained above. Moreover, information on life expectancy was not always available for the same years as for information on population by age groups.

The procedure used is based on the calculation of the average age of the population in each country and year for which data are available. Secondly, using this data, the life expectancy for this average age is calculated from the life expectancy table by age groups for the closest year within the five previous or five subsequent years. Because the UN statistics provide more information for life expectancy at birth than for different age groups, a third phase estimated the regression model where the life expectancy of the average age in each country and year estimated in the first stages were dependent on the life expectancy at birth and dummy variables for the country and year. This model provided estimations of life expectancy for the average age.

3.7. Time discount rate, ρ and degree of reciprocity in the society (λ)

A social discount rate was assumed to be constant and equal to 4%. Likewise, because we assume the degree of reciprocity in the society (λ) to be constant, we can give it an arbitrary value, for instance, equal to one.

3.8. Population

In addition, the population of each country is used to express the volume of social capital in per capita terms. The *National Accounts* data published by the OECD is used for the OECD country sample; these data present the evolution of the populations of its member countries since 1970. Finally, the population data provided in the United Nations Statistical Division *World Development Indicators* are used in the world database.

4. Main Results for the Organisation for Economic Co-operation and Development (OECD) Countries

THE two databases estimated allow us to analyse the evolution of social capital in different geographical areas and to compare countries with varying socio-demographic characteristics, and different legal, institutional, historical and lifestyle frameworks. The first of these databases is described in this section and comprises all the OECD countries (with the exception of Iceland) for the period between 1970 and 2005. Although differences are observed in the OECD context, most OECD member countries share a similar level of development and to a certain extent, a common history. In contrast, the database we present in the following section is more heterogeneous, as it includes a wider set of countries with very different levels of development and per capita income, as well as deep cultural and historical differences.

Graphic 4.1 presents the evolution of social capital for the OECD countries, and graphic 4.2, the rate of variation over all the years analysed and three sub-periods (1970-1985, 1985-1995, 1995-2005). The reference used to construct the volume index of social capital was the value of social capital per inhabitant in each country in 1990, or if this year was not available, in the first year for which it could be calculated.

The data in graphic 4.1 evidence the sharp differences in the countries' profiles. Pronounced oscillations in social capital can be observed, with periods of great expansion followed at times by periods of contraction and reduction. These variations, larger than for other types of capital, such as physical or human, follow the conception of social capital as an asset of trust that is transmitted through the network of social relations. If trust breaks down or is betrayed, it is to be expected that social capital will depreciate faster than other assets. In contrast, at times when individuals are shown

GRAPHIC 4.1: Evolution of social capital. OECD database
(1990 [or first available year] = 100)

Australia   — ·— Belgium
- - - - - Austria

Canada   — ·— Denmark
- - - - - Czech Republic

Finland   — ·— Germany
- - - - - France

Greece   — ·— Ireland
- - - - - Hungary

Italy   — ·— Republic of Korea
- - - - - Japan

Luxembourg   — ·— Netherlands
- - - - - Mexico
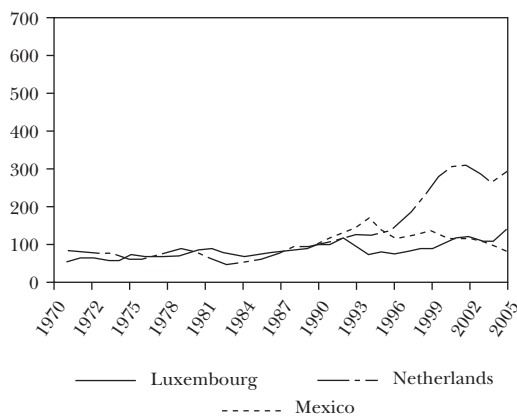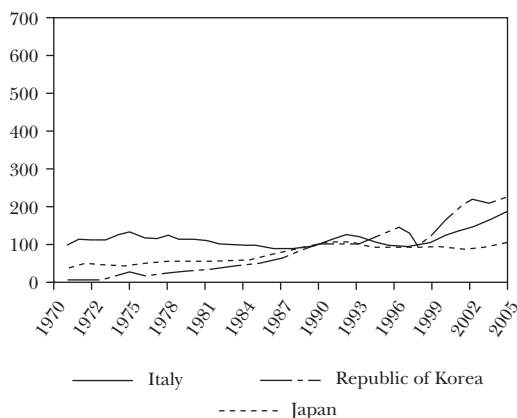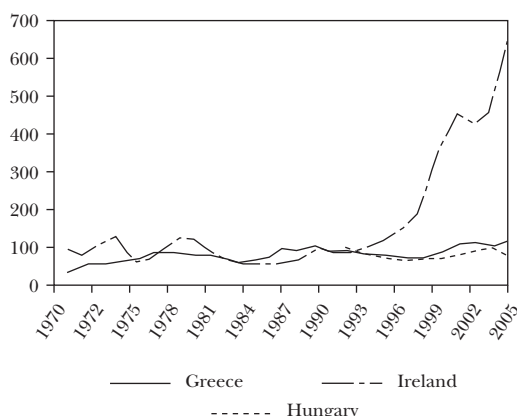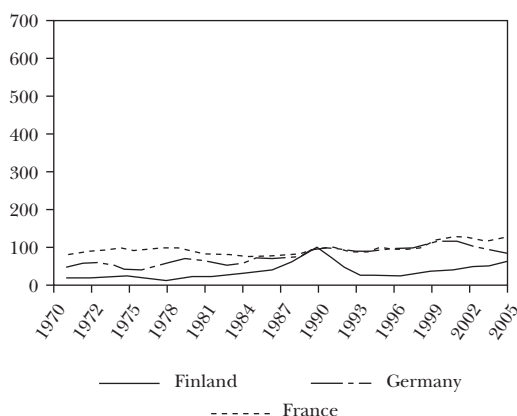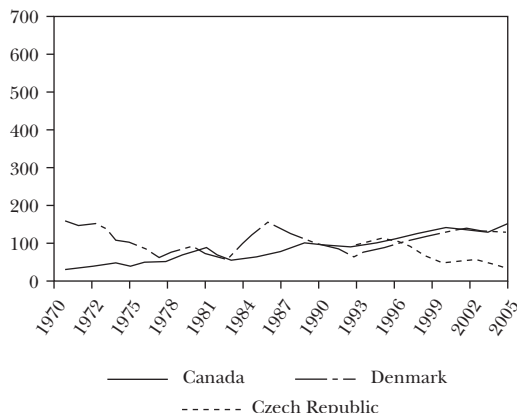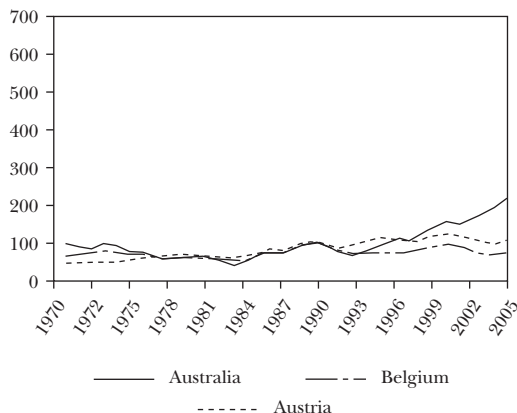
GRAPHIC 4.1 (continuation): **Evolution of social capital. OECD database**
(1990 [or first available year] = 100)

New Zeland
Poland
Norway
Portugal

Slovakia
Sweden
Spain
Switzerland

Turkey   United States
United Kingdom
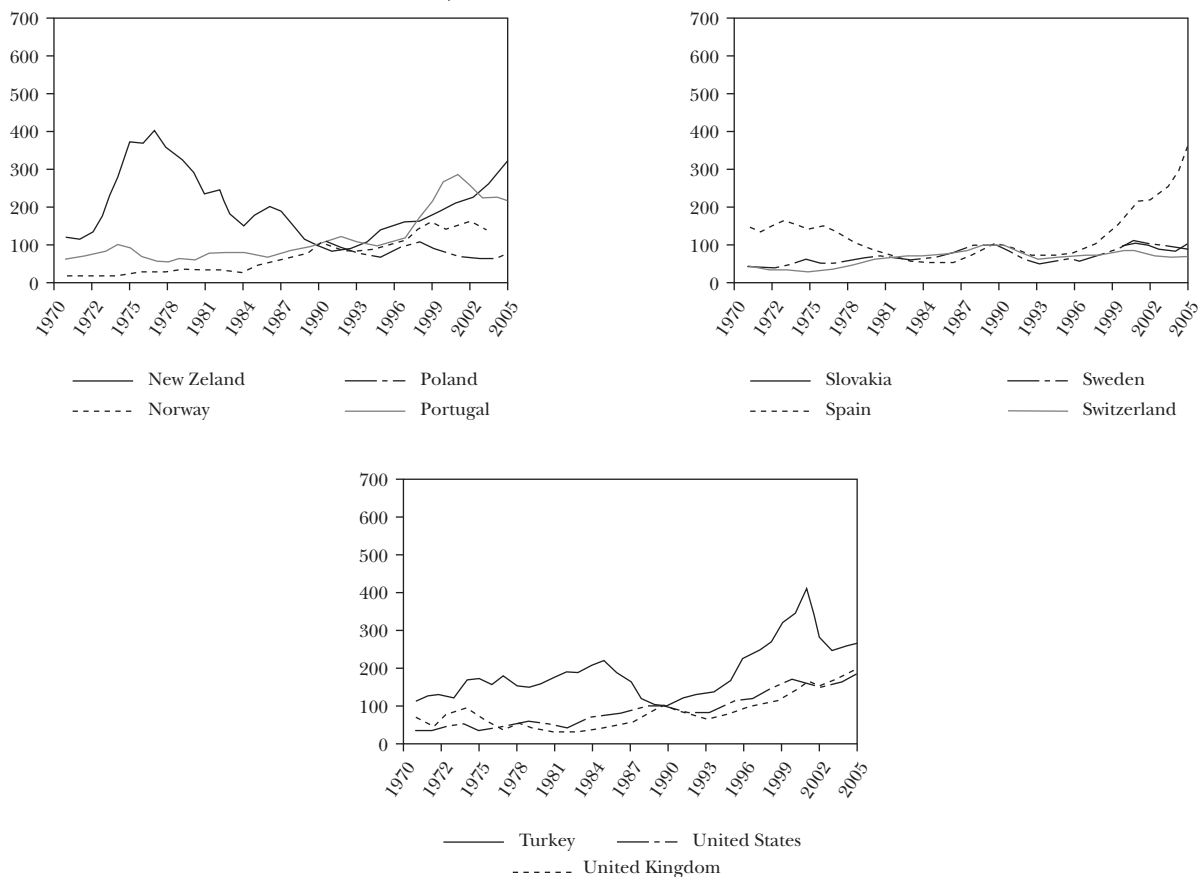
Source: Authors' calculations.

GRAPHIC 4.2: **Per capita social capital growth. OECD database**
Annual average growth rate
(percentages)

a) 1970-1985
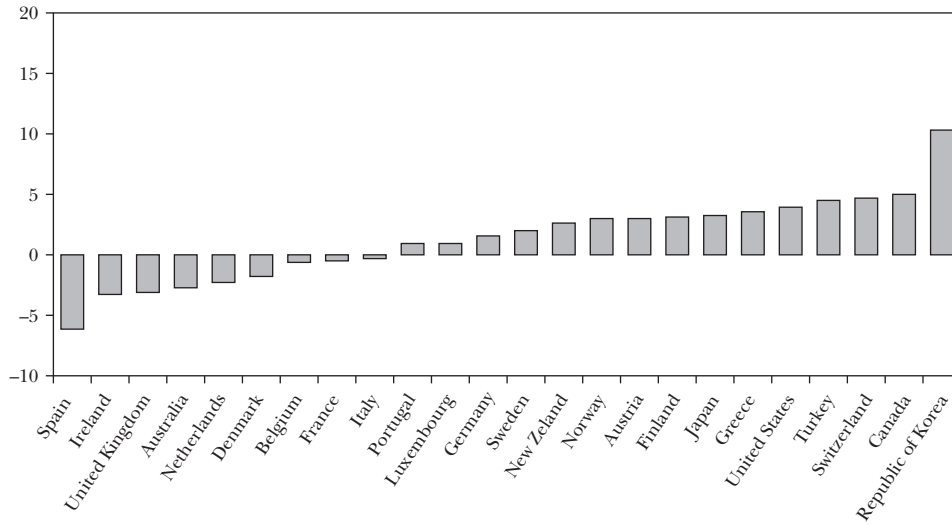
b) 1985-1995
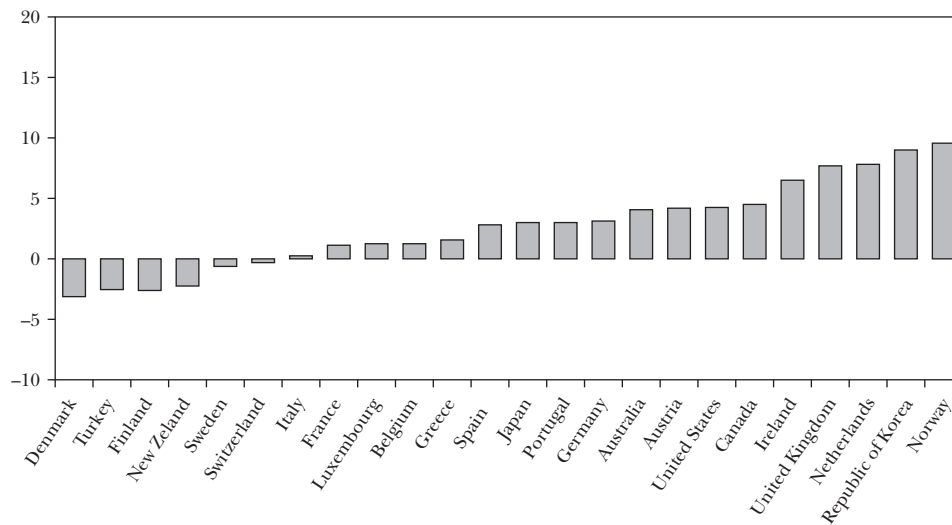
GRAPHIC 4.2(continuation)**:** **Per capita social capital growth. OECD database**
Annual average growth rate
(percentages)

c) 1995-2005
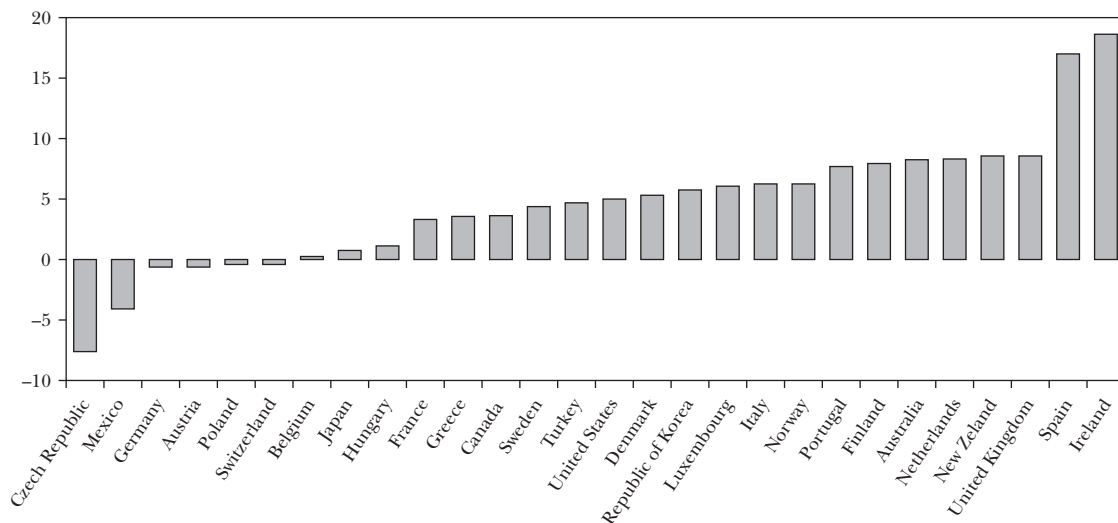
d) 1970-2005
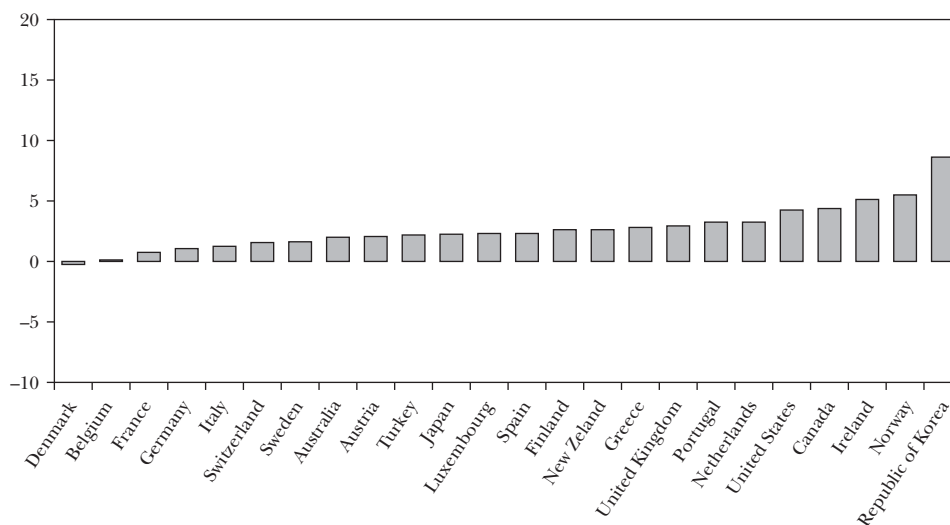
Note: Variations for Norway are calculated up to 2003.
Source: Authors' calculations.

trust and cooperation that make them feel they are participating in collective improvements, their social capital may increase more quickly. Therefore, the pattern of high variability in social capital is coherent with its conceptualization and the modelisation adopted. In certain countries, this variability is notable, such as Ireland, New Zealand, Spain, Turkey, Finland, the Netherlands or Denmark.

Graphic 4.2 summarises the information on the evolution of social capital, showing the growth rates in social capital for all countries, the whole period and the three sub-periods. In the whole period, between 1970 and 2005, social capital rose in all countries, with the greatest increases found in Korea, Norway, Ireland, Canada or the United States. Countries such as Denmark, Belgium, France and Germany lie at the opposite extreme.

Some countries are clear examples of how economic incentives deriving from improved standards of living conditions and income levels stimulate the growth of social capital and the propensity to trust and cooperate. Korea, which started out with low levels of social capital, is the country with the highest social capital growth, particularly for the period 1970-1985, years in which this country's income and living standards improved dramatically, associated with high economic growth and industrialisation rates. In subsequent years, the growth rates become more moderate, showing an intermediate value among the set of OECD countries.

A similar pattern can be observed in Ireland, a country that began a period of strong economic growth at the start of the nineties, with reduced unemployment and improved standards of living. This fact, according to our base hypotheses for the social capital model, should translate into improved social capital, and this is indeed shown in graphic 4.1, from 1995 onwards. A similar situation is also seen in Spain, although less intense, but with greater variability, as in the initial years social capital is seen to fall at the rate of over 5%, coinciding with a period of stagnation and job losses.

The case of these three countries suggests, as stated in Pérez García et al. (2005), that the relationships between economic progress and social capital occur in two directions. Income growth brings about higher levels of social capital, but without these social capital gains and consequent reduction in transaction and supervision costs, this income growth would have been lower. The relationship between economic growth and social capital can therefore be conceived as a circular accumulative process in which the two work to strengthen each other.

The graphics presented above show the different paths social capital follows in each country. If we take one country in a specific year as a base, we can compare the different levels of social capital among countries. This

comparison is presented in graphic 4.3, with the United States in 1990 as a reference. The greatest endowments of social capital are seen in Switzerland, Norway, Canada, Luxembourg, the Netherlands, Japan, Sweden and Korea. This result coincides with the general assumption made in the construction of the social capital measure. That is to say, in countries with higher per capita income and welfare standards, the incentives to identify oneself with society and participate in achieving positive results through trust and cooperation will also be greater. Larger endowments of social capital are therefore observed in these countries.

GRAPHIC 4.3: **Social capital in the OECD countries (2005)**
Per capita volume index
(United States = 100)
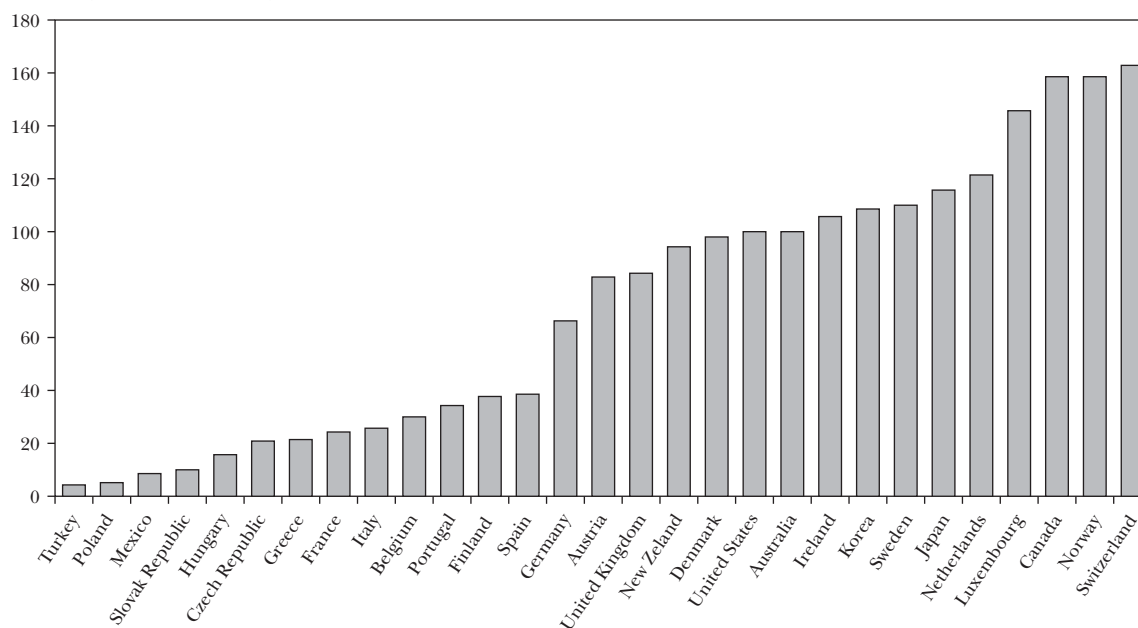
Note: Norway, 2003.
Source: Authors' calculations.

Spain's position in the international context reveals relatively low endowments of social capital, despite the improvements attained and intense growth over the last decade. It does however lie in similar positions to other southern European countries such as France, Italy, Portugal or Greece, and in recent years has overtaken them, which may suggest the hypothesis that a common substratum exists in social capital evolution in specific geographical or cultural areas. In the same vein, other geographical areas with shared cultural and economic links, such as the Scandinavian countries, or the for-

mer communist countries of Eastern Europe, also have similar levels of social capital. A thorough exploration of this hypothesis should be made in additional analyses of the results.

Similarly, future analysis should examine the implications of the hypotheses put forward in the estimation for solving the problems caused by limitations in the available information. However, the OECD database allows us to test the effects on results of one of the assumptions made in the empirical application of the theoretical model. In this case, we compare the results with those that would be obtained if one of the more widely used indicators to measure social capital were applied: the response to whether, in general, individuals feel they can trust others (variable *trust*). According to our methodological proposal, this indicator could be just one component in the social capital measure, not a direct measure in itself. Specifically, it could be used as an indicator of the degree of connection in the network *(c)* instead of the variable based on credit access.

Graphic 4.4 compares the relation in the results of the volume index of social capital when the measure of degree of connection is substituted as explained above. Because of the lack of data, this test of robustness is limited. In general, such extensive series as those for the proxy used do not exist. The comparison can be made for the years 1990 (for 22 countries) and 2000, using data published by Inglehart et al. (2004). It can be seen that, although changes occur in the disparity in the levels in both series (such as Norway, Switzerland and Sweden, in 2000), most of the observations cluster around the diagonal, suggesting a positive relation between the two indicators. In fact the Pearson and Spearman [4] correlation coefficients for each year, which compare the two resulting measures of social capital, are high. In 1990, the Pearson correlation coefficient showed a high value of 0.73, and that of Spearman, 0.88, and in both cases they were significantly different from zero. They were also significant and even higher in 2000, with values of 0.74 and 0.91, respectively.

The ranking among countries therefore does not seem to alter greatly when the degree of connection in the social network indicator is substituted. However, a further question to be posed is whether the change in the indicator seriously affects the evolution of social capital over time. This comparison can be made in at least one case, as Davis, Smith and Marsden (2004) provide a *trust* indicator series for a prolonged period for the United

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4. The Spearman correlation coefficient is a non-parametric test that does not require an underlying normal distribution of the variables in contrast to the requirements of the Pearson correlation coefficient.

GRAPHIC 4.4: **Robustness of the social capital indicators according to different proxies of the degree of connection in the social network (c). OECD database**
Per capita volume index
(United States = 100)

a) 1990
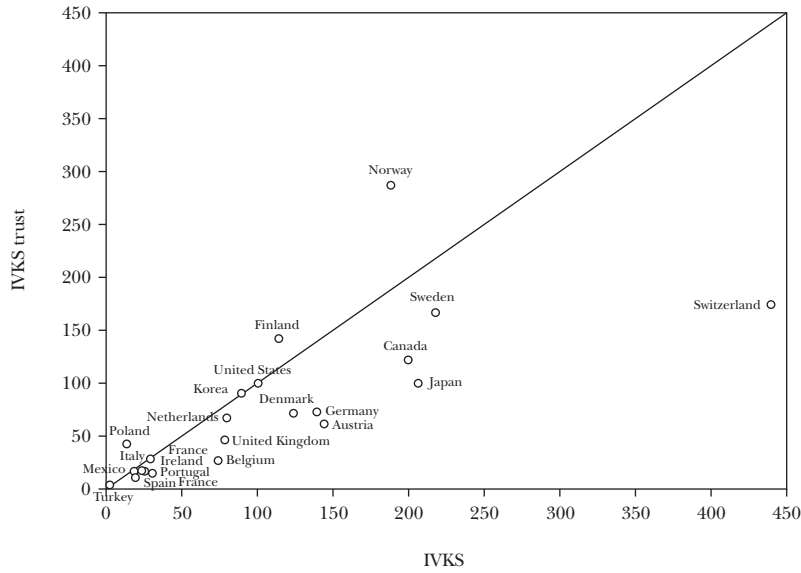
b) 2000
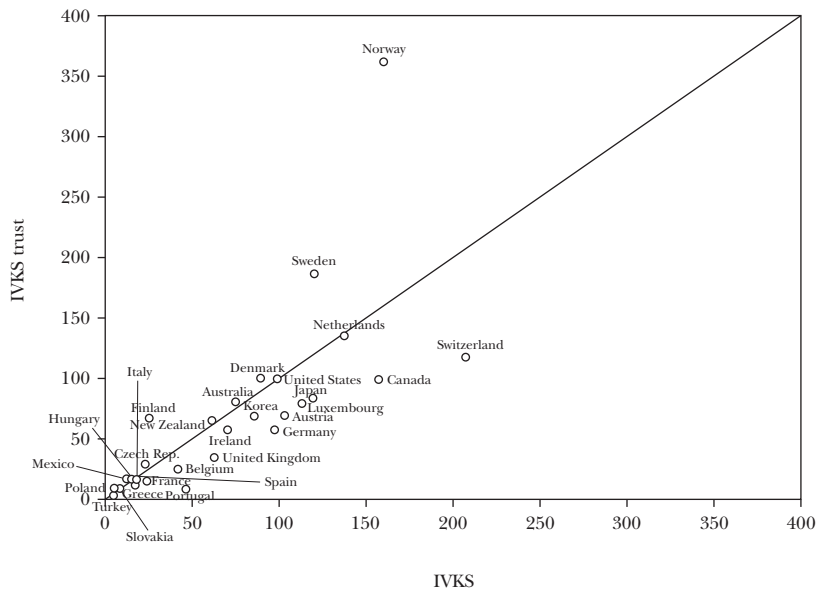
Note: The indicator of the degree of connection of the social network *IVKS trust* is the percentage of the population that states that in general people can be trusted instead of the credit/GDP ratio.

Source: Authors' calculations. Trust variables data were taken from Inglehart et al. (2004).

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GRAPHIC 4.5: Social capital in the United States. Different hypotheses of *c*.
Per capita volume index
(1972 = 100)
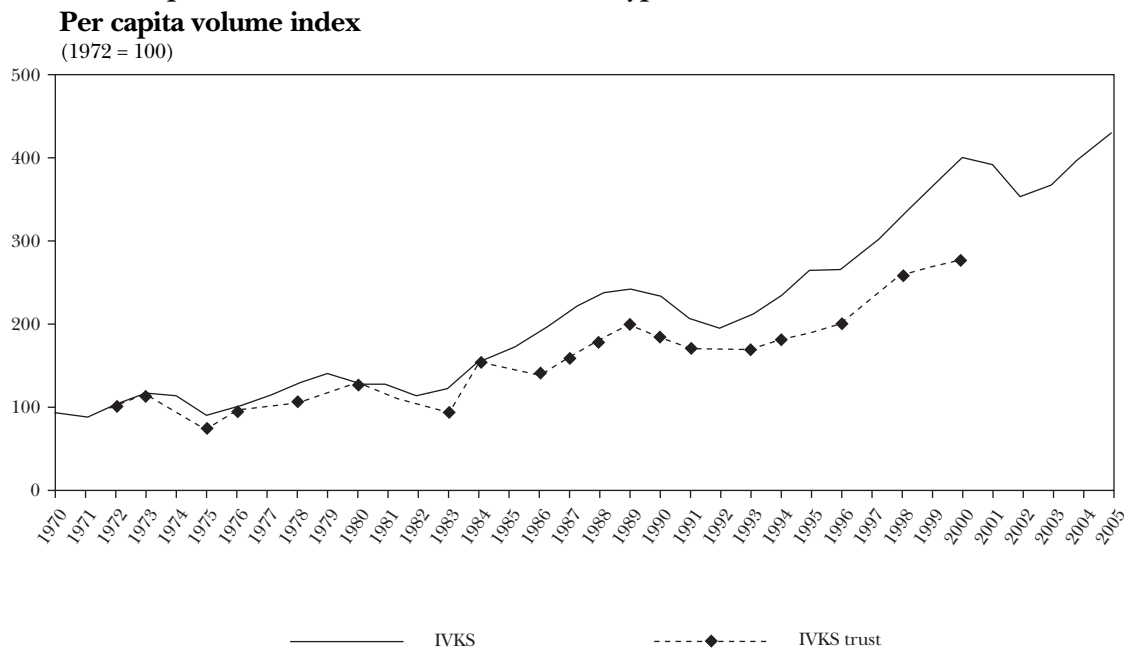
Notes:

– The indicator of the degree of connection of the social network used by the variable *IVKS trust* is the percentage of the population that states that in general people can be trusted, instead of the credit/GDP variable.

– Years with information of trust are marked in the serie *IVKS trust*. The remaining years were interpolated.

– 1972 is taken as base year as it is the first year in which the trust variable is available.

Source: Authors' calculations. Data of the trust variable are taken from Davis, Smith and Marsden (2004).

States. This information was used to recalculate the social capital value, and the corresponding results are shown in graphic 4.5. In the light of these findings, it seems that the changes are not dramatic: both series show a similar evolution, although the series calculated with the *trust* variable shows somewhat lower growth. In any event, the use of the *trust* variable does not modify the recovery of social capital in the USA from the mid-eighties onwards.

5. Main Characteristics of World Social Capital

T HE world social capital database comprises an unbalanced panel of 78 countries from all over the world [5]. Table 5.1 presents the years available for each country. In general, the database covers practically all countries from the early to mid-nineties onwards, although information is more irregular at the beginning of the period for a larger number of countries. By continent, the database covers 6 African countries, 22 American, 19 Asian, 29 European, the continent with the largest representation, and two in Oceania (Australia and New Zealand). These countries represented 81% of the world population in 2005. By years, a total of 30 countries are covered in 1970, a number that increases steadily to 42 in 1980, 58 in 1990, and reaching a maximum at the beginning of this century with a total of 78 countries.

The values of social capital estimated for each country included in the world database appear in tables A.2a and A.2b of the appendix. In this section we summarise the most notable characteristics of social capital distribution among countries, and its growth. Graphic 5.1 shows the evolution of social capital from 1970 onwards for countries included in the database, taking 1990 (or the first available year) as the reference year. As in the case of the Organisation for Economic Co-operation and Development (OECD) countries, pronounced oscillations in social capital can be observed over time, with periods of intense accumulation being followed in some cases by periods of decline. The greatest fluctuations appear in Ireland, New Zealand, Spain, Slovenia, Bolivia and Paraguay.

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5. The information on OECD countries included in this database does not necessarily correspond to that presented in section 4. This is because in the world database we opted to use the information from the same datasources for each variable and for all the countries in an attempt to make the estimation as comparable and homogeneous as possible. Information from the sources used in the OECD database were only used in some cases to estimate a variable when it was not available in the main source of information for the world database. However, the results are practically the same in both databases.

TABLE 5.1: **Coverage of the world database**

Continent	Country	Years
Africa	Algeria	1989-2005
	Botswana	1996-2004
	Egypt	1970-2004
	Mauritius	1995-2005
	South Africa	2000-2004
	Tunisia	1989-2005
America	Argentina	1982-2005
	Barbados	1976-2004
	Bolivia	1989-2002
	Brazil	1976-2004
	Canada	1970-2005
	Chile	1975-2005
	Colombia	1975-2005
	Costa Rica	1976-2005
	Dominican Republic	1991-2004
	Ecuador	1987-2004
	El Salvador	1978-2004
	Honduras	1982-2005
	Jamaica	1970-2005
	Mexico	1990-2005
	Nicaragua	1990-2002
	Panama	1970-2004
	Paraguay	1979-2003
	Peru	1986-2004
	Trinidad and Tobago	1970-2002
	United States of America	1970-2005
	Uruguay	1984-2005
	Venezuela	1975-2004
Asia	Armenia	1993-2005
	Azerbaijan	1995-2005
	Bangladesh	1989-2003
	China	1978-2004
	Georgia	1997-2005
	Hong Kong	1990-2005
	India	1985-2002
	Indonesia	1996-2004
	Iran (Islamic Republic of)	1999-2005
	Israel	1970-2005
	Japan	1970-2005
	Malaysia	1984-2005
	Pakistan	1979-2005

TABLE 5.1 (continuation): **Coverage of the world database**

Continent	Country	Years
	Philippines	1970-2005
	Republic of Korea	1970-2005
	Singapore	1970-2004
	Sri Lanka	1990-2004
	Thailand	1971-2005
	Turkey	1970-2005
Europe	Austria	1970-2005
	Belarus	1994-2005
	Belgium	1970-2005
	Bulgaria	1991-2005
	Croatia	1993-2005
	Czech Republic	1993-2005
	Denmark	1970-2005
	Finland	1970-2005
	France	1970-2005
	Germany	1970-2005
	Greece	1970-2005
	Hungary	1992-2005
	Ireland	1970-2005
	Italy	1970-2005
	Luxembourg	1970-2005
	Netherlands	1970-2005
	Norway	1970-2003
	Poland	1990-2005
	Portugal	1970-2005
	Republic of Moldova	1999-2004
	Romania	1992-2005
	Russian Federation	1993-2004
	Slovakia	1994-2005
	Slovenia	1992-2005
	Spain	1970-2005
	Sweden	1970-2005
	Switzerland	1970-2005
	Ukraine	1995-2005
	United Kingdom	1970-2005
Oceania	Australia	1970-2005
	New Zealand	1970-2005

GRAPHIC 5.1: Evolution of social capital. World database
Per capita volume index.
(1990 [or first available year] = 100)

a) Africa
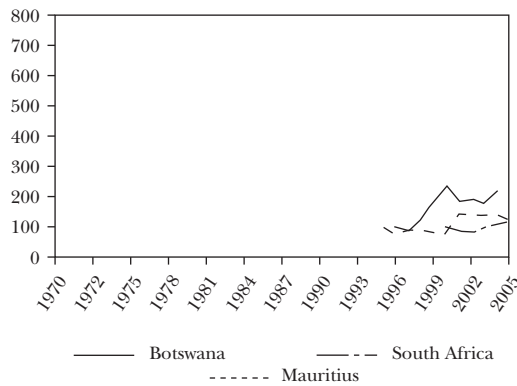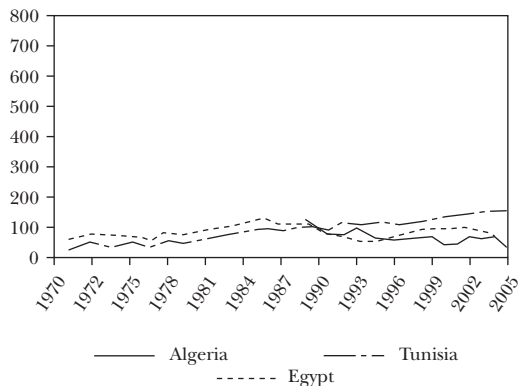
b) America
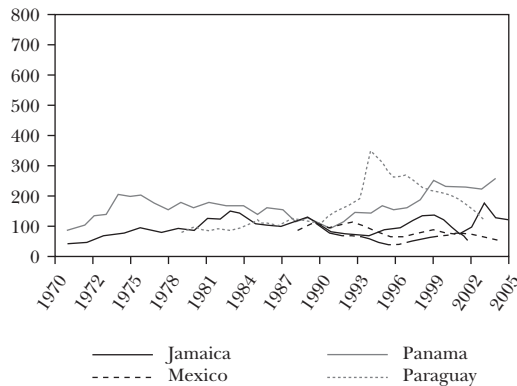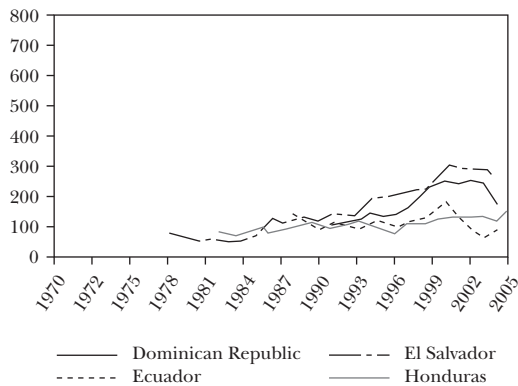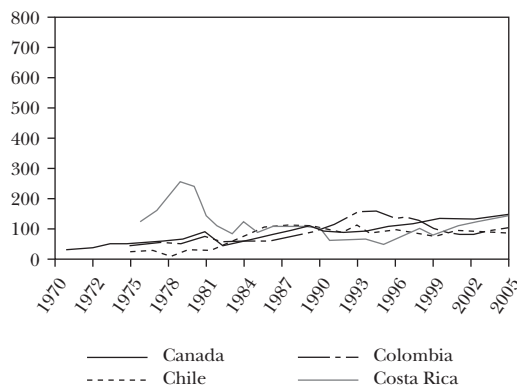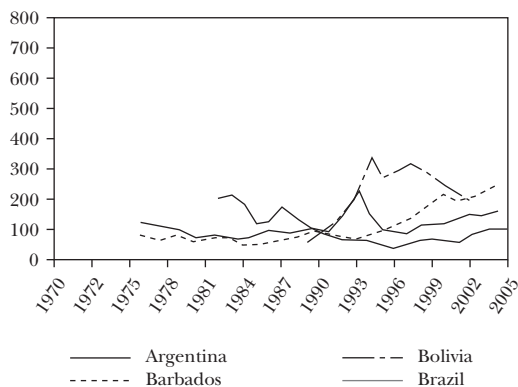
42

GRAPHIC 5.1 (continuation): **Evolution of social capital. World database**
Per capita volume index
(1990 [or first available year] =100)

b) America (cont.)
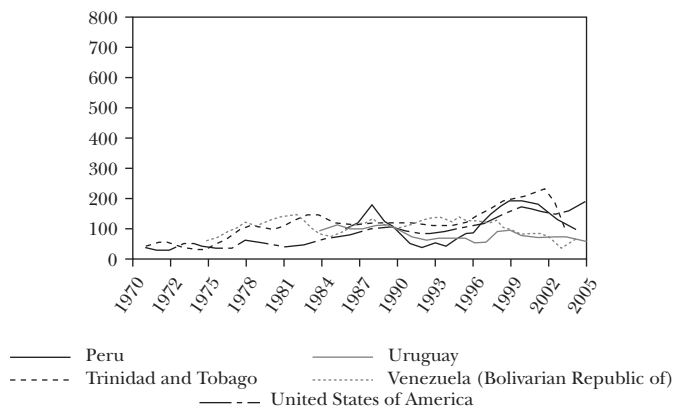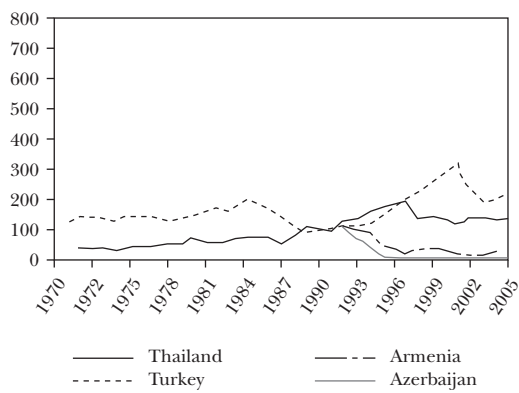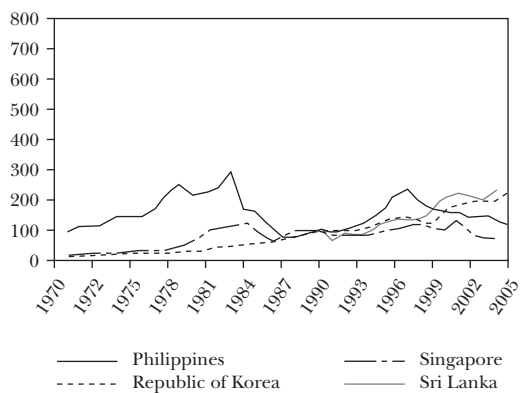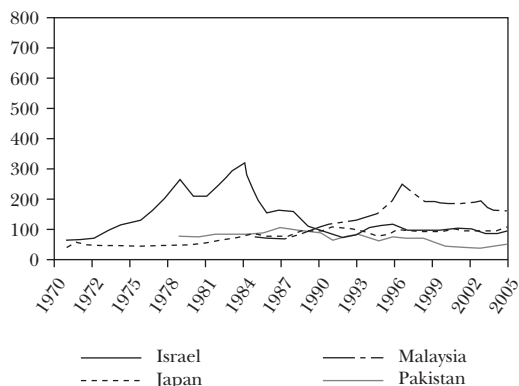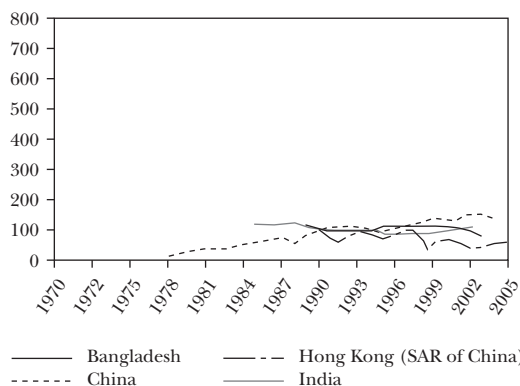
——	Peru	——	Uruguay
-----	Trinidad and Tobago	··········	Venezuela (Bolivarian Republic of)
	—— -— United States of America		

c) Asia

——	Bangladesh	—·—	Hong Kong (SAR of China)
-----	China	——	India

——	Israel	—·—	Malaysia
-----	Japan	——	Pakistan

——	Philippines	—·—	Singapore
-----	Republic of Korea	——	Sri Lanka

——	Thailand	—·—	Armenia
-----	Turkey	——	Azerbaijan

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GRAPHIC 5.1 (continuation): **Evolution of social capital. World database**
Per capita volume index
(1990 [or first available year] =100)

c) Asia (cont.)
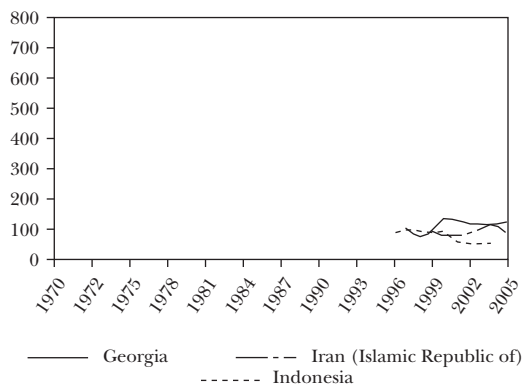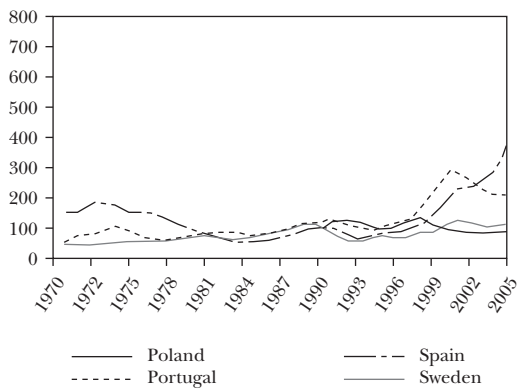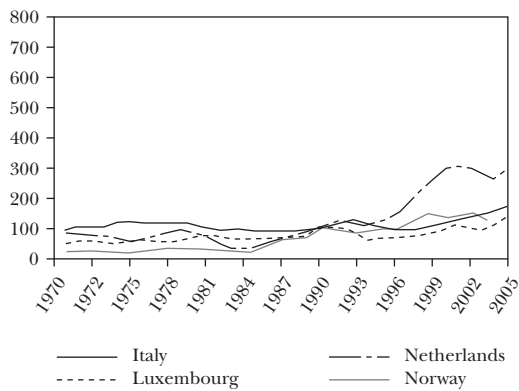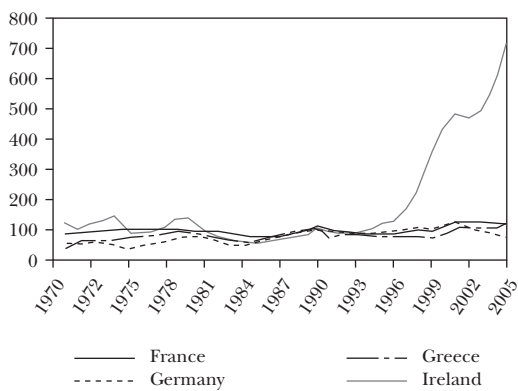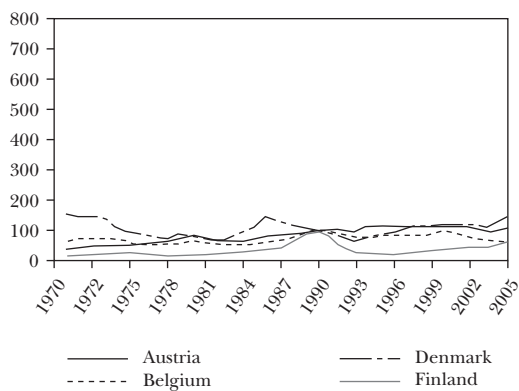
Georgia — Iran (Islamic Republic of)
Indonesia

d) Europe

Austria — Denmark
Belgium — Finland

France — Greece
Germany — Ireland

Italy — Netherlands
Luxembourg — Norway

Poland — Spain
Portugal — Sweden

GRAPHIC 5.1 (continuation): **Evolution of social capital. World database**
Per capita volume index
(1990 [or first available year] =100)

d) Europe (cont.)

| Switzerland | Belarus |
| United Kingdom | Bulgaria |

| Croatia | Hungary |
| Czech Republic | Republic of Moldova |

Romania	Slovenia
Russian Federation	Ukraine
Slovakia	

e) Oceania

| Australia | New Zealand |
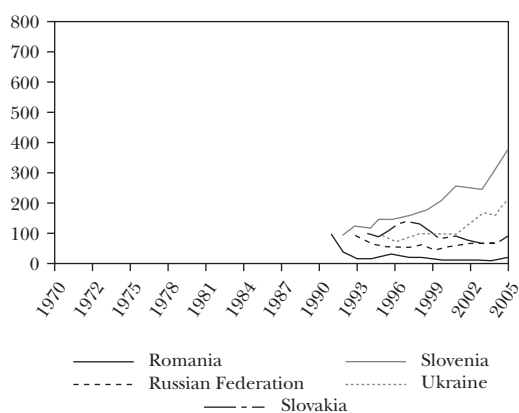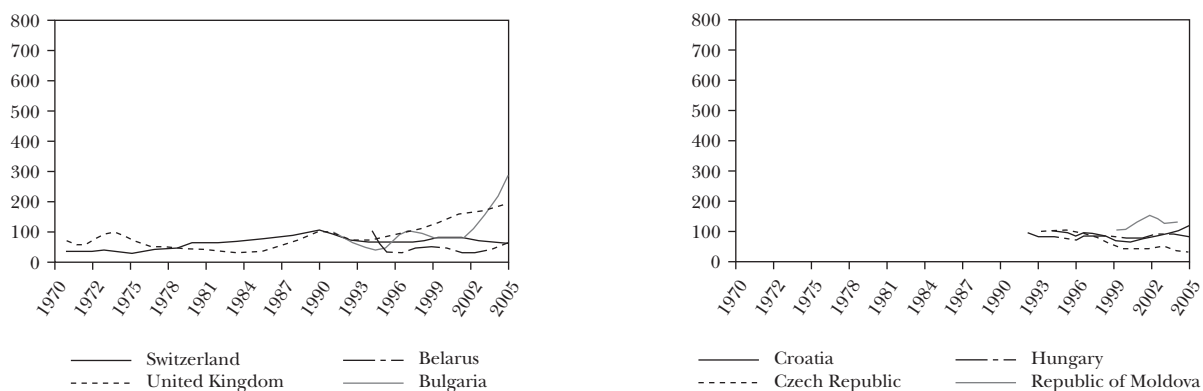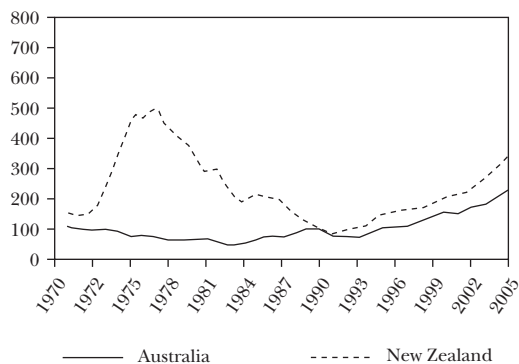
Source: Authors' calculations.

Graphic 5.2 shows the growth rates in the volume index of social capital per capita for the countries with information available for the whole period 1970-2005 and for the years 1990-2005. The graphic reveals that for a long period of thirty-six years, social capital levels increase in all countries with the exception of Belgium and Denmark. No clear relationship appears to exist between a country's level of development and social capital growth. The largest growth is observed in Korea (with an annual average accumulation rate of 8%), Norway and Ireland (5.8 and 5.3%, respectively). As mentioned above, countries with low levels of development also present notable levels of social capital growth: Singapore achieved a higher growth than Ireland at 5.4%, and the average growth rate in Trinidad and Tobago was 5.2%.

Although information was not available for the entire 1970-2005 period, the intense growth of three emerging economies deserves comment. Growth in China is particularly remarkable: from 1978 to 2004 it grew at an annual average rate of 8%. Important increases in levels of social capital also occurred in Malaysia (4% annual average in 1984-2005) and Thailand (3% annual average in 1971-2005).

If we analyse the more recent period of 1990 to 2005, results for Ireland are outstanding, with an annual average growth rate of 14%. Spain and New Zealand also present substantial growth rates, with variations in social capital at annual average rates of 9.2 and 8.4%, respectively, over three five-year periods. Finally, substantial growth also occurred in a number of developing countries, particularly in Asia and South America. Of particular mention are El Salvador, Barbados, Panama, Bolivia, Sri Lanka or Turkey. In general, these years were typified by strong world growth and intense economic social and institutional transformations that fostered the growth of social capital.

However, endowment of social capital also declined in some economies during this most recent period of 1990-2005. Thus, social capital fell in Algeria and Nicaragua at an annual average rate of over 6.5%, in countries such as Pakistan, Venezuela, Mexico, Finland, Switzerland, Hong Kong or Uruguay, by more than 3%.

Other countries of note, not so much for their growth as for the institutional, economic, political and social transformations that clearly affected their capacities for trust, are the former socialist countries of Eastern Europe, and former Soviet Union countries. In general, these countries present moderate levels of social capital, with Ukraine and Slovenia following a more dynamic path with an annual average accumulation rate of 14% between 1995 and 2005, and 11% between 1992 and 2005, respectively. If we analyse their evolution from 1995 onwards, the year in which information became available for most of these countries, Bulgaria in particular stands out with an annual growth of 22% and Slovenia, Ukraine and Belarus with

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GRAPHIC 5.2: **Social capital growth. World database**
Annual average growth rate
(percentages)

a) 1970-2005

b) 1990-2005
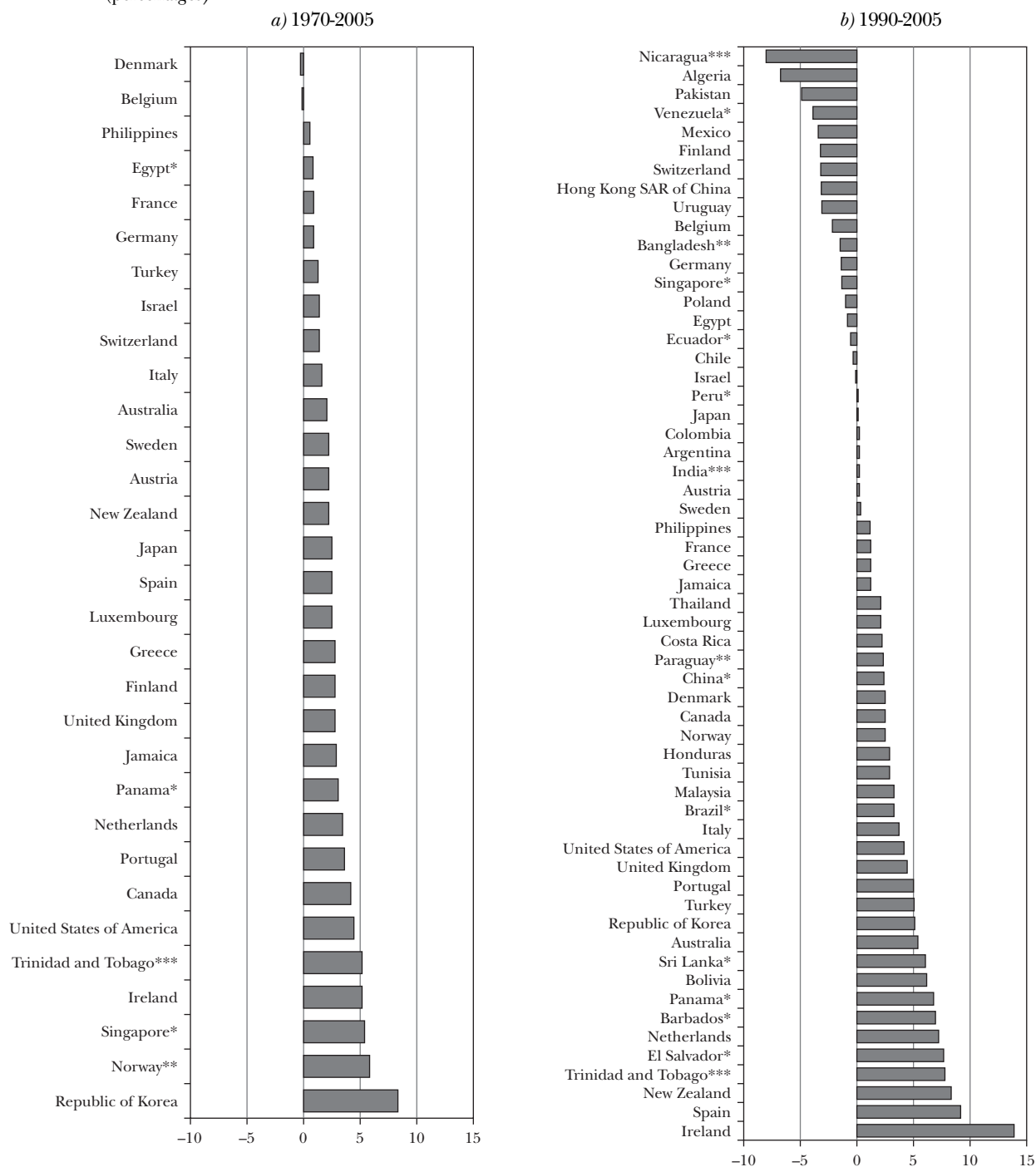
Notes: For countries with no data for 2005, the following years are represented:

– *2004 last available year.

– **2003 last available year.

– ***2002 last available year.

Source: Authors' calculations.

rates of 9, 8 and 6%, respectively. Other countries such as Hungary, Croatia, Russia and Moldavia sustained slight growth. Levels of social capital show a decline in the remaining Eastern European countries (Slovakia, Poland, Azerbaijan, Rumania, Armenia or the Czech Republic).

In light of the above, we can deduce that with the exception of the occasional specific case, major gains in levels of social capital have not yet been seen in the former socialist republics. The process of transition towards a market economy in these countries is slow, and represented a fall in living standards in the period immediately following the fall of the Berlin Wall when expectations of rapid growth did not come to fruition, but painful adjustments had to be faced. For example, the transition towards a market economy in most of these countries involved higher rates of unemployment which in many cases meant a shift from situations of full employment to two-figure unemployment rates. According to our theoretical and empirical modelling, this led to accelerated social capital depreciation rates and hence, the evolution of social capital seen in these countries.

Nonetheless, the reforms during this period of transition in a few countries in this block, such as Slovenia or Bulgaria, seem to be bearing fruit following some years of adjustment. According to data from the World Bank's *World Development Indicators,* during the nineties the GDP per capita in Bulgaria fell to an annual average rate of 2%, reaching a low of 9% in one particular year. However, this adjustment period now seems to be over, as evidenced by the GDP annual average growth rate of 6% since 2000. Furthermore, the rate of unemployment dropped from 20% in 2000 to the notably lower figure of 9.9% in 2005; and banking credit, our proxy for density of social networks, is also increasing at much higher rates (see Duenwald, Gueorguiev and Schaechter, 2005). According to our hypotheses, all these factors lead to a higher incentive for individuals to cooperate, and hence, the dramatic growth of social capital in these two countries.

China and India are two economies that have also witnessed major transformations in recent decades, and are becoming increasingly integrated in both product and capital markets on an international scale. We can observe important gains in productivity, and also that central planning is gradually opening up so that markets are becoming more relevant. However, these two countries have very different social capital profiles. While China shows a trend of steady growth in its levels of social capital, India presents a picture of stagnation, and clear growth has only emerged since the end of the nineties. These two distinct paths in the evolution of social capital clearly reflect that while both economies have grown considerably, this growth has been more intense in China than in India. In 1980 per capita in-

come in India was 20% above that of China, whereas in 2005 the situation was diametrically opposed, with China's per capita income doubling that of India.

Certain features also stand out in America. In general, American countries, not including Canada and the United States, fall into the lower half of the social capital growth ranking. In general terms, a trend of growth emerges from the eighties onwards, although with oscillations. A fair number of countries, such as Nicaragua, Venezuela, Mexico, Uruguay, Ecuador or Chile, also experienced a reduction or a trend of stagnation in their social capital levels at the end of the nineties and the beginning of this century. Social capital evolution in Argentina is of particular note. At the beginning of the eighties, Argentina had two and a half times its 2000 social capital level. Its social capital fell notably to reach a minimum in 1996, when it was barely a fifth of what it had been at the beginning of this period. It began to recover after this year, with an inflection in the 1999 to 2000 period, although it did not return to its initial levels. This evolution of social capital in Argentina can be explained by the social-economic conditions in the country which led to a reduction in the incentives among the population to cooperate and trust others.

Graphic 5.3 summarises the above comments on the evolution of world social capital. The graphic shows the social capital index level for each country in the last available year, 2005. Rather than taking each country's value in 1990 as a reference, we use that of the United States for this year, in order to facilitate comparisons among countries. This comparison shows that high levels of social capital practically coincide with the countries previously mentioned for the OECD database: Norway, Canada, Switzerland and Sweden. On the opposite side, those with low levels of social capital include countries with lower levels of development such as Azerbaijan, Armenia, Algeria, Paraguay, Botswana or Venezuela. Therefore, although in the analysis of the evolution of social capital no clear relationship seemed to emerge between the growth of social capital and level of development in a country, the relation appears quite clearly when the levels countries reach are compared. Hence, higher levels of per capita income and welfare are generally associated with higher levels of social capital. This result should come as no surprise for two reasons. First, because the relationship between levels of social capital and levels of development form part of the assumptions underlying the methodology used to construct the social capital indicator. But secondly, because of the complexity of modern economies, with their myriad relationships between individuals, groups and companies, if social capital did not bring down transaction and supervision costs

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GRAPHIC 5.3: Social capital in the world. World database (2005)
Per capita volume index
(United States = 100)
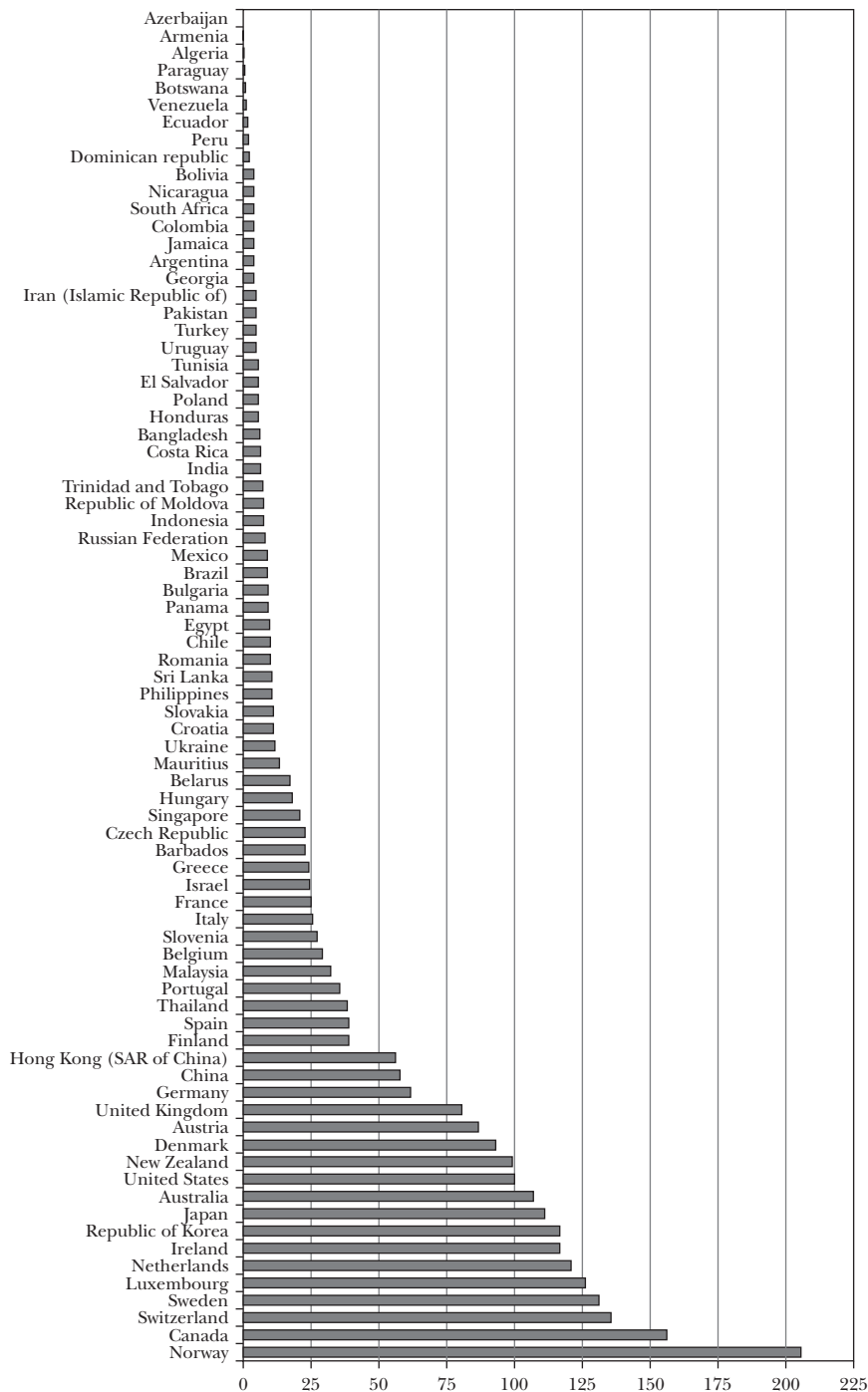
Notes: For countries with no data for 2005, the following years are represented:

– 2002: Bolivia, Nicaragua, India, Trinidad and Tobago.

– 2003: Paraguay, Bangladesh, Norway.

– 2004: Botswana, Venezuela, Ecuador, Peru, South Africa, El Salvador, Republic of Moldova, Indonesia, Russian Federation, Brazil, Panama, Egypt, Sri Lanka, Singapore, Barbados, China.

Source: Authors' calculations.

and act to reduce information asymmetries in society, the most highly developed economies would not be able to achieve the degree of efficiency that they do. For this reason, the association between economic development and social capital derives from the very nature of the productive factor of social capital and the process of trust feedback that growth represents.

Map 5.1 presents the geographical distribution of social capital obtained in the world database for 2005 (or the last available year), and classifies the countries it covers into three groups (tercils): those with above average, around average and below average distributions of social capital. A general view confirms the comments made above. The geographical areas with the highest levels of social capital coincide with those with the highest levels of development, or the geographical areas undergoing the fastest economic growth. Thus, in 2005 the areas with above average levels of social capital are concentrated in North America, a large part of Europe, Oceania (Australia and New Zealand) and China. In contrast, the countries with the lowest levels of development have lower levels of social capital, as is the case of the few African countries included in the sample, Arab countries, India and some South American countries.

Finally, as with the OECD database, we tested the sensitivity of the social capital indicator against variations in some of the proxies for the estimations of social capital obtained in the world database. Specifically, the credit/GDP ratio used to measure the density of social networks was again substituted by the trust variable defined in the same way and from the same source as in section 4. The results, presented in graphic 5.4, again indicate variations in the values for some countries, although the overall picture given by both is similar. The Pearson and Spearman correlation coefficients are high and statistically significant, with values of 0.82 and 0.92 in 1990, and 0.83 and 0.82 in 2000, respectively.

MAP 5.1: Spatial distribution of the per capita social capital volume index (2005). World database
(United States = 100)
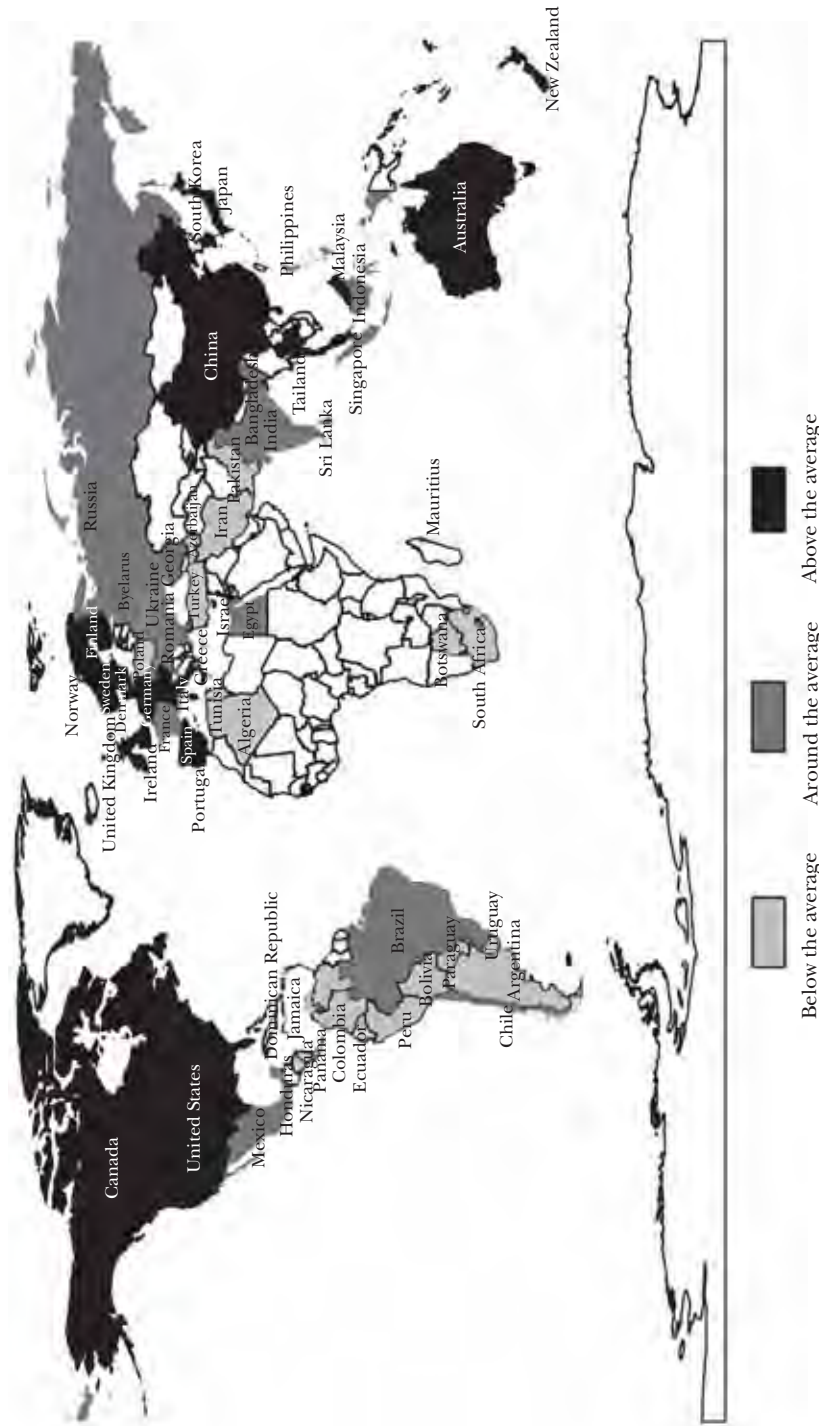
Notes: For countries with no data for 2005, the following years are represented:

– Countries have been classified in tercils.

– 2002: Bolivia, Nicaragua, India, Trinidad and Tobago.

– 2003: Paraguay, Bangladesh, Norway.

– 2004: Botswana, Venezuela, Ecuador, Peru, South Africa, El Salvador, Republic of Moldova, Indonesia, Russian Federation, Brazil, Panama, Egypt, Sri Lanka, Singapore, Barbados, China.

Source: Authors' calculations.

GRAPHIC 5.4: **Robustness of the social capital indicators according to different proxies of degree of connection of the social network (c). World database. Per capita volume index**
(United States = 100)
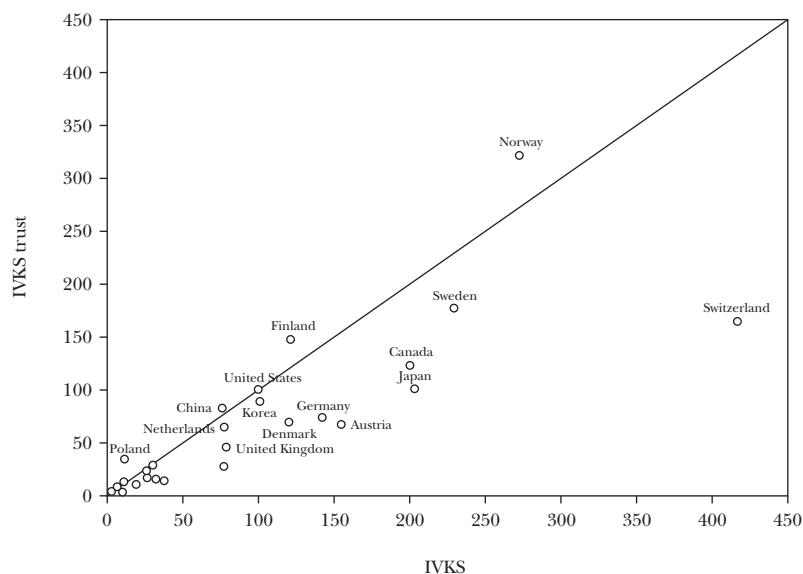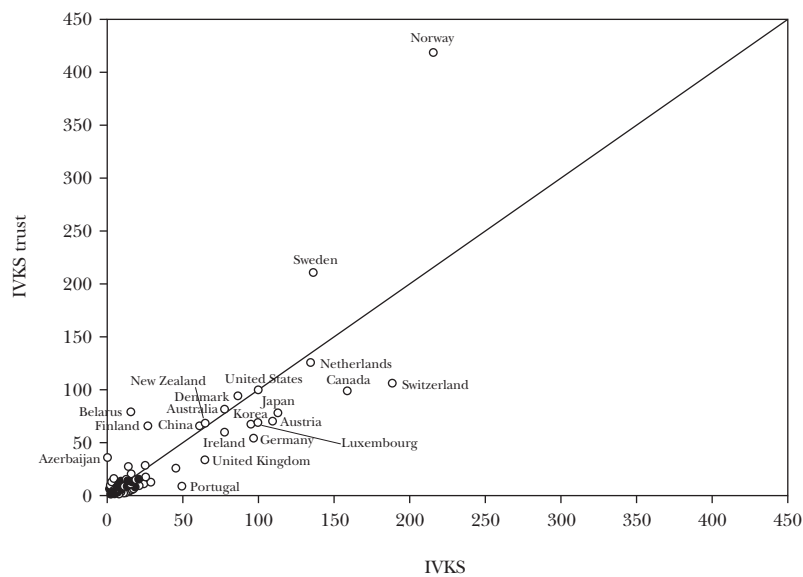
a) 1990

b) 2000

Note: The indicator of the degree of connection of the social network used by the variable *IVKS trust* is the percentage of the population that states that in general people can be trusted, instead of the credit/GDP ratio.

Source: Authors' calculations. Data of the trust variable are taken from Inglehart et al. (2004).

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6. Conclusions

IN this working paper we present the updated version of the database of so-
cial capital for a set of countries compiled for the first time in the monograph
by Pérez García et al. (2005). The database consists of two sections, one in
which social capital endowments are estimated for Organisation for Econom-
ic Co-operation and Development (OECD) countries, and a second, in which
social capital is estimated for a set of countries from all over the world.

The first database was previously available in Pérez García et al.
(2005), and has been updated and improved in the present document. The
OECD database allows all these countries, with the exception of Iceland, to
be analysed for the period between 1970 and 2005. Thus, four years have
been added to the sample of OECD countries. Improvements to the data-
base go beyond the inclusion of these additional years. All the series used to
construct the indicator have been revised, with the inclusion of new statistics
published after the previous version had been drawn up, as well as improve-
ments to the construction of proxies.

The main innovation in the present document is the creation of a
new database of the social capital indicator for all the countries in the world
for which it was possible to estimate the volume index of social capital. Spe-
cifically, the database includes 78 countries (6 African, 22 American, 19
Asian, 29 European and 2 from Oceania) over the period 1970-2005. The
countries covered represented 81% of the world population in 2005.
The database comprises an unbalanced panel of observations since data on
all countries is not available for the whole period. Information is provided
from 1970 for a total of 30 countries, a figure that increases to 42 in 1980
and 58 in 1990. Maximum coverage of 78 countries was reached for the first
years of this century.

The databases presented in this document represent, above all, a met-
hodological contribution by furthering the knowledge of social capital
through formal modelling, and a conceptual framework that accurately de-
limits the factors that should appear in a measure of social capital. This mo-
delling was carried out using a methodology based on the consideration
that economic relationships—and not only social relationships, as is gener-
ally assumed in most of the literature—are crucial in the generation of so-

cial capital. The second basic thesis of this approach is that if social capital is in fact *capital*, it must be measured in the same way as other types of capital. This perspective implies the recognition of the productive nature of trust and an analysis of the process by which trust is generated through the investment of costly resources in the accumulation of an asset that depreciates.

To operationalise the proposed conceptual framework, variables must be used to proxy each of the elements postulated by the theoretical model as determinants of social capital. Since no measures exist to directly proxy each one of these elements, restrictive, and at times heroic, assumptions had to be made; consequently the series presented must be essentially understood in terms of their methodological value, and as a guide to the points on which greater statistical efforts must be made to generate information that will allow social capital to be measured more accurately.

In spite of the above, the results are interesting. They show that social capital, as opposed to other types such as physical or human capital, can present great variability, with profound oscillations occurring in periods of intense accumulation of social capital, but which can also alternate with other periods in which social capital diminishes rapidly. This result is coherent with the conception of social capital as an asset of trust. On occasions, trust is quickly destroyed if it is betrayed or, contrarily, it is rapidly created if it is honoured.

The results also reveal the existence of a positive relationship between the degree of development countries reach and the pace of sustained improvement of this development, and level of social capital. The greater the development or the faster the growth in a society, the higher the levels of trust and social capital it will achieve, which in turn will contribute to the process of economic growth through the role it plays in reducing transaction and supervision costs. This process can therefore be considered as a virtuous circle, in which social capital and economic growth foster each other.

Appendix:
Database

IN the present statistical appendix we include the series estimated for social capital in the Organisation for Economic Co-operation and Development (OECD) and in the world databases. It should be taken into account that the differences in the data values estimated for the social capital in a country that appears in both the OECD and the world databases are due to the different statistical sources used to obtain them. In the case of OECD countries, we preferred to use data from homogenous, standardised sources that only cover these countries, rather than others with greater geographical scope, but lower internal homogeneity. In this way, we have attempted to guarantee greater comparability between the countries considered.

The information in this appendix is in electronic format. Petitions should be addressed to publicaciones@ivie.es.

TABLE A.1a: Volume index of social capital. OECD database
(1990 [or first available year] = 100)

	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987
Australia	75.00	71.62	68.25	76.22	72.77	60.90	61.24	56.59	52.28	53.69	55.57	56.85	49.85	40.32	47.29	61.36	70.34	70.30
Austria	45.20	48.03	51.07	52.85	51.89	52.90	58.94	63.11	64.15	68.13	72.80	70.79	66.13	62.63	69.76	73.22	82.34	82.61
Belgium	71.70	74.46	75.76	79.29	76.34	66.15	60.18	60.14	61.07	66.59	70.30	65.41	60.20	60.11	59.99	65.13	71.99	75.06
Canada	23.75	24.97	28.08	33.33	36.45	35.05	39.09	40.67	45.72	56.35	61.28	75.19	56.82	51.69	55.08	59.76	67.88	74.90
Czech Republic	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Denmark	151.21	142.13	145.95	143.83	101.56	100.04	84.83	73.46	64.95	85.26	85.84	66.87	64.39	69.86	99.26	118.70	150.53	136.84
Finland	21.22	21.35	20.40	20.41	23.31	25.29	21.40	17.84	15.21	18.09	22.44	23.58	25.20	28.13	31.17	36.37	39.21	47.63
France	76.94	79.43	85.54	88.28	91.60	85.76	88.74	90.93	93.65	90.67	90.33	84.88	83.17	83.13	77.23	76.42	77.67	78.87
Germany	52.46	54.39	56.29	56.99	48.89	40.25	42.92	47.60	54.09	63.60	70.44	66.29	57.87	53.74	61.98	66.64	71.59	75.54
Greece	34.64	43.19	50.93	49.78	55.67	58.17	65.26	77.34	79.99	81.14	77.79	81.29	71.54	61.79	61.33	67.58	71.44	89.67
Hungary	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Ireland	87.23	74.63	86.93	98.87	115.88	78.32	73.84	76.94	90.53	123.82	118.22	89.88	82.26	72.60	68.39	63.36	64.89	65.89
Italy	97.86	107.55	107.46	109.41	120.34	126.97	115.94	115.29	120.02	113.97	114.07	109.89	106.47	99.90	97.14	98.56	93.11	88.46
Japan	36.01	40.42	43.96	44.92	44.03	44.77	46.29	48.00	50.12	53.51	56.51	57.98	60.53	62.69	65.09	68.03	71.43	76.69
Republic of Korea	8.81	10.00	11.51	13.45	15.93	17.34	17.71	18.69	23.79	24.86	26.86	32.54	38.99	42.05	44.75	50.77	55.31	66.06
Luxembourg	51.08	57.84	58.20	53.86	49.78	61.83	58.20	61.64	59.51	65.31	73.24	76.17	74.09	65.69	63.03	64.52	70.23	73.19
Mexico	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Netherlands	73.35	72.23	66.70	67.98	65.95	52.32	52.95	60.91	69.74	78.04	78.55	66.43	52.63	51.59	51.69	57.50	64.09	79.04
New Zealand	102.48	98.49	111.64	169.89	249.29	344.39	340.35	378.80	330.21	307.12	277.08	222.77	234.11	176.01	148.88	176.37	195.68	186.06
Norway	21.50	22.73	22.48	23.36	23.27	22.49	26.68	31.72	32.18	33.90	34.91	34.01	32.76	30.06	32.62	36.56	53.99	65.54
Poland	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Portugal	57.52	62.33	68.18	72.57	93.91	87.60	65.94	60.59	56.82	66.82	65.32	75.89	81.71	85.06	82.43	76.73	72.32	81.18
Slovakia	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Spain	129.58	129.41	134.84	147.86	146.33	131.09	141.13	132.45	111.52	102.15	89.47	81.82	78.15	67.41	57.45	55.03	57.16	65.69
Sweden	45.16	40.25	41.18	42.93	48.13	51.17	50.75	53.39	56.30	64.35	68.94	70.26	64.64	60.06	64.78	64.04	69.29	79.95
Switzerland	33.10	32.66	32.19	32.07	26.70	26.39	28.06	33.40	39.21	45.87	55.34	57.64	65.54	62.05	65.03	69.56	73.40	80.20
Turkey	71.12	80.04	82.73	81.44	112.71	120.35	114.94	135.42	115.34	115.52	122.91	142.00	158.04	162.25	182.95	197.31	167.83	153.59
United Kingdom	65.83	57.41	65.17	82.73	91.06	70.17	52.43	42.70	44.03	45.41	42.14	36.57	34.84	34.05	37.01	40.95	46.90	51.54
United States	32.80	31.43	35.92	41.79	41.83	32.92	37.16	41.96	48.39	53.50	49.53	48.90	44.72	48.08	62.50	68.94	77.54	89.39

TABLE A.1a (continuation): **Volume index of social capital. OECD database**
(1990 [or first available year] = 100)

	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Australia	81.41	97.09	100.00	81.31	76.60	77.16	88.81	105.90	113.23	115.83	135.12	153.09	172.56	168.89	191.31	207.36	235.66	263.59
Austria	88.62	96.51	100.00	100.19	102.10	100.16	116.51	119.68	114.91	119.15	117.44	123.36	128.71	127.28	120.62	117.25	107.94	113.81
Belgium	82.65	94.62	100.00	95.44	87.89	79.86	76.75	78.05	82.36	80.89	85.00	94.12	101.04	98.87	87.23	80.34	76.31	79.47
Canada	87.54	96.65	100.00	91.18	90.14	91.24	99.34	106.60	112.82	121.86	132.59	139.48	149.79	150.80	149.31	148.78	157.08	170.71
Czech Republic	—	—	—	—	—	100.00	106.70	110.16	105.96	97.58	72.75	55.83	50.48	49.31	50.03	55.03	48.35	48.51
Denmark	124.52	107.78	100.00	96.31	85.47	67.75	81.44	87.40	93.90	105.00	125.87	119.33	128.30	133.76	138.30	130.23	133.85	153.71
Finland	62.12	84.54	100.00	78.79	50.10	33.12	28.47	28.86	29.28	29.73	33.43	39.07	39.90	46.98	48.45	51.86	55.12	64.36
France	83.90	90.35	100.00	99.36	94.91	86.29	84.27	91.40	89.96	91.66	98.55	109.32	124.54	137.59	132.59	128.20	127.96	133.76
Germany	76.55	82.14	100.00	102.38	97.11	93.17	92.16	98.59	99.68	96.68	107.84	116.94	125.09	123.49	114.72	106.77	96.83	91.62
Greece	87.18	95.58	100.00	84.99	83.27	92.79	87.79	85.54	81.12	79.98	78.52	82.90	97.63	112.90	119.13	120.24	114.41	127.58
Hungary	—	—	—	100.00	100.00	85.34	86.91	78.84	70.46	70.54	75.22	71.07	78.80	77.54	83.53	91.92	90.24	87.44
Ireland	69.95	76.15	100.00	85.45	92.66	83.87	98.47	121.45	131.51	167.97	233.91	340.55	436.81	494.06	474.35	500.48	606.94	766.36
Italy	89.19	92.39	100.00	111.67	124.37	124.53	112.27	101.17	100.71	99.55	101.56	111.34	124.22	138.54	146.06	161.85	174.60	192.09
Japan	84.34	93.25	100.00	100.26	103.05	101.21	97.24	96.66	95.96	97.56	102.36	99.02	101.11	100.50	96.52	101.13	104.64	106.69
Republic of Korea	72.33	86.68	100.00	107.54	109.70	109.04	123.28	134.62	149.82	162.57	113.35	132.62	182.18	207.95	249.09	248.98	238.49	254.58
Luxembourg	79.45	83.76	100.00	99.21	117.60	92.12	72.86	83.32	78.64	84.51	96.86	99.40	115.52	132.82	133.84	124.15	128.03	166.90
Mexico	—	—	100.00	124.72	140.49	150.52	183.75	147.58	133.67	139.50	147.21	161.81	144.01	145.72	149.20	141.01	125.17	112.27
Netherlands	84.56	91.26	100.00	108.65	116.48	127.50	123.26	131.24	147.96	178.37	227.40	274.47	316.75	327.62	329.14	303.85	296.21	310.37
New Zealand	146.42	113.55	100.00	89.40	96.56	100.27	119.35	155.41	168.72	180.70	180.30	204.78	226.36	243.21	260.82	291.67	341.12	396.86
Norway	69.71	73.29	100.00	90.59	90.80	85.06	90.85	97.27	100.34	110.99	146.69	171.16	153.56	163.82	178.97	167.06	—	—
Poland	—	—	100.00	102.46	89.40	90.55	78.96	75.93	86.41	98.56	110.02	93.82	79.06	74.76	66.48	69.24	66.64	71.57
Portugal	90.75	91.76	100.00	112.19	120.12	109.69	102.29	103.33	111.22	123.15	169.97	219.70	279.94	300.74	273.84	242.53	242.79	233.32
Slovakia	—	—	—	—	—	—	—	—	—	—	—	—	100.00	104.94	91.95	85.26	80.38	99.95
Spain	75.38	89.45	100.00	100.83	89.30	70.39	69.91	76.04	82.06	92.97	110.14	144.55	175.10	232.53	231.64	258.15	297.19	407.54
Sweden	94.82	108.39	100.00	82.51	60.72	54.40	56.55	62.36	58.37	60.16	74.19	78.94	97.68	114.20	113.93	107.60	100.41	98.71
Switzerland	86.75	96.30	100.00	82.99	74.25	67.59	68.69	73.81	71.40	69.89	74.40	83.85	86.34	87.64	81.23	75.09	73.99	75.36
Turkey	111.66	99.62	100.00	122.74	138.27	138.86	154.48	184.22	256.63	275.33	305.37	373.09	407.54	494.79	348.70	309.21	325.98	340.79
United Kingdom	67.61	91.26	100.00	85.09	75.45	70.53	76.92	88.82	96.82	108.14	117.16	125.29	144.73	165.10	167.64	179.73	195.14	210.35
United States	98.27	102.31	100.00	89.40	85.64	93.16	104.67	119.51	123.02	136.18	155.21	172.14	192.56	189.69	175.16	182.03	201.38	218.49

Source: Authors' calculations.

TABLE A.1b: Per capita volume index of social capital. OECD database
(1990 [or first available year] = 100)

	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987
Australia	102.33	93.53	87.54	96.32	90.49	74.80	74.47	68.05	62.13	63.12	64.53	65.01	56.03	44.70	51.80	66.33	74.93	73.77
Austria	46.72	49.43	52.25	53.77	52.70	53.87	60.12	64.36	65.47	69.66	74.43	72.23	67.41	64.00	71.28	74.77	83.99	84.16
Belgium	74.02	76.73	77.76	81.13	77.86	67.27	61.10	60.98	61.87	67.40	71.07	66.13	60.88	60.79	60.68	65.85	72.76	75.80
Canada	30.84	31.50	35.00	41.05	44.26	41.95	46.17	47.48	52.85	64.49	69.23	83.90	62.66	56.44	59.58	64.04	72.03	78.44
Czech Republic	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Denmark	157.72	147.22	150.32	147.24	103.48	101.65	85.97	74.22	65.41	85.67	86.14	67.12	64.68	70.22	99.83	119.34	151.13	137.21
Finland	22.97	23.08	21.92	21.81	24.78	26.76	22.58	18.77	15.96	18.93	23.41	24.49	26.03	28.88	31.83	36.99	39.76	48.15
France	85.93	87.89	93.83	96.06	99.02	92.29	95.11	97.03	99.50	95.92	95.08	88.84	86.57	86.07	79.59	78.39	79.29	80.12
Germany	54.71	56.12	57.73	58.16	49.83	41.18	44.13	49.04	55.78	65.57	72.37	67.98	59.39	55.35	64.08	69.08	74.15	78.23
Greece	39.75	49.69	57.80	56.25	62.67	64.88	71.82	83.83	85.58	85.73	81.39	84.29	73.73	63.30	62.53	68.63	72.33	90.61
Hungary	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Ireland	103.58	87.79	100.70	112.71	129.94	86.36	80.13	82.37	95.69	128.79	121.77	91.44	82.80	72.56	67.89	62.70	64.19	65.15
Italy	105.21	114.86	113.96	115.20	125.53	131.55	119.45	118.35	122.81	116.30	116.28	111.79	107.88	100.81	97.82	98.98	93.38	88.57
Japan	42.48	47.04	50.45	50.84	49.17	49.38	50.55	51.96	53.85	57.01	59.74	60.84	63.09	64.88	66.93	69.51	72.60	77.58
Republic of Korea	11.72	13.04	14.73	16.91	19.69	21.07	21.18	22.00	27.59	28.39	30.20	36.02	42.51	45.16	47.48	53.34	57.53	68.04
Luxembourg	57.78	64.45	64.25	58.70	53.55	65.93	61.97	65.49	63.14	69.03	77.11	80.07	77.92	69.03	66.17	67.54	73.06	75.63
Mexico	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Netherlands	84.11	81.85	74.81	75.63	72.79	57.24	57.48	65.72	74.79	83.11	83.00	69.71	54.97	53.69	53.58	59.32	65.76	80.58
New Zealand	122.21	115.65	128.89	192.31	276.51	375.18	367.32	407.26	354.90	330.62	296.39	237.30	247.35	183.49	153.68	181.27	200.81	189.39
Norway	23.51	24.70	24.24	25.01	24.77	23.81	28.11	33.27	33.62	35.30	36.24	35.18	33.77	30.88	33.41	37.33	54.92	66.38
Poland	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Portugal	65.55	71.36	77.93	83.02	104.43	92.92	69.24	62.92	58.38	67.92	65.68	75.81	81.17	84.23	81.31	75.65	71.35	80.30
Slovakia	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Spain	148.68	146.93	151.53	164.50	161.10	142.71	151.81	140.73	117.20	106.43	92.62	84.22	80.02	68.70	58.31	55.65	57.62	66.06
Sweden	48.06	42.54	43.39	45.15	50.48	53.46	52.83	55.38	58.23	66.40	71.00	72.28	66.46	61.72	66.51	65.64	70.85	81.48
Switzerland	35.95	35.28	34.51	34.13	28.27	27.94	29.88	35.70	41.90	48.91	58.79	60.89	68.83	64.89	67.76	72.17	75.75	82.25
Turkey	113.08	124.12	125.11	120.12	162.14	168.84	157.76	182.07	151.90	149.02	155.32	175.10	190.09	190.35	209.37	220.25	183.25	164.09
United Kingdom	67.73	58.77	66.52	84.24	92.70	71.45	53.39	43.50	44.87	46.23	42.82	37.14	35.43	34.61	37.56	41.44	47.36	51.93
United States	39.93	37.78	42.71	49.23	48.83	38.05	42.55	47.55	54.26	59.34	54.42	53.20	48.19	51.34	66.16	72.33	80.61	92.10

TABLE A.1b (continuation): **Per capita volume index of social capital. OECD database**
(1990 [or first available year] = 100)

	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Australia	84.04	98.54	100.00	80.28	74.72	74.53	84.88	100.00	105.53	106.75	123.24	138.03	153.75	148.47	166.22	178.07	200.16	221.27
Austria	90.04	97.70	100.00	98.85	99.95	96.71	111.97	114.79	110.05	113.93	112.21	117.66	122.49	120.80	115.16	111.47	101.90	106.69
Belgium	83.20	94.91	100.00	95.08	87.21	78.93	75.62	76.75	80.83	79.19	83.04	91.74	98.24	95.81	84.14	77.18	73.06	75.89
Canada	90.49	98.13	100.00	90.10	88.02	88.11	94.88	100.77	105.53	112.86	121.78	127.07	135.19	134.64	131.82	130.13	136.07	146.52
Czech Republic	—	—	—	—	—	100.00	106.65	110.16	106.12	97.84	73.01	56.09	50.77	49.83	50.67	55.73	48.94	49.03
Denmark	124.80	107.96	100.00	96.06	84.97	67.13	80.42	85.86	91.72	102.14	121.99	115.27	123.52	128.33	132.31	124.29	127.40	145.91
Finland	62.61	84.91	100.00	78.35	49.54	32.59	27.90	28.17	28.48	28.84	32.35	37.71	38.44	45.15	46.45	49.60	52.57	61.17
France	84.79	90.81	100.00	98.90	94.03	85.15	82.88	89.61	87.92	89.30	95.70	105.68	119.68	131.37	125.78	120.86	119.90	124.61
Germany	78.80	83.72	100.00	101.03	95.10	90.58	89.33	95.28	96.07	92.99	103.76	112.52	120.17	118.46	109.81	102.14	92.65	87.69
Greece	87.91	96.06	100.00	83.60	81.02	89.46	83.93	81.16	76.43	74.88	73.12	76.85	90.23	104.02	109.39	110.05	104.37	115.97
Hungary	—	—	—	—	100.00	85.43	87.13	79.15	70.86	71.08	75.96	71.98	80.02	78.92	85.26	94.09	92.58	89.88
Ireland	69.26	75.89	100.00	84.94	91.46	82.46	96.27	118.14	127.04	160.59	221.28	318.80	403.74	449.88	424.21	440.62	525.77	649.90
Italy	89.15	92.22	100.00	111.63	124.11	125.18	112.50	101.15	100.55	99.20	101.02	110.68	123.23	137.07	144.19	159.76	172.13	187.47
Japan	84.96	93.56	100.00	99.88	102.27	100.11	95.92	95.05	94.14	95.49	99.94	96.52	98.37	97.49	93.52	97.85	101.19	103.12
Republic of Korea	73.78	87.54	100.00	106.48	107.50	105.77	118.38	127.98	141.08	151.66	104.98	121.96	166.14	188.25	224.27	223.07	212.63	225.98
Luxembourg	81.27	84.89	100.00	97.84	114.38	88.33	68.89	77.59	72.74	77.16	87.30	88.35	101.78	115.64	115.30	106.05	108.57	141.00
Mexico	—	—	100.00	121.70	134.44	141.20	168.88	131.43	117.05	120.19	124.87	135.26	118.60	118.34	119.55	111.55	97.79	86.62
Netherlands	85.66	91.88	100.00	107.80	114.69	124.67	119.80	126.93	142.43	170.83	216.46	259.52	297.36	305.26	304.72	280.01	272.11	284.34
New Zealand	148.45	114.67	100.00	86.02	91.95	94.40	110.87	142.27	152.03	160.71	158.94	179.57	197.33	210.77	222.68	244.66	282.46	325.60
Norway	70.24	73.53	100.00	90.14	89.83	83.66	88.84	94.64	97.13	106.85	140.39	162.69	145.02	153.91	167.26	155.24	—	—
Poland	—	—	100.00	102.12	88.82	89.75	78.09	75.01	85.29	97.21	108.46	92.52	78.78	74.50	66.28	69.10	66.54	71.49
Portugal	90.01	91.32	100.00	112.34	120.60	110.07	102.63	103.60	111.31	123.09	165.67	213.28	270.19	288.14	260.47	229.15	228.11	218.08
Slovakia	—	—	—	—	—	—	—	—	—	—	—	—	100.00	105.37	92.32	85.60	80.66	100.20
Spain	75.64	89.58	100.00	100.60	88.80	69.78	69.12	75.01	80.75	91.25	107.73	140.66	168.96	221.86	217.83	238.76	270.45	364.84
Sweden	96.21	109.23	100.00	81.95	59.95	53.40	55.12	60.46	56.50	58.20	71.74	76.28	94.24	109.87	109.26	102.80	95.56	93.56
Switzerland	88.31	97.25	100.00	81.92	72.49	65.39	65.93	70.37	67.77	66.18	70.24	78.78	80.67	81.40	74.84	68.68	67.20	68.01
Turkey	116.73	101.91	100.00	120.35	132.97	131.03	143.07	167.49	229.08	241.34	262.95	315.76	339.45	406.44	282.55	247.24	257.29	265.56
United Kingdom	67.99	91.51	100.00	84.80	75.00	69.95	76.09	87.61	95.27	106.14	114.68	122.20	140.68	159.86	161.75	172.74	186.67	200.70
United States	100.33	103.47	100.00	88.21	83.34	89.47	99.30	112.04	113.99	124.68	140.45	153.99	170.34	166.08	151.83	156.23	171.18	184.00

Source: Authors' calculations.

TABLE A.2a: **Volume index of social capital. World database**
(1990 [or first available year] = 100)

	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981
Algeria	—	—	—	—	—	—	—	—	—	—	—	—
Botswana	—	—	—	—	—	—	—	—	—	—	—	—
Egypt	41.00	48.17	53.37	50.91	50.97	63.14	55.15	50.27	65.61	56.98	60.80	77.10
Mauritius	—	—	—	—	—	—	—	—	—	—	—	—
South Africa	—	—	—	—	—	—	—	—	—	—	—	—
Tunisia	—	—	—	—	—	—	—	—	—	—	—	—
Argentina	—	—	—	—	—	—	—	—	—	—	—	—
Barbados	—	—	—	—	—	—	93.23	75.68	74.02	83.58	65.05	83.88
Bolivia	—	—	—	—	—	—	—	—	—	—	—	—
Brazil	—	—	—	—	—	—	95.64	91.40	86.14	82.82	64.23	61.07
Canada	26.62	28.00	31.52	37.43	40.69	39.12	41.68	42.98	48.32	60.00	64.95	79.58
Chile	—	—	—	—	—	21.24	18.14	20.74	17.88	20.32	29.63	30.72
Colombia	—	—	—	—	—	38.40	38.46	43.50	47.73	44.23	51.39	56.17
Costa Rica	—	—	—	—	—	—	87.07	112.56	153.38	191.08	184.41	117.73
Dominican Republic	—	—	—	—	—	—	—	—	—	—	—	—
Ecuador	—	—	—	—	—	—	—	—	—	—	—	—
El Salvador	—	—	—	—	—	—	—	—	77.14	70.52	54.90	66.83
Honduras	—	—	—	—	—	—	—	—	—	—	—	—
Jamaica	34.80	37.51	45.77	53.04	59.43	68.46	75.01	71.03	73.46	79.58	77.15	109.25
Mexico	—	—	—	—	—	—	—	—	—	—	—	—
Nicaragua	—	—	—	—	—	—	—	—	—	—	—	—
Panama	56.01	64.03	87.56	97.59	144.08	142.11	148.34	127.00	125.50	140.59	130.05	143.76
Paraguay	—	—	—	—	—	—	—	—	—	55.98	74.49	71.34
Peru	—	—	—	—	—	—	—	—	—	—	—	—
Trinidad and Tobago	39.11	41.43	45.41	39.24	27.80	34.41	47.63	62.67	89.65	93.74	91.19	104.07
United States	32.96	31.71	36.45	42.70	42.39	33.13	37.52	42.77	49.36	54.52	50.30	49.42
Uruguay	—	—	—	—	—	—	—	—	—	—	—	—
Venezuela	—	—	—	—	—	42.74	53.11	71.41	92.33	87.20	105.63	113.64
Armenia	—	—	—	—	—	—	—	—	—	—	—	—
Azerbaijan	—	—	—	—	—	—	—	—	—	—	—	—
Bangladesh	—	—	—	—	—	—	—	—	—	—	—	—
China	—	—	—	—	—	—	—	—	17.88	24.09	27.79	33.53
Georgia	—	—	—	—	—	—	—	—	—	—	—	—
Hong Kong (SAR of China)	—	—	—	—	—	—	—	—	—	—	—	—
India	—	—	—	—	—	—	—	—	—	—	—	—
Indonesia	—	—	—	—	—	—	—	—	—	—	—	—
Iran (Islamic Republic of)	—	—	—	—	—	—	—	—	—	—	—	—
Israel	38.81	43.81	47.72	60.69	77.56	89.83	100.24	127.73	158.53	207.87	173.94	176.44
Japan	36.34	40.47	43.99	44.86	43.29	43.74	45.46	47.18	49.60	52.67	55.67	56.98

TABLE A.2a (continuation)**: Volume index of social capital. World database**

(1990 [or first available year] = 100)

	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981
Malaysia	—	—	—	—	—	—	—	—	—	—	—	—
Pakistan	—	—	—	—	—	—	—	—	—	59.13	59.27	58.32
Philippines	59.91	69.58	74.00	78.85	94.73	100.51	104.53	122.15	163.40	193.44	167.96	179.03
Republic of Korea	9.70	10.78	12.67	14.68	16.78	18.38	18.71	19.99	25.06	26.58	28.36	33.81
Singapore	9.18	9.69	12.73	17.37	16.33	16.86	21.57	24.49	28.89	34.48	47.26	80.06
Sri Lanka	—	—	—	—	—	—	—	—	—	—	—	—
Thailand	—	30.48	29.97	30.69	26.27	34.09	33.97	39.50	46.34	48.60	60.80	53.59
Turkey	85.04	95.73	96.74	94.66	94.79	109.85	110.36	115.83	106.37	108.91	120.02	130.08
Austria	46.78	49.55	52.56	54.43	53.44	54.15	60.35	64.69	65.58	69.95	74.38	71.01
Belarus	—	—	—	—	—	—	—	—	—	—	—	—
Belgium	72.84	75.06	76.11	79.75	76.44	64.78	58.93	58.41	58.93	64.00	67.68	62.09
Bulgaria	—	—	—	—	—	—	—	—	—	—	—	—
Croatia	—	—	—	—	—	—	—	—	—	—	—	—
Czech Republic	—	—	—	—	—	—	—	—	—	—	—	—
Denmark	155.36	145.55	147.93	147.24	106.54	105.11	94.12	81.98	73.80	89.84	87.47	70.24
Finland	21.37	21.37	21.61	21.38	24.29	25.21	21.52	17.95	15.30	18.27	22.69	23.71
France	78.25	81.10	87.29	88.87	92.24	86.10	89.32	90.99	93.76	90.94	89.16	84.25
Germany	55.34	56.88	58.38	58.82	50.07	40.84	43.51	48.11	54.23	64.30	71.40	66.84
Greece	40.35	46.78	50.16	49.92	56.54	62.40	68.75	80.82	83.94	84.76	81.33	84.34
Hungary	—	—	—	—	—	—	—	—	—	—	—	—
Ireland	100.17	80.90	98.76	111.66	128.95	81.72	82.56	79.43	101.37	127.27	128.92	90.34
Italy	95.20	103.23	103.62	106.50	117.46	125.18	116.23	114.87	119.81	114.05	113.18	104.01
Luxembourg	49.79	56.27	56.39	52.14	48.62	58.56	55.51	58.53	56.67	61.19	69.93	72.38
Netherlands	76.81	74.78	69.10	70.55	68.35	61.80	62.77	72.10	82.06	91.60	91.77	75.16
Norway	19.78	21.01	20.80	21.99	21.80	21.15	25.27	29.54	31.53	33.37	34.98	33.92
Poland	—	—	—	—	—	—	—	—	—	—	—	—
Portugal	53.45	67.18	73.76	79.17	92.57	89.47	69.40	63.77	59.55	69.58	67.28	74.14
Republic of Moldova	—	—	—	—	—	—	—	—	—	—	—	—
Romania	—	—	—	—	—	—	—	—	—	—	—	—
Russian Federation	—	—	—	—	—	—	—	—	—	—	—	—
Slovakia	—	—	—	—	—	—	—	—	—	—	—	—
Slovenia	—	—	—	—	—	—	—	—	—	—	—	—
Spain	136.91	136.07	160.54	163.22	158.63	133.50	144.40	139.62	116.18	106.20	91.91	81.94
Sweden	46.83	41.79	42.32	43.93	49.08	52.17	51.92	53.95	56.61	64.76	69.50	70.84
Switzerland	34.39	34.02	33.46	33.28	27.63	26.79	28.45	33.89	39.59	46.31	56.19	58.46
Ukraine	—	—	—	—	—	—	—	—	—	—	—	—
United Kingdom	70.28	61.54	69.94	87.81	94.86	73.36	55.89	45.91	47.34	48.59	44.79	39.32
Australia	79.03	74.06	71.56	75.77	72.75	60.68	62.91	57.85	53.33	54.62	56.49	57.58
New Zealand	127.75	123.57	140.43	215.38	313.73	429.99	424.99	458.50	391.81	362.37	323.08	259.25

TABLE A.2a (continuation): **Volume index of social capital. World database**

(1990 [or first available year] = 100)

	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993
Algeria	—	—	—	—	—	—	—	126.39	100.00	79.96	82.67	103.53
Botswana	—	—	—	—	—	—	—	—	—	—	—	—
Egypt	80.38	89.26	102.91	112.53	121.59	109.68	114.62	118.30	100.00	84.31	76.80	65.75
Mauritius	—	—	—	—	—	—	—	—	—	—	—	—
South Africa	—	—	—	—	—	—	—	—	—	—	—	—
Tunisia	—	—	—	—	—	—	—	104.44	100.00	99.57	119.33	122.08
Argentina	185.35	198.75	168.95	113.85	124.82	168.15	143.46	115.38	100.00	80.15	72.37	69.21
Barbados	72.23	69.05	60.33	55.38	60.68	64.23	73.82	96.95	100.00	94.26	73.39	68.91
Bolivia	—	—	—	—	—	—	—	62.69	100.00	127.46	169.64	234.99
Brazil	68.69	64.39	68.75	78.38	95.19	87.00	87.82	100.80	100.00	105.78	160.00	241.61
Canada	57.64	51.94	56.07	61.34	69.21	75.51	88.88	98.20	100.00	88.72	87.34	90.85
Chile	35.77	49.11	66.12	81.98	102.54	101.07	106.32	108.67	100.00	92.40	102.94	112.46
Colombia	54.88	56.19	56.95	55.75	58.52	65.42	77.35	89.17	100.00	115.22	131.11	169.37
Costa Rica	83.87	72.46	106.58	77.98	84.53	97.87	95.96	107.64	100.00	57.81	65.78	72.46
Dominican Republic	—	—	—	—	—	—	—	—	—	100.00	108.56	116.47
Ecuador	—	—	—	—	—	—	143.88	100.62	100.00	123.71	99.37	107.40
El Salvador	59.33	57.98	57.78	62.62	118.65	111.99	112.44	141.05	100.00	137.56	150.96	143.49
Honduras	64.07	61.34	66.70	75.99	73.22	82.07	93.70	113.08	100.00	97.59	123.80	122.47
Jamaica	116.44	136.06	124.65	101.40	103.37	96.35	107.11	116.40	100.00	74.76	75.61	68.06
Mexico	—	—	—	—	—	—	—	—	100.00	103.96	115.13	121.37
Nicaragua	—	—	—	—	—	—	—	—	100.00	76.42	77.79	72.79
Panama	145.57	142.67	147.80	126.59	150.95	149.43	110.89	117.89	100.00	101.48	126.70	151.94
Paraguay	75.77	76.65	83.54	103.87	96.44	101.44	121.81	105.80	100.00	147.74	172.41	203.79
Peru	—	—	—	—	88.42	116.30	165.83	114.78	100.00	57.54	48.37	57.47
Trinidad and Tobago	125.87	140.58	141.12	127.17	115.21	110.32	106.23	98.74	100.00	126.29	125.16	124.17
United States	44.55	47.37	62.32	68.62	77.00	88.83	98.42	102.44	100.00	88.68	85.02	92.88
Uruguay	—	—	100.46	110.89	104.58	95.59	108.97	114.84	100.00	69.47	69.38	72.07
Venezuela	122.12	98.27	75.94	75.54	96.67	100.06	125.09	101.42	100.00	106.02	139.14	153.36
Armenia	—	—	—	—	—	—	—	—	—	—	—	100.00
Azerbaijan	—	—	—	—	—	—	—	—	—	—	—	—
Bangladesh	—	—	—	—	—	—	—	113.86	100.00	95.29	93.99	95.84
China	37.68	42.61	50.22	54.99	66.73	72.92	72.86	75.13	100.00	108.24	109.40	119.30
Georgia	—	—	—	—	—	—	—	—	—	—	—	—
Hong Kong (SAR of China)	—	—	—	—	—	—	—	—	100.00	80.30	73.61	79.29
India	—	—	—	108.57	110.47	110.24	114.23	102.31	100.00	98.19	99.35	101.92
Indonesia	—	—	—	—	—	—	—	—	—	—	—	—
Iran (Islamic Republic of)	—	—	—	—	—	—	—	—	—	—	—	—
Israel	203.39	250.95	281.21	192.57	137.29	148.72	146.01	110.26	100.00	89.55	80.35	93.49
Japan	58.99	61.57	63.70	66.90	69.86	75.69	83.66	92.36	100.00	100.31	102.09	100.27

TABLE A.2a (continuation): **Volume index of social capital. World database**
(1990 [or first available year] = 100)

	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993
Malaysia	—	—	55.71	59.03	64.66	70.28	70.94	80.69	100.00	116.49	131.74	148.57
Pakistan	63.81	62.83	64.56	69.69	78.54	96.22	93.85	94.95	100.00	67.64	78.51	88.38
Philippines	200.94	248.28	147.26	143.65	107.20	70.67	74.42	81.92	100.00	86.63	106.77	120.74
Republic of Korea	39.90	42.93	45.71	51.63	55.79	66.57	72.73	86.00	100.00	108.86	110.87	110.38
Singapore	83.98	100.73	114.59	91.80	68.74	82.59	88.53	97.30	100.00	108.55	98.80	98.25
Sri Lanka	—	—	—	—	—	—	—	—	100.00	67.36	96.06	84.47
Thailand	49.40	58.55	66.57	66.86	69.43	56.12	78.52	103.45	100.00	96.93	128.29	139.87
Turkey	148.76	149.53	171.00	182.83	159.80	152.54	105.59	91.54	100.00	106.90	119.56	117.97
Austria	66.04	62.63	69.34	72.68	81.47	81.52	86.24	96.08	100.00	99.12	100.13	97.72
Belarus	—	—	—	—	—	—	—	—	—	—	—	—
Belgium	56.95	56.58	55.14	60.64	64.37	64.71	72.42	90.00	100.00	102.64	97.42	93.86
Bulgaria	—	—	—	—	—	—	—	—	—	100.00	64.32	52.90
Croatia	—	—	—	—	—	—	—	—	—	—	—	—
Czech Republic	—	—	—	—	—	—	—	—	—	—	—	100.00
Denmark	67.81	76.70	97.83	116.21	148.08	131.40	126.28	108.40	100.00	95.79	84.86	64.86
Finland	25.34	28.13	31.29	36.34	39.24	47.85	62.46	84.97	100.00	76.66	47.96	31.65
France	81.88	82.10	76.09	76.97	77.73	79.04	84.36	90.94	100.00	99.33	93.84	85.98
Germany	58.12	53.57	61.84	66.49	71.10	74.31	75.53	81.96	100.00	102.15	95.65	90.07
Greece	73.78	63.32	62.18	68.76	72.53	89.97	88.20	96.33	100.00	84.87	83.37	91.93
Hungary	—	—	—	—	—	—	—	—	—	—	100.00	84.53
Ireland	90.43	69.77	65.68	57.51	61.25	64.02	68.63	75.94	100.00	84.31	91.10	82.50
Italy	100.43	94.58	95.31	96.41	91.35	86.97	87.84	90.78	100.00	108.66	114.29	124.00
Luxembourg	70.35	63.12	60.68	62.01	68.36	71.97	78.19	84.44	100.00	100.05	116.45	91.24
Netherlands	57.29	41.56	41.43	46.54	53.43	76.04	85.04	93.37	100.00	108.04	127.83	124.85
Norway	31.12	28.33	30.12	33.51	48.19	64.86	69.07	72.86	100.00	92.20	92.82	86.81
Poland	—	—	—	—	—	—	—	—	100.00	116.15	116.05	115.99
Portugal	84.31	96.14	88.07	82.42	78.33	86.69	93.90	97.28	100.00	120.33	121.32	110.62
Republic of Moldova	—	—	—	—	—	—	—	—	—	—	—	—
Romania	—	—	—	—	—	—	—	—	—	—	100.00	52.33
Russian Federation	—	—	—	—	—	—	—	—	—	—	—	100.00
Slovakia	—	—	—	—	—	—	—	—	—	—	—	—
Slovenia	—	—	—	—	—	—	—	—	—	—	100.00	124.07
Spain	77.90	66.57	56.61	54.48	56.91	64.89	74.44	89.36	100.00	99.66	91.31	71.57
Sweden	65.51	61.42	66.73	65.23	75.14	80.96	95.95	107.97	100.00	82.26	62.09	57.55
Switzerland	65.80	62.18	65.44	69.95	73.57	80.05	86.56	96.00	100.00	82.73	73.74	67.46
Ukraine	—	—	—	—	—	—	—	—	—	—	—	—
United Kingdom	37.64	36.90	36.53	40.69	46.91	51.62	67.95	91.83	100.00	84.62	74.48	70.06
Australia	49.61	40.17	47.11	61.04	69.89	70.52	79.65	98.53	100.00	80.16	77.25	77.56
New Zealand	272.80	204.48	173.72	204.97	200.87	189.02	148.34	114.97	100.00	88.91	95.67	99.79

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TABLE A.2a (continuation): **Volume index of social capital. World database**
(1990 [or first available year] = 100)

	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Algeria	83.05	72.53	64.63	68.92	78.54	84.65	54.35	56.53	88.74	80.76	87.55	45.06
Botswana	—	—	100.00	91.62	126.73	195.36	252.20	196.44	202.34	187.95	239.29	—
Egypt	69.88	70.01	81.34	94.40	109.93	122.98	116.56	125.93	127.49	125.23	113.28	—
Mauritius	—	100.00	88.78	92.02	99.85	91.09	81.66	159.95	150.12	150.21	152.95	149.83
South Africa	—	—	—	—	—	—	100.00	94.68	86.19	105.46	113.90	—
Tunisia	124.18	129.17	120.98	130.33	135.99	144.23	159.07	171.07	174.57	181.33	186.80	191.00
Argentina	66.41	53.09	45.87	59.99	77.56	79.90	74.37	69.87	102.26	113.24	125.33	123.26
Barbados	82.09	94.80	123.36	134.90	165.11	203.61	224.73	201.06	232.97	223.12	270.70	—
Bolivia	380.92	316.46	327.82	370.71	363.47	321.59	305.70	280.77	270.31	—	—	—
Brazil	150.05	106.06	92.04	94.14	128.75	138.09	144.90	162.08	183.95	180.55	195.82	—
Canada	98.56	105.06	112.09	119.24	129.66	138.31	150.28	150.31	147.52	146.69	155.37	168.37
Chile	89.16	101.76	102.56	113.31	101.57	93.85	102.72	110.42	112.33	111.28	110.73	115.43
Colombia	168.92	174.18	151.86	166.47	148.09	120.72	108.83	103.37	98.74	109.41	116.33	134.97
Costa Rica	72.26	55.51	77.54	103.42	123.98	104.35	129.82	141.08	157.85	166.20	185.56	195.69
Dominican Republic	150.42	141.17	154.43	176.70	225.55	270.08	288.15	283.07	300.09	290.14	223.39	—
Ecuador	125.93	140.12	104.51	138.18	144.81	157.42	225.00	154.97	119.32	87.99	116.31	—
El Salvador	207.50	219.98	238.23	249.47	265.88	296.07	378.32	376.78	373.74	378.54	375.52	—
Honduras	122.79	107.07	100.51	132.77	136.05	154.10	168.87	178.72	177.81	193.18	178.51	227.53
Jamaica	70.16	86.90	95.25	110.54	135.78	142.43	126.26	80.68	104.37	194.33	142.06	136.01
Mexico	110.05	87.63	81.15	86.51	91.06	102.94	90.84	91.64	90.88	85.47	73.89	72.60
Nicaragua	64.31	55.61	50.27	61.09	65.16	83.20	94.07	88.49	47.15	—	—	—
Panama	157.04	178.91	170.70	190.37	229.29	301.60	282.54	290.23	295.45	300.01	335.46	—
Paraguay	391.83	353.68	316.21	329.34	298.23	289.93	278.80	265.21	225.15	189.31	—	—
Peru	50.73	79.97	97.72	150.08	194.30	227.47	222.11	225.56	185.54	155.24	127.93	—
Trinidad and Tobago	114.54	135.41	133.49	169.34	197.76	211.50	221.51	241.46	262.08	—	—	—
United States	104.83	119.67	123.85	138.68	158.37	176.68	195.06	188.95	176.48	182.92	204.09	220.97
Uruguay	66.56	66.33	57.21	60.51	95.77	97.02	82.58	80.09	78.39	85.80	75.93	68.47
Venezuela	151.23	157.82	135.00	134.26	147.76	113.17	103.36	117.09	100.25	63.22	74.80	—
Armenia	91.07	48.42	35.54	26.03	39.79	33.28	34.20	29.92	19.82	16.04	19.72	31.11
Azerbaijan	—	100.00	105.33	105.20	107.01	86.93	79.69	45.04	69.15	72.35	85.09	92.36
Bangladesh	98.58	118.04	127.15	126.98	125.45	131.57	133.41	128.77	122.66	106.72	—	—
China	104.74	102.49	110.38	121.80	138.39	149.25	152.76	150.79	171.71	174.05	160.67	—
Georgia	—	—	—	100.00	72.05	94.00	133.07	124.67	109.77	112.92	102.19	109.91
Hong Kong (SAR of China)	91.70	80.63	96.21	114.84	75.91	61.34	72.14	73.06	60.57	58.83	66.81	74.35
India	99.80	95.11	99.33	99.32	98.89	105.54	113.65	117.29	127.36	—	—	—
Indonesia	—	—	100.00	104.41	98.74	97.53	99.99	75.34	67.20	60.82	62.58	—
Iran (Islamic Republic of)	—	—	—	—	—	100.00	88.32	92.45	93.91	107.59	117.40	106.11
Israel	116.28	129.37	136.94	121.16	118.78	126.50	129.84	139.02	135.50	124.33	124.56	145.61
Japan	95.75	94.54	93.90	95.65	99.50	95.13	98.04	97.08	92.04	96.36	100.96	105.23
Malaysia	154.23	176.32	238.24	284.45	250.12	231.97	245.66	246.97	250.69	259.79	226.79	230.55

TABLE A.2a (continuation)**: Volume index of social capital. World database**

(1990 [or first available year] = 100)

	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Pakistan	82.99	76.73	84.34	79.19	83.19	80.34	56.01	51.48	49.89	51.60	63.55	67.27
Philippines	144.44	176.79	240.94	274.23	220.92	201.49	191.13	198.70	186.87	191.05	176.13	163.49
Republic of Korea	123.86	135.07	149.33	163.25	115.11	131.14	178.68	198.86	233.72	232.55	224.80	241.33
Singapore	104.26	113.07	119.01	146.11	161.53	137.00	142.27	181.13	118.77	122.33	113.99	—
Sri Lanka	92.81	130.86	141.45	140.35	151.13	187.89	238.64	240.47	234.92	225.47	265.22	—
Thailand	164.15	184.88	196.90	218.13	153.56	156.32	155.25	139.76	161.41	159.41	156.29	160.23
Turkey	131.09	156.39	215.62	229.17	250.55	298.36	338.21	402.50	283.95	251.14	264.27	275.47
Austria	113.46	116.69	112.73	117.49	116.00	120.86	126.42	126.21	120.24	114.11	106.29	111.21
Belarus	100.00	29.20	26.16	33.82	39.58	44.38	43.36	37.31	34.71	41.60	47.66	51.69
Belgium	85.43	90.05	89.70	92.69	90.12	95.66	103.69	101.14	89.29	80.98	76.20	74.21
Bulgaria	40.36	41.21	74.78	99.16	81.60	70.85	72.85	69.37	89.99	142.03	189.80	271.70
Croatia	100.00	95.83	79.46	83.81	77.21	65.06	59.48	62.95	80.98	87.11	94.54	112.05
Czech Republic	104.13	103.33	100.67	92.25	69.08	53.11	47.79	46.50	46.58	50.52	44.52	45.24
Denmark	80.26	86.75	92.31	103.31	122.28	116.25	128.32	132.61	137.27	129.08	132.64	152.34
Finland	27.10	27.76	28.06	28.76	32.50	38.90	39.69	47.23	48.12	51.01	54.05	63.36
France	79.17	86.66	85.74	85.71	91.85	96.08	112.11	127.93	125.03	123.76	123.61	129.36
Germany	88.64	94.84	94.76	91.04	102.12	111.49	120.29	118.35	108.21	99.49	89.43	83.83
Greece	87.01	83.79	79.76	77.72	76.73	80.47	94.48	108.31	113.92	115.87	111.48	132.50
Hungary	86.93	79.20	71.27	71.55	75.94	71.37	79.19	77.42	82.89	91.39	89.02	86.12
Ireland	97.33	121.16	133.26	173.91	244.05	363.77	474.10	534.69	519.23	558.86	652.41	842.01
Italy	112.75	102.10	100.02	98.61	99.41	107.92	121.34	134.52	140.91	154.04	162.09	177.04
Luxembourg	71.43	80.37	75.24	83.55	93.71	97.97	116.06	131.22	133.29	122.82	127.03	164.44
Netherlands	121.75	127.70	144.69	178.75	224.59	277.15	320.02	329.18	329.19	301.65	295.86	316.58
Norway	92.15	98.06	100.26	110.53	143.96	163.54	144.28	150.37	161.10	151.23	—	—
Poland	101.61	89.59	102.33	116.46	130.29	111.08	93.48	88.17	78.23	81.16	77.98	84.23
Portugal	102.88	103.17	110.01	121.80	168.06	215.72	275.40	295.97	268.65	237.19	231.57	221.94
Republic of Moldova	—	—	—	—	—	100.00	108.91	132.72	150.93	125.36	126.66	—
Romania	44.58	60.70	81.05	56.31	60.82	47.25	36.40	32.85	26.30	34.92	31.33	42.41
Russian Federation	84.86	54.70	58.69	52.57	70.99	58.40	54.74	61.09	70.97	72.40	68.19	—
Slovakia	100.00	90.35	124.73	145.33	132.25	98.31	85.42	89.15	78.70	72.63	69.47	87.47
Slovenia	120.07	149.63	148.24	154.58	168.44	185.07	208.82	255.79	247.84	245.67	303.49	369.80
Spain	71.14	77.31	82.84	94.70	113.06	149.53	182.68	243.40	242.65	269.84	308.96	421.97
Sweden	62.50	68.22	65.52	68.71	84.61	88.19	106.70	123.26	124.24	113.34	108.10	112.33
Switzerland	66.45	73.17	70.77	68.68	72.42	81.09	83.40	85.16	80.39	72.17	71.36	67.18
Ukraine	—	100.00	81.35	87.61	102.86	101.08	98.53	99.95	127.08	156.14	154.08	195.79
United Kingdom	76.75	89.10	96.96	108.79	119.24	126.73	146.11	166.47	169.58	177.44	193.58	198.52
Australia	90.49	106.78	115.75	117.45	133.97	152.76	170.05	167.17	191.92	208.85	232.88	266.21
New Zealand	119.65	154.64	168.37	183.64	181.18	206.23	227.76	245.37	262.00	292.39	342.49	400.44

Source: Authors' calculations.

TABLE A.2b: **Per capita volume index of social capital. World database**
(1990 [or first available year] = 100)

	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981
Algeria	—	—	—	—	—	—	—	—	—	—	—	—
Botswana	—	—	—	—	—	—	—	—	—	—	—	—
Egypt	64.70	74.38	80.65	75.29	73.77	89.45	76.48	68.24	87.15	74.02	77.18	95.54
Mauritius	—	—	—	—	—	—	—	—	—	—	—	—
South Africa	—	—	—	—	—	—	—	—	—	—	—	—
Tunisia	—	—	—	—	—	—	—	—	—	—	—	—
Argentina	—	—	—	—	—	—	—	—	—	—	—	—
Barbados	—	—	—	—	—	—	97.24	78.70	76.79	86.52	67.18	86.39
Bolivia	—	—	—	—	—	—	—	—	—	—	—	—
Brazil	—	—	—	—	—	—	129.06	120.47	110.89	104.15	78.90	73.29
Canada	34.69	35.95	39.82	46.51	49.65	46.85	49.25	50.19	55.87	68.69	73.39	88.82
Chile	—	—	—	—	—	26.88	22.63	25.51	21.69	24.31	34.94	35.68
Colombia	—	—	—	—	—	52.91	51.78	57.24	61.38	55.60	63.17	67.55
Costa Rica	—	—	—	—	—	—	127.27	160.22	212.45	257.45	241.66	150.04
Dominican Republic	—	—	—	—	—	—	—	—	—	—	—	—
Ecuador	—	—	—	—	—	—	—	—	—	—	—	—
El Salvador	—	—	—	—	—	—	—	—	89.03	79.81	61.18	73.64
Honduras	—	—	—	—	—	—	—	—	—	—	—	—
Jamaica	44.50	47.30	56.82	64.80	71.52	81.28	87.98	82.43	84.39	90.39	86.45	120.76
Mexico	—	—	—	—	—	—	—	—	—	—	—	—
Nicaragua	—	—	—	—	—	—	—	—	—	—	—	—
Panama	89.65	99.66	132.62	143.90	206.90	198.83	202.28	168.87	162.80	178.01	160.84	173.78
Paraguay	—	—	—	—	—	—	—	—	—	78.26	100.93	93.80
Peru	—	—	—	—	—	—	—	—	—	—	—	—
Trinidad and Tobago	48.95	51.33	55.80	47.90	33.68	41.32	56.60	73.59	103.87	107.02	102.44	114.85
United States	40.12	38.12	43.35	50.29	49.48	38.30	42.96	48.48	55.36	60.47	55.26	53.76
Uruguay	—	—	—	—	—	—	—	—	—	—	—	—
Venezuela	—	—	—	—	—	66.29	79.52	103.22	128.92	117.77	138.24	144.15
Armenia	—	—	—	—	—	—	—	—	—	—	—	—
Azerbaijan	—	—	—	—	—	—	—	—	—	—	—	—
Bangladesh	—	—	—	—	—	—	—	—	—	—	—	—
China	—	—	—	—	—	—	—	—	21.23	28.22	32.15	38.30
Georgia	—	—	—	—	—	—	—	—	—	—	—	—
Hong Kong (SAR of China)	—	—	—	—	—	—	—	—	—	—	—	—
India	—	—	—	—	—	—	—	—	—	—	—	—
Indonesia	—	—	—	—	—	—	—	—	—	—	—	—
Iran (Islamic Republic of)	—	—	—	—	—	—	—	—	—	—	—	—
Israel	60.81	66.53	70.63	86.27	107.03	121.16	132.21	164.74	200.21	255.86	209.01	207.83
Japan	43.02	47.31	50.70	51.28	48.55	48.27	49.81	51.19	53.33	56.15	58.89	59.83

TABLE A.2b (continuation): **Per capita volume index of social capital. World database**
(1990 [or first available year] = 100)

	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981
Malaysia	—	—	—	—	—	—	—	—	—	—	—	—
Pakistan	—	—	—	—	—	—	—	—	—	79.45	77.35	74.00
Philippines	100.15	113.08	116.93	121.18	141.62	146.16	147.87	168.09	218.81	252.24	213.42	221.87
Republic of Korea	13.02	14.17	16.33	18.54	20.79	22.34	22.37	23.53	29.06	30.36	31.89	37.43
Singapore	13.48	13.97	18.03	24.13	22.31	22.70	28.66	32.10	37.39	44.07	59.65	96.30
Sri Lanka	—	—	—	—	—	—	—	—	—	—	—	—
Thailand	—	44.69	42.78	42.70	35.63	45.11	43.86	49.79	57.06	58.52	71.70	61.97
Turkey	135.19	148.34	146.07	139.31	136.10	154.11	151.48	155.75	140.19	140.58	151.51	160.37
Austria	48.57	51.21	53.97	55.57	54.47	55.26	61.62	65.99	66.95	71.44	75.93	72.38
Belarus	—	—	—	—	—	—	—	—	—	—	—	—
Belgium	75.33	77.35	78.13	81.63	78.00	65.92	59.87	59.27	59.76	64.85	68.51	62.82
Bulgaria	—	—	—	—	—	—	—	—	—	—	—	—
Croatia	—	—	—	—	—	—	—	—	—	—	—	—
Czech Republic	—	—	—	—	—	—	—	—	—	—	—	—
Denmark	162.01	150.75	152.31	150.70	108.55	106.77	95.37	82.81	74.32	90.24	87.76	70.49
Finland	23.13	23.08	23.22	22.85	25.81	26.68	22.70	18.89	16.05	19.12	23.67	24.62
France	87.44	89.78	95.79	96.74	99.76	92.69	95.78	97.13	99.66	96.24	93.88	88.22
Germany	57.71	58.69	59.88	60.03	51.04	41.78	44.73	49.56	55.93	66.28	73.36	68.55
Greece	46.63	53.82	57.34	56.80	64.10	70.09	76.21	88.21	90.44	90.20	85.70	88.08
Hungary	—	—	—	—	—	—	—	—	—	—	—	—
Ireland	119.04	95.24	114.49	127.38	144.71	90.18	89.66	85.11	107.23	132.48	132.89	91.99
Italy	100.33	108.28	108.07	110.32	120.89	128.06	118.32	116.44	121.02	114.86	113.76	104.41
Luxembourg	55.96	62.29	61.85	56.45	51.95	62.04	58.75	61.79	59.74	64.29	73.19	75.61
Netherlands	88.08	84.74	77.52	78.49	75.45	67.61	68.14	77.80	88.00	97.56	96.98	78.88
Norway	21.64	22.84	22.43	23.54	23.20	22.39	26.62	30.99	32.95	34.75	36.27	35.09
Poland	—	—	—	—	—	—	—	—	—	—	—	—
Portugal	58.48	76.91	84.57	90.75	104.65	97.37	73.41	66.74	61.66	71.27	68.17	74.48
Republic of Moldova	—	—	—	—	—	—	—	—	—	—	—	—
Romania	—	—	—	—	—	—	—	—	—	—	—	—
Russian Federation	—	—	—	—	—	—	—	—	—	—	—	—
Slovakia	—	—	—	—	—	—	—	—	—	—	—	—
Slovenia	—	—	—	—	—	—	—	—	—	—	—	—
Spain	157.41	154.56	180.99	182.10	175.27	145.99	156.05	149.09	122.68	111.14	95.48	84.32
Sweden	49.84	44.17	44.60	46.20	51.48	54.50	54.05	55.96	58.54	66.82	71.58	72.88
Switzerland	36.83	36.11	35.17	34.74	28.78	28.07	30.10	35.95	41.93	48.95	59.68	61.76
Ukraine	—	—	—	—	—	—	—	—	—	—	—	—
United Kingdom	72.72	63.34	71.76	89.90	97.09	75.10	57.23	47.03	48.51	49.73	45.77	40.16
Australia	107.83	97.69	92.67	96.64	90.47	74.53	76.51	69.56	63.39	64.22	65.61	65.83
New Zealand	156.20	149.29	166.85	251.23	357.72	480.27	471.03	506.70	432.86	401.88	357.85	284.22

TABLE A.2b (continuation): **Per capita volume index of social capital. World database**
(1990 [or first available year] = 100)

	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993
Algeria	—	—	—	—	—	—	—	129.62	100.00	78.02	78.75	96.41
Botswana	—	—	—	—	—	—	—	—	—	—	—	—
Egypt	97.18	105.26	118.36	126.28	133.17	117.29	119.74	120.85	100.00	82.62	73.82	62.04
Mauritius	—	—	—	—	—	—	—	—	—	—	—	—
South Africa	—	—	—	—	—	—	—	—	—	—	—	—
Tunisia	—	—	—	—	—	—	—	107.01	100.00	97.61	114.62	114.98
Argentina	208.52	220.21	184.38	122.40	132.22	175.52	147.59	117.02	100.00	79.04	70.39	66.42
Barbados	74.17	70.70	61.58	56.35	61.55	64.92	74.36	97.30	100.00	93.90	72.83	68.12
Bolivia	—	—	—	—	—	—	—	64.14	100.00	124.55	161.96	219.19
Brazil	80.55	73.81	77.10	86.06	102.41	91.79	90.95	102.54	100.00	104.06	154.96	230.47
Canada	63.56	56.70	60.63	65.71	73.40	79.04	91.84	99.68	100.00	87.52	85.11	87.56
Chile	40.92	55.27	73.21	89.27	109.82	106.45	110.10	110.61	100.00	90.74	99.27	106.50
Colombia	64.58	64.71	64.22	61.58	63.34	69.41	80.46	90.94	100.00	112.96	126.04	159.66
Costa Rica	103.94	87.33	124.93	88.93	93.84	105.77	101.02	110.41	100.00	56.39	62.63	67.35
Dominican Republic	—	—	—	—	—	—	—	—	—	100.00	106.82	112.83
Ecuador	—	—	—	—	—	—	150.78	102.97	100.00	120.95	95.05	100.59
El Salvador	64.86	63.01	62.40	67.10	125.86	117.36	116.21	143.51	100.00	134.99	145.16	135.06
Honduras	81.92	75.98	80.07	88.43	82.63	89.82	99.48	116.51	100.00	94.74	116.71	112.16
Jamaica	126.49	145.12	130.67	104.86	105.77	97.97	108.64	117.14	100.00	74.26	74.58	66.64
Mexico	—	—	—	—	—	—	—	—	100.00	102.04	110.94	114.85
Nicaragua	—	—	—	—	—	—	—	—	100.00	74.57	74.01	67.53
Panama	172.07	165.00	167.29	140.29	163.82	158.87	115.50	120.32	100.00	99.43	121.62	142.89
Paraguay	96.77	95.11	100.66	121.42	109.27	111.32	129.48	109.02	100.00	143.57	162.99	187.57
Peru	—	—	—	—	96.34	123.91	172.86	117.14	100.00	56.43	46.57	54.33
Trinidad and Tobago	136.31	149.41	147.51	131.15	117.67	111.92	107.27	99.27	100.00	125.46	123.40	121.47
United States	48.00	50.58	65.97	71.99	80.05	91.52	100.48	103.61	100.00	87.50	82.74	89.20
Uruguay	—	—	104.36	114.46	107.27	97.44	110.39	115.59	100.00	69.00	68.43	70.57
Venezuela	150.29	117.47	88.26	85.45	106.52	107.51	131.14	103.81	100.00	103.67	133.01	143.41
Armenia	—	—	—	—	—	—	—	—	—	—	—	100.00
Azerbaijan	—	—	—	—	—	—	—	—	—	—	—	—
Bangladesh	—	—	—	—	—	—	—	116.47	100.00	93.13	89.79	89.49
China	42.40	47.27	54.98	59.39	71.00	76.36	75.07	76.24	100.00	106.77	106.60	114.92
Georgia	—	—	—	—	—	—	—	—	—	—	—	—
Hong Kong (SAR of China)	—	—	—	—	—	—	—	—	100.00	79.64	72.40	76.65
India	—	—	—	120.55	120.02	117.26	118.99	104.40	100.00	96.26	95.60	96.28
Indonesia	—	—	—	—	—	—	—	—	—	—	—	—
Iran (Islamic Republic of)	—	—	—	—	—	—	—	—	—	—	—	—
Israel	235.13	284.88	315.09	211.99	148.82	158.62	153.18	113.73	100.00	84.32	73.08	82.81
Japan	61.52	63.78	65.56	68.44	71.04	76.59	84.29	92.68	100.00	100.00	101.52	99.47

TABLE A.2b (continuation): **Per capita volume index of social capital. World database**
(1990 [or first available year] = 100)

	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993
Malaysia	—	—	65.10	67.19	71.71	75.96	74.74	82.83	100.00	113.45	124.93	137.21
Pakistan	78.80	75.52	75.54	79.38	87.11	103.94	98.75	97.39	100.00	65.95	74.65	81.95
Philippines	243.02	293.19	169.82	161.75	117.86	75.87	78.01	83.87	100.00	84.65	101.96	112.73
Republic of Korea	43.50	46.12	48.50	54.24	58.07	68.64	74.28	86.99	100.00	107.86	108.85	107.41
Singapore	96.67	114.48	127.80	102.23	76.63	90.69	94.78	101.15	100.00	105.47	93.14	90.30
Sri Lanka	—	—	—	—	—	—	—	—	100.00	66.39	93.80	81.46
Thailand	56.09	65.34	73.05	72.18	73.76	58.68	80.86	104.96	100.00	95.58	124.78	134.26
Turkey	178.89	175.40	195.65	204.17	174.44	162.94	110.36	93.63	100.00	104.83	115.01	111.35
Austria	67.23	63.94	70.80	74.18	83.04	83.00	87.56	97.08	100.00	98.00	99.21	95.03
Belarus	—	—	—	—	—	—	—	—	—	—	—	—
Belgium	57.59	57.22	55.78	61.31	65.06	65.35	72.90	90.27	100.00	102.26	96.67	92.77
Bulgaria	—	—	—	—	—	—	—	—	—	100.00	65.02	53.89
Croatia	—	—	—	—	—	—	—	—	—	—	—	—
Czech Republic	—	—	—	—	—	—	—	—	—	—	—	100.00
Denmark	68.10	77.09	98.37	116.80	148.63	131.73	126.52	108.55	100.00	95.53	84.37	64.25
Finland	26.18	28.88	31.96	36.96	39.79	48.36	62.90	85.38	100.00	76.23	47.43	31.15
France	85.27	85.11	78.56	79.16	79.62	80.61	85.64	91.42	100.00	98.90	93.01	84.88
Germany	59.64	55.17	63.94	68.92	73.65	76.96	77.75	83.53	100.00	100.80	93.67	87.62
Greece	76.58	65.34	63.84	70.33	73.96	91.41	89.29	97.01	100.00	84.05	81.69	89.25
Hungary	—	—	—	—	—	—	—	—	—	—	100.00	84.62
Ireland	91.10	69.81	65.25	56.95	60.64	63.28	68.15	75.86	100.00	83.83	89.99	81.17
Italy	100.74	94.84	95.55	96.63	91.55	87.15	87.98	90.86	100.00	108.60	114.01	123.28
Luxembourg	73.51	65.94	63.28	64.50	70.65	73.94	80.00	85.40	100.00	98.71	113.31	87.52
Netherlands	59.85	43.25	42.94	48.02	54.82	77.53	86.14	94.02	100.00	107.20	125.92	122.18
Norway	32.07	29.08	30.86	34.22	49.03	65.70	69.60	73.11	100.00	91.76	91.84	85.39
Poland	—	—	—	—	—	—	—	—	100.00	115.77	115.31	114.96
Portugal	84.18	95.58	87.25	81.47	77.43	85.84	93.22	96.88	100.00	119.86	120.50	109.75
Republic of Moldova	—	—	—	—	—	—	—	—	—	—	—	—
Romania	—	—	—	—	—	—	—	—	—	—	100.00	52.41
Russian Federation	—	—	—	—	—	—	—	—	—	—	—	100.00
Slovakia	—	—	—	—	—	—	—	—	—	—	—	—
Slovenia	—	—	—	—	—	—	—	—	—	—	100.00	125.95
Spain	79.74	67.82	57.44	55.09	57.38	65.27	74.72	89.52	100.00	99.46	90.91	71.12
Sweden	67.35	63.10	68.51	66.86	76.84	82.50	97.35	108.81	100.00	81.70	61.31	56.50
Switzerland	69.10	65.01	68.18	72.57	75.93	82.10	88.44	96.94	100.00	81.66	71.99	65.26
Ukraine	—	—	—	—	—	—	—	—	—	—	—	—
United Kingdom	38.47	37.68	37.21	41.32	47.50	52.12	68.43	92.15	100.00	84.36	74.04	69.48
Australia	55.78	44.60	51.72	66.10	74.46	74.00	82.22	100.00	100.00	79.15	75.36	74.94
New Zealand	295.71	218.84	184.15	216.03	211.36	197.20	152.67	116.67	100.00	87.71	93.40	96.32

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TABLE A.2b (continuation): **Per capita volume index of social capital. World database**
(1990 [or first available year] = 100)

	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Algeria	75.73	64.88	56.84	59.70	67.07	71.28	45.12	46.25	71.51	64.10	68.43	34.69
Botswana	—	—	100.00	89.85	122.16	185.67	237.20	183.54	188.47	175.02	223.14	—
Egypt	64.73	63.66	72.59	82.68	94.48	103.72	96.44	102.22	101.52	97.83	86.82	—
Mauritius	—	100.00	87.85	89.96	96.61	87.02	77.19	149.56	139.20	137.89	139.04	134.70
South Africa	—	—	—	—	—	—	100.00	92.96	83.64	101.25	110.12	—
Tunisia	114.87	117.58	108.54	115.33	118.82	124.38	135.63	144.21	145.53	150.27	153.36	155.41
Argentina	62.90	49.65	42.38	54.77	70.00	71.31	65.68	61.07	88.51	97.07	106.42	103.65
Barbados	80.85	93.03	120.66	131.52	160.49	197.34	217.19	193.79	223.96	213.94	258.91	—
Bolivia	347.24	282.07	285.86	316.40	303.76	263.23	245.12	220.58	208.12	—	—	—
Brazil	141.01	98.19	83.94	84.57	113.94	120.40	124.51	137.28	153.61	148.69	159.06	—
Canada	94.08	99.47	104.99	110.51	119.13	126.03	135.73	134.40	130.72	128.88	135.04	145.00
Chile	82.98	93.16	92.47	100.71	89.07	81.25	87.83	93.30	93.84	91.94	90.51	93.35
Colombia	156.19	158.04	135.25	145.61	127.25	101.94	90.35	84.41	79.33	86.52	90.57	103.50
Costa Rica	65.56	49.14	66.93	87.03	101.74	83.58	101.63	108.09	118.50	122.40	134.19	139.09
Dominican Republic	143.51	132.66	142.95	161.15	202.67	239.12	251.36	243.29	254.12	242.09	183.69	—
Ecuador	115.62	126.29	92.61	120.52	124.44	133.32	187.81	127.49	96.75	70.32	91.62	—
El Salvador	191.13	198.31	210.26	215.62	225.14	245.70	307.82	300.73	292.78	291.18	283.77	—
Honduras	109.27	92.64	84.57	108.71	108.46	119.70	127.92	132.15	128.43	136.39	123.25	153.69
Jamaica	68.16	83.74	90.70	104.26	126.92	132.23	116.53	74.03	95.30	176.57	128.38	122.33
Mexico	102.28	80.01	72.96	76.65	79.57	88.70	77.17	77.05	75.63	70.41	60.26	58.61
Nicaragua	58.22	49.19	43.50	51.78	54.15	67.78	75.12	69.26	36.16	—	—	—
Panama	144.70	161.53	151.02	165.05	194.86	251.31	230.91	232.74	232.56	231.89	254.70	—
Paraguay	351.32	309.01	269.31	273.51	241.57	229.13	215.02	199.65	165.48	135.88	—	—
Peru	47.12	72.98	87.63	132.25	168.31	193.78	186.17	186.14	150.81	124.33	100.96	—
Trinidad and Tobago	111.23	130.66	128.14	161.85	188.32	200.72	209.52	227.64	246.28	—	—	—
United States	99.45	112.19	114.77	126.96	143.31	158.06	172.53	165.31	152.77	157.02	173.49	186.04
Uruguay	64.71	64.01	54.80	57.52	90.36	90.84	76.74	73.89	71.79	78.02	68.56	61.40
Venezuela	138.39	141.41	118.49	115.49	124.65	93.65	83.97	93.38	78.51	48.63	56.54	—
Armenia	93.25	50.59	37.70	27.92	43.01	36.20	37.41	32.92	21.91	17.81	21.98	34.77
Azerbaijan	—	100.00	104.27	103.15	103.93	83.68	76.09	42.68	65.03	67.53	78.72	84.61
Bangladesh	90.02	105.46	111.22	108.80	105.35	108.30	107.67	101.92	95.22	81.28	—	—
China	99.76	96.56	102.91	112.41	126.50	135.14	137.34	134.58	152.24	153.35	140.72	—
Georgia	—	—	—	100.00	72.91	96.21	137.76	130.56	116.24	120.88	110.52	120.03
Hong Kong (SAR of China)	86.67	74.71	85.28	100.95	66.17	52.96	61.74	61.98	50.91	49.33	55.38	61.08
India	92.59	86.68	88.94	87.39	85.53	89.74	95.03	96.51	103.17	—	—	—
Indonesia	—	—	100.00	102.98	96.08	93.65	94.75	70.45	62.01	55.38	56.22	—
Iran (Islamic Republic of)	—	—	—	—	—	100.00	87.03	89.89	89.89	101.66	109.91	98.33
Israel	100.36	108.73	112.11	96.75	92.70	96.24	96.21	100.61	96.17	86.63	85.39	98.21
Japan	94.66	93.11	92.23	93.71	97.24	92.80	95.46	94.32	89.25	93.31	97.62	101.59
Malaysia	138.73	154.52	203.50	236.91	203.25	184.10	190.63	187.61	186.63	189.71	162.57	162.31

TABLE A.2b (continuation): **Per capita volume index of social capital. World database**

(1990 [or first available year] = 100)

	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Pakistan	75.05	67.70	72.61	66.57	68.26	64.36	43.80	39.30	37.17	37.53	45.13	46.63
Philippines	131.88	157.94	210.71	234.86	185.38	165.72	154.14	157.19	145.08	145.62	131.86	120.29
Republic of Korea	119.44	128.41	140.62	152.29	106.61	120.60	162.94	180.03	210.42	208.34	200.43	214.22
Singapore	92.86	97.71	98.81	117.34	125.46	105.63	107.90	133.59	86.76	89.06	81.91	—
Sri Lanka	88.28	122.79	131.27	128.64	136.98	167.90	209.77	218.45	210.32	199.29	232.41	—
Thailand	155.60	173.17	182.35	199.85	139.26	140.37	138.07	123.14	140.91	137.94	134.07	136.30
Turkey	121.45	142.25	192.58	201.03	215.93	252.72	281.69	329.82	229.01	199.44	206.89	212.97
Austria	110.34	113.14	109.14	113.65	112.05	116.46	121.67	121.00	114.70	108.35	100.28	104.43
Belarus	100.00	29.29	26.34	34.19	40.20	45.22	44.32	38.27	35.77	43.09	49.61	54.08
Belgium	84.18	88.54	88.03	90.74	88.04	93.24	100.81	97.99	86.13	77.79	72.88	70.65
Bulgaria	41.30	42.34	77.25	102.97	85.31	74.51	78.02	75.70	98.72	156.72	211.10	302.97
Croatia	100.00	95.42	82.29	85.27	79.78	66.49	63.14	65.93	84.81	91.19	98.96	117.23
Czech Republic	104.08	103.33	100.83	92.49	69.32	53.36	48.06	46.99	47.17	51.15	45.02	45.84
Denmark	79.26	85.29	90.17	100.49	118.56	112.34	123.52	127.19	131.29	123.16	126.15	144.51
Finland	26.55	27.10	27.29	27.90	31.45	37.55	38.24	45.39	46.13	48.78	51.55	60.23
France	77.90	85.00	83.83	83.54	89.23	92.99	108.00	122.62	119.02	116.97	116.15	120.82
Germany	85.86	91.72	91.34	87.59	98.27	107.24	115.53	113.50	103.55	95.17	85.57	80.24
Greece	83.77	80.06	75.67	73.28	71.96	75.13	87.94	100.38	105.19	106.71	102.45	121.41
Hungary	87.14	79.51	71.67	72.10	76.70	72.29	80.42	78.80	84.61	93.55	91.33	88.52
Ireland	95.57	117.92	128.63	166.21	230.48	338.96	435.88	485.03	463.18	490.36	562.22	711.21
Italy	111.96	101.23	98.86	97.23	97.91	106.19	119.30	132.22	138.54	151.56	159.69	174.72
Luxembourg	67.56	74.95	69.15	75.70	83.89	86.61	101.19	114.03	114.77	104.24	107.02	137.50
Netherlands	118.35	123.51	139.42	171.25	213.91	262.19	300.46	306.73	304.79	277.98	271.70	289.88
Norway	90.13	95.39	97.07	106.45	137.78	155.53	136.27	141.32	150.57	140.13	—	—
Poland	100.49	88.50	101.01	114.86	128.45	109.53	92.20	87.87	78.00	81.00	77.85	84.13
Portugal	101.83	101.82	108.27	119.47	164.19	209.82	266.52	284.56	256.41	224.80	218.21	208.05
Republic of Moldova	—	—	—	—	—	100.00	109.26	133.60	152.46	127.05	128.78	—
Romania	44.69	60.99	81.70	56.90	61.59	47.94	36.96	33.82	27.49	36.60	32.93	44.68
Russian Federation	84.97	54.84	59.00	53.01	71.78	59.29	55.57	62.16	72.54	74.36	70.40	—
Slovakia	100.00	90.07	124.12	144.36	131.19	97.44	84.77	88.62	78.23	72.19	69.02	86.82
Slovenia	120.54	150.13	148.65	155.41	169.63	186.10	209.62	256.38	248.17	245.78	303.43	369.51
Spain	70.59	76.57	81.78	92.53	110.17	144.45	175.17	232.06	228.42	249.49	281.07	377.69
Sweden	60.92	66.12	63.41	66.45	81.81	85.22	102.97	118.62	119.16	108.31	102.90	106.54
Switzerland	63.77	69.76	67.15	65.04	68.37	76.23	77.92	79.06	74.07	66.01	64.82	60.60
Ukraine	—	100.00	82.08	89.20	105.67	104.82	103.21	105.76	135.74	168.22	167.26	214.08
United Kingdom	75.97	88.04	95.65	107.10	117.13	124.20	140.77	161.05	164.60	171.42	186.13	189.81
Australia	86.01	100.83	107.87	108.28	122.19	137.74	151.51	146.95	166.75	179.34	197.61	223.56
New Zealand	113.97	145.16	155.56	167.41	163.75	185.42	203.57	218.02	229.34	251.46	290.79	335.94

Source: Authors' calculations.

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