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What do we know about link between
growth and institutions?

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Abstract

The link between economic growth and institutions has been studied for more than ten years. Our goal is to take stock of this literature in order to identify more precise and conscious directions for future research. We first introduce the reference framework and by means of a simple comparative development exercise raise some questions a literature on this field should be able to answer. Being aware of the difficulty of the task, we then organise critically all the contributions so as to explain each result and the different paths undertaken. Finally, we conclude with several issues we believe deserve further attention.

1. Introduction

The world consists of economies of all shapes and sizes. There are very rich countries and there are very poor countries. Some economies are growing rapidly and some are not growing at all. And between these extremes, a large number of economies lie.

There is enormous variation in per capita income across economies; rates of economic growth vary substantially across countries, are not necessarily constant over time, and a country's relative position in the world distribution of per capita incomes is not immutable. Countries can move from being poor to being rich, and vice-versa.

With Barro, Baumol, Lucas, Mankiw, Romer, Sala-i-Martin, Solow, Weil[1], the economic

[1] During the '50s, Solow built a model around a production function and a capital accumulation equation. This model, defining the *steady-state* of the economy, the *transition dynamics*, and the *factors of growth*, provides a formal interpretation of the growth processes. The Solow model appeals to differences in investment rates, population growth rates and *exogenous* differences in technology, to explain differences in per capita incomes. A country is rich if it invests more and has lower population growth rates.

In an influential paper published in 1992, *A Contribution to the Empirics of Economic Growth*, Gregory Mankiw, David Romer, and David Weil evaluated the empirical implications of the Solow model and concluded it performed very well. They then noted that the "fit" of the model could be improved even more by extending the model to include human capital, that is, by recognizing that labor in different economies may possess different levels of education and different skills. It follows a more precise, detailed, intuition and answer about the reasons of the existence of rich countries and poor countries: countries that have a low population growth rate, a high level of technology and invest a large fraction of their resources in physical capital and in the accumulation of skills, are rich. The countries that fail in one or more of these dimensions suffer a corresponding reduction in income. This represents an effective starting point to shed light on the differences in income levels across economies, but how does it perform at explaining differences in growth rates? An early hypothesis, known as *convergence hypothesis*, proposed by economic historians such as Aleksander Gerschenkron (1952) and Moses Abramovitz (1986) was that, at least under certain circumstances, "backward" countries tend to grow faster than rich countries, in order to close the gap between the two groups. W.Baumol was one of the first economists to provide statistical evidence documenting convergence among some countries and the absence of convergence among others. The convergence hypothesis is a substantial contributions is the aim is to explain the differences in growth rates of industrialized countries; it is less effective if the purpose is to account for the differences in growth rates around the world. Among countries that have the same steady-state, the convergence hypothesis should hold: poor countries should grow faster, on average, than rich countries. For members of the OECD or the industrialized countries, the assumption that their economies have similar technology levels, investment rates, and population growth rates may not be a bad one. This same reasoning suggests a compelling explanation for the lack of convergence across the world as a whole: all countries do not have the same steady-states. The differences in income levels around the world largely reflect differences in steady-states. Because all countries do not have the same investment rates, population growth rates, or technology levels, they are not generally expected to grow toward the same steady-state target. Therefore, referring to the principle of the *transition dynamics* gathers prominence and thanks to this it is possible to maintain that: the further an economy is "below" its steady-state, the faster the economy should grow. The further an economy is "above" its steady-state, the slower the economy should grow. Mankiw, Barro and Sala-i-Martin have shown that this prediction of the neoclassical model can explain differences in growth rates across the countries of the world: the absolute convergence becomes *conditional* convergence because speaking on "convergence" is possible only after having considered the differences between the steady-states. Actually, the theories stemming from the neoclassical model focus on shaping the accumulation of physical and human capital. In another sense, these theories emphasize the importance of technology. However, though technology is a central component of neoclassical theory, it is left unmodeled. Technological improvements arrive *exogenously* at a costant rate, and differences in technologies across economies are unexplained. To overcome this impasse, the *endogenous growth theory*, instead of assuming that growth occurs because of automatic and unforeseeable (exogenous) improvements in the state of technology, aims at understanding the economic forces underlying technological progress, incorporating the economic decision of investing in knowledge. An important contribution of this work is the recognition that technological progress happens as profit-maximizing firms or inventors seek out newer and better opportunities. In this way, improvements in technology, and the process of economic growth itself, are understood as an endogenous outcome of the economy. With regard to this, the Romer model, designed to explain why and how the advanced countries of the world exhibit sustained growth, endogenizes technological progress by introducing the search for new ideas by researchers interested in profiting from their inventions. Romer examines the engine of economic growth in great detail, showing that it comes from the intimate nature of the ideas: ideas are different from most other economic goods. Ideas are nonrivalrous and the economy of "ideas" is strictly related to the presence of increasing returns to scale and to the imperfect competition. Firms must be able to charge prices greater than marginal cost to cover the one-time expense required to create an idea. It is this wedge between price and marginal cost that provides the economic "fuel" for the engine of growth.

Another famous endogenous approach is a model created by Robert E. Lucas. The Lucas model, based on human capital and following Solow, assumes a production function in which human capital per person appears as an argument. A policy that leads to a permanent increase in the time individuals spend obtaining skills generates a permanent increase in the growth of output per worker.

In this way, it is possible to quantify to what extent the technological process depends on the R&D activity of the firms and the investment in human capital. The R&D activity has as a determinant the fertility of the process of research and the appropriation of its results. And the investment in human capital is founded on the return the individuals expect to obtain.

theory accounts for the different fortunes of countries, looking at the rate of investment in private inputs, the growth rate of the labour force and the level of technology.

However, this framework raises additional questions: why is it that some countries invest much less than others? Why are capital and skills used so much less productively in some locations? Why do some countries fail to adopt new technologies and to organize production efficiently?

A leading research program points at "institutions", whose role has been studied, theoretically and empirically, for about ten years. Different types of institutions have been considered, different levels analysed, various views have emerged, and many conclusions have been drawn.

The objective of this paper is to take stock of these years of research, of these views, definitions, conclusions, and perspectives outlined. This is an ambitious but important task, because I think the time is ripe to acknowledge what we have learned in order to identify more precisely directions for future research.

The paper is organised as follows. Section 2 provides a survey of the conceptual framework, where some definitions and different explanations for the institutional change are offered. Section 3 organises critically the empirical literature, with its various assumptions and the cross-country regressions looking for the "cause" of income differences. Section 4 reviews, by means of some empirical evidence, the literature on the development strategies, the different types of institutional design required, and the resulting theoretical attempt. Section 5 concludes and provides a number of issues that deserve further research.

Before proceeding and understanding the state of research, a discussion about the institutional variables and a look at some data are needed.

One of the first things that concerns is how "institutions" can be assessed. The next table does the trick: it shows some institutional variables and provides a brief description with the relative source. The first institutional variables (Voice and Accountability, Political Stability and the Absence of Violence, Government Effectiveness, Regulatory Quality, Rule of Law, Control of Corruption) are known as Worldwide Governance indicators. They are produced by Kaufmann, Kraay and Mastruzzi, since 1996, and range from –2.5 to +2.5. Other examples of institutional variables are the Political Rights Score, the Civil Liberties Score, and the related Status, from the Freedom House, an independent non governmental organization; the Index of Economic Freedom, that ranges from 0 to 100, provided by another research institute, the Heritage Foundation; the Socioeconomic Conditions, the Internal Conflict, the Investment Profile variables, from the Political Risk Service; the Polity Score, the Democracy and the Constraints on the Executive variables, from the Polity IV dataset. These variables are just few examples of the institutional dimensions that can be caught, but are enough to suggest that the "levels" of analysis could be manifold. Indeed, we have variables related to something that can be called "economic institution" (e.g. the risk of expropriation, property rights, business freedom), and something that can be called "political institution" (e.g. the level of democracy, the constraints on the executive, the political rights score).

Table 1.   Institutional Variables: a brief description

VARIABLES	DESCRIPTION	SOURCE
Voice and Accountability	Capturing perceptions of the extent to which a country's citizens are able to participate in selecting their government, as well as freedom of expression, freedom of association, and a free media.	*Kaufmann Kraay Mastruzzi*
Political Stability and Absence of Violence	Capturing perceptions of the likelihood that the government will be destabilized or overthrown by unconstitutional or violent means.	*Kaufmann Kraay Mastruzzi*
Government Effectiveness	Capturing perceptions of the quality of public services, the quality of the civil service and the degree of its independence from political pressures, the quality of policy implementation and formulation, and the credibility of the government's commitment to such policies.	*Kaufmann Kraay Mastruzzi*
Regulatory Quality	Capturing perceptions of the ability of the government to formulate and implement sound policies and regulations that permit and promote private sector development	*Kaufmann Kraay Mastruzzi*
Rule of Law	Capturing perceptions of the extent to which agents have confidence in and abide by the rules of society, and in particular the quality of contract enforcement, property rights, the police, and the courts, as well as the likelihood of crime and violence.	*Kaufmann Kraay Mastruzzi*
Control of Corruption	Capturing perceptions of the extent to which public power is exercised for private gain, including both petty and grand forms of corruption, as well as "capture" of the state by elites and private interests.	*Kaufmann Kraay Mastruzzi*
Political Rights Score	Measuring perceptions of the extent to which people are able to participate freely in the political process, including through the right of vote, compete for public office and elect representatives who have a decisive impact on public choices (it is measured on a one to seven scale, with one representing the highest degree of freedom, seven the lowest).	*Freedom House*
Civil Liberties Score	Measuring perceptions of the extent to which people are allowed the freedom of expression and belief, associational and organizational rights, rule of law and personal autonomy without interference from the state (it is measured on a one to seven scale, with one representing the highest degree of freedom, seven the lowest).	*Freedom House*
Status of Free, Partly Free, Not Free	This status, determined by the combination of Political Rights and Civil Liberties ratings, indicates the general state of freedom in a country or territory.	*Freedom House*
Index of Economic Freedom	This index is built upon analysis of 10 specific components of economic freedom: business freedom, trade freedom, fiscal freedom, government size, monetary freedom, investment freedom, financial freedom, property rights, freedom from corruption, labour freedom. These 10 component scores are equally weighted and averaged to get an overall economic freedom score for each country.	*Heritage Foundation*
Investment Profile	This is an assessment of factors affecting the risk to investment. The risk rating assigned is the sum of three subcomponents, each with a maximum score of four points and a minimum score of 0 points. A score of 4 points equates to Very Low Risk and a score of 0 points to Very High Risk. The subcomponents are Contract Viability/Expropriation, Profits Repatriation, and Payment Delays.	*Political Risk Service*

Constraints on the Executive	This variable refers to the extent of institutionalized constraints on the decision-making powers of chief executives, whether individuals or collectivities.	*Polity IV Project*
Polity Score	The Polity conceptual scheme is unique in that it examines concomitant qualities of democratic and autocratic authority in governing institutions, rather than discreet and mutually exclusive forms of governance. This perspective envisions a spectrum of governing authority that spans from *fully institutionalized autocracies* through *mixed, or incoherent, authority regimes* (termed "anocracies") to *fully institutionalized democracies*. The "Polity Score" captures this regime authority spectrum on a 21-point scale ranging from -10 (hereditary monarchy) to +10 (consolidated democracy).	*Polity IV Project*
Democracy	Democracy is conceived as three essential, interdependent elements. One is the presence of institutions and procedures through which citizens can express effective preferences about alternative policies and leaders. Second is the existence of institutionalized constraints on the exercise of power by the executive. Third is the guarantee of civil liberties to all citizens in their daily lives and in acts of political participation. The Democracy indicator is an additive eleven-point scale (0-10).	*Polity IV Project*
Internal Conflict	This is an assessment of political violence in the country and its actual or potential impact on governance. The highest rating is given to those countries where there is no armed or civil opposition to the government and the government does not indulge in arbitrary violence, direct or indirect, against its own people. The lowest rating is given to a country embroiled in an on-going civil war. The risk rating assigned is the sum of three subcomponents, each with a maximum score of four points and a minimum score of 0 points. A score of 4 points equates to Very Low Risk and a score of 0 points to Very High Risk. The subcomponents are civil war/coup threat, terrorism political violence, and civil disorder.	*Political Risk Service*
Socioeconomic Conditions	This is an assessment of the socioeconomic pressures at work in society that could constrain government action or fuel social dissatisfaction. The risk rating assigned is the sum of three subcomponents, each with a maximum score of four points and a minimum score of 0 points. A score of 4 points equates to Very Low Risk and a score of 0 points to Very High Risk. The subcomponents are unemployment, consumer confidence, and poverty.	*Political Risk Service*

To get to the core and reach for what a theory of institutions should try to explain, let us start with a comparative exercise. Table 2 offers the data, taken from the World Development Indicators Database, of six economic variables, for different years, to see the dynamics, and for selected countries. The countries are Australia, Germany, United States, Lithuania, South Africa, Uruguay, Bolivia, Moldova, Sudan, Cambodia, Pakistan and Central African Republic. The economic variables are: GDP per capita[2], GDP per capita PPP[3], Gross Capital Formation (as percentage of GDP)[4], the Foreign Direct Investment[5] net inflows, and the gross enrollment ratio for primary and second education[6]. All these variables are supposed to say something about development. Gdp per capita is the most famous and, as we will see later, used measure for growth and development; it is followed by other two macroeconomic variables, the gross capital formation and the F.D.I. net inflows, here considered just to outline a country's "situation". In fact, gross capital formation data are used to analyse the trends in investment activity, while F.D.I. ones show how a country is attractive to foreign investors. Finally, the last indicator, the primary or secondary school enrollment rate, is related to a more "human" dimension of development.

In terms of per capita GDP, the highest values (2007) are those of United States, Australia, and Germany (above 30000\$), the lowest are those of Cambodia (1800\$) and Central African Republic (713\$). In the middle we have Lithuania, Uruguay, South Africa (between 18000\$ and 9000\$), Bolivia, Moldova, Pakistan, Sudan (between 4000\$ and 2000\$). For the gross capital formation, it is worth noting the increasing pattern of Moldova, the Lithuania's restoring one, maybe related to "transition", and the Central African Republic's poor level.

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[2] GDP per capita is gross domestic product divided by midyear population. GDP is the sum of gross value added by all resident producers in the economy plus any product taxes and minus any subsidies not included in the value of the products. It is calculated without making deductions for depreciation of fabricated assets or for depletion and degradation of natural resources. Data are in current U.S. dollars.

[3] GDP per capita based on purchasing power parity (PPP). PPP GDP is gross domestic product converted to international dollars using purchasing power parity rates. An international dollar has the same purchasing power over GDP as the U.S. dollar has in the United States. GDP at purchaser's prices is the sum of gross value added by all resident producers in the economy plus any product taxes and minus any subsidies not included in the value of the products. It is calculated without making deductions for depreciation of fabricated assets or for depletion and degradation of natural resources. Data are in current international dollars.

[4] Gross capital formation (formerly gross domestic investment) consists of outlays on additions to the fixed assets of the economy plus net changes in the level of inventories. Fixed assets include land improvements (fences, ditches, drains, and so on); plant, machinery, and equipment purchases; and the construction of roads, railways, and the like, including schools, offices, hospitals, private residential dwellings, and commercial and industrial buildings. Inventories are stocks of goods held by firms to meet temporary or unexpected fluctuations in production or sales, and "work in progress." According to the 1993 SNA, net acquisitions of valuables are also considered capital formation.

[5] Foreign direct investment are the net inflows of investment to acquire a lasting management interest (10 percent or more of voting stock) in an enterprise operating in an economy other than that of the investor. It is the sum of equity capital, reinvestment of earnings, other long-term capital, and short-term capital as shown in the balance of payments. This series shows net inflows in the reporting economy and is divided by GDP.

[6] Gross enrollment ratio is the ratio of total enrollment, regardless of age, to the population of the age group that officially corresponds to the level of education shown. Primary education provides children with basic reading, writing, and mathematics skills along with an elementary understanding of such subjects as history, geography, natural science, social science, art, and music.Secondary education completes the provision of basic education that began at the primary level, and aims at laying the foundations for lifelong learning and human development, by offering more subject- or skill-oriented instruction using more specialized teachers.

Table 2. Comparative Development: some facts

		Gdp per capita (current US$)	Gdp per capita PPP (current international $)	Gross capital formation (% of GDP)	Foreign direct investment, net inflows (% of GDP)	School enrollment, primary (% gross)	School enrollment, secondary (% gross)
Australia	**1990**	17906.44	16875.48	28.17008	2.654303	107.7775	81.77516
	1994	17815.99	19441.11	22.96681	1.572037	..	..
	1998	20930.21	23555.05	23.89253	1.521081	100.1464	155.7531
	2002	19588.87	28012.37	22.94465	4.414036	102.6032	153.3206
	2005	33087.71	31701.73	26.37343	-5.27564	104.0955	148.5338
	2007	39066.07	34922.86	27.39267	4.823081	..	..
Germany	**1990**	21583.79	18415.5	23.16685	0.17521	..	..
	1994	26329.72	21715.58	22.47161	0.339674	..	..
	1998	26624.78	24250.97	21.60854	1.081987	..	..
	2002	24445.15	27578.46	17.2734	2.657778	100.5513	99.74553
	2005	33848.24	31397.09	17.07921	1.471092	101.3572	100.5416
	2007	40323.71	34401.26	18.31669	1.553742	..	..
United States	**1990**	23063.58	23063.58	17.65615	0.84225	104.2533	91.81819
	1994	26669.73	26669.73	18.11756	0.657357	..	..
	1998	31518.85	31518.85	19.96181	2.059094	101.1791	96.06754
	2002	36186.3	36186.3	18.07422	0.809879	99.08611	93.02264
	2005	41825.85	41825.85	19.50776	0.910125	98.44485	94.12464
	2007	45591.65	45591.65	..	1.727395	..	..
Lithuania	**1990**	2841.183	8868.051	32.61194	..	88.81441	95.36402
	1993	1902.306	5566.598	18.41813	0.44987	..	..
	1996	3120.816	7887.043	25.555	8.342196	..	..
	2002	4074.346	10546.8	22.07159	5.040591	101.6682	101.9239
	2005	7536.435	14063.37	25.11021	4.009922	94.34824	99.78945
	2007	11355.56	17575.4	29.52362	5.262012	..	..
South Africa	**1990**	3182.214	5636.924	17.73298	-0.0676	106.6793	65.98117
	1994	3546.669	5802.8	16.8709	0.275752	..	..
	1998	3205.169	6289.4	17.00201	0.409797	116.9612	89.77975
	2002	2450.499	7142.942	16.05581	0.663106	107.2789	89.63755
	2005	5168.089	8487.626	18.06236	2.691254	103.1666	95.83035
	2007	5914.365	9757.427	21.39853	2.030296	..	..
Uruguay	**1990**	2990.37	5050.634	12.20085	0.447303	108.591	81.25109
	1994	5125.142	6683.25	15.87163	0.943667	..	..
	1998	6745.849	7965.191	15.87011	0.743058	112.1751	88.27739
	2002	3710.637	7006.632	11.52131	1.422202	110.8085	106.4633
	2005	5036.343	9265.583	13.13778	5.08987	113.9633	101.3184
	2007	6960.48	11215.52	15.05478	3.800055	..	..

Table 2. (Cont.)

		Gdp per capita (current US$)	Gdp per capita PPP (current international $)	Gross capital formation (% of GDP)	Foreign direct investment, net inflows (% of GDP)	School enrollment, primary (% gross)	School enrollment, secondary (% gross)
Bolivia	1990	729.9133	2216.255	12.53194	0.558799	105.9389	43.98817
	1994	817.6186	2609.234	14.37119	2.176814	..	..
	1998	1064.908	3079.143	23.60651	11.17152	112.4071	72.32633
	2002	912.7328	3287.106	16.29467	8.55826	115.5671	86.29672
	2005	1039.981	3757.512	13.6128	-2.49887	..	..
	2007	1378.518	4206.354	15.18666	1.556543	..	..
Moldova	1990	818.672	2786.913	24.89013	..	87.30364	81.26085
	1994	386.8661	1249.899	28.82537	0.679545	..	..
	1998	385.2942	1226.811	26.80115	4.60507	..	..
	2002	412.0788	1577.234	21.66018	5.057714	100.7972	83.44441
	2005	770.8109	2190.453	30.82567	6.381827	97.89131	88.06252
	2007	1155.78	2551.1	38.17542	11.22367	94.41768	88.55391
Sudan	1990	478.4872	735.4356	11.19658	-0.25087	..	20.61527
	1994	445.1992	888.3088	17.39043	0.77522	..	..
	1998	353.4459	1110.028	17.94907	3.295048	..	..
	2002	430.9243	1372.582	19.45637	4.762272	52.85226	29.76364
	2005	742.1739	1679.02	23.72939	8.415386	56.68552	32.71747
	2007	1198.994	2086.117	24.24787	5.247025	66.36675	33.35411
Cambodia	1990	..	..	..	..	93.68251	30.1154
	1994	..	613.681	11.93855	..	..	..
	1998	281.0556	737.0273	11.83377	7.045182	93.03986	17.9036
	2002	316.5878	1033.06	18.12452	3.457159	123.8336	22.71787
	2005	462.5076	1443.397	18.4657	5.905622	125.7553	..
	2007	577.9976	1802.473	20.78597	10.38697	119.1997	42.03969
Central African Republic	1990	494.5209	577.7086	12.30828	0.046914	68.42351	11.14121
	1994	253.9023	560.3109	11.7	0.422307	..	..
	1998	282.3425	615.5272	13.54	0.725963	..	..
	2002	260.6626	651.6617	8.957957	0.541691	63.86035	11.51952
	2005	322.0971	644.1791	8.91287	1.267141	60.66166	..
	2007	394.1863	713.3417	8.880123	1.589091	70.67095	..
Pakistan	1990	370.5525	1211.737	18.93537	0.612998	48.78953	21.64507
	1994	434.6231	1447.595	19.54642	0.811304	..	..
	1998	472.6479	1600.74	17.7112	0.81361	..	..
	2002	499.0036	1786.265	16.58276	1.138205	71.94232	..
	2005	702.964	2184.36	19.08125	2.010007	86.18377	28.58179
	2007	879.4449	2496.12	22.89522	3.732152	..	32.54099

Referring to the foreign direct investment, the net inflows are high for Cambodia and Moldova. Primary school enrollment ratio is low in Sudan, Cambodia, Central African Republic; the secondary one in (again) Sudan, Cambodia, Central African Republic, and Pakistan.
But how are "institutions" in these countries?

Table.3 Comparative Institutional Development

		Political Rights Score	Civil Liberties Score	Status	Governance Score[7]	Economic Freedom Index
Australia						
	1998	1	1	F	1.92 (95.7)	75.6
	2003	1	1	F	2.01 (95.3)	77.4
	2007	1	1	F	1.99 (96.7)	81.1
	2008	1	1	F	1.9 (96.7)	82.2
Germany						
	1998	1	2	F	1.82 (93.8)	64.3
	2003	1	1	F	1.56 (91.5)	69.7
	2007	1	1	F	1.75 (92.9)	70.8
	2008	1	1	F	1.65 (93.4)	70.6
United States	**1998**	1	1	F	1.61 (90.5)	75.4
	2003	1	1	F	1.83 (92.9)	78.2
	2007	1	1	F	1.64 (91)	81.2
	2008	1	1	F	1.65 (92.9)	81
Lithuania						
	1998	1	2	F	0.58 (71.1)	59.4
	2003	1	2	F	0.86 (78.2)	69.7
	2007	1	1	F	0.7 (74.4)	71.5
	2008	1	1	F	0.64 (71.6)	70.9

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[7] The values in parenthesys are the percentiles.

		Political Rights Score	Civil Liberties Score	Status	Governance Score	Economic Freedom Index
South Africa	1998	1	2	F	0.95 (82.0)	64.3
	2003	1	2	F	0.75 (75.8)	67.1
	2007	2	2	F	0.72 (74.9)	63.5
	2008	2	2	F	0.75 (75.4)	63.4
Uruguay	1998	1	2	F	0.63 (72.5)	68.6
	2003	1	1	F	0.48 (69.2)	69.8
	2007	1	1	F	0.45 (69.7)	68.4
	2008	1	1	F	0.48 (68.7)	67.9
Bolivia	1998	1	3	F	-0.09 (56.4)	68.8
	2003	3	3	PF	-0.41 (40.8)	64.3
	2007	3	3	PF	-0.79 (22.3)	54.2
	2008	3	3	PF	-0.81 (19)	53.1
Moldova	1998	2	4	PF	-0.25 (47.9)	53.5
	2003	3	4	PF	-0.63 (29.4)	60
	2007	3	4	PF	-0.82 (19.9)	58.7
	2008	4	4	PF	-0.76 (23.7)	57.9
Sudan	1998	7	7	NF	-1.08 (12.8)	38.3
	2003	7	7	NF	-1.21 (9)	-
	2007	7	7	NF	-1.15 (11.4)	-
	2008	7	7	NF	-1.41 (5.2)	-

		Political Rights Score	Civil Liberties Score	Status	Governance Score	Economic Freedom Index
Cambodia						
	1998	6	6	NF	-0.78 (20.9)	59.8
	2003	6	5	NF	-0.76 (21.8)	63.7
	2007	6	5	NF	-0.86 (18.5)	55.9
	2008	6	5	NF	-0.81 (19.4)	55.9
Central African Republic	**1998**	3	4	PF	-1.46 (3.8)	-
	2003	7	5	NF	-1.52 (3.3)	60
	2007	5	5	PF	-1.38 (4.7)	50.6
	2008	5	5	PF	-1.45 (3.3)	48.6
Pakistan						
	1998	4	5	PF	-0.65 (25.1)	53.2
	2003	6	5	NF	-0.55 (34.6)	55
	2007	6	5	NF	-0.6 (30.8)	57.2
	2008	4	5	PF	-0.73 (25.6)	55.6

The previous table considers three dimensions: an index of economic freedom, and index for the quality of policy implementation and formulation, and a score for the degree of political rights and civil liberties. Without meaning to find causalities, the simple reading of the data suggest that the countries considered free, mostly or moderately free in terms of economic freedom[8], that is, with a score higher than 60, are also free in terms of political rights and civil liberties and show a positive values for the government effectiveness variable. These are Australia, United States, Germany, Lithuania, South Africa and Uruguay. Symmetrically, those mostly unfree or repressed in terms of economic freedom, are partially free or not free for the status of political rights and civil liberties, and show negative numbers for the index related to the quality of policy. These are Bolivia, Moldova, Sudan, Cambodia, Pakistan, Central African Republic. And these, more or less, have also lower levels of per capita GDP and enrollment rates.

But, even taking the causality for granted, and we will soon see that it is somehow true "institutions" affect economic performance, how does it happen? And looking at the institutional variables used in the foregoing comparative exercise, could a sort of interdependence *within* "institutions" exist? Which is the relationship between economic policy, political and economic institutions? And do human development and civil liberties depend on the nature of a political system?

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[8] A score between 100-80 means free, 79.9-70 means mostly free, 69.9-60 moderately free, 59.9 - 50 mostly unfree, and 49.9-0 repressed.

2. The Theoretical Framework

2.1 What are Institutions?

To answer this question we need to consider the seminal work of *Douglass C. North*. From the 70's, he did a great work of research to understand what institutions are.

Institutions are defined as the rules of the game in a society or, more formally, are the humanly devised constraints that shape human interaction.[9] According to North, they consist of both informal constraints (sanctions, taboos, customs, traditions, and codes of conduct), and formal rules (constitutions, laws, property rights). In a historical perspective, institutions have been devised by human beings to create order and reduce uncertainty in exchange. They define the choice set and determine transaction and production costs and, hence, the profitability and feasibility of engaging in economic activity. From a dynamical point of view, North observes that they evolve incrementally, connecting the past with the present and the future. Institutions provide the incentive structure of an economy; as that structure evolves, it shapes the direction of economic change towards growth, stagnation, or decline. A crucial distinction is made between institutions and organizations. Like institutions, organizations provide a structure to human interaction. Indeed, when the costs that arise as a consequence of the institutional framework are examined, we see they are a result not only of that framework, but also of the organizations that have developed in consequence of that framework. Organizations include political bodies (political parties, a regulatory agency), economic bodies (firms, trade unions, family farms, cooperatives), social bodies (churches, clubs, athletic associations), and educational bodies (schools, universities). They are groups of individuals bound by some common purpose to achieve objectives. Both how organizations come into existence and they evolve are fundamentally influenced by the institutional framework.

The major role of institutions in a society is to reduce uncertainty by establishing a stable (but not necessarily efficient) structure to human interaction. From conventions, codes of conduct, and norms of behaviour to statute law, and common law, and contracts between individuals, institutions are evolving and, therefore, are continually altering the choices available to us.

To understand more concretely the role of institutions, we need to take into account North's papers and books related to economic history[10]. These publications show how the concepts and definitions given before are not simply an exercise of abstraction.

The closing years of the seventeenth century reveal winners like Holland and England, and clear losers such as Spain, France, Italy and Germany. For instance, the failure of the French economy to exhibit long-run sustained economic growth is interpreted as a failure of the French state to develop an efficient set of property rights. On one hand, property rights in land were established and protected. On the other hand, the product market continued, as the result of state policy, to be as imperfect as during the late Middle Ages. For Spain, the tragedy of its decline and stagnation is not simply an account of depriving minorities of their property (first the Jews and then the Moors). Actually, they were symptomatic of the insecurity of all property rights. As the Crown's financial difficulties increased, seizure, confiscation, or the unilateral alteration of contracts were recurrent phenomena, which ultimately affected every group engaged in commerce or industry as well as agriculture. As no property rights were secure, economic retardation was the inevitable

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[9] North, *"Institutions, Institutional Change and Economic Performance"* 1990.

[10] North and Thomas, *"The Rise of the Western World: A New Economic History"*, 1973.
North, *"Beyond the New Economic History"*, 1974.
North, *"Government and the Cost of Exchange in History"*, 1984 .
North and Weingast, *"Constitutions and Commitment: The Evolution of Institutions Governing Public Choice in Seventeenth-Century England"* 1989.
North, *"Economic Performance Through Time"*, 1994.

consequence. The opposite, North argues, happened for the Netherlands and England. The Low Countries were the first important centre of Western European manufacturing. The growth of efficient markets allowed the easy importation of raw materials and facilitated the sale of the final product for export. The fortunes of the industrial sector and of the area in general were dependent upon the Malthusian cycle. When population in Europe grew, so did trade and manufacturing; when population fell, commerce and industry also declined. During the population trough of the fifteen-century, English cloth became a prime competitor. In response, the urban centres of the Netherlands began to specialize in luxury and semi-luxury textiles. Rural industry in the Low Countries remained of limited importance until 1500. Thereafter, rural manufacture became of increasing importance. The rise of commercial activity, the development of an efficient capital market and the policy of the government made this possible. *North* and *Thomas* observe that the reduction in the cost of capital allowed the use of more capital in the manufacturing process; the absence of guild regulations in the country allowed the manufacturing process to be free of restrictive guild practices and to employ less expensive rural labour. These conditions helped the relatively densely settled Dutch countryside to develop according to its comparative advantage and let the Dutch become the economic leaders of Europe during the early modern period. Their centrally located geographical position and their government, which established an efficient economic organization, account for this growth.

This scenario, North argues, presented England with a continual challenge, since the latter lacked the size of France, the foreign endowments of Spain and the efficient institutions of the Netherlands. Early in the seventeenth century, England began to construct a New World empire in defiance of Spain. During the course of the century, England attempted to imitate the property rights and institutional arrangements of the Netherlands. England succeeded, and early in the next century supplanted the Dutch as the most efficient and rapidly growing nation in the world. England created the first patent law to encourage innovation; experienced the elimination of many of the remnants of feudal servitude; developed the goldsmith into a deposit banker issuing bank notes, discounting bills and providing interest on deposits; saw the creation of a central bank, with the chartering of the Bank of England in 1694. By 1700 the institutional framework of England provided a hospitable environment for growth. The decay of industrial regulation and the declining power of guilds permitted mobility of labour and innovation in economic activity; this was later further encouraged by the Statute of Monopolies patent law. The mobility of capital was encouraged by joint stock companies, goldsmiths, and the Bank of England, all of which lowered transaction costs in the capital market; the supremacy of parliament and the embedding of property rights in the common law put political power in the hands of men anxious to exploit the new economic opportunities and provided the essential framework for a judicial system to protect and encourage productive economic activity.

2.2 Institutional change: the importance of *path dependence*

That institutional change shapes the way societies evolve through time and is the key to understand historical change[11] comes as a natural consequence of the foregoing reasoning. Indeed, it is a complicated process because the changes at the margin can be a result of changes in rules, in informal constraints, and in kinds and effectiveness of enforcement. Moreover, institutions typically change incrementally rather than in discontinuous fashion. How and why they change incrementally and why even discontinuous changes are never completely discontinuous are seen as an effect of the imbeddedness of informal constraints in societies. Although formal rules may change overnight as the result of political or judicial decisions, informal constraints, embodied in customs, traditions, and codes of conduct, are much more impervious to deliberate policies. These cultural constraints

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[11] North, *"Institutions, Institutional Change and Economic Performance"*, 1990.

not only connect the past with the present and future, but provide us with a key to explain the path of historical change.

The starting point of this analysis should focus on the difference between institutions and organizations and the interaction between them that shapes the direction of institutional change. Institutions, together with the standard constraints of economic theory, determine the opportunities in a society. Organizations are created to take advantage of those opportunities and, as the organizations evolve, they alter the institutions. The resultant path of institutional change is shaped by the hold that comes from the symbiotic relationship between institutions and the organizations, that have evolved as a consequence of the incentive structure provided by those institutions, and the feedback process by which human beings perceive and react to changes in the opportunity set (North, 1990).

The increasing returns characteristics of an institutional matrix, North argues, come from the dependence of the resultant organizations on that institutional framework. Both the formal and the informal institutional constraints result in particular exchange organizations that have come into existence because of the incentives embodied in the framework itself and therefore depend on it for the profitability of the activities that they undertake. Incremental change comes from the perceptions of the entrepreneurs in political and economic organizations that they could do better by altering the existing institutional framework at some margin. But these perceptions crucially depend on both the information that the entrepreneurs receive and the way they process that information. If political and economic markets were efficient, then the choices made would always be efficient. But the actors frequently have to act on incomplete information and process the information they receive through mental constructs that can result in persistently inefficient paths. Transaction costs in political and economic markets lead to inefficient property rights, but the imperfect subjective models of the players can make for the persistence of such property rights.

To analyze institutional change, we first need to explore organizations and the way they interact with institutions. Keeping this in mind, North begins by returning to the Coase argument that transaction costs are the basis for the existence of the firm. If information and enforcement were costless, it would be hard to envision a significant role for organizations. But they are not costless.

Organizations are defined as purposive entities designed by their creators to maximize wealth, income, or other objectives defined by the opportunities afforded by the institutional structure of the society. In pursuing those objectives, organizations incrementally alter the institutional structure. They are not, however, necessarily socially productive because the institutional framework often has perverse incentives. Organizations are designed to foster the objectives of their creators and are created as a function not simply of institutional constraints but also of other constraints. The interaction of these constraints shapes the potential wealth-maximizing opportunities of entrepreneurs.

These maximizing objectives of the organization, which have been conditioned by the institutional framework, are to be integrated with the development of the stock of knowledge. If we start with the neoclassical firm, the only function of management is to select profit-maximizing quantities of outputs and inputs, which means determining the quantity and the consequent price that will be established. This neoclassical approach came under critical evaluation. In fact, the real tasks of management are to devise and discover markets, to evaluate products and product techniques, and to manage actively the actions of employees; these are all tasks in which there is uncertainty and in which investment in information must be acquired.

Discovering and evaluating markets, evaluating techniques, and managing employees entail the development of tacit knowledge to disclose the complexities associated with problems of measurement and enforcement. The kinds of information and knowledge required by the entrepreneur are in good part a consequence of a particular institutional context. That context will not only shape the internal organization and determine the extent of vertical integration and governance structure, but also determine the margins that offer the greatest promise in maximizing the organization's objectives. If the basic institutional framework makes income redistribution the

most profitable economic opportunity, it can be expected a very different development of knowledge and skills than a productivity-increasing economic opportunity would entail. These extreme examples typify much of economic history. The incentives that are built into the institutional framework play the decisive role in shaping the kinds of skills and knowledge that pays off.

Maximizing behaviour of economic organizations therefore shapes institutional change by: the resultant derived demand for investment in knowledge of all kinds; the ongoing interaction between organized economic activity, the stock of knowledge and the institutional framework; and the incremental alteration of the informal constraints as a product of maximizing activities of organizations.

Let us turn now to two fundamental questions of societal and economic change, that is, what determines the divergent patterns of evolution of societies or economies, and how we account for the survival of economies with persistently poor performance over long periods of time.

To dealing with these issues, North turns to a body of economic literature that has focused primarily on the evolution of technology, but has made analogies to a broader range of questions, including, although mostly implicitly, institutional change. He shows that

technological change and institutional change are the basic keys to societal and economic evolution and both exhibit the characteristics of path dependence. Path dependence means that the consequence of small events and chance circumstances can determine solutions that lead one to a particular path. There are two forces shaping the path of institutional change: increasing returns and imperfect markets characterized by significant transaction costs. In a world in which there are no increasing returns to institutions, and markets are competitive, institutions do not matter. But with increasing returns, institutions matter. With increasing returns, institutions matter and shape the long-run path of economies, but as long as the consequent markets are competitive or even roughly approximate the zero transaction cost model, the long run path is an efficient one. Given noncontroversial assumptions about preferences, neither divergent paths nor persistently poor performance would prevail. But if the markets are incomplete, the information feedback is fragmentary, and transaction costs are significant, then the subjective models of actors, modified both by imperfect feedback and by ideology, will shape the path. At this point, not only both divergent paths and persistently poor performance can prevail, the historically derived perceptions of the actors shape the choices that they make. In a dynamic world characterized by institutional increasing returns, the imperfect efforts of the actors reflect the difficulties of deciphering a complex environment with the available mental constructs (ideas, theories, and ideologies). Before examining the sources of persistently inefficient paths, North attempts to make the process of path dependence clearer. Aware of the fact that history can be seen as a story of incremental institutional change involving interplay between the institutional framework and the consequent organizations, he stresses that, at every step along the way, there are choices that provided real alternatives. Path dependence is a way to narrow conceptually the choice set and link decision-making through time: it is not a story in which the past predicts the future.

North then integrates the path dependent character of the incremental change in institutions with the persistence of patterns of long-run growth or decline. Once a development path is set on a particular course, the network externalities, the learning process of organizations, and the historically derived subjective modelling of the issues reinforce the course. But unproductive paths can persist: the increasing returns characteristic of an initial set of institutions, that provide disincentives to productive activity, will create organizations and interest groups with a stake in the existing constraints. They will shape the polity in their interests. Such institutions provide incentives that may encourage military domination of the polity and economy, religious fanaticism, or plain, simple redistributive organizations, but they provide few rewards from increases in the stock and dissemination of economically useful knowledge. The subjective mental constructs of the participants will evolve an ideology that not only rationalizes the society's structure but accounts for its poor performance. As a result, the economy will evolve policies that reinforce the existing

incentives and organizations. Because all economies have institutional frameworks that create both productive and unproductive opportunities for organizations, the history of any economy will reflect some mixed results.

However, it would be a mistake to think that successful paths get reversed by small events or errors and vice-versa. The increasing returns nature of the institutional matrix is made up of a complex of interdependent rules and informal constraints that in total determine economic performance. Path dependence, hence, means that history matters. Today's choices couldn't be understood without tracing the incremental evolution of institutions.

2.3 Institutional change: *quasi parameters* and *self-reinforcement*

Building on a game-theoretic foundation, *quasi parameters* and *self-reinforcement* are other concepts introduced[12] in literature to offer a dynamic approach to institutions.

Classical game theory provides a conceptual apparatus for the analysis of self-enforcing institutions. However, many features that are usually taken as parameters in the repeated game formulation share two properties: they can gradually be altered by the implications of the institution under study, and second, their marginal change will not necessarily cause the behaviour associated with that institution to change. These features are neither parameters (as they are endogenously changed) nor variables (as they do not directly condition behaviour): they are *quasi* parameters. Because changes in *quasi*-parameters and their implications are not recognized by the actors, it is necessary to consider them as parametric, exogenous and fixed, in studying the self-enforcing property of an institution in the short run, but when studying the same institution in the long run they need to be considered as endogenous and variable. The changes in *quasi*-parameters that an institution implies can reinforce or undermine it[13]. An institution reinforces itself when, over time, the changes in *quasi parameters* it entails imply that the associated behaviour is self-enforcing in a larger set of situations, than would otherwise have been the case. A self-enforcing institution that reinforces itself is a *self-reinforcing* institution. But a self-enforcing institution can also undermine itself when the changes in the *quasi* parameters that it entails imply that the associated behaviour will be self-enforcing in a smaller set of situations. Central to endogenous institutional changes are therefore the dynamics of self-enforcing beliefs and the associated behaviour. From this point of view, an institutional change is a change in beliefs and it occurs when the associated behaviour is no longer self-enforcing, leading individuals to act in a manner that does not reproduce the associated beliefs. Conversely, a necessary condition for an institution to prevail over time is that the range of situations in which the associated behaviour is self-enforcing does not decrease over time. Unless an institution is self-*re*inforced, it will reach a situation in which the behaviour associated with it is no longer self-enforcing. Endogenous institutional change follows.

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[12] Greif and Laitin, "*A theory of Endogenous Institutional Change*", 2004

[13] They illustrate their dynamic approach to institutional change through the comparison of late medieval Venice ang Genoa, looking at the political regime (the institution). Each of the institutions is self-enforcing, but only one is self-reinforcing. The quasi-parameters considered are the wealth of the cities, the strength of the people, and the social identities of the clans. Changes in quasi parameters in Genoa had the effect of undermining political order, making its institutions sensitive to relatively small exogenous shifts in clans'strength, trading opportunities, and the level of external threat. The opposite changes transpired in Venice, whose institution was self-reinforcing.

3. The Attempting Literature

3.1 Property rights and contracting institutions

One of the most famous attempts to assess the impact of institutions on economic growth, using the concept of property rights, is the Knack and Keefer's 1995 paper[14]. The institutional indicators used come from the International Country Risk Guide (ICRG) and the Business Environmental Risk Intelligence (BERI). The ICRG variables considered are *expropriation risk*, *rule of law*, interpreted as proxies for the security of property and contract rights, *repudiation of contracts by the government* as indicator of government credibility, *corruption[15] in government* and *quality of bureaucracy* as proxies for the general efficiency with which government services are provided. In particular, their reasoning assumption is that in those countries where ICRG records high levels of corruption, entrepreneurs are beset by greater uncertainty regarding the credibility of government commitments. That is, the same institutions that allow public officials to demand large and arbitrary bribes, such as failed law enforcement systems, inhibit those officials from credibly pledging not to renege on their future commitments. This discourages investment and encourages forms of economic activity that are less vulnerable to expropriation. The indicators from BERI are, on one hand, *contract enforceability* and *infrastructure quality*, and, on the other, *nationalization potential* and *bureaucratic delays*. The five ICRG variables and the four BERI variables are aggregated[16] to form an ICRG index and a BERI index of the security of contractual and property rights. Empirically, in a cross-sectional model, where the specification shows growth as a function of initial income, secondary and primary school enrollment, the percent of government consumption in GDP, the investment variable and the institutional indicators, these indexes are found to have a greater impact on growth than the variables[17] previously employed as proxies of property rights.
More recently, also Acemoglu and Johnson[18], investigating which institutions are more conducive to economic growth, evaluate the importance of "*property rights institutions*", which protect citizens against expropriation by the government and powerful elites, and "*contracting institutions*", which enable private contracts between citizens. But in particular, this paper is an attempt to learn more about the relative importance of contracting versus property rights institutions at the macro level. Contracting institutions regulate transactions between private parties such as a debtor and a creditor. Both parties to such a relationship may like to deviate from the pre-specified contractual terms, and they can only do so because of "failures" in implementation and enforcement. While weak contracting institutions can be very costly, citizens also have certain recourses. Most importantly, they can change the terms of the contracts or the nature of their activities to protect themselves from the worst type of opportunistic behaviour. In contrast, property rights institutions are intimately linked to the distribution of political power in society because they regulate the

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[14] "*Institutions and Economic Performance: Cross Country tests using alternative Institutional Measure*"
[15] Shleifer and Vishny (1993) has explored theoretically two broad reasons why corruption may be costly to economic development. The first reason is the weakness of central government, which allows various governmental agencies and bureaucracies to impose independent bribes on private agents seeking complementary permits from these agencies. Such competing bureaucracies, each of which can stop a project from proceeding, hamper investment and growth around the world, but especially in countries with weak governments. The second broad reason that corruption is costly is the distortions entailed by the necessary secrecy of corruption. The demands of secrecy can shift a country's investments away from the highest value projects, such as health and education, into potentially useless projects, such as defense and infrastructure, if the latter offer better opportunities for secret corruption. These demands can also cause leaders of a country to maintain monopolies, to prevent entry, and to discourage innovation by outsiders if expanding the ranks of the elite can expose existing corruption practices. Such distortions from corruption can discourage useful investment and growth.
[16]The aggregation is accomplished through simple addition.
[17] Revolutions and coups, and assassinations.
[18] "*Unbundling Institutions*", 2004.

relationship between ordinary private citizens and the politicians or elites with access to political power. When property rights institutions fail to constrain those who control the state, it is not possible to circumvent the consequent problems by writing alternative contracts to prevent future expropriation, because the state, with its monopoly of legitimate violence, is the ultimate arbiter of contracts. The most important component of contracting institutions is the functioning of the legal system. Differences in both laws and the implementation of laws across countries introduce significant differences in the costs of enforcing contracts and consequently in the equilibrium contracts and transactions. *Property rights institutions*, instead, are related to political and state-society interactions.

For contracting institutions, they use three measures: an index of legal formalism developed in Djankov at al. (2003), an index of the overall procedural complexity of resolving a court case (from the World Bank) and the number of distinct procedures involved in the same process (from the World Bank). They also use three measures for the property rights institutions: constraint on the executive, from the Polity IV dataset, capturing the degree of constraints on politicians, protection against expropriation by government averaged over 1985-95 from Political Risk Services, and the Heritage Foundation's private property index which captures the extent to which private property is protected against both government and other sources of expropriation. The specification to be estimated is a cross-country regression of the outcome of interest (of a country) on a measure of property rights institutions and on a measure of contracting institutions. The outcomes of interest are four: the level of GDP per capita, which is a good measure of long-run growth; the ratio of investment to GDP, which is a measure of whether a society is able to channel money into productive investments; the amount of private credit as a percent of GDP as a measure of finance provided through the banking sector and trade credit; and stock market capitalization as a percent of GDP, which provides a measure of equity finance. The strategy adopted is the two-stage least squares with distinct and plausible instruments for contracting and property rights institutions. The instruments for property rights institutions are log settler mortality and indigenous population density[19], and the one for contracting institutions is legal origin.

Their empirical investigation reveals that contracting institutions and legal rules, better the set of proxies related to contracting institutions, have some effect on the form of finance (the use of equity versus debt contracts) and on the stock market development. But they have limited or no effects on major economic outcomes, including long-run growth, the investment to GDP ratio, and the overall amount of financial intermediation in the economy. Property rights institutions, the proxies associated to property rights institutions, have a large effect on all these outcomes.

3.2 Causes of Income Differences

3.2.1 Proximate or Fundamental Causes and The Reversal of fortune

One of the first attempts to find the reasons underlying the cross-country output per worker differences is by Hall and Jones[20] (1999). They are the first economists that document at a deeper level these differences and treat the institutional dimension, called *social infrastructure*, as endogenous. By social infrastructure they mean the institutions and government policies that provide the incentives for individuals and firms in an economy. Their measure[21] of social

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[19] These are related to the Europeans'colonization strategy. Where settler mortality was high, due to the disease environment faced by the Europeans, the settlement was not feasible and Europeans developed extractive institutions; where it was low, they developed institutions similar to the contemporary institutions in Europe. Where indigenous population was high, Europeans "captured" local population, where it was low, Europeans settled and were less likely to develop extractive institutions. (to understand more deeply the role of European colonization, see the following part)

[20] *"Why Do Some Countries Produce So Much More Output per Worker than Others?"*

[21] This is formed as the average of the GADP index and openness one.

infrastructure is formed by combining two indexes. The first element is an index of government antidiversion policies created from data assembled by Political Risk Services that specializes in providing assessments of risk to international investors. Two of the categories relate to the government's role in protecting against private diversion are law and order, and bureaucratic quality. Three categories relate to the government's possible role as a diverter, that is corruption, risk of expropriation, and government repudiation of contracts. The second element of their measure of social infrastructure captures the extent to which a country is open to international trade and they refer to the index compiled by Sachs and Warner. To examine the quantitative importance of differences in social infrastructure as determinants of incomes across countries, they hypothesize a structural model where the dependent variable is, of course, the output per worker (in logarithmic terms) and the independent variable is the social infrastructure. The latter is explicitly recognized as an endogenous variable and so instrumented. The instruments are various correlates of the extent of Western European influence. These are characteristics of geography such as distance from the equator and the extent to which the primary languages of Western Europe (English, French, German, Portuguese, Spanish) are spoken as first languages today. Their results indicate that differences in the independent variable account for much of the difference in long-run economic performance throughout the world. The extent to which different countries have adopted different social infrastructures is partially related to the extent to which they have been influenced by Western Europe.

Hall and Jones (1999) observe that differences among countries can be attributed to differences in human capital, physical capital, and productivity and that these are just a first step in understanding differences in output per worker. Their central hypothesis[22] is that the primary, *fundamental* determinant of a country's long-run economic performance is its social infrastructure and that those differences are *fundamentally* related to differences in social infrastructure across countries.

The literature has developed a definition for the causes of income differences. Some are defined as *proximate* and some other as *fundamental*. Acemoglu, recalling what Hall and Jones call "first step", defines proximate causes as those provided by the standard economic answers like differences in physical capital, human capital and technology. Fundamental causes are those able to say why some countries invest less than others, fail to adopt new technologies and to organize production efficiently.

Acemoglu, Johnson and Robinson[23] assert that the two main candidates for the *fundamental* causes of cross-country differences in prosperity are *geography* and (*economic*) *institutions*.

The *geography hypothesis* maintains that geography, climate, and ecology of a society's location shape both its technology and the incentives of its inhabitants.

They present three main versions of the *geography hypothesis*, each emphasizing a different mechanism for how geography affects prosperity. First, climate may be an important determinant of work effort, incentives, or even productivity: it stresses the time-invariant effects of geographic variables and predicts that nations and areas that were relatively rich in 1500 should also be relatively prosperous today. Second, geography may determine the technology available to a society. And finally, the third variant of the geography hypothesis links the poverty in many areas of the world to their "disease burden". While the *geography hypothesis* looks at "forces of nature" as a primary factor in the poverty of nations, the *institutions hypothesis* is about "man-made" influences. According to this view, some societies are organized in a way that upholds the rule of law, encourages investment in machinery, in human capital, in better technologies, facilitates broad-based participation in economic and political life by the citizens, and supports market transactions. The hypothesis that differences in *economic institutions* are the fundamental cause of different patterns of economic growth is based on the notion that it is the way that humans themselves decide to organize their societies that determines whether or not they prosper. Some ways of organizing

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[22] This hypothesis explains also why their specification for the determination of incomes is parsimonious.
[23] *"Institutions as the Fundamental Cause of Long-Run Growth"* 2005.

societies encourage people to innovate, to take risks, to save for the future, to find better ways of doing things, to learn and educate themselves. Others do not. The crucial element for goods institutions are enforcement of property rights for a broad cross-section of society, so that a variety of individuals have incentives to invest and take part in economic life; constraints on the actions of the elites, politicians and other powerful groups, so that these people cannot expropriate the incomes and investments of others in the society; and some degree of equal opportunity for broad segments of the society, so that they can make investments, especially in human capital, and participate in productive economic activities. These institutions contrast with conditions in many societies of the world, where the rule of law is selectively applied and property rights are nonexistent for the vast majority of the population.

That institutions matter does not imply that geography is not important. If geography matters, they argue, we can locate the poorest places in the world, with per capita income levels less than $1/20^{th}$ of the United States. It will be found that almost all of them are close to the equator, in very hot regions with periodic torrential rains. It is true there is a correlation between geography and prosperity, i.e., a simple statistical association.

To find a similar statistical association between institutions and prosperity, it is quite common, for example, to measure institutions in terms of the protection for entrepreneurs' property rights – protection against expropriation risk. Another measure of institutions is the constraints placed on the executive in the post-war years, more closely corresponding to our notion of constraining elites and powerful groups.[24] A high score for the former means a high degree of protection against expropriation, and a high score for the latter means effective constraints against arbitrary actions by politicians and the executive. In both cases, the relationship between these measures of institutions and income per capita (more precisely, the logarithm of income per capita) exhibit a strong correlation. As was the case with geography, this statistical association does not prove causation.

Acemoglu, Johnson and Robinson, replicating the North's exercise, to make progress in distinguishing between the roles of geography and institutions as *fundamental* causes of prosperity and poverty, go back in history and make use of the "experiments" it offers.

The first *natural experiment* proposed by Acemoglu, Johnson, and Robinson, is a homogeneous country divided into two, each part with very different institutions: the case of Korea. Until the end of World War II, Korea was under Japanese occupation. Korean independence came on August 15, 1945. After this date, Soviet forces entered North Korea and took over the control of these provinces from the Japanese. U.S. authorities, instead, supported the influential nationalist leader Syngman Rhee, who was in favour of separation rather than a united communist Korea. There were elections and a new constitution established the Republic of Korea to the south of the 38th parallel. The north became the Democratic People's Republic of Korea. These two independent countries organized themselves in very different ways and adopted completely different sets of institutions. The North followed the model of Soviet socialism and the Chinese Revolution in abolishing private property of land and capital. The South, instead, maintained a system of private property and the government attempted to use markets and incentives in order to develop the economy. Since separation, the two Koreas have experienced diverging paths of economic development. Before this "experiment" in institutional change, north and south Korea shared the same history and cultural roots. Korea, in particular, exhibited an "unparalleled" degree of ethnic, cultural, geographic and economic homogeneity. For these reasons, the splitting on the Koreas is seen as a *natural experiment* to identify the causal influence of institutions on prosperity. Korea was split with the two halves organized in radically different ways, and with geography and many other potential determinants of economic prosperity held fixed. Thus, any differences in economic performance, they argue, can be attributed to differences in institutions.

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[24] See that now, the examples refer to institutions of very different nature.

However, the evidence from this *natural experiment* is not enough. For this reason, they study a larger scale "*natural experiment*" whose phenomenon is not completely new in literature[25]. This is the *colonial experiment*, that is, the colonization of much of the world by Europeans.

They argue[26] that this experience transformed the institutions in many diverse lands conquered or controlled by Europeans. Most importantly, they believe that Europeans imposed very different sets of institutions in different parts of their global empire. As a result, while geography was held constant, Europeans initiated large changes in *economic* institutions, in the social organization of different societies. At one extreme, Europeans set up extreme *extractive institutions*, which concentrate power in the hands of a small elite and create a high risk of expropriation for the majority of the population. These one are exemplified by the Belgian colonization of the Congo, slave plantations in the Caribbean or forced labour systems in the mines of Central America. These institutions introduced neither protection for the property rights of regular citizens nor constraints on the power of elites. This is not surprising, since these institutions were designed to facilitate Europeans' extraction of resources from the colonies. At the other extreme, many Europeans went and settled in a number of colonies, creating settler societies, replicating, and often improving, the European form of *institutions protecting private property*. This set of institutions is essential for investment, incentives and economic performance. Primary examples of this mode of colonization include Australia, New Zealand, Canada, and the United States. The settlers in these societies also managed to place significant constraints on elites and politicians, even if they had to fight to achieve this objective. Both in North America and Australia, the plans of the British crown to develop a more hierarchical structure were thwarted by the protests, demonstrations and migrations of the lower strata of European settlers. Acemoglu, Robinson and Johnson (AJR from now on) wonder what happened to economic development after colonization, if the places that were rich before colonization remain rich, as suggested by the *geography hypothesis*, or if there was a systematic change in economic fortunes associated with the changes in institutions. The historical evidence shows no evidence of the persistence suggested by the *geography hypothesis*. On the contrary, there is a sort of *Reversal of Fortune* in economic prosperity, as they have shown. Societies like the Mughlas in India, and the Aztecs and the Incas in America, that were among the richest civilization in 1500, are among the poorer societies of today. In contrast, countries occupying the territories of the less-developed civilizations in North America, New Zealand and Australia are now much richer than those in the lands of the Mughlas, Aztecs and Incas.

Empirically, as proxies for prosperity before modern times, they use urbanization rates and population density. Only societies with a certain level of productivity in agriculture and a relatively developed system of transport and commerce could sustain large urban centres and a dense population. Their cross-country regression of log income per capita in 1995 on urbanization rates in 1500 for a sample of 41 observations (former colonies for which data are available) shows that a 10 percentage point lower urbanization in 1500 is associated with approximately twice as high GDP per capita today. At the same time, regressing log income per capita in 1995 on log population density in 1500 shows that countries with higher population density in 1500 are substantially poorer today. AJR argue that this evidence is reversal against the most standard versions of the *geography hypothesis* discussed above: it cannot be that the climate, ecology or disease environments of the tropical areas condemn them to poverty today, since these areas with the same climate, ecology and disease environments, were richer. In particular, looking at the variation in colonization strategies, they see that the *Reversal of Fortune* is exactly what the *institutions hypothesis* predicts. European colonialism made Europeans the politically powerful group with the capability to influence institutions more than any indigenous group was able to, at that time. As suggested by the reasoning of Acemoglu, Johnson and Robinson explained above, we expect Europeans to have done so not according to the interest of the society as a whole, but in order to maximize their benefits. And this is exactly what the historical evidence suggests it happened. In places where Europeans did not

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[25] Hall and Jones, 1999.
[26] "*Reversal of Fortune: Geography and Institutions in the Making of the Modern World Income Distribution*" 2002.

settle and thus did not care much about aggregate output or welfare, in places where there was a large population to be coerced and employed for cheap in mines or in agriculture, or simply taxed, in places where there was a lot to be extracted, they point out, Europeans pursued the strategy of setting up *extractive institutions*. In those colonies, there were no constraints on the power of the elites, that is the Europeans themselves and their allies, and no civil or property rights for the majority of the population; in fact, many of them were forced labourers or slaves. Contrasting with this pattern, in other colonies, Europeans settled in large numbers and developed the laws and institutions of the society to ensure that they themselves were protected, both in their political and economic lives. In these settler colonies, the institutions were therefore much more conducive to investment and economic growth. Moreover, Europeans were more likely to invest in the development of institutions of private property in areas that were sparsely settled and previously relatively poor. The relatively densely settled and highly urbanized colonies ended up with extractive institutions, while sparsely-settled and non urbanized areas received an influx of European migrants and developed institutions protecting property rights and constraining elites. European colonialism therefore led to an *institutional reversal*, in the sense that the richer places ended up with worse institutions.

However, it is possible the Europeans did not actively introduce extractive institutions in many of these places. The structure of the Mughal, Aztec and Inca empires were already very hierarchical, non-democratic and with power concentrated in the hands of rulers. Perhaps the Europeans simply took over these institutions. In any case, what matters is that in densely settled and relatively-developed places, it was in their interests to develop institutions of private property, thus leading to the *institutional reversal*. The *institutional reversal* combined with the *institutions hypothesis* predicts the *Reversal of Fortune*: relatively rich places got worse institutions, and if these institutions are really important, we should see them become relatively poor over time. Empirically, they regress three different measures of institutions on urbanization in 1500 and log population density in 1500. These measures of institutions are average protection against expropriation risk between 1985 and 1995 from Political Risk Services, which approximates how secure property rights are, constraint on the executive in 1990 and in the first year of independence, from Polity III data set, which can be thought of as a proxy for the concentration of political power in the hands of ruling groups. The regressions show a negative relationship between their measures of prosperity in 1500 and current institutions.

3.2.2 Legal Origins

Other horizons the literature offers result from the idea that countries have distinct "legal origins" and these matter for economic and financial outcomes. This line of research examines the costs and benefits of alternative legal rules, which are important due to the effects they show to have on economic development.

La Porta, Lopez-de-Silanes, Shleifer, and Vishny[27] study how laws protecting investors differ across countries, how the quality of enforcement of these laws varies, and whether these variations matter for corporate ownership patterns around the world. In particular, they compare empirically shareholder and creditor rights in 49 different countries and different legal traditions, compare the quality of law enforcement among the same countries and legal tradition and look at the ownership.

In this perspective, laws in different countries are typically not written from scratch, but rather transplanted from a few legal families or traditions. In general, commercial laws come from two broad traditions: *common law*, which is English in origin, and *civil law*, which derives from Roman law. Within the civil tradition, there are only three major families that modern commercial laws originate from: French, German, and Scandinavian. The French and the German civil traditions, as

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[27] *"Law and Finance"* 1998

well as the common law tradition, have spread around the world through a combination of conquest, imperialism, outright borrowing, and more subtle imitation. The resulting laws reflect both the influence of their families and the revisions specific to individual countries. Comparative legal scholars agree that, even though no two nations' laws are exactly alike, some national legal systems are sufficiently similar in certain critical respects to permit classification of these national legal systems into major families of law. On the basis of this approach, scholars identify two broad legal traditions: civil law and common law. The civil, or Romano-Germanic, legal tradition is the oldest, the most influential, and the most widely distributed around the world. It originates in Roman law, uses statutes and comprehensive codes as a primary means of ordering legal material, and relies heavily on legal scholars to ascertain and formulate its rules. Legal scholars typically, as described before, identify three currently common families of laws within the civil-law tradition: French, German, and Scandinavian. The French Commercial Code was written under Napoleon in 1807 and brought by his armies to Belgium, the Netherlands, part of Poland, Italy and western regions of Germany. In the colonial era, France extended its legal influence to the Near East and Northern and sub-Saharan Africa, Indochina, Oceania, and French Caribbean islands. French legal influence has been significant as well in Luxembourg, Portugal, Spain, some of the Swiss cantons, and Italy. The German Commercial Code was written in 1897 after Bismarck's unification of Germany, and perhaps because it was produced several decades later, was not as widely adopted as the French code. It had an important influence of the legal theory and doctrine in Austria, Czechoslovakia, Greece, Hungary, Italy, Switzerland, Yugoslavia, Japan, and Korea. Taiwan's laws came from China, which borrowed heavily from the German code during its modernization. The Scandinavian family is usually viewed as part of the civil-law tradition, although its law is less derivative of Roman law than the French and German families. The common-law family includes the law of England and those laws modelled on English law. The common law is formed by judges who have to resolve specific disputes. Precedents from judicial decisions shape common law. Common law has spread to the British colonies, including the United States, Canada, Australia, India, and many other countries.

To the purpose of their study, they assemble a data set covering legal rules pertaining to the rights of investors and to the quality of enforcement of these rules[28]. For shareholders, some of the rules cover voting powers, ease of participation in corporate voting, and legal protections against expropriation by management. For creditors, some of these rules cover the respect for security of the loan, the ability to catch assets in case of a loan default, and the inability of management to seek protection from creditors unilaterally. These rules measure the ease with which investors can exercise their powers against management.

The authors look only at laws pertaining to investor protection, and specifically only at company and bankruptcy/reorganization laws. Company laws exist in all countries and are concerned with the legal relations between corporate insiders and the corporation itself and the legal relations between the corporation and certain outsiders, particularly creditors. Bankruptcy/reorganization laws apply more generally to companies but deal specifically with procedures that unfold in the case of failure to pay back debt. All these laws are part of the commercial codes in civil-law countries and exist as separate laws, mainly in the form of acts, in common-law countries.

They begin by comparing shareholder rights from company laws. Because shareholders exercise their power by voting for directors and on major corporate issues, in evaluating shareholders rights, they include voting rights attached to shares, and rights that support the voting mechanism against interference by the insiders. In particular, they show that common-law countries have the relatively strongest, and the French-civil-law countries the weakest, protections of shareholders. Turning to creditor rights, they find that common-law countries protect investors the most, French-civil-law countries protect them the least. German-civil-law countries are in the middle, though closer to the

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[28] Ibidem table 1, for a better description of the variables and sources.

civil-law group. The one exception is the strong protections that German-civil-law countries afford secured creditors.

Then, they compare the quality of law enforcement and focus on ownership. With respect to the law enforcement, they argue that a strong system of legal enforcement could substitute for weak rules. They use five different measures to address this issue: efficiency of the judicial system, rule of law, corruption, risk of expropriation by the government, and likelihood of contract repudiation by the government. Obviously, the quality of law enforcement differs across legal families. Scandinavian countries and German-civil-law countries have the highest scores of any group on the efficiency of the judicial system, the rule of law, corruption, risk of expropriation and risk of contract repudiation by government. On all the measures of rule of law, common-law countries are behind the leaders but ahead of the French-civil-law countries. These results do not support the conclusion that the quality of law enforcement substitutes or compensates for the quality of laws. Referring to the ownership, they explore the hypothesis that companies in countries with poor investor protection have more concentrated ownership of their share. The data shown confirm that the quality of legal protection of shareholders helps determine ownership concentration, accounting for the higher concentration of ownership in the French-civil-law countries. Moreover, heavily concentrated ownership results from weak protection of investors in a corporate governance system.

Historical origin of a country's laws is also correlated with economic outcomes.

From an empirical point of view, La Porta, Lopez-de-Silanes, and Shleifer[29] find higher income per capita is associated with better shareholder and creditor protection, more efficient debt enforcement, and lower government ownership of banks. Civil law is generally associated with lower shareholder and creditor protection, less efficient debt enforcement, and higher government ownership of banks. Higher income per capita is generally associated with more developed financial markets, more firms per capita, less ownership concentration, and a higher private-credit-to-GDP ratio. The results on regulation say that higher income per capita is correlated with lower entry regulation and government ownership of the media, but not with labour regulation or conscription. Relative to common law countries, French legal origin countries have more entry and labour regulation, higher state ownership of the media, and heavier reliance on conscription. Results on judicial institutions show higher income per capita is associated with less legal formalism but not with longer judicial tenure or the acceptance of case law. Compared to common law countries, civil law countries have more legal formalism, lower judicial tenure, and lower constitutional acceptance of case law. Compared to French civil law, common law is associated with better investor protection, which in turn is associated with improved financial development, better access to finance, and higher ownership dispersion; lighter government ownership and regulation, which are in turn associated with less corruption, better functioning labour markets, and smaller unofficial economies; and less formalized and more independent judicial systems, which are in turn associated with more secure property rights and better contract enforcement.

All this evidence shows the pervasiveness of the economic consequences of legal origins.

Legal origins, they argue, influence legal rules and regulations, which in turn have substantial impact on important economic outcomes (from financial development, to unemployment, to investment and entry, to the size of unofficial economy, to international trade). And from this, they outline the Legal Origin Theory, whose basic ingredients are three. First, by the eighteenth or nineteenth centuries England and Continental Europe, particularly France, have developed very different styles of social control of business, and institutions supporting these styles. Second, these styles of social control were transplanted by the origin countries to most of the world, rather than written from scratch. Third, these styles have proved persistent in addressing social problems.

Legal Origins Theory raises the obvious question of how the influence of legal origins has persisted over the decades or even centuries. The key point is that transplantation involves not just specific legal rules but also legal institutions, human capital of the participants in the legal system, and the

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[29] *"The Economic Consequences of Legal Origin"*, 2008

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strategy of the law for dealing with new problems. Successive generations of judges, lawyers, and politicians all learn the same broad ideas of how the law and the state should work. The legal system supplies the fundamental tools for addressing social concerns and it is that system, with its codes, distinctive institutions, modes of thought and even ideologies, that is very slow to change. The fact that legal system is slow to change does not mean that specific legal rules and regulations never change. Moreover, this theory does not say that common law always works better for the economy. As Glaeser and Shleifer show, regulation and state control may be efficient responses to disorder, where common-law solutions fail to sustain markets. Glaeser and Shleifer[30] (2003), interpret the early twentieth century rise of the regulatory state in the United States as an efficient response to the subversion of the justice system by large corporation. They wonder why, between 1887 and 1917, in the United States, reformers eroded the nineteenth-century belief that private litigation was the sole appropriate response to social wrongs. To this end, they develop a theory of law enforcement in which private litigation, government regulation, a combination of the two, and doing nothing are considered as alternative institutional arrangements to secure property rights. In their theory, whatever law enforcement strategy the society chooses, private individuals will seek to subvert its workings to benefit themselves. The efficiency of alternative institutional arrangements depends in part on their vulnerability to such subversion. In this way, they interpret the early twentieth century rise of the regulatory state in the United States as an efficient response to the subversion of the justice system by large corporations. The principal message of their analysis is the tight relationship between the "law and order" already prevailing in a society, and the optimality of alternative law enforcement schemes. To understand the rise of regulation in the United States at the end of the nineteenth and the beginning of the twentieth centuries, we have to follow their reasoning. The scale of economic activity rose dramatically over the nineteenth century. During the industrial revolution, firms grew sharply in size. The social costs of harm grew roughly proportionately, but the costs of subverting justice did not. As a result, a legal system that may have operated well during the agrarian period failed when faced with entities that had huge incentives to subvert it both legally and illegally. Because higher levels of economic activity lead to subversion of both strict liability and negligence, adding regulation was the efficient response. The rise of the regulatory state may have been an efficient response to changing conditions.

To conclude, they claim that no country exhibits a system of social control that is an ideal type; all countries mix the two approaches. Common law countries are quite capable of civil law solutions, and vice versa. Nonetheless, the empirical prediction of the Legal Origin Theory is that the differences between legal origins are deep enough that we observe them expressed in the different strategies of social control of economic life even after centuries of legal and regulatory evolution. Perhaps because the legal system is such a difficult to change element of social order, legal origins survive both time and transplantation. This is what La Porta, Lopez-de-Silanes, and Shleifer call explanatory power.

3.2.3 Human Capital or Institutions?

The role of education has been largely emphasized among the determinants of long-term economic growth.
For example, in *Human Capital and Growth* (2001), Barro observes that given the level of GDP, a higher initial stock of human capital signifies a higher ratio of human to physical capital and this higher ratio tends to generate higher growth through al least two channels. First, more human capital facilitates the absorption of superior technologies from leading countries. Second, human capital tends to be more difficult to adjust than physical capital. Therefore, a country that starts with a high ratio of human to physical capital tends to grow rapidly by adjusting upward the quantity of

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[30] *"The rise of the Regulatory State"*, 2003

physical capital. Barro shows that the quality and quantity of schooling both matter for growth but that quality is much more important. Also Lucas[31], in his seminal paper on economic development (1988), emphasizes the accumulation of human capital as a main engine of growth; thus, according to the analysis in that paper, cross-country differences in growth rates across countries would be primarily attributable to differences in rates of accumulation of human capital.

An alternative approach was pioneered by Nelson and Phelps[32] (1966) and many years later deepened and expanded by Aghion. This emphasizes the combined effect of the stock of human capital and of the innovation process in generating long-run growth and fostering convergence. In this alternative approach, differences in growth rates across countries would be mainly attributable to differences in stocks of human capital, as those condition countries' ability to innovate or to adapt to new technologies and thereby catch up with the world technological frontier. The history of cross-country income differences exhibits mixed patterns of convergence and divergence. The most striking pattern, Aghion (2005) observes, over the long run is the "great divergence", the dramatic widening of the distribution that has taken place since the early nineteenth century. As we have already said, the pattern of convergence is not universal: the gap between the leading countries as a whole and the very poorest countries as a whole has continued to widen. Thus, the history of income differences since the mid twentieth century has been one of "club-convergence" (Aghion); that is, all rich and most middle income countries seem to belong to one group, or "convergence club", with the same long-run growth rate, whereas all other countries seem to have diverse long-run growth rates, all strictly less than that of the convergence club. The basic model developed by Aghion suggests that long-run growth would be best enhanced by a combination of good property right protection (to protect the rents of innovators against imitation), a good education system, in order to increase the efficiency of R&D activities, and a stable macroeconomy to reduce interest rates. The discussion of convergence club suggests that the same policies or institutions would also increase a country's ability to join the convergence club. However, in his essay *Econonomic Backwardness in Historical Perspective*, Gerschenkron (1962) argues that relatively backward economies could more rapidly catch up with more advanced countries by introducing "appropriate institutions" that are growth-enhancing at an early stage of development but may cease to be so at a later stage. Aghion argues that the Gerschenkron's idea of "appropriate institutions" can be easily embedded in a growth framework. Innovation activities require initiative, risk taking, the selection of good projects and talents, and all this, he claims, calls for more market-based and flexible institutions, for a higher reliance on market finance, higher competition and trade liberalization, more flexible labour markets and so forth. In particular, it follows from the linear relationship between the country's distance to frontier at time *t* and at time *t-1*, that the growth-maximizing institutions will evolve as a country moves toward the world technological frontier. Far below the frontier, a country will grow faster if it adopts the so called investment-based institutions or policies, whereas closer to the frontier growth will be maximized if the country switches to innovation-based institutions or policies.

The literature we have seen so far has reached closed to an intellectual consensus that the institutions, in general, cause economic growth. The reverse idea, namely that growth in income and human capital causes institutional improvement, is associated with the work of Lipset, who believes that educated people are more likely to resolve their differences through negotiation and voting than through violent disputes. According to this view, countries differ in their stocks of human and social capital, and institutional outcomes depend to a large extent on these endowments. Human capital leads to more benign politics, less violence, and more political stability. Lipset's hypothesis, that growth leads to better political institutions, has received considerable support in the work of Przeworski[33].

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[31] *"On the Mechanics of Economic Development"*

[32] *"Investment in Humans, Technological Diffusion, and Economic Growth"*

[33] Przeworski claims that institutions are not a deeper cause than the supply of factors or technology: institutions may determine the supply of factors and their use, but these factors affect growth and future wealth, which affect the

The two views of economic and political development share some important similarities. They both emphasize the need for secure property rights to support investment in human and physical capital, and they both see such security as a public policy choice. Nevertheless, the institutional view sees checks on government as the mechanisms for securing property rights, the "human capital" view emphasizes the need for human and physical capital accumulation to start the process.

Glaeser, La Porta, Lopez-de-Silanes and Shleifer[34] (2004) revisit these two broad approaches to development in an effort to assess each one's empirical validity.

They start with the standard OLS growth regressions using different measures of institutions to assess the effect of institutions on economic growth. They use averages of the assessments of institutional quality over a period of time. The dependent variable is the growth of per capita income between 1960 and 2000, and the independent variables are initial income per capita, initial education, the share of a country's population in temperate zones, as well as eight institutional variables (executive constraints, expropriation risk, autocracy, government effectiveness, judicial independence, constitutional review, plurality, proportional representation) entering at one time. The evidence shows a correlation between economic growth over a period and the average assessments of institutional quality over that period, including constraints on the executive, risk of expropriation, government effectiveness, and autocracy. In contrast, there is no relationship between growth and constitutional measures of institutions, such as judicial independence, constitutional review, plurality, and proportional representation. Then, they present a series of growth regressions in which the independent variable is the executive constraints at the beginning of the period. Starting in 1960, the regressions are run decade by decade, using initial period per capita income, initial period education, and initial period constraints on the executive as independent variables, and they show that initial executive constraints have no predictive power for subsequent economic growth outside the 1980s, whereas initial human capital is a predictor.

From this evidence, they conclude that the claim "institutions cause economic growth", as opposed to growth improving institutions, is "non-existent". The objective measures of institutions, those that describe the constitutional rules that limit the power of the sovereign, have no predictive power for the growth of per capita income.

Then, they consider human capital and political institutions in the sample of poor countries. To this end, they divide their sample of countries into those with low human capital, intermediate human capital, and high human capital. They divide the sample into four types of political regimes using the average Polity IV democracy score: autocracies (countries with the average score under 2), stable democracies (countries with the average score of 10), and two intermediate groups: imperfect autocracies (the average score between 2 and 7) and imperfect democracies (the average score between 7 and 10). They find that nearly all highly educated countries are stable democracies, and nearly all-stable democracies are highly educated. In contrast, almost all dictatorships are poorly educated. The lowest education countries are never stable democracies; the highest education countries are generally stable, but sometimes imperfect, democracies. They also show that during 1960-2000, countries with high human capital in 1960 have grown faster than low human capital ones; stable democracies have grown faster than imperfect democracies, and much faster than dictatorships, on average. Finally, they look at changes in political institutions (executive constraints, autocracy, democracy) over 5-year intervals as a function of country fixed effects, initial schooling, initial level of economic development, and initial levels of these political institutions themselves. Initial levels of schooling and initial levels of these political institutions are a strong predictor of improving institutional outcomes over the next 5 years.

Eicher, *Garcia-Penalosa* and *Tekson*[35] (2006) providing an exploration of the mechanisms by which institutions affect output, find that institutions and human capital are substitutes. Institutions

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evolution of institutions. Wealth , its distribution and the institutions that allocate factors and distribute incomes are mutually interdependent and evolve together.

[34] *"Do institutions Cause Growth?"*
[35] *"How Do Institutions Lead Some Countries to Produce So Much More Output per Worker than Others?"*

alone do not produce output. Hence, their effect must be indirect, operating through their impact on either factor accumulation or productivity. They combine the approach of Hall and Jones (1999), with that of Mankiw Romer and Weil (1992), which emphasizes the importance of investment in human and physical capital, to explain cross-country per capita income levels. Specifically, they examine whether specifications in which institutions are the sole determinant of output levels can be improved upon by allowing for the effect of factor inputs. Their hypothesis is that the main contribution of institutional quality to development is through its impact on the accumulation of human and physical capital.

They start regressing output on both institutions (measured and instrumented as done by Hall and Jones) and factor inputs. They find that the inclusion of a measure of institutions into the Mankiw, Romer and Weil specification yields a significant coefficient on institutions and that augmenting Hall and Jones's specification with physical factors of production reduces the effect of institutions on output. To understand how much of the variation in output is accounted for by the direct impact of institutions, as opposed to the indirect effect of institutions that works through factor inputs, they regress, respectively, output on factor inputs, institutions and the level of technology, and inputs on institutions. Physical and human capital react rather differently to improvements in institutional quality. A reason for this could be that the elasticities of output with respect to factor endowments, and hence factor returns, depend on a country's institutional quality. That is, given the level of technology, the effect of a given stock of (physical or human) capital on output depends on the quality of a country's institutions.

Finally, they study the relationship between institutions and factors of production estimating an equation where the dependent variable is output per worker and the independent variables are institutions, factor inputs and the interaction terms between institutions and human and physical capital. This regression allows them to conclude that better institutions seem to increase the productivity of physical capital, but reduce that of human capital. Institutions increase the elasticity of output with respect to physical capital and labour, and reduce the elasticity with respect to human capital. Human capital and institutions by themselves have a positive impact; however, institutions matter more for growth in low human capital countries. The reverse way of thinking about this relationship could be that the more human capital a country has, the less important institutions are.

4. Economic Policy and Institutions

4.1 Growth Policies

The standard policy reforms, included in the *Washington Consensus* (table 1), have the potential to promote growth. What should be understood is that the impact of these reforms is dependent on circumstances. Policies that work in some places may have weak, unintended, or negative effects in others.

Rodrik in *One Economics, Many Recipes* (2007) shows how it is possible to develop a unified framework for analyzing and formulating growth strategies that is both operational and based on solid economic reasoning. For this objective, the step is to develop a better understanding of how the *binding constraints* on economic activity differ from setting to setting. This understanding can be used to derive policy priorities.

 Economic growth depends on the returns to accumulation, on their private appropriability, and on the cost of financing accumulation. The first stage of the *diagnostic analysis*, as it is presented by Rodrik, aims at uncovering which of these three factors poses the greatest impediment to higher growth. In some economies, the "constraint" may lie in low returns, in other may be poor

appropriability, and in others too high cost of finance. The next stage of the *diagnostic analysis* is to discover the specific distortions that lie behind the most severe of these constraints. If
the problem seems to be poor appropriability, it might be due to high taxes, corruption, or macro instability. If, instead, the problem is with the high cost of finance, it might be due to fiscal deficits or poor intermediation. A process of *growth diagnostics* consists of reviewing and analyzing these factors to ascertain which of these factors is the most binding constraint on growth. All factors are likely to matter for growth and welfare. The challenge is to identify the one that provides the largest positive direct effect, so that even after taking into account second-best interactions and indirect effects, the net impact of a policy change is beneficial.

Table 4 The Washington Consensus Rules

Original Washington Consensus	"Augmented" Washington Consensus (addition to the original 10 items)
Fiscal Discipline	Corporate governance
Reorientation of public expenditures	Anticorruption
Tax Reform	Flexible labour markets
Interest Rate Liberalization	Adherence to WTO disciplines
Unified and competitive exchange rates	Adherence to international financial codes and standards
Trade liberalization	Prudent capital-account opening
Openness to direct foreign investment	Nonintermediate exchange rate regimes
Privatization	Independent central banks/inflation targeting
Deregulation	Social safety nets
Secure property rights	Targeted poverty reduction

(Source: Dani Rodrik 2007)

Actually, once the constraint and the key problems have been identified, they are these one that deserve the most attention from policymakers and, for this reason, it is necessary to think about the appropriate policy response. The point in this step is to focus on the market failures and distortions associated with the constraint discovered previously. The response must be targeted as closely as possible on the source of the distortion. Hence, if credit constraints are the main ones, and the problem is the result of lack of competition and large bank spreads, the appropriate response is to reduce impediments to competition in the banking sector. If economic activity is held back because of high taxes, the solution is to lower them, and so on. Thus, this step involves policy design, where the objective is to remove the identified constraints with targeted policies that are cognizant of the local realities. Finally, the third step requires the institutionalisation of the *diagnostic* and *policy design* activities, with the goals of strengthening the institutional infrastructure of the economy. The most frequent cause for the collapse in growth is the inability to deal with the consequences of external shocks. Resilience against such shocks requires strengthening the rule of law, solidifying democratic institutions (if they exist), and erecting social safety nets. When such institutions are in place, the macroeconomic and other adjustments, needed to deal with adverse shocks, can be undertaken relatively smoothly. When they are not, the result is distributive conflict and economic collapse.
It is easier, Rodrik argues, to list the functions that good institutions perform than it is to describe the shape they should take. Desirable institutions are seen as those providing security of property rights, enforce contracts, stimulate entrepreneurship, foster integration in the world economy, maintain macroeconomic stability, manage risk-taking by financial intermediaries, supply social

insurance and safety nets, and enhance voice and accountability. But concretely, each one of these ends can be achieved in a large number of different ways. Furthermore, developing nations are different from advanced countries in that they face both greater challenges and more constraints. One of the most important challenge and constraint is inequality. Easterly[36] (2007) has found evidence that supports the hypothesis that high structural inequality is a large and statistically significant hindrance to develop the mechanisms by which economic development is achieved.

The type of institutional reform promoted by multilateral organizations such as the World Bank, the International Monetary Fund, or the World Trade Organizations is heavily biased toward a best-practice model. It presumes it is possible to determine a unique set of appropriate institutional arrangements ex ante, and views convergence toward those arrangements as inherently desiderable. This approach is grounded in a *first best mindset*, which presumes the primary role of institutional arrangements is to minimize transaction costs in the immediately relevant domain, without paying attention to potential interactions with institutional features elsewhere in the system. Dealing with the institutional landscape in developing economies requires a second best mindset (*Second Best Institutions*, Rodrik, 2008). Rodrik elaborates on this point using illustrations from four areas: contract enforcement, entrepreneurship, trade openness, and macroeconomic stability. For the first area, thinking in these second best terms suggests avenues of reform that may have been easily overlooked. Perhaps it is more effective to enhance relational contracting than to invest in first-class legal institutions. Perhaps early efforts at reforming formal contract enforcement institutions should focus on specific categories of firms that do not have access to relational contracting instead of targeting all firms across the board. For the second, a single minded effort to reduce entry regulations may not only fail to produce the intended effects, it may also backfire when the binding constraint is expected returns that are too small rather than inadequate competition. Appropriate reform strategy requires having a good fix on the binding constraint. For the third, a particular economic objective can be achieved through a number of different institutional designs, and sometimes it is worth doing things in an "unorthodox" way if this will serve to relax other constraints elsewhere in the system. For the last, the lesson is that institutional rigidity pays off when lack of credibility and time inconsistency are the main problems of the day, but that it can eventually become a drag on growth. No single set of best practices will serve the needs of all countries at all times. The feature stressed here is that real world reformers operate in a second best environment of their own, which means they need to keep an eye on how proposed solutions affect multiple distortions. There will be multiple ways of removing a constraint, some of which may be politically much more feasible than others. Also, the nature of the binding constraint will change over time, requiring a change in focus. Best practice institutions are noncontextual and do not take into account these complications. Insofar as they narrow rather than expand the "menu" of institutional choices available to reformers, they serve the cause badly.

4.2 *Functional* Institutions

Economies, formed by markets, require institutions because they are not self-creating, self-regulating, or self-stabilizing. Rodrik[37] considers and analyzes five types of functional institutions, in the sense of supporting a healthy, sustainable, market based system. These functional institutions are: property rights, regulatory institutions, institutions for macroeconomic stabilization, institutions for social insurance, and institutions of conflict management.

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[36] *"Inequality does cause underdevelopment: Insights from a new instrument"*
[37] *"One Economics, Many Recipes"*, 2007.

- *Property rights*

  The establishment of secure and stable property rights has been a key element in the rise of the West and the onset of modern economic growth. It stands to reason that entrepreneurs do not have the incentive to accumulate and innovate unless they have adequate *control* over the return to the assets that are thereby produced or improved. The key word is "control" rather than "ownership": formal property rights do not count for much if they do not confer control rights. Each society decides for itself the scope of allowable property rights and the acceptable restrictions on their exercise. Intellectual property rights are protected in the most advanced societies, but not in many developing countries. On the other hand, legislation restricts the ability of households and enterprises in the rich countries to do as they please with their "property" to a much greater extent than is the case in developing countries. All societies recognize that private property rights can be controlled if doing so serves a greater public purpose. It is the definition of what constitutes "greater public purpose" that varies.

- *Regulatory Institutions*

  Markets fail when participants engage in fraudulent or anticompetitive behaviour. They fail when transaction costs prevent the internalizing of technological and other nonpecuniary externalities and when incomplete information results in moral hazard and adverse selection. Economists recognize these failures and have developed the analytical tools required to think systematically about their consequences and possible remedies. Theories of the second best, imperfect competition, agency, and many others offer an almost embarrassing choice of regulatory instruments to counter market failures. Theories of political economy and public choice offer cautions against unqualified reliance on these instruments.

  In practice, every successful market economy is overseen by a set of regulatory institutions, regulating conduct in goods, services, labour, assets, and financial markets. In fact, the freer are the markets, the greater is the burden on the regulatory institutions. It is not a coincidence, Rodrik states, that the United States have the world's freest markets as well its toughest antitrust enforcement. The lesson that market freedom requires regulatory vigilance has been driven home by the experience in East Asia during the Asian financial crisis. In South Korea and Thailand, as in so many other developing countries, financial liberalization and capital account opening led to financial crises precisely because of inadequate prudential regulation and supervision. It is important to recognize that regulatory institutions may need to extend beyond the standard list covering antitrust, financial supervision, securities regulation, and a few others. This is true especially in developing countries, where market failures may be more pervasive and the requisite market regulations more extensive. The experience of South Korea and Taiwan in the 1960s and 1970s are interpreted by Rodrik in that light. The extensive subsidization and government coordination of private investment in these two economies played a crucial role in setting the stage for self-sustaining growth. It is clear that many other countries have tried and failed to replicate these institutional arrangements. However, it has to be stressed that desiderable institutional arrangements vary, not only across countries, but within countries over time.

- *Institutions for Macroeconomic Stabilization*

  Since Keynes, we have come to a better understanding of the reality that capitalist economies are not necessarily self-stabilizing. Keynes and his followers worried about shortfalls in aggregate demand and the resulting unemployment. More recent views of macroeconomic instability stress the inherent instability of financial markets and its transmission to the real economy. All advanced economies have come to acquire fiscal and monetary institutions that perform stabilizing functions, having learned the hard way about the consequences of not having them. Probably most important among these institutions is a lender of last resort – typically the central bank –, which guards against self-fulfilling banking crises.

There is a strong current within macroeconomic thought, represented in its theoretically most sophisticated version by the real business cycles (RBC) approach that disputes the possibility of effectiveness of stabilizing the macroeconomy through monetary and fiscal policies. There is also a sense in policy circles that fiscal and monetary institutions have added to macroeconomic instability, rather than reduced it, by following procyclical rather than anticyclical policies. These developments have spurred the trend toward central bank independence, and helped open a new debate on designing more robust financial institutions. Some countries have given up on a domestic lender of last resort function by making their central banks function like a currency board. The Argentine calculation was that having a central bank that can *occasionally* stabilize the economy is not worth running the risk that the central bank will *mostly* destabilize it. Perhaps Argentine history gives plenty of reason to think that this is not a bad bet. But what may work for Argentina may not work for others, like Mexico, Brazil, Turkey or Indonesia. And even in Argentina, the currency board system worked for a while. The debate over currency boards and dollarization illustrates the obvious, but occasionally neglected fact that the institutions needed by a country are not independent of that country's history.

- *Institutions for Social Insurance and Social Cohesion for Institutions*
  A modern market economy is one where change is constant and the individual-specific (idiosyncratic) risk to incomes and employment is pervasive. Modern economic growth entails a transition from a static economy to a dynamic one, where the tasks that workers perform are in constant evolution, and movement up and down in the income scale is frequent. One of the liberating effects of a dynamic market economy is that it frees individuals from their traditional entanglements (like the church, the village hierarchy). The flip side is that it uproots them from traditional support systems and risk sharing institutions. And as a consequence, the social arrangements for equalizing the distribution of resources in traditional societies lose much of their social insurance functions. And the risks that have to be insured against become much less manageable in the traditional manner as markets spread.

The expansion of publicly provided social insurance programs during the twentieth century is one of the most remarkable features of the evolution of advanced market economies. In the United States, it was the Great Depression that paved the way for the major institutional innovations in this area: Social Security, unemployment compensation, public works, public ownership, deposit insurance, and legislation favouring unions. Prior to the Great Depression, the middle classes were generally able to self-insure or buy insurance from private intermediaries. As these private forms of insurance collapsed, the middle classes threw their considerable political weight behind the extension of social insurance and the creation of what would later be called the *welfare state*. In Europe, the roots of the welfare state reached in some cases to the tail end of the nineteenth century. But the expansion of social insurance programs, particularly in the smaller economies most open to foreign trade, was a post World War II phenomenon.

Social insurance institutions not always take the form of transfer programs paid out of fiscal resources. The East Asian model, represented well by Japan, is one where social insurance is provided through a combination of enterprise practices (such as lifetime employment), sheltered and regulated sectors, and an incremental approach to liberalization and external opening. Certain aspects of Japanese society that seem inefficient to outside observers can be viewed as substitutes for the transfer programs that would otherwise have to be provided (as they are in most Europeans nations) by a welfare state. At the same time, the existing welfare states in Western Europe and the United States engender a number of economic and social costs (fiscal outlays, long-term unemployment), which have become increasingly apparent. Partly because of that, developing countries, such as those in Latin America that adopted the market-oriented model following the debt crisis of the 1980s, have not paid

sufficient attention to creating institutions of social insurance. The result has been economic insecurity and a violent reaction against the reforms. How these countries will maintain social cohesion in the face of large inequalities and volatile outcomes, both of which are being aggravated by the growing reliance on market forces, is a question without an obvious answer. But if Latin America and the other developing regions are to open a different path in social insurance than that followed by Europe or North America, they will have to develop their own vision to bridge the tension between market forces and the yearning for economic security.

Social insurance legitimises a market economy by rendering it compatible with social stability and social cohesion. In turn, the degree of social cohesion, as shown by another branch of the literature, shapes the social constraints, which are one of the primary reasons why even good politicians in countries all over the world, but especially in low income countries, often enact bad policies. Easterly, Ritzen and Woolcock[38] (2006) try to examine the strength and direction of the relationship between social structures, political institutions, and economic policies. They use a concept of social cohesion to make the general point that the extent to which people work together when crisis strikes or opportunity knocks is a key factor shaping economic performance. They define social cohesion as the nature and extent of social and economic divisions within society. These divisions represent vectors around which politically societal cleavages can develop. Socially cohesive societies are not necessarily demographically homogenous, but rather ones that have fewer potential or actual leverage points for individuals, groups, or events to expose and exacerbate social fault lines, and ones that find ways to harness the potential residing in their societal diversity. In literature, various attempts to measure social cohesion can be found. Some are direct measures, some indirect. For the first type, the most common are *Memberships Rates of Organizations and Civic Participation* and *Measure of Trust*; for the second, these are: *Income Distribution Measures* and *Ethnic Heterogeneity*.

Looking at the global recession in 1974-1994, it is instructive to examine some of the differences between those countries that overcame the storm and those that did not. In a study of a large sample of developing countries, for instance, Rodrik[39] (1999) finds evidence that weak public institutions and (ethnically and economically) divided societies responded worse to the shock than did those with high-quality institutions and united societies.

But by what mechanisms does social cohesion affect growth? Empirically, Easterly, Ritzen and Woolcock show that social cohesion determines the quality of institutions, which in turn has important impacts on growth. They work in order to take into account the endogeneity of institutions: one equation has a measure of "institutions" as dependent variable and the ethnolinguistic fractionalization and the middle-class share (measures of social cohesion) as independent variables, the other one has the output per capita growth rate as dependent variable and a proxy for "institutions" as independent variable. The measures of institutions adopted are voice and accountability, quality of bureaucracy, civil liberties, government effectiveness, freedom from graft, law and order tradition, freedom from political instability and violence, political rights, freedom from regulatory burden, rule of law, and trust. These measures are all used and therefore there are as many regressions as the number of institutional measures considered.

The indicators of social cohesion make natural instruments that allow identifying a causal link from good institutions to growth. Considering institutions, they find that all the proxies of institutional quality are positively associated with growth and all the institutional measures ("trust" works less well) are related to both of the measures of cohesion. Thus, more social cohesion leads to better institutions and better institutions in turn lead to higher growth.

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[38] *"Social Cohesion, Institutions, and Growth"*
[39] *"Where did all the growth go? External shocks, social conflicts, and growth collapse"*

While social cohesion is partly shaped by national leaders, social cohesion also depends on some exogenous historical accidents. A nation-state that has developed a common language among its citizens is more cohesive than one that is linguistically fragmented. This is not to say that linguistic homogeneity is bad or good. Linguistic homogeneity may simply be an indicator of how much a group of nationals have developed a common identity over the decades or centuries that national identify forms. Where such a common identity is lacking, opportunistic politicians can and do exploit ethnic differences to build up a power base. This should not be interpreted in the sense that nations where there are large cleavages of class and language are condemned to poor institutions and low growth. This reasoning only says that on average lack of social cohesion has been exploited by politicians to undermine institutions, which in turn has resulted in low growth. But politicians can choose to build a good "environment", unify fractionalized peoples, and defeat the average tendency to divide and rule. One potentially important lever for enhancing social cohesion, they claim, is education. Education helps provide public knowledge about the very idea of social contrasts among individuals and between individuals and the state. Schools help providing the context within which students learn the appropriate behaviour for upholding social contracts, by providing students with a range of experiences in which they learn how to negotiate with people, problems, and opportunities they might not otherwise encounter. Education helps providing an understanding of the expected consequences of breaking social contracts.

- *Institutions of Conflict Management*
  Societies differ in many aspects. Some are made up of an ethnically and linguistically homogeneous population marked by a relatively egalitarian distribution of resources. Others are characterized by deep cleavages along ethnic or income lines. These divisions, when not bridged adequately, can hamper social cooperation and prevent the undertaking of mutually beneficial projects. Social conflict is harmful both because it diverts resources from economically productive activities and because it discourages such activities by the uncertainty it generates.
  These circumstances can be thought of as instances of a failure by social factions to coordinate on outcomes that would be of mutual benefit. Healthy societies have a range of institutions that make such colossal coordination failures less likely. The rule of law, a high quality judiciary, representative political institutions, free elections, independent trade unions, social partnership, institutionalized representation of minority groups, and social insurance are examples of such institutions.
  These arrangements, Rodrik argues, function as institutions of conflict management because they warn the potential winners of social conflict that their gains will be limited, and assure the losers that they will not be expropriated. They tend to increase the incentives for social groups to cooperate by reducing the payoff to socially uncooperative strategies.

The idea that a specific type of institution is the only type that is compatible with a well functioning market economy requires scepticism. To this regard, it is necessary to understand how a developing society acquires a market-based economy with its set of functional institutions. Rodrik[40] (2007) suggests to think of the acquisition or building of a market-based economy as the adoption of a new technology that allows society to transform its primary endowments (land, raw labour, natural resources) into a larger bundle of outputs. Let this new technology be called "market economy", where the term encompasses all of the institutional complements discussed previously.
To realize what kind of a technology is a market economy, two possibilities should be considered. One possibility is that the new technology is a general purpose one, that it is codified and readily available on world markets. In this case, it can be adopted by simply importing a programme (*blueprint*) from the more advanced economies. The transition to a market economy, in this vision,

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[40] *"One Economics, Many Recipes"*

as Rodrik explains, consists of getting a "manual" *how to build a market economy* with the directions to remove price distortions, privatise enterprises, harden budget constraints, and so on.

A different possibility is that the requisite technology is highly specific to local conditions and it contains a high degree of tacitness. Specificity implies that the institutional asset available in the advanced countries may be inappropriate to the needs of the society in question and tacitness that much of the knowledge that is required is in fact not written down, leaving the blueprints highly incomplete. For these reasons, imported blueprints are useless and institutions need to be developed locally, relying on local knowledge, experience and experimentation.

These two scenarios are only theoretical: neither the *blueprint* nor the *local-knowledge* perspective captures the whole story. Even under the best possible circumstances, an imported programme requires domestic expertise for successful implementation. But this dichotomy clarifies some key issues in institution building and sheds light on important debates about institutional development. As example, Rodrik considers the debate on Chinese gradualism. One perspective claims Chinese particularism by arguing that the successes of the economy are not due to any special aspects of the Chinese transition to a market economy, but instead are due to a convergence of Chinese institutions to those in nonsocialist economies. In this view, the faster the convergence, the better the outcomes. The policy indication that follows is that China should focus not on institutional experimentation but on harmonizing its institutions with those abroad. The other perspective is that the peculiarities of the Chinese model represent solutions to particular political or informational problems for which the blueprint-style doesn't exist. Hence, an alteration in the planned economy that improves incentives at the margin, enhances efficiency in resource allocation, and leaves none of the plan beneficiaries worse off. In this view, the Chinese-style decentralization is interpreted as allowing the development of superior institutions of coordination: when economic activity requires products with matched attributes, local experimentation is a more effective way of processing and using local knowledge.

As Rodrik suggests, there are "dangers" also with experimentalism. First of all, one needs to distinguish "self conscious experimentalism" from delay and gradualism designed to serve privileged interests. The *two-steps-forward*, *one-step-backward* style that prevails in much of the former Soviet Union and sub Saharan Africa is driven not so much by a desire to build better institutions as by aversion to reform. This has to be distinguished from a programmatic effort to acquire and process *local- knowledge* to better serve local needs. Second, it is obviously costly, in terms of time and resources, to build institutions from scratch when imported programmes can serve just as well. Costs in this context have to be evaluated carefully, since experimentalism can have opportunity costs as well, insofar as it forecloses certain paths of future institutional development. Much of the legislation establishing a SEC agency for securities markets, for example, can be borrowed from those countries that have already learned how to regulate these markets the hard way. The same goes perhaps for an antitrust agency, a financial supervisory agency, a central bank, and many other governmental functions. One can always learn from the institutional arrangements prevailing elsewhere, even if they are inappropriate or cannot be transplanted.

The difficult questions, and the trade-offs between the *blueprint* and the *experimentalist* approaches, arise when the attainable objectives are not so clear. Local knowledge matters greatly in answering these questions. Blueprints, best practices, international codes and standards, harmonization can do the trick for some "technical" issues. But large-scale institutional development by and large requires a process of discovery about local needs and capabilities.

4.3 Participatory Political Institutions

The *blueprint* approach is largely *top-down* and relies on expertise on the part of technocrats and foreign advisors. The *local-knowledge* approach is, by contrast, *bottom-up* and relies on

mechanisms for eliciting and aggregating local information[41]. In principle, these mechanisms can be as diverse as the institutions that they help create. But the most reliable forms of such mechanisms, Rodrik thinks, are *participatory* political institutions, which can be thought as *metainstitutions* that aggregate local knowledge and thereby help build better institutions.

It is certainly true that nondemocratic forms of government have often succeeded admirably in the task of institution building using alternative devices. The examples of South Korea, with its bureaucratic autonomy, and China, with its decentralization and experimentalism, come to mind. Yet the cross-national evidence indicates that these are the exceptions rather than the rule. Nothing prevents authoritarian regimes from using local knowledge; the trouble is that nothing compels them to do so.

Rodrik exploits the case of Mauritius to illustrate how participatory democracy helps build better institutions that lay the foundation for sustainable economic growth. The initial conditions in Mauritius were inauspicious from a number of standpoints. The island was a monocrop economy in the early 1960s and faced a population explosion. Mauritius is also an ethnically and linguistically divided society, and its independence in 1968 was preceded by a series of riots between Muslims and Creoles. Mauritius's superior economic performance has been built on a peculiar combination of orthodox and heterodox strategies. To an important extent, the economy's success was based on the creation of an export-processing zone (EPZ) operating under free-trade principles, which enabled an export boom in garments to European markets and an accompanying investment boom at home. The island's economy has combined the export-processing zone with a domestic sector that was highly protected until the mid-1980s. Mauritius has followed a two-track strategy similar to that of China. This economic strategy was in turn supported by social and political arrangements that encouraged participation, representation, and coalition building. Rather than discouraging social organization, governments have encouraged it. The circumstances under which the Mauritian export-processing zone was set up in 1970 are instructive, and highlight the manner in which participatory political systems help design creative strategies for building locally adapted institutions. Given the small size of the home market, it was evident that Mauritius would benefit

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[41]Two contrasting worldviews coexist in institutional economics. These views are labelled as "*top down*" versus "*bottom up*". The *top down* view of institutions sees them as determined by laws written by political leaders. The *bottom up* view sees institutions instead as emerging spontaneously from the social norms, customs, traditions, beliefs, and values of individuals within a society, with the written law only formalizing what is already mainly shaped by the attitudes of individuals. The two worldviews have very different implications for institutional change. In the *top down* view, the political leadership can start with a "blank slate", tearing up the old laws and making new laws at any time. The *bottom up* view sees current institutions as heavily constrained by previous institutions. Institutional change in the *bottom up* view is always gradual, evolutionary rather than revolutionary. These two views also have very different implications for the role of economists or other "experts". In the *top down* view, there is a heavy burden on economists to determine the optimal institutions to recommend to political leaders, using theory and empirics to design new institutions from scratch. In the *bottom up* view, there is a much more specialized role for economists, who at best can recommend desirable incremental changes, subject to the constraint that institutional reforms cannot attempt too much without disrupting the functioning of the economy by much more than is justified by the benefits of the desirable change. In the *top down* view, economists recommend institutions through pure reason. In the *bottom up* view, economists express reluctance to make drastic changes to institutions whose rationale they cannot fully comprehend, showing respect for the historical evolution that has somehow yielded today's institutions. This is not to advocate the extreme view that *what is, is right*, only the more modest view that *what is, is for a reason*. The reason a particular institution has emerged will affect the consequences of attempts to change that institutions. The *top down* view also tends to go together with the view that there is one globally unique best set of institutions, toward which all societies are hopefully thought to be "developing". The development economist acts as a cross country communicator of the institutions of the advanced society to the less informed in the backward society. The *bottom up* view of institutions is more open to the possibility that societies evolve different institutions even in the long run. These two worldviews have been painted as opposing extremes, which is a caricature. The top down view is seldom advocated explicitly, but is implicit in the traditional analysis in aid agencies that sees institutions as something the central government must create to make possible the functioning of a market economy. The apparent effectiveness of top down formal institutions in rich societies may still depend on these institutions having evolved from the bottom up. If so, then attempting to introduce formal institutions into poor societies where bottom up factors are lacking will not replicate the institutional successes of rich countries. The *bottom up* view of institutions certainly undermines the optimism implied by aid agency recommendations that institutions can be rapidly changed from the top by political leaders. Even without a comprehensive theory of institutions, historical evidence, contemporary research, and common sense suggest that institutional change is gradual in the large majority of cases. Attempts at rapid top down change can even have negative consequences. If that is reality, then an agenda of gradual reform that recognizes the constraints of bottom up evolution will lead to more hopeful results than a delusory top down attempt to leap to institutional perfection. (Easterly, *Institutions: Top Down or Bottom Up?*, 2008)

from an outward-oriented strategy. But as in other developing countries, policymakers had to contend with the import-substituting industrialists, who had been supported by the restrictive commercial policies of the early 1960s prior to independence. These industrialists were naturally opposed to relaxing the trade regime. An economist following the *Washington Consensus* would have advocated across the broad liberalization, without regard to what that might do for the precarious political and social balance of the island. Instead, the Mauritian authorities chose the *two track-strategy*. The export processing zone scheme in fact provided a way around the political difficulties. The creation of this EPZ generated new opportunities of trade and of employment, without taking protection away from the import-substituting groups and from the male workers who dominated the established industries. The segmentation of labour markets early on between male and female workers, with the latter predominantly employed in the EPZ, was particularly crucial, as it prevented the expansion of the EPZ from driving wages up in the rest of the economy, thereby disadvantaging import-substituting industries. New profit opportunities were created at the margin, while leaving old opportunities undisturbed and there were no identifiable losers. This in turn paved the way for the more substantial liberalizations that took place in the mid 1980s and in the 1990s. Mauritius found its own way to economic development because it created social and political institutions that encouraged participation, negotiation, and compromise. That it did so despite inauspicious beginnings and following a path that diverged from orthodoxy says a lot about the importance of such institutions.

A famous account of another African success story is the case of Botswana, which is provided by Acemoglu, Johnson, and Robinson[42] (2003). This paper, in the form of a case study and with the help of comparative data analysis and some OLS regressions, shows what can be done with the right institutions. Despite adverse initial conditions, including minimal investment during the colonial period and high inequality, Botswana achieved development. AJR impute the success of this country to its adoption of "good" policies, which were chosen because of the presence of "good" institutions. The so called good policies promoted rapid accumulation, investment and the socially efficient exploitation of resource rents. But these policies, in turn, resulted from an underlying set of institutions, *institutions of private property*[43] that encouraged investment and economic development. They discuss the factors that could account for the distinct institutional equilibrium (compared to the other African countries) that emerged in Botswana and identify a combination of features that appear potentially relevant to understanding its institutional and economic performance. First, Botswana is very rich in natural resource wealth. Second, it had unusual pre-colonial political institutions allowing commoners (common men) to make suggestions and criticize chiefs. The institutions therefore enabled an unusual degree of participation in the political process, and placed restrictions on the political power of the elites. Third, British colonial rule was limited, which allowed the pre-colonial institutions to survive to the independence era. Fourth, upon independence, the most important rural interests were politically powerful, and it was in their economic interest to enforce property rights. Fifth, the post-independence political leaders took a number of sensible decisions. Botswana can be seen as an optimistic example of what can be done with the appropriate actions towards institutional design, even starting with unfavourable initial economic conditions. Despite being a small, agriculturally marginal, tropical nation, in a precarious geo-political situation, Botswana experienced rapid development. They think this shows what can be done with the right institutions. In Botswana's case, these institutions emerged in part as a result of a unique juxtaposition of a historical condition and political factors.

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[42] *"An African Success Story: Botswana"*

[43] Remember that Acemoglu, Johnson and Robinson define "good" institutions as corresponding to a social organization which ensures that a broad cross-section of the society has effective *property rights*. Such institutions contrast with extractive institutions, where the majority of the population faces a high risk of expropriation by the government, the ruling elite or other agents.

Neither the case of Mauritius nor the one of Botswana is related or depends on some form of development assistance. Easterly[44] defines development assistance as the combination of money, advice, and conditions provided by rich nations and international financial institutions, such as the World Bank and International Monetary Fund, which are designed to achieve economic development in poor nations. Development economists long have known the answers of how to achieve economic development. The problem is that those answers have continued changing over time.

The first problem is related to the actions that achieve economic development. The evolution of the *"conventional" Wisdom* is as follows. In 1950s through the 1970s, development (economic growth) was a simple matter of raising the rate of investment to GDP, including public investments for roads, dams, irrigation canals, schools, and electricity, as well as private investment. Private investment was usually not trusted to do enough or to do the right things, and so there was a strong role for the state to facilitate and direct investment, guided by the development experts. But the debts accumulated to finance these investments turned out not to be repayable. Middle-income countries had borrowed from commercial banks at market rates, while low-income countries had loans from official agencies at concessionals rates. Both entered into a long process of rescheduling and writing off debt that led to a lost decade for both groups of debtors. The attention shifted toward the success of the East Asian tigers (South Korea, Taiwan, Hong Kong, and Singapore), which combined export orientation and macroeconomic stability. This became the inspiration for structural adjustment packages of the IMF, the World Bank, and the "Washington Consensus"[45]. The slogan was "adjustment with growth". Loans to finance structural adjustment met the same fate in low-income countries as the earlier loans to finance investment and the loans could not be repaid. The hope the East Asian miracle could be replicated elsewhere with the same policies proved unsuccessful and the Washington Consensus gave away to second generation reforms that stressed the importance of institutions such as property rights, contract enforcement, democratic accountability, and freedom from corruption. Although each shift in the conventional wisdom was provoked by the failure of the previous conventional wisdom, the argument was usually that previous recommendations were "necessary but not sufficient". This does not mean that economists know nothing about development, or that they know nothing about the many little pieces that contribute to development. Good economic analysis of problems in finance, macroeconomics, taxation and public spending, health, agriculture, etc. has held up well. Economists are reasonably confident that some combination of free markets and good institutions has an excellent historical track record of achieving development. It is just that we don't know which specific actions contribute to free markets and good institutions; how all the little pieces fit together. That is, we don't know how to achieve development.

The second is about the so called development assistance "seen as money with advice" simply because of the fact that successful cases of development happening due to a large inflow of aid (money) and technical assistance have been hard to find.

In sum, what actions achieve development are not known. Moreover, the combination of advice and aid do not make those actions happen.

Easterly states that it doesn't necessarily follow that foreign aid should be eliminated. Once freed from the delusion that it can accomplish development, foreign aid could finance piecemeal steps aimed at accomplishing particular tasks for which there is clearly a huge demand (to reduce malaria deaths, to provide more clean water, to build and maintain roads, to provide scholarships for talented but poor students, and so on). It could seek to create more opportunities for poor individuals, rather than try to transform poor societies.

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[44]*"Was Development assistance a mistake?"*, 2007.
[45] Removing price distorsions, opening up to trade, and correcting macroeconomic imbalances.

4.3.1 But does "democracy" really generate growth?

Having listed the (good) "features" of the *participatory political* institutions, we need to look at the literature that tries to achieve broad empirical results.

Today all OECD countries are democratic, while many of the non democracies are in the poor parts of the world, for example sub-Saharan Africa and Southeast Asia.

Several papers move "in the orbit" of this form of government to understand if democracy tends to be a reliable mechanism for generating such desiderable outcome. In this connection, we contemplate the works of Rodrik (1999), Rodrik and Wacziarg (2005), Easterly, Gatti, Kurlat (2006), Rodrik (2007), Acemoglu, Johnson, Robinson and Yared (2008).

They provide evidence in support of the following assertions:

- Democracies yield long-run growth rates that are more predictable.

- Democracies produce greater short-term stability.

- Democracies handle adverse shocks much better.

- Democracies deliver better distributional outcomes.

- Democratisations have positive effects on growth.

- Mass killings are less likely at highest levels of democracy.

- There is no causal effect of income on democracy.

Starting with the *first* assertion, it is considered a sample of 90 countries during the 1970-1989 period for the relationship between a country's level of democracy and its growth rate of GDP per capita, after having controlled for initial income, education, and regional effects. Democracy is measured on a scale of 0 to 1, using the Freedom House Index of political rights and civil liberties. The slope of the relationship is positive and statistically significant, but it's not very robust. Looking at individual cases, it becomes quickly evident why this is so. Among high growth countries, Taiwan, Singapore, and Korea rank low in terms of democracy (during the period covered by the sample), and some other countries, like Botswana and Mauritius, have done equally well or even better under fairly open political regimes. Poor performances can similarly be found at either end of the democracy spectrum: South Africa and Mozambique have done poorly under authoritarian regimes, Papua New Guinea and Jamaica under relatively democratic ones. Hence mean long run growth rates tend not to depend systematically on political regime type. Rodrik then wonders if the cross-national variance in long run growth performance is smaller under democracies than it is under autocracies. He divides the country sample into two roughly equal sized groups, calling those with values of the democracy index less than 0.5 "autocracies" and those with values greater or equal to 0.5 "democracies". Looking at the coefficients of variation of long run growth rates, he finds that they are higher for autocracies than democracies. Since countries with authoritarian regimes tend to have lower incomes, this result reflects the greater randomness in the long run growth rates of poor countries[46].

For the *second* assertion, the relationship between regime type and volatility in short run economic performance, Rodrik[47] focuses on three national accounts aggregates: real GDP, real consumption and investment. Volatility is measured by calculating the standard deviation of annual growth rates

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[46] Rodrik, *"One Economics, Many Recipes"*, 2007.
[47] *"One Economics, Many Recipes"*, 2007.

of the relevant aggregate over the 1960-1989 period. Then each measure of volatility is regressed on a number of independent variables, including the measure of democracy[48]. The estimated coefficient on the measure of democracy is negative and statistically significant in all cases. A movement from pure autocracy to pure democracy is associated with reductions in the standard deviations of growth rates of GDP, consumption, and investment. In particular, long- standing democracies such as India, Costa Rica, Malta, and Mauritius have experienced significantly less volatility than countries like Syria, Chile, or Iran, even after controlling for country size and external shocks. Moreover, causality seems to run directly from regime type to volatility. Therefore, the evidence suggests that democracy is conducive to lower volatility in economic performance.

Considering the *third* assertion, the question Rodrik poses is whether democratic and participatory institutions have helped adjustments to shocks[49] of external origin. Rodrik[50] (1999) explores how social cleavages and domestic institutions of conflict management mediate the effects of shocks on economic performance and shows that the adjustment to shocks will tend to be worse in countries with deep latent social conflicts and with poor institutions of conflict management. Consequently, such countries will experience larger declines in growth rates following shocks. These ideas are tested by regressing the change in growth on indicators of latent conflict and on proxies for institutions of conflict management. The evidence shows that there is a systematic relationship between ethnic cleavages and the growth decline: countries with greater ethnic and linguistic fragmentation experienced larger declines in economic growth. Indeed, Easterly and Levine[51] had already shown the economic importance of ethnic diversity by demonstrating that it helps account for "Africa's growth tragedy". In fact, Africa's poor growth is associated with low schooling, political instability, underdeveloped financial systems, distorted foreign exchange markets, high government deficits, and insufficient infrastructure. High ethnic diversity is closely associated with low schooling, underdeveloped financial systems, distorted foreign exchange markets, and insufficient infrastructure.

Therefore, the interest in democratic institutions derives from the idea that such institutions provide ways of regulating and managing social conflicts through participatory means and the rule of law, and hence dissipate the adverse consequences of external shocks. In empirical terms, to test this hypothesis, it is necessary to see whether the measure of democracy used, is related to changes in growth rates subsequent to the shocks. The relationship is highly significant: countries with greater political freedoms during the 1970s experienced lower declines in economic growth when their trend growth rate changed. It is possible to see that the hardest hit countries tend to be those with few political liberties, such as Syria, Algeria, Panama, and Gabon. Countries with open political regimes, such as Costa Rica, Botswana, Barbados, and India, did much better. These results are perhaps surprising in view of the presumption that it takes strong, autonomous governments to undertake the policy adjustments required in the face of diversity. They are less surprising from the perspective that adjustment to shocks requires managing social conflicts, and democratic institutions are useful institutions of conflict management. Rodrik also investigates the relationship between declines in growth and three other aspects of political regime: the degree of institutional (*de jure*) independence of the executive, the degree of operational (*de facto*) independence of the executive, and the degree to which nonelites can access political institutions. These three variables come from the Polity III data. These three indicators are correlated with the Freedom House measure of democracy: independence of the executive tends to be lower in democracies, and avenues of nonelite participation are larger. But there are interesting exceptions. The United States ranks highest not only on the democracy index, but also in the degree of institutional (*de jure*) independence of the executive. Other democracies with relatively autonomous executives (*de jure*)

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[48] The other independent variables are log per capita GDP, log population, exposure to external risk and dummies for Latin America, East Asia, sub-Saharan Africa, and OECD.

[49] The shocks considered are those happened from the middle to late 1970s.

[50] *"Where did all the growth go? External shocks, social conflicts, and growth collapses"*

[51] *"Africa's Growth Tragedy: Policies and Ethnic Divisions"*, 1997.

are France, Canada, and Costa Rica. By contrast, South Africa is coded as having had (during the 1970s) little democracy and little executive autonomy. A further question in the literature is whether an insulated and autonomous executive is necessary for the implementation of economic reforms. The results show that more significant growth declines are associated with greater institutional and operational independence of the executive and lower levels of political access by nonelites. This means that political regimes with lower executive autonomy and more participatory institutions handle exogenous shocks better. This might be part of the explanation for why democracies experience less economic instability over the long run (as seen before). Recent experience in East Asia strongly validates these results. South Korea and Thailand, with more open and participatory political regimes, handled the Asian financial crisis significantly better than Indonesia (Rodrik 1999). Democracy helped the first two countries manage the crisis for at least three reasons. First, it facilitated a smooth transfer of power from a set of politicians to a new group of government leaders. Second, democracy imposed mechanisms of participation, consultation, and bargaining, enabling policy makers to create the consensus needed to undertake the necessary policy adjustments decisively. Third, because democracy provides for institutionalized mechanisms of "voice", the Korean and Thai institutions obviated the need for riots, protests, and other kinds of disruptive actions by affected groups.

Moving to the *fourth* assertion, democracy makes an important difference to the distribution of the enterprise surplus in the manufacturing sectors of national economies.

Rodrik[52] wonders if political institutions contribute to the determination of the level of wages and finds that it is so. Controlling for labour productivity, income levels, and other possible determinants, he finds there is a robust and significant association between the extent of democratic rights in a country and the level of wages received by workers in manufactures. The association exists both across countries and over time within countries. Countries with greater political participation than would have been predicted from their income levels, such as India, Israel, Malta, and Cyprus, also have correspondingly higher wages relative to productivity. Some countries at the other end of the spectrum (with lower values for the democracy index and low wages) are Syria, Saudi Arabia, Turkey, and Mexico. Moving from Mexico's level of democracy to that of the United States is associated with an increase in wages of about 30 percent. In particular, the relationship is causal; that is, changes in political regime cause a redistribution of the enterprise surplus toward workers. One problem is that a prolabour distribution in manufacturing can go hand in hand with a more regressive distribution overall. This could be the case where prolabour policies create a sort of labour aristocracy to the detriment of the rural sector worker. But the relationship between democracy and *economy-wide* inequality (measured by the Gini coefficient) is negative. More participatory regimes produce greater equality not only within the modern (manufacturing) sector, but throughout the economy. And they do so without cost to economic growth and producing greater stability (Rodrik 2007).

Looking at the *fifth* statement, Rodrik and Wacziarg[53], referring to a body of literature that thinks democratization in developing countries produces political instability, ethnic conflict and poor economic outcomes, show that the data do not support this view. They use annual frequency data to examine within-country effects of democratization on economic growth and include time and country fixed effects to distinguish the impact of democratization per se from other determinants. Their analysis reveals that major democratic transitions have a positive effect on economic growth in the short run. This is especially true for the poorest countries of the world and those that are marked by sharp ethnic divisions. Democratizations tend to follow periods of low growth rather than precede them. Moreover, democratic transitions are associated with a decline in growth volatility.

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[52] *"Democracies Pay Higher Wages"*, 1999.
[53] *"Do Democratic Transitions Produce Bad Economic Outcomes?"*, 2005.

For the *sixth*, Easterly, Gatti, Kurlat[54] study the relationship between the occurrence and magnitude of episodes of mass killing and the levels of development and democracy across countries and over time, looking at the determinants of mass killings of unarmed civilians in the period from 1820 to 1998. The contribution of the paper is twofold. First, using historical records and sources, they construct a new dataset listing occurrence and magnitude of episodes of mass killing by the state over the XIXth and XXth century. Then, they analyze the association between the probability that an episode of mass killing occurs and the levels of development and democracy[55] of a country. Their main independent variables are average per capita GDP over the decade and the level of democracy. Overall, they find that episodes of mass killing are more likely at intermediate levels of income and less frequent at the highest levels of democracy.

Finally, Acemoglu, Johnson, Robinson and Yared[56], revisit the relationship between income per capita (log GDP per capita) and democracy[57] and focus on the causal effect of income on democracy. In this paper they argue that, although income and democracy are positively correlated, there is no evidence of a causal effect of the first on democracy[58]. Regressions that include country fixed effects and/or instrumental variable regressions show no evidence of a causal effect of income on democracy over the postwar era or the past 100 years. These results shed considerable doubt on the conventional wisdom that income per capita is a key determinant of democracy and that a general increase in income per capita brings improvements in institutions. At the same time, these results raise the question of why there is a positive cross-country correlation between income and democracy today. This is, they say, likely to be because the political and economic development paths are interwoven and are jointly affected by various factors; the development path a society embarks upon is partly influenced by its experience during certain critical junctures which might include the early stages of colonization for former colonies, the aftermath of independence or the founding of a nation, the epoch of collapse of feudalism for Western European nations, the age of industrialization and the periods of significant ideological shocks such as the Reformation, the Enlightment, or the rise of Islam. Some countries appear to have embarked upon a development path associated with democracy and economic growth, while others pursued a path based on dictatorship, repression, and more limited growth. Consistent with this, they have shown that historical sources of variation in development paths are responsible for much of the statistical association between long-run economic and political changes.

4.4 Political and Economic Institutions: attempts to distinguish

A deeper, closer, examination of the literature reveals that both political and economic institutions are called *generically* "institutions", without a formal distinction. In the foregone section, Rodrik and, Acemoglu, Johnson and Robinson, see a particular set of political institutions as the cause of development in Mauritius and Botswana. However, from a theoretical point of view, the relationship between the two has not been set. Moreover, the endogeneity of institutions has not been completely explained.

Just two works take some steps forward.

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[54] *"Development, democracy, and mass killings"*, 2006.

[55] The democracy index ranges from 1 to 10. The scale is constructed additively, using the following variables: PAR-COMP (competitiveness of partecipation: extent to which non-elites are able to access institutional structures for political expression); XRCOMP (Executive recruitment competition: extent to which executives are chosen through competitive elections); XROPEN (Executive recruitment openness: opportunity for non elites to attain executive office); XCONST (Executive constraints: operational independence of chief executive). (source POLITY project).

[56] *"Income and Democracy"*, 2008.

[57] Democracy is measured by the Freedom House Political Rights Index and the Polity Composite Democracy Index

[58] Their measures of democracy is the Freedom House Political Rights Index and the Polity Democracy and Autocracy Index.

A basic framework for thinking about why economic institutions differ across countries is outlined by Acemoglu, Johnson and Robinson[59]. Their hypothesis is that economic institutions are determined as collective choices of the society, for their economic consequences. Because all individuals and groups don't prefer the same set of economic institutions, as they lead to different distributions of resources, there will be a conflict of interest among various groups over the choice of economic institutions. Whichever group has more political power is likely to secure the set of economic institutions it prefers. They argue that distribution of political power in society is also endogenous and distinguish between two components of political power, namely *de jure* and *de facto* political power. *De jure* political power refers to power that originates from political institutions[60] in society; political institutions, similarly to economic institutions, determine the constraints on and the incentives of the key actors, but this time in the political sphere. *De facto* political power is the power a group of individuals has, even if it is not allocated by political institutions. It has two sources: it depends on the ability of the group to solve its collective action problem and on its economic resources.

Political institutions determine the distribution of the jure political power, which in turn affects the choice of economic institutions[61]. Political institutions, though slow changing, are also endogenous. Since political institutions are seen as collective choices too, the distribution of political power in society is the key determinant of their evolution. This creates a tendency for persistence: political institutions allocate de jure political power, and those who hold political power influence the evolution of political institutions, and they will opt to maintain the political institutions that give them political power.

Working in a historical perspective, in *The Rise of Europe: Atlantic Trade, Institutional Change, and Economic Growth* (2005) they provide and document an interesting fact related to the process of European growth, that shows the working of this framework. Between 1500 and 1850, the growth of nations with access to the Atlantic, and the growth of Atlantic ports, account for most of the differential growth of Western Europe relative to Eastern Europe. Their hypothesis is that Atlantic trade generated large profits for commercial interests in favour of institutional change in countries that met two crucial preconditions: easy access to the Atlantic and nonabsolutist initial institutions. These profits moved the balance of political power away from the monarchy and induced significant reforms in political institutions, which introduced more secure property rights and paved the way for further innovations in economic institutions.

They construct also a model[62] to study the implications of changes in political institutions for economic institutions and economic outcomes. The main idea is that equilibrium economic institutions are a result of the exercise of de jure and de facto political power. A change in political institutions alters the distribution of de jure political power, but the elite can intensify their investments in de facto political power to partially or fully offset their loss of de jure power. Thus equilibrium changes in political institutions may have little or no effect on the equilibrium distribution of economic institutions.[63]

Aghion, Alesina and Trebbi[64] (2004) also make an explicit distinction between political and economic institutions and develop a paper whose emphasis is only on the endogeneity of political institutions. They look at the institutional design, arguing that a fundamental aspect of that is how much society chooses to delegate unchecked power to its leaders. If, once elected, a leader cannot be restrained, they say, society runs the risk of a tyranny of the majority; if a leader faces too many

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[59] *"Institutions as the Fundamental Cause of Long-Run Growth"*, 2004.

[60] Examples of political institutions include the form of government, democracy vs. dictatorship, and the extent of constraints on politicians and political elites.

[61] This framework, with political institutions influencing economic institutions, which then determine economic outcomes, introduces the important concept of a *hierarchy of institutions*.

[62] *"Persistence of Power, Elites and Institutions"*, 2007.

[63] They focus on symmetric Markov Perfect Equilibria and use the optimization language.

[64] *"Endogenous Political Institutions"*

ex post checks and balances, legislative action is often blocked. They provide a model[65] of the trade-off between delegation of power and ex post control of politicians: they model delegation of power or "insulation" of leaders as the share of votes that can block the leader ex post when he tries to implement legislation. A Constitution that establishes a high share of votes needed to block implies that leaders are more insulated. The optimal amount of insulation depends on politico-economic features such as the size of the aggregate improvement from reform, the aggregate uncertainties over the outcome from reform, the degree of polarization of society, the individual degree of risk aversion, the availability and efficiency of fiscal transfers, and the degree of protection of property rights against expropriation. They discuss how the optimal choice of insulation would or would not be adopted in a system where the choice was not made completely behind a veil of ignorance or only a fraction of the population had a voice in the choice of institutions. One especially interesting case is a situation in which those who choose a Constitution are also those who know who will control political office after the Constitution is ratified. In this case, what is optimal for them may not be optimal for society as a whole. In particular, in a fragmented society, while it would be optimal to choose less insulation to guarantee a "voice" to all groups, in practice an especially powerful group may take a hold of the constitutional process and imposes its rule. Finally, they test their analytical model by means of a cross-country empirical analysis. They focus on the relationship between polarization (for which they use two indexes of socio-ethnic fractionalisation) and various measures of insulation, that is, whether the regime is autocratic rather than democratic, whether it is more presidential, or whether the voting system involves majority rules instead of proportional rules. From the regressions shown, there is evidence that various indices of insulations are positively correlated with measure of fractionalisation and polarization. More polarized societies tend to have more "insulated" rulers.

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[65] They consider an economy populated by a continuum of individuals. Members of this polity will differ ex post on how much they benefit from policy actions (reforms) which may be implemented. If no reforms is implemented, all individuals obtain the same income.

5 Conclusion and Extensions

Exploring the literature has certainly been exciting and at the same time difficult. It has been exciting to discover how much has been said and how much remains to be done; difficult, to put all these pieces together and find a frame for them. Aware of the "dangerous" task, I have decided to organise and synthesize all the contributions in order to make clear the paths the economic thinking has undertaken and let the literature speak. My voice could mingle with the single results and puzzle.

But now, it's time for me to speak.

What do we know about the link between institutions and growth?

From section 3, we have learned that property rights institutions are very important, more important than contracting institutions, and that there are many attempts to explain the incomes differences between countries: someone thinks of the colonial experiment, someone thinks of a country's legal origins and some other thinks of human capital as engine to "right" institutions. The colonial experiment is very suggestive, it goes back in history, and is able to show the primacy of institutions (vs. geography) as unique fundamental cause of income differences; however, it is not plain how the Europeans' choices have survived and the behaviour of the pattern of institutions started with those choices. The study of single cases could find the answer: other forces, maybe pointed by the context, can be used as independent variables and panel models could show the incremental change of institutions.

Also the historical origins of a country's laws are correlated with economic outcomes. These studies have considered the effects of legal origins on "rules and regulations" (called "institutions"), which in turn have impact on economic outcomes. Legal origins influence procedural formalism, judicial independence, regulation of entry, government ownership of the media, labour laws, conscription, company law and securities law, bankruptcy law, government ownership of banks. And these "institutions" have effects on the economic outcomes they might influence. But the way from legal origins to economic outcomes, undoubtedly powerful, seems to miss something. What about low incomes, English legal origins, countries like Sudan, Pakistan, Kenya, Somalia? Botswana is also an English legal origins country but, as Acemoglu, Johnson and Robinson clearly state, what determined its "success story" was a particular set of initial conditions, namely some political institutions. Hence, though legal origins may affect the regulation environment of a country and, then, some economic outcomes, they don't account for the whole story. The colonial experiment is more coherent and the case of Botswana suggests that we have to look at the interaction of colonialism with pre-colonial institutions to understand a country's path. What we need is an intimate understanding of the individual characteristics of the society.

The view that focuses on the role of human capital, the last attempt, says that the claim "institutions cause economic growth" is non-existent. However, their reasoning is not completely stringent and at the end the result they achieve is another one, namely that both human capital and political institutions affect the evolution of the political features. After showing a relationship between economic growth and assessments of institutional quality (constraints on the executive, risk of expropriation, government effectiveness and autocracy) over a period, they study decade by decade the relationship between economic growth, initial period education and initial period constraints on executive, concluding that the initial constraints have no predictive power for subsequent economic growth. But, unless their objective is explicitly to refute, it is not clear why initial executive constraints should affect directly subsequent economic performance. This variable is a political variable and even if often used as a proxy for property rights institutions, it shouldn't be forgotten what it means. These constraints are referred to political power, and political power affects a country's policy design. Couldn't it be that where these constraints are high, where there is democracy, there is a higher level of redistribution and people are free? From this perspective, it is straightforward that people in a dictatorial system are not free and poorly educated. Therefore, the

timing of the analysis should be different; constraints on the executive at time t, influence the level of human capital from t+1, and then economic growth. Probably, the negative sign for the coefficient of the initial constraints on executive variable may simply reflect a problem of collinearity.

The others papers highlight the different ways human capital is important for growth but they don't explore how and which institutions affects human capital. Their interaction deserves future attention.

Section 4 tells about the role of reforms, of policy making, and the role of different types of institutions. Although this branch of literature moves some step forward in order to put things in the right place, some extensions are needed. From this section, we understand that reforms are important, their impact is highly dependent on circumstances, that they should start from discovering the distortions, which deserve the most attention from policy makers, and end strengthening the institutional infrastructure to avoid future problems. We can read this picture saying that a country's economic performance is the result of the combination of market, policy and institutions. In this perspective, the institutions listed by Rodrik, the ones I called functional, and others like banking institutions, enterprise institutions, competition institutions, should be seen as economic institutions, that is, more close to the economy. But we have seen that to build locally adapted, economic institutions, there must be a participatory political system: a particular political system may help build better economic institutions and then these affect the economic performance. Acemoglu, Johnson and Robinson, and Alesina et al. have tried to explain this. The AJR's attempt is more complete, the other one focusing only on political institutions doesn't explain the effect on economic institutions.

From this review, a few suggestions for future research stand out.

First, reading the different contributions of the literature, the most striking thing is that "institutions" can take on different meanings: they can be alternatively political assessments, economic assessments and policy assessments. When we talk about institutions, we should explain which dimension we are thinking of. Otherwise the claim "institutions affect or don't affect growth" means nothing. Because it is very difficult to draw the line, more work should be devoted to improve the classification of the relevant measures and the definition of the part of the institutional environment under study.

Second, a theory of institutions, a coherent and agreed upon way of thinking, that organises the concepts arisen is needed.

Third, the problem of the endogeneity of institutions should be read differently. Empirically, the economic institutions have been instrumented by various correlates of the European influence: trade shares, settler mortality, language, geography or climate. These studies are cross-sectional and the instruments are all time invariant. More emphasis should be placed upon panel models and different instruments should be found. For instance, political instruments could be used to examine the hierarchy of institutions hypothesis.

Fourth, a fundamental direction for future research is to go back in history and find experiments of radical change of institutions in order to study the subsequent patterns.

Fifth, a better understanding of the role of economic policy and its relationship with the political system is needed. This should be pursued empirically and conceptually.

Sixth, a "new" direction could be to discover which institutions can enhance human development.

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