SOCIO-ECONOMIC DETERMINANTS OF DEVELOPMENT IN WORLD ECONOMY: 1820–2005

BILDIRICI, Melike*
SUNAL, Seckin

Abstract

In this multi-country study, sample countries selected from each segment of development levels areanalysed in terms of demography, urbanization, economic policy, geographical location, natural resources, human capital, income distribution and several other factors. In a former study by the authors, that has been published in this journal, OECD countries, EU countries, transition countries, Asian countries and Middle-East countries had been analysed and compared in terms of their development paths and factors that determined their development levels such as real wages, foreign capital, trade, deficits and other economic factors. However, in this study, highest determinance is attributed to political stability. Sample countries are grouped according to their political stability index values. The sample is divided into three groups, the first of which is composed of developed and politically stable countries. The second group is formed by developing countries that experience political instability. The third group is made up of backward countries that suffer severe political instability and poverty. A cross sectional comparison is made among individual and groups of sample countries in terms of variables mentioned above. In application part, country groups are analysed by various time series and panel data methods. The data used in applications cover the period 1985 - 2004. Each country in the sample is analysed for co-integrating vectors in well known time series methodology. Consequently, panel unit-root and panel co-integration results are given. Finally, the table of panel ECM analysis is laid down in the part spared for application and empirical results.

JEL Classification: O10, O11, O47, C22, F01, F02, I30,
Key words: Growth, Development, Stability, Political Stability, Political Stability Index, Human Development Index, Panel Co-integration, Panel Error Correction Models

1. Introduction

In former studies by the author published in this journal, it had been stated that a one-for-all recipe for development could not be possible. However this did not mean that there are some factors that are musts for development and they should be existent in every region, country, etc. that seeks for growth and development. A certain amount of capital accumulation, a consistent level of technology spreading around interrelated sectors and a legal and political infrastructure for production and industry are some of these.

In recent economic history of the world economy, it is frequently observed that many instances that do not seem to be in accordance with the trivial recipe for a stable economy (free market economy, parliamentary democracy, rule of law and etc.) happen to harbour a great potential of development that soon or late realizes while in some other instances countries that have these conditions fulfilled do not manage to exhibit an expected leap forward. However, there still exists a common characteristic among these countries. Though not ruled by democracy and law, many countries manage to develop by maintaining a politically stable economy and keeping labor costs low with the help of repressive governments or even monarchies. Keeping the country politically stable in either way (democratically or by repression) increases the confidence of manufacturers in undertaking new investment schemes and eventually increasing the productive potential

* Melike Bilidirici, Dr Associate Professor and Seckin Sunal, Yildiz Technical University, Department of Economics, Istanbul, Turkey. Email: bildiri@yildiz.edu.tr

and provides tax efficiency. Increased political stability lowers the cost of public finance and this eliminates crowding out and removes the inflationary pressures on the overall economy.

a) Political Stability and Instability: There are numerous factors that effected negative growth performances. However we claim that political stability and/or instability is an important factor. Common point in most of the countries named as "growth disasters" is socio-political instability while the common point in "growth miracles" like Taiwan, Hong Kong, South Korea, Japan and Singapore is relatively high socio-economic stability. Reasons of success and failure can be analysed by separate categories but the common term is the high political instability due to wars, civil wars, terror, corruption, and frequent government changes. High or hyper inflation emerging with political instability brings high unemployment, increase in unhappiness indexes, budget deficits, inequality in income distribution, high government spending, ineffectiveness of tax structure and vicious cycles with these factors.

Terror, internal conflicts, civil wars generate different effects than their conventional effects. Following the WW1 and WW2, growth was increase as gained pace. However, Iran-Iraq and Afghanistan-Pakistan wars do not generate similar effects because of religious and ethnic conflicts in governance, economic and political structures of these countries. Terror, internal conflict, civil wars and wars are major determinants of political instability. However, terror, internal conflict and civil war create different effects than those of war. As in WW I and II, generally growth increases after wars. But terror which harbours ethnical, political and religious conflicts and civil war prevent development by creating political instability. Besides, they cause high inflation, budget deficits and unemployment. High interest rates cause borrowing realized at higher interest rates and decrease the share of tax revenues in GDP. Foreign capital inflows decrease while hot money inflows increase, real investments decrease and extra incomes increase.

Some of the studies, which emphasize the inverse relation between political instability and economic growth concentrate on property rights. These models assert that ambiguity about the future affects the rate of economic growth through investment decisions. Barro and Sala-i Martin (1995) discuss the general state of ambiguity in sustaining output ownership. Swensson (1998) researched the link between individual incentives, protection of property rights and political instability. Stevens (2000) developed the formal model of investment under ambiguity.He asserts that ambiguity arises because of risk and concentrates on properties on foreign investments. Aron (2000) suggested an intuitive formulation for development, quality of foundations and political instability in developing countries. Eren and Bildirici (2000) found out that political instability reversely effects economic development by increasing budget deficit and domestic debt. In Berthélemy, et. al. (2002) paper for 22 African countries over the 5 sub-regions of Africa, political instability has resulted in a reaction from the authorities in the case of Côte d'Ivoire during 1996, for Zimbabwe in 1998 and for Egypt and Chad the 1996-2001 periods. Nigeria and Zimbabwe displays a situation in which the hardening of the regime clearly explains the occurrence of political troubles. Political instability has a direct negative impact on the accumulation of private investment that is highly sensitive to the institutional environment and the performance of the economy. Political instability affects growth by hindering physical capital accumulation. It may also affect growth indirectly through the returns of investment, or directly through total factor productivity (Berthélemy et. Al. 2002; pp. 15-18). Some studies focus on public expenditures, political

instability and development issues. It is discussed that political instability distorted tax equality and effectiveness. Other studies on public expenditures concentrate on the structure and flexibility of tax revenues. Generally studies on Argentina, Brazil, Uruguay, and Chile find a close relation between political events and inflation (Agénor and Montiel ;1996, p.36).

Difficulties in maintaining stability in management of the macro economy increase in cases of polarized political parties, strong labor movements, strong tendencies of governments towards redistribution.

For some emerging and underdeveloped countries, there are three important issues in the context of political instability. The three important points are nationalist-based separatism, religion anti-secularism, and the drive to control markets. But there are other problems. Massive power has been concentrated in presidential hands. The elections are rugged and delayed. There is fear of terrorism, war, civil war, organized crime, migration, and the loss of political control. It lacked specialized forces and their judicial systems were not sufficiently removed from criminals. The conflicts dramatized to all the states disorder, lawlessness. A syndrome of lawlessness involving political opposition, radical religious doctrine and illegal activities, is drawing the countries of the region into common peril.

Among these problems, issues about minorities have a determinant role on development performances of countries as well as in a political instability context. It is a more frequent problem in emerging countries and it is generally manipulated by external powers. It is observed that such conflicts concentrate in countries with high natural resources and a potential to catch up with developed countries. In countries with a heterogeneous demographic structure, ethnic and religious conflicts effect development in a negative way while such conflicts are very little or non existent in countries with homogeneous demographic structures. This structure is also important for the performance of transition economies. Development performances of countries with homogeneous demographic structure are higher. When countries that could not complete the development or transition processes are analysed, this structure can easily be observed. Among the transition countries, countries with homogeneous structures have overcome transition problems easier.

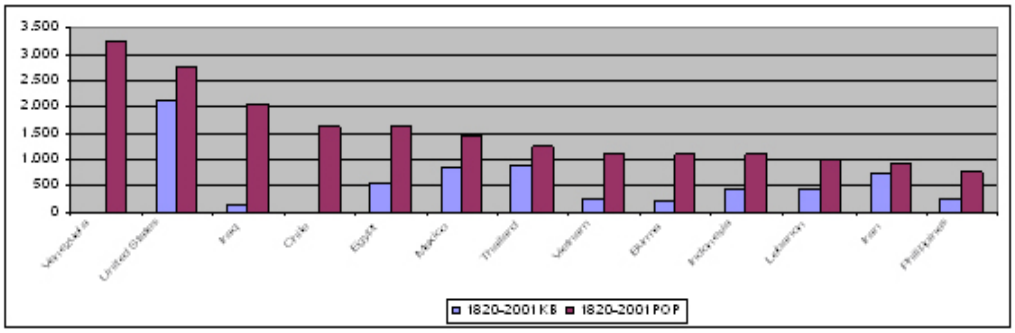
Today in Arabic world, there is an extension of the conflicts of civil war and war. These countries surrounded as it is by instability in Iraq, Palestinian, and Afghanistan and to the north in the Caucasus, and with nuclear-armed Pakistan and India to the east and nuclear-armed Israel to the west. The instabilities in countries was made the existence of nuclear weapons in Israel, India and Pakistan, and of the challenges posed by US, Israeli-Palestinian conflict, the Persian Gulf, movement of the Taliban in Afghanistan. At the same time, it is clear that military strength alone won't guarantee security of countries. (Boutwell; 2003).

In the study, among all the factors, political instability is found out to be the most important criteria that could effect economic development.Increasing political instability brings inflation, domestic and foreign borrowing with high interest rate, departing from effectiveness in tax structure and decreases in direct investments.Socio-politic instability caused by terror, internal conflicts and civil wars give rise to low or unstable growth rates, budget deficits, high rates of interest and decreasing rate of tax revenue/expenditures.

b) Population: Empirical studies that tested the relation between demographic change and economic growth study the relation between age composition and growth performances of countries. Recent empirical studies show that there is a positive relation between aging of the population and economic growth. One of the important findings about demography in the literature is that there is a negative relation between fertility rate and growth. This result verifies the assertion in neoclassical growth models that "the increase in fertility rates causes the investment in the economy be used for providing capital for the new workers rather than increasing the per capita capital amount".

If rate of population increase is considered instead of fertility rate, the relation between development and population performance in 1820-2001 can be noticed. Population increase from 1820 to 2001 is calculated as %. As can be seen in figure 1, rate of increase in per capita national income for countries with high population growth rate is low. It is also observed that countries with low rates of population increase are countries that grow fast.

Figure 1. Population increase and growth rate of per capita national income



When the OECD countries are analysed, Turkey is the country that experienced highest population growth. Even though the population growth ratio of USA seems to be greater, what increases the USA population is migration while the resident population increases in Turkey. Since the increase in USA's population is generated by migration, the country gains significant numbers of brains and this increases its human capital accumulation and efficiency of labor. When a comparison is made for the years 1960 and 2002, it is observed that Turkey's population has increased by 200% while the population increase in Spain is 30% and in Greece and Portugal it is 40%.Insufficiency of education is doubtlessly an important factor in this increase, having into account the important moderation effect of the average educational level on average fertility as it is shown in Guisan, Aguayo and Exposito (2001) and other studies. The figure gives the annual rate of increase.The one of countries with the highest average rate of growth of population is Turkey. Although the rate of increase in Israel is high, unlike Turkey, it does not have a population problem.

We calculated the hypothetical per GDP of countries under scenario that countries had a population growth rate equal to that of England's in the period 1950–2002, and show the results in table 1. The table depicts that developed countries like USA, Canada, Australia are supposed to have much greater per capita income if they had a population growth rate as low as that of England or they had less migration into the country. However these countries are ones that attracted migration of qualified labor force. Thus,

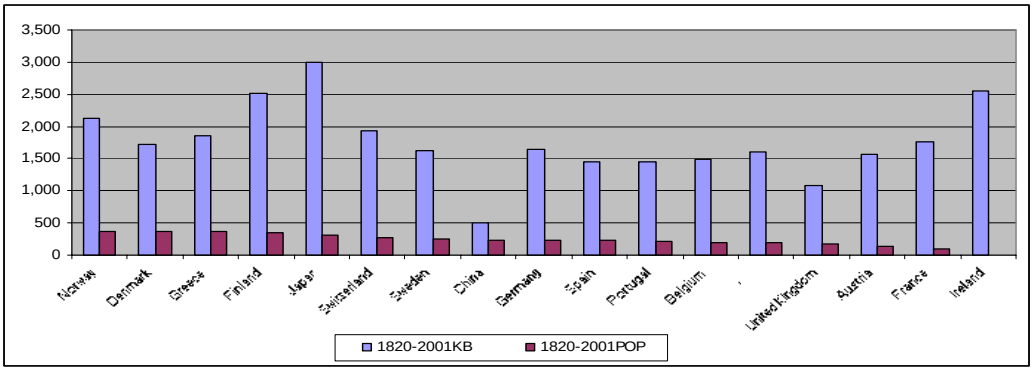
their current per capita income levels are increased and maintained with the contribution of this migrated qualified labor force. From the table it can be concluded that the least difference is observed in Africa. The reason is high mortality rates that dampen the high fertility rate observed in the entire continent.

Table 1. Difference between calculated and real per capita incomes for selected countries. (1950–2002)

Total 29 Western Europe	1,394	Costa Rica	16,109	Gambia	3,053
Australia	20,851	Total 15 Latin American countries	5,599	Ghana	2,784
Canada	19,639	Total 24 small Caribbean countries	3,771	Guinea	1,064
United States	15,683	Total Latin America	9,705	Kenya	3,245
Total Western Offshoots	16,334	Total 26 East Asian countries	2,246	Lesotho	1,923
USSR	1,612	Bahrain	19,087	Liberia	1,899
Armenia	4,997	Iran	11,814	Libya	8,101
Azerbaijan	3,437	Turkey	9,808	Madagascar	1,378
Kazakhstan	6,191	Yemen	5,593	Malawi	1,547
Kyrgyzstan	2,989	Total 15 West Asian countries	13,134	Mali	1,231
Lithuania	1,228	Total Asia	4,649	Mauritania	1,320
Moldova	1,314	Algeria	5,561	Mozambique	2,074
Russian Federation	1,034	Benin	3,105	Namibia	8,963
Tajikistan	2,824	Botswana	9,392	Niger	1,324
Turkmenistan	5,878	Burkina Faso	1,221	Nigeria	2,700
Uzbekistan	8,180	Cameroon	1,814	Reunion	6,948
Total Former USSR	1,612	Cape Verde	2,370	Rwanda	1,371
Argentina	6,866	Central African Rep.	872	São Tomé & Principe	1,612
Brazil	9,881	Chad	792	Senegal	3,180
Chile	10,990	Comoro Islands	1,353	Somalia	1,329
Colombia	9,682	Congo	4,715	Sudan	2,778
Mexico	14,057	Côte d'Ivoire	4,844	Swaziland	6,308
Peru	7,272	Djibouti	5,618	Togo	1,539
Uruguay	2,094	Egypt	5,472	Tunisia	6,130
Venezuela	25,370	Equatorial Guinea	10,385	Uganda	2,145
Total 8 Latin American countries	10,835	Eritrea & Ethiopia	1,079	Zambia	1,552
Bolivia	3,846	Gabon	5,886	Zimbabwe	3,016

Note: The difference between real per capita GDP and hypothetical per capita GDP is calculated from Madison (2002; 2001). Hypothetical per capita GDP is calculated according to the population of countries under the scenario that they had a population growth rate equal to that of England's in the period 1950–2002. Their current GDP's (GDP's in 2002) are divided into these calculated populations. The table depicts the difference between calculated and real per capita GDP's.

Figure 2. Rates of growth of per capita national income and population in developed countries



Besides, there are still some countries that would have a higher per capita GDP if they had a lower rate of population Growth. Among these are Namibia, Botswana, Tunisia and Libya. The reason that there is not much difference in Western Europe's calculated and real income is its similar demographic structure to that of England. However some countries reflect significant differences. For example the differences between real and calculated GDP's for Latin American Countries are massive. Especially Venezuella and Mexico are obvious in this sense. When we move on to Eastern Europe and Middle-East, we again see countries that have important differences in calculated and real GDP's. Of these are Iran, Turkey and Uzbekistan.

Besides population, life expectancy at birth is also important. Life expectancy affects the rates of saving and investment. When a comparison is made among OECD countries, it will be seen that Turkey has the lowest rate and it has a very low life expectancy. All along 1960-2002, life expectancy in Turkey, Japan and Portugal was lower than other countries. By the mid 1970's, life expectance has rapidly increased especially in Japan.

In countries where life expectancy is high, savings and investments increase due to the effort of transferring income to future generations. At the opposite case, negative effects occur.

c) Human Capital Investment: Nelson and Phelps (1966), Romer, (1990), Aghion and Howitt, (1992) have assume that human capital is necessary for the discovery of new technologies and thus its *stock* is permanently related to the growth rate of output. Micro-economic studies of human capital based on Mincerian human capital earnings functions suggest significant returns to education. Jorgenson *et al*., (1987); Young, (1994, 1995) provide some additional support to a significant growth impact of human capital accumulation, In particular, while the initial stock of human capital matters, the evolution of human capital over time is not statistically related to output growth as Benhabib and Spiegel, (1994); Pritchett, (1996), and Topel, (1999). According to the augmented neoclassical model, when human capital is also added as an explanatory variable besides labor and physical capital, the model is accepted to have explained differences in growth in the period 1960-1985 (Mankiw et. al., 1992). In this framework, when differences occur in the long term targets of countries, it is asserted that an absolute convergence will not be possible and long term targets are effected by direct policies like tax, education, infrastructure and property rights as well as some uncontrollable factors.

What can be said about the contribution of human capital in the first industrial revolution is limited. It can not be said that there has been great improvements in human

capital. Adult literacy rate is 50%.But about important developments are experienced on the other component of human capital, working conditions.

Baumol (1986), Dowrick and Gemmel(1991), moved from social ability indicators and taken Abramowitz's "education level" and "industrialization level".Besides, taking "education level" and "industrialization level" as the universal causes of convergence process is disputable. It is widely accepted that education system plays a major role in the catching up process of Germany in 19th century.Education is not accepted to be an explanatory variable for the industrialization process of Russia in 19th century. Though education level in Korea was far higher than other developing countries, expansion of education at all levels has been realized together with technological catching up. Acquisition of social ability is a different policy target than technological catch up. Baumol (1986) and Dowrick and Gemmel (1991) are studies that make policy suggestions of this type. World Bank and other international foundations also suggest that improvement of human capitalizes important in eliminating poverty in developing countries.

The effect of education on development is stronger after 1950. Education and literacy is important for human capital and development.In this context, most significant examples are Spain and Turkey. For Turkey and Spain which had approximate populations in 1960, differentiation in the resources spared for education has been determinant on population increase.Turkey has similar characteristics in education of 25 or older age citizens with Portugal which had a 4950$ income in 1970 (with 1995 prices). In both countries, education period is 2.4 years. Though Ireland and Spain are closer in terms of education level, Ireland is better in period of education. Turkey, on the other hand is behind other countries. Though literacy rate in Turkey has increased in time, it is still behind other countries.Literacy rate for the year 2000 are 97.63% in Spain, 97.37% in Greece, and 92.90% in Portugal while it is 86.5% in Turkey.

According to World Bank data, weighted average of literacy rates of low income countries whose data could be gathered is merely 63.6%. As of the year 1997, university enrolment ratios of Japan, Singapore, Hong Kong and China are 44.9%, 43.8%, 27.4% and 6.1% respectively. As of 1998, their research and development expenditures are 2.9%, 0.7%, 0.44% and 1.8% of their GDP's respectively.

As proposed in an international study by Guisan, Aguayo and Exposito (2001) and in Guisan and Exposito (2005) for Africa, educational level has a significant effect on lowering average fertility rates.

What is as important as or more important than literacy rate is the female literacy rate. Female literacy rate is an important determinant of literacy rate and growth rate. The one of countries with the lowest rate of female literacy in OECD countries is Turkey. When the years 1970 and 2002 are compared, an increase is observed from 40% to 78% which is still low compared to other countries.

Comparing the public expenditures on education for Turkey, Greece, Ireland, Portugal and Spain, it is observed that Portugal has the highest shareThe share in Ireland follows a downward path while Turkey increases its share after 1990 but is still behind other countries with Greece. Ireland that gave priority to investments on education after 1960 has always kept this priority. Compared to developing countries, share spared for education is low in developed countries. Another important point is that share spared for education increases educated population and decreases social conflict. Low rate of education increases social unrest and conflict.

According to Grenchenkron (1962, 1963, 1968, 1970), social ability level is not a determinant factor in failure of success in catch up process but rather an aspect that determines its formation.

d) Geographical Proximity and Ownership of Natural Resources: Geographical structure of countries has important effects on growth. In this context, the analysis may be started with transition countries.Geographical location is important in Baltic countries having completed transition process faster that other former USSR countries. Baltic countries having geographical and religious links with Europe have completed their development processes faster than USSR. Asian countries having close links with Japan; China, Singapore and Taiwan are other examples that can be given. Again, Africa, Afghanistan, Iran, Pakistan, Turkey, Syria and Iraq are other examples of the issue. In countries close to civil wars, conflicts and wars, socio-political instability arises, share of defence budget in aggregate expenditures increases and rate of growth decreases. Under the opposite circumstances, rate of growth increases.

Another point that can be evaluated in the geographical location of the country is its colonization. Colonization arises negative effects on corporate structure of colonized countries. Interpreting the geographical location and institutionalist view may have an explanatory effect. According to the institutionalist view, the impact of the environment on development can be realized through institutions in the long run. According to this view, development possibilities and technologies are created in institutions (Bulutay, 2004, p.50).

Another important issue is ownership of natural resources. It can no be asserted that countries with natural resources grow faster. According to Sachs and Warner (1997), growth in countries with high natural resources is low (Sachs and.Warner, 1997; p.187). Accordingly, majority of countries where natural resources are abundant, experience stationarities in growth since early 1970's. Ownership of natural resources does not always increase per capita national income. As were the case in some Asian and African countries.In cases where per capita national income has increased, (United Arab Emirates, Qatar, Saudi Arabia) improvement in measures of development is quite disputable. What is observed in United Arab Emirates, Qatar and Saudi Arabia is marketing of natural resources.Production and marketing made in a developed country oriented way is another drawback. When countries of same income level are compared, R&D expenditures are very insufficient, literacy rate, efficiency of labour, structure of manufacturing sector seem to be very different. Per capita national income has increased but these countries are far behind the countries of the same income group in terms of industrialization, cultural factors, technology and development.Increasing per capita national income does not mean sharing the same criteria with similar countries.

e) Welfare State Practices, Tax Structure and Informal Economy: The majority of emerging countries adapting the strategy of developing under the control of the state has increased the size of the public sector. Public expenditures constitute nearly half of the aggregate income while the same figure constitutes only one fourth in emerging countries. In OECD countries, the ratio of public expenditures and GDP was 27% in 1960 while the same ratio reached 48% in 1996 and domestic fund utilization of the public sector has significantly increasedThis increase in public expenditures shows that the public sector has expanded beyond its conventional functions (Gwartney, Holcombe and Lawson, 1998: p.164).In developed countries, transfer payments constitute the majority of public expenditures while public enterprise becomes more prominent in emerging

countries. In these countries, the government tries to mobilize and direct funds in order to pace development rather than keeping the economy in equilibrium as is the case in developed countries (Soubbotine and Sheram, 2000:61).

Studies show that there is a strong negative link between GDP growth and public expenditures (Gwartney, Holcombe and Lawson, 1998a: p.164). In the public sector, 6 countries where highest rates of increases are observed in public sector (Portugal, Spain, Greece, Finland, Sweden and Denmark), important decreases are experienced in growth. GDP growth rate has fallen from 6.4% in 1960 to 1.2% in 1990's. According to Gwartney et. Al. (1998b), volume of the public sector in fastest growing countries is below 20% the volume of public expenditures other than investment is around 13% of GDP. It can be concluded that countries which maintain faster growth are the ones where the share of the public sector is low or continuously decreasing.

Another important issue within this framework is the quality of public expenditures. In the last decade, growing literature has begun to focus on the growth implications of unproductive government spending, and whether such expenditures can induce structural breaks in growth (see Levine and Renelt, 1991; Easterly and Rebelo, 1993; Turnovsky and Fisher, 1995; Tanzi and Zee, 1997; Ghate and Zak, 2002; Romer, 2003). In context of welfare state economies, posits two channels through which fiscal choices induce structural breaks in the growth rate of an economy. First, unproductive government expenditures hinder growth because such expenditures are a less-than-perfect substitute for private consumption in the aggregate and cause to decline of private savings and economic growth. A related channel adds a political economy explanation to declining investment and growth because of a rising welfare state. To wit, because politicians determine government expenditures, fiscal flows reflect political objectives (Ghate, 2003). In the long run, growth is affected adversely because higher welfare state spending is financed by higher taxation which generates an economic inefficiency (Fic and Ghate 2005, p.571). Fic and Ghate (2005) focus that a growing welfare state leads to a decline in growth. In the long run, lower growth dampens the growth of the welfare state. This is because higher taxes are required to fund a growing welfare state leading to lower growth in the long run. The structural break in the time trend of welfare state growth precedes the structural break in growth rates. However, reductions in economic growth are associated with lower values of the welfare state as lower growth forces politicians to cut transfers and taxes. (Fic and Ghate 2005, pp.571-598).

Tax structure is related with the economic structure and has determinant effects on the economy. However, in countries like Mexico, Brazil, Turkey, Argentina where political instability is high, increases in tax rates would encourage informal economy since the effectiveness of the tax system is deteriorated. In countries where political instability is rising, although the tax rate is high, tax revenue/GDP ratio is low as in Turkey. In countries with political instability tax revenues fall as tax rates increase. (see Bildirici and Coşar; 2005). There are various reasons underlying this, but indirect taxes substitute direct taxes as political instability increases. Increasing the direct tax revenue is difficult due to the fragmented structure of the parliament.Another issue is that, as the tax rates increased, the share of tax revenues in income will not change since tax avoidance and evasion is very commonIn democratic societies, tax avoidance and tax evasion increase as political instability increases. Insufficiency of audit mechanism, corruption, nepotism and etc. makes prevention of these issues more difficult.

Another issue observed together with political instability is that the public is reluctant to pay taxes even if the tax rates increase. The reason is mainly inability to see oneself as a member of the society. Emerging countries with high political instability are ones where informal economy is growing.In such countries, informal economy grows fast and nourishes with political instability. Informal economy can reach immense volumes in emerging countries rather than developed ones and effects the overall growth of the country. In economies where informal economy is large, the growth rate of the overall economy is low while the growth rate of the informal economy is high. In these countries, the economy exhibits low performance while informal economy develops fast.Countries where informal economy is large in volume are also ones with high political instability. Especially in former USSR countries, volume of informal economy has increased in the transition period. Accordingly, when the informal economy in the years 1988-2000 is analysed on a regional basis, it is observed that informal economy has the greatest share in emerging countries including transition economies. Among the transition countries, the share of informal economy is higher in former USSR countries. The share of informal economy in Kyrgyz Republic in the year 1999 is 47.9% and 26.8% in Kazakhstan in the year 2000 (OECD 2004). Among the states of the former Soviet Union in 1998–99, Georgia's shadow economy was the largest, at 64 percent of GDP; Russia's was 44 percent of GDP; and Uzbekistan's was the smallest, at 9 percent. Among the transition countries of central and eastern Europe in the same period, Bulgaria's was the largest, at 34 percent of GDP (but at 11.1 percent of GDP in 2000, and Slovakia's and Czech Republic's the smallest, at 7.3 percent and 5.6 percent (OECD, 2004). Countries where informal economy is relatively small are ones which have experienced the phases of development without problems and completed the transition process.

In 1998–99 in Africa, Nigeria and Egypt had the largest shadow economies, equivalent to 77 percent and 69 percent of GDP, but South Africa had a shadow economy of only 11 percent of GDP. In Asia in the same period, Thailand ranked number one with a shadow economy of 70 percent of GDP; Hong Kong SAR and Singapore had the smallest shadow economies, both at 14 percent of GDP. In Latin America in 1998-99, the biggest shadow economy was in Bolivia, at 67 percent of GDP, and the smallest was in Chile, at 19 percent. (OECD, 2004)

In the 21 OECD countries in 1998–2002, Turkey and Italy had the largest shadow economies, at 37 percent and 16 percent of GDP. In the middle group were the Scandinavian countries, and at the lower end were the United Kingdom and Australia, at 1.5 percent and 3 percent of GDP, Belgium at 3.5 percent and Canada, at 3 percent.

As can be seen, as the economy grows, informal economy shrinks in developed countries while it grows in emerging and less developed countries. In countries where shadow economy grows, formal economy shrinks.

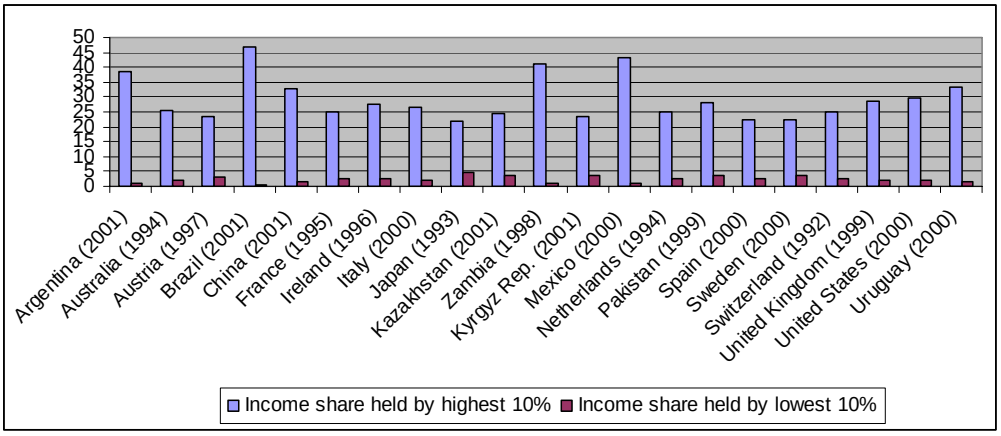
f) Urbanization: Henderson (2003) finds a close relation between urbanization and growth. According to Henderson, in an international level, the coefficient of correlation between per capita GDP and rate of urbanization is high.) Important points are: productivity is effected by the density in urban regions rather than the rate of urbanization (members of informal sector moving to the periphery of the cities effect growth in a positive way) and urbanization is a consequence of development of manufacturing sector (Henderson; 2003; 47-50). Since the end of WW2, physical capital at average level of urban economy is provided to those who migrate from rural areas and their productivity increases. This increases the per capita income in the country. However, productivity

increases caused by other investments and especially from technology is limited. Average productivity and income in urban economy increase more slowly. Even though polarization leads to a suitable environment for effective use of resources, after some level, it increases economic and social costs. There are two aspects of this problem for emerging and less developed countries. One of these is metropolis problems while he other one is the problem of backward regions. At the first stages of development process, metropolis which are the centers of development (poles of growth), are regions of attraction for the factors of production.However, due to rapid and unbalanced accumulation of population, positive externalities become negative externalities and increase the cost of living in big cities. Intense factor mobility occurs towards urban poles from other regions of the country. Unless this inflow is balanced at some level, the optimal scale at the poles of development is exceeded and new types of metropolis problems emerge. Consequently, urbanization problems change their nature in time and penetrate into economic, social and political structures. In cities that grow with floods of migration, insufficiency of education and health services, land and residence requirements, insufficiency of water, energy, infrastructure and general municipality services increase the need for public investment and bring an extra burden for public finance. Rapid increases in land problems pace the efforts on creating new locations by usurpation of public lands.This kind of lands increase with pace with the effect of remissions granted at election periods and this deepens the instability in the socio-political structure of the metropolis.

g) Justice in Income Distribution and Poverty: Although Kaldor has claimed that inequality increases the rate of growth and accumulation; recent outcomes have given rise to new debates.Income equality will not decrease growth and even development may not be maintained unless distribution of private property rights is made in an egalitarian way. Accordingly, excessively unequal income distribution will not provide individuals an efficient medium for working. Gintis (1998) states that equality will not effect growth negatively. Consequently, in China, Korea and Japan where egalitarianism and government intervention is relatively high, growth is faster than Latin America where inequality is much more prominent. After WW2, Europe and Japan have reached high levels of growth at the golden age of welfare state (Roemer, 1998; p, 221; Hoff, 1998; p.333; Bulutay, 1999; 2005a; p.28). According to A.V. Banerjee and E. Duflo (2003) a positive or negative change in inequality comes with a lower rate of growth in the future (Banerjee and Duflo, 2003; p.268). Barro on the other hand, makes a distinction between developed and less developed countries and finds a negative relation between inequality and growth in poor countries while a positive relation is found in rich countries (Bulutay; 2005a; 29). Probably it is the reversion of the Kuznets law. Equality in income distribution is a determinant of economic growth.Economic growth will increase as income distribution becomes more equal.It will be observed that income distribution is mode equal in developed regions while it is more unequal in other regions.In the world, only East Asia has achieved some success in struggling against poverty. In other regions increases have been observed in the number of poor people. When analysed in terms of population percentiles, significant decreases have been achieved in East Asia in the ratio of population having a daily income of less than 1 $ while increases have been observed in Central Asia and no significant changes have been observed in other regions of the world.At the world scale, it is observed that the rate of population living under the poverty level has decreased by 4%.

Countries that are closer to equality are Northern European countries. Japan and Canada are other countries that are close to equality. There is a more unequal income distribution in Australia, Ireland, New Zealand, England and USA.Mexico, Brazil, Argentina and Turkey are among the emerging countries that have the most unequal income distribution. Kazakhstan, Kyrgyzstan and Pakistan have a more equal income distribution.

Figure 3. Income distribution.



Source:Gathered from World Bank data.

It can be said that income inequality in European Union is regional and in countries other than Germany, it has started to increase by 1990's. Especially in Italy and Spain, regional inequalities are more significant. Turkey also has a similar position (Bulutay 2005; 34). China which has grown %90.4 in the period 1978-2001, has transformed into a more unequal structure from an egalitarian one. Gini coefficient for urban population has increased from 0.16 in 1978 to 0.32 in 2000. The coefficient for the overall economy is 0.417. This structure is not specific to China.In the transition countries, similar unequal structures are observed.In Russia, Gini coefficient for the year 1998 is 0.487.

Deterioration of income distribution requires redistribution of income and increases in transfers and taxes. Taxes deteriorate savings and encourage physical and human capital accumulation (Bulutay, 2005, p.29). According to R. E. Lucas (2003), none of the increases in welfare of the people could be linked with a transfer of resources from the rich to the poor. Increases in taxes or transfers do not decrease injustice in income distribution. In emerging countries, redistribution mechanism is ineffective because of high tax avoidance and evasion. For the developed countries, an inverse structure is prominent.In these countries, it has an effect that dampens inequality. According to OECD (1998) data, redistribution policies in EU countries decrease income inequalities caused by market distribution. According to OECD, although transfers are distributed in a relatively equal way on income, they still have a positive redistributive effect and they decrease inequality to a limited extent. On the other hand, inequality decreasing effect of direct taxes is far higher (OECD, 1998; p.11). Bourguignon, Ferrerira, Lustig (2005) analyses the situation in Argentina, Brazil, Colombia, Indonesia, Malaysia, Mexico and Taiwan. According to them, income distribution is different in countries where the

growth rate of per capita income is same. Income distribution inequality increases in growing and shrinking economies. There is a tendency of increasing inequality in analysed countries at the last 20-30 years of the previous century.The increase in the Gini coefficient is relatively low in Asian countries while it has a higher magnitude in Latin America. In the study where education is found out to be the most critical factor, it is said to be a factor that increases inequality but decreases poverty (Bourguignon, Ferrerira, and Lustig, 2005; p.389-400). According to M. Förster (2004), generally income distribution inequality in OECD countries has increased in mid 1980's and 1990's.

2. The Model

Political stability is found out to be the most critical economic and secio-economic criterion that affects development. Increasing political instability brings out rises in inflation, domestic and foreign indebtedness with high rates of interest departing from efficiency in tax structure and decreases in foreign direct investments. Social and political instability caused by terror, internal conflicts and civil wars causes low or unstable growth rates, high inflation, budget deficits, high interest rates, realization of public debt at high interest rates, decreases at the ratio of tax revenues/GDP, increases in seignorage revenues (limited in some instances and countries. In countries and periods where inflation is high, decreases in demand for money decreases seignorage revenues), low rates of return on foreign capital, low rate of R&D expenditures/GDP, decreases in investment and increase in population growth rate etc. For this reason, countries will be analysed through samples gathered from 3 groups of countries. Countries which experienced political stability are ones that develop or have developed fast while those with political instability are ones that could not complete their development processes. Within this context, the first group is formed by Japan, Ireland, Spain, USA and similar countries. The second group includes countries with political instability that were initially close to those in the first group but which eventually fell behind: Argentina, Mexico, Brazil, Turkey etc. The third group is formed by backward countries that experience severe political instability. The common characteristic of the countries in the third group can be represented by wars, civil wars, ethnic conflicts, monarchies etc. In this paper, three groups and models were constructed. Model was the relationship between political instability and growth. The data used in this study is annual and covers the period 1985–2004.

$$Y_{it} = \beta_{0i} + \beta_{1i} P_{it} + \varepsilon_{it}$$

Y_{it} is economic performance in *i* country, *t* years. P_{it} is measure of political instability. εit is error term. The political instability series is derived from the Euro money. The Y is taken from the IMF Economic Outlook, various issues.

3. Empirical Results

In this paper, the co-integration analysis of panel data was consisted two steps. First, it is test for time series and panel unit root. In time series analysis, it was used two statistics and in panel unit root test, four statistics proposed by LLC, IPS and HT are used. Second, it was tested for co-integration in panel data using: Johansen, Pedroni test, FMOLS and DOLS. Time series ADF and PP tests are calculated for all countries. All

time series involved unit roots according to the ADF and PP tests. ADF and PP tests in first differences show that their first differences are stationary. Tests are calculated with a constant plus a time trend and they have a null hypothesis of non-stationary against an alternative of stationarity. Panel unit roots tests were reported in Table 2. The result supports the hypothesis of a unit root in all variables across countries, as well as the hypothesis of zero order integration in first differences.

Table 2. Panel Unit Root Tests

		HT	LLC	IPS				
1.Group	Y	-42.85	-33.075	-26.838	P	-20.85	-17.69	-11.706
2.Group	Y	-28.12	-24.00	-18.78	P	-35.15	-20,41	-14.85
3.Group	Y	-25.87	-18.75	-15.68	P	-15.23	-12.18	-8.951

Though there are differences in development levels of the countries in the second group, Brazil, Mexico, Turkey, Argentina, Syria and Peru, for the moment we are interested in their political stability positions rather than their development levels. LLC assumes a common unit process while IPS and Fisher χ^2 assume an individual unit root process.

Country by country Johansen maximum likelihood co-integration results are reported in Table 3. The hypothesis of no co-integration is rejected for all countries, and the hypothesis of one co-integrating vector is accepted. Panel co-integrating tests are reported in Table 4. While Fisher's test supports the presence of one co integrating vector, The HT test support the hypothesis of a co-integrating relation and LL test supports the hypothesis of a co integrating relation. Both time series and panel-based tests agree that there is co-integrating vector. On a per country basis and for the panel as a whole. For the panel, the coefficient of political instability is statistically significant, and the effect is negative. On a per country basis, political instability has a negative impact on growth and the relation seems to be statistically significant in countries. The hypothesis of short run causality can not be rejected for all countries.

Table 3. Co-integration

Nb	Country	*Max.Eigenvalue Stat* Ho: rank=r	Nb	Country	*Max.Eigenvalue Stat* Ho: rank=r	Nb	Country	*Max.Eigenvalue Stat* Ho: rank=r
1	Senegal	*57,4949*	15	Sudan	*29,682*	29	Singapore	*16,20*
2	Kenya	*26,4266*	16	Haiti	*39,127*	30	Finland	*96,51*
3	Colombia	*30,9215*	17	Liberia	*25,878*	31	Denmark	*25,31*
4	Mali	*49,270*	18	Zimbabwe	*54,557*	32	Canada	*23,51*
5	Bangladesh	*37,986*	*19*	Brazil	*96,4780*	33	Ireland	*82,60*
6	Uganda	*29,903*	20	Mexico	*16,50*	34	Austria	*31,89*
7	Sri Lanka	*32,662*	*21*	*Peru*	73,792	35	Japan	*36,777*
8	Zambia	*38,98*	22	Argentina	*22,257*	36	Netherlands	*96,271*
9	Nicaragua	*35,477*	23	Syria	*26,033*	37	Iceland	*34,89*
10	Nigeria	*42,992*	24	Turkey	*22,197*	38	Belgium	*38,81*
11	Togo	*33,954*	25	Norway	*50,206*	39	Australia	*36,99*
12	Ethiopia	*37,8197*	26	Luxembourg	*26,887*	40	Hong Kong	*38,76*
13	Pakistan	*36,02*	27	Switzerland	*83,070*	*41*	*New Zealand*	*93,119*
14	*Malawi*	*67,056*	*28*	*Sweden*	*73,421*			

Notes. r: number of co integrating vectors. Results denote rejection of the null hypothesis of no co-integration at 5% level of significance. Group 1: 1 to 18, group 2: 19 to 24, group 3: 25 to 41.

Table 4. Panel Co-integration Test

Fisher χ^2 Co-integration Test 1.Group r=0 : 180.13 r≤1 : 5.08 Pedroni Result Panel v stat: 18.89 Panel rho-stat= -19.18 Panel pp-stat=-27.55 Panel adf-stat=-36.92 Group rho-stat= -21.91 Group pp-stat= -17.09 Group adf-stat= -17.141 Group FMOLS Result DOLS Result -2.119 (9.109) 2.91 (11.11) -2,10 (9,11)
Fisher χ^2 Co-integration Test 2.Group r=0 : 75.03 r≤1 : 5.02 Pedroni Result Panel v stat: 22,45 Panel rho-stat= -16,36 Panel pp-stat= -21,02 Panel adf-stat=-25,032 Group rho-stat= -11.91 Group pp-stat= -22,36 Group adf-stat= -20,78 Group FMOLS Result : -3.09 (9.12) DOLS Result: -3.092 (9.11)
Fisher χ^2 Co-integration Test 3.Group r=0 : 100.16 r≤1 : 6.32 Pedroni Result Panel v stat: 26,15 Panel rho-stat= -19,26 Panel pp-stat=-26,03 Panel adf-stat= -23,02 Group rho-stat= -11.91 Group pp-stat= -33,02 Group adf-stat= -45,23 Group FMOLS Result: -6.09 (8.75) DOLS Result: -7.65 (6.95)

It is investigated whether relation between political instability and economic growth is short run. Used ECM model is as follows

$$\Delta Y_t = c + \sum_{i=1}^{n} \beta_i \Delta P_{t-1} + \sum_{i=1}^{n} \Delta \chi'_{t-1} \gamma_i + \lambda (Y_{t-1} - \chi'_{t-1} \phi - \phi_0 P_{t-1}) + \nu_t$$

equilibrium error and/or deviation from the long run are

$$Y_{t-1} - \chi'_{t-1} \phi - \phi_0 P_{t-1}$$

An important problem is whether $\lambda \neq 0$. Other problem is whether $H_0 : \beta_i = 0$ can be rejected. This point is very important because when it can be rejected; there is no short run causality.

As result, the short run causality can not be rejected for all country. Estimates and diagnostic statistics for the VEC model are presented in Table 7.

VEC model for panel data is as follows

$$\Delta Y_{it} = c_i + \sum_{\imath=1}^{n} \beta_\imath \Delta Y_{i,t-1} + \sum_{\imath=1}^{n} \Delta \chi'_{i,t-1} \gamma_i + \lambda (Yi_{,t-1} - \chi'_{,i,t-1} \phi - \phi_0 P_{i,t-1}) + \nu_{it}$$

where *ci* is fixed country effects. The model can be estimated with instrumental variables. I must use an instrumental variables estimator to deal with the correlation between the error term and lagged dependent variables ΔY_{t-1}.

Diagnostic statistics for the VEC model was given in Table 5. As it was seen in the result, there is evidence of short run causality. The most important result is policy recommendation. If it is wanted to increase Y, it should be focused short and long run policies and political stability.

Table 5. Panel Error Correction Model

1. Group		2. Group		3. Group	
Variable	Estimate	Variable	Estimate	Variable	Estimate
ΔY_{t-1}	12.16	ΔY_{t-1}	22.16	ΔY_{t-1}	25,12
ΔY_{t-2}	4.22	ΔY_{t-2}	14.22	ΔY_{t-2}	3,21
ΔP_{t-1}	-10.71	ΔP_{t-1}	-9.21	ΔP_{t-1}	-7.56
ΔP_{t-2}	-8.29	ΔP_{t-2}	-6.029	ΔP_{t-2}	-7.12
Error C T	-0.112	ErrorC T	-0.31	ErrorC T	-0.012
LR	1.666	LR	2.123	LR	1.56
JB	0.576	JB	0.645	JB	0.15

4. Conclusion

In the light of findings and explanations above, it can be concluded that there is not a common and universally valid recipe for develpment but political instability impedes development while political stability is the most critical factor that provides economic development. Political instability increases the seriousness of problems such as corruption, unemployment, price instability, budget defcits etc.

Additionally, it is a plausible conclusion that main factor that underlies development in many countries is technology. Imitating current technology supports development as well as, or even more than developing new technologies, just as has had happened in the case of England; industrial revolution had taken place in England but the technology required was not developed but rather adapted. It should also be noted that what unerlies the development experience of China, Hong-Kong and Japan is adaptation of technology.

Political stability seems to play an increasingly determinant role in development of countries. Especially in the period after 1980, political stability and adaptation of technology seem to be the main factors that provide fast growth while political stability constitutes an obstacle in front of growth and development.

References

Agenor, P., (2000), "The Economics of Adjustment and Growth", San Diego

Aghion, P., Howitt, P., Foulkes, D. M., (2004), "The Effect of Financial Development on Convergence: Theory and Evidence", *NBER Working Papers* 10358,

Aron, J., (2000), "Growth and Institutions: A Review of the Evidence", *World Bank Research Observer*, Oxford University Press, (15-1)

Banerjee, A., Newman, A., (1993), "Occupational Choice and the Process of Economic Development", *Journal of Political Economy*, (101- 2)

Barro,R.J., Sala-i Martin, X., (1995), "*Economic Growth*", McGraw-Hill, New York

Berthélemy, J-C., Kauffmann, C., Renard, L., Wegner, L., (2002), "Political instability, political regimes and economic performance in African countries", *OECD Development Center Working Paper*

Bourguignon, F., Ferreira,F. G.H., Lustig, N., (Eds.), (2005), *The Microeconomics of Income Distribution Dynamics in East Asia and Latin America* .Washington: World Bank and OUP.

Bulutay, T., (2005), "Türkiye Ekonomisinde Büyüme ve Bölüşüm Sorunları", *İktisat, İşletme ve Finans*

Easterly, W., Rebelo, S., (1993), "Fiscal Policy and Economic Growth: An Empirical investigation", *Journal of Monetary Economics,* Elsevier, v. 32(3)

Fic, T., Ghate, C., (2005), "the Welfare State, Thresholds, an Economic Growth", *Economic Modelling*, Elsevier, v. 22(3)

Förster, M.F., (2004), "Pauvreté: Tendances à Long Terme Dans les Pays de l'OCDE", in: *Les Politiques Sociales - revue internationale*, v. 64

Gerschenkron, A., (1952), *Economic Backwardness in Historical Perspective*. Cambridge: Harvard Univ.

Ghate, C., Zak, P. J., (2002), "Growth of Government and the Politics of Fiscal Policy", *Structural Change and Economic Dynamics*, Elsevier, v. 13(4)

Guisan, M.C., Aguayo, E. and Exposito, P.(2001). Economic Growth and Cycles: Cross-country Models of Education, Industry and Fertility and International Comparisons. *Applied Econometrics and International Development,* Vol.1-1, pp. 9-37.

Guisan, M.C., Exposito, P., (2005), "Human Capital and Economic Development in Africa: An Econometric Analysis for 1950-2002", *Applied Econometrics and International Development*, 5-1.

Gwartney, J., Holcombe, R., R. Lawson, (1998), "The Size and Functions of Government and Economic Growth", Joint Economic Committee Study, April, http://www.house.gov/jec/growth/function/function.htm

Gwartney, J., Holcombe, R., Lawson R., (1998), "The Scope of Government and the Wealth of Nations", Cato Journal, v.18, No.2, Fall, http://www.cato.org/pubs/journal/cj18n2/cj18n2-1.pdf

Gwartney, J., Holcombe, R., Lawson, R., (1998) "The Scope of Government and the Wealth of Nations", the CATO Journal v. 18 (2)

Henderson, V., (2003), "The Urbanization Process and Economic Growth: the So What Question", Journal of Economic growth (March)

Howitt, P., Aghion, P., (1998), "Capital Accumulation and Innovation as Complementary Factors in Long-Run Growth", Journal of Economic Growth (June)

Kaldor, N. (1957), "A Model of Economic Growth", Economic Journal (67)

Kaldor, N. ve J. A. Mirrlees (1962), "A New Model of Economic Growth", Review of Economic Studies (29)

Levine, R., Renelt, D., (1991), "A sensitivity analysis of cross-country growth regressions", Policy Research Working Paper Series 609, The World Bank

Maddison, A. (1994), "Explaining the Economic Performance of Nations, 1820-1989", Ed. W.J. Baumol, R.R. Nelson ve E.N. Wolff, Convergence of Productivity, Oxford University Press

Maddison, A. (2001), "The World Economy: A Millenia Perspective", Paris: OECD.

Maddison, A., (2002), "The West and the Rest in the International Economic Order", OECD Observer (235)

Mankiw, N. G., Romer, D., Weil, D. N., (1992), "A Contribution To the Empirics of Economic Growth", the Quarterly Journal of Economics, MIT Press, v. 107(2)

Nelson, R., Phelps, E.S., (1966), "Investment in Humans, Technological Diffusion, and Economic Growth", American Economic Review (56)

Pritchett, L., (1997), "Divergence, Big-Time", Journal of Economic Perspectives (11) (Summer)

Pritchett, L., (2000), "The Tyranny of Concepts: Cumulative, Depreciated Investment Effort (CUDIE) is not Investment", Journal of Economic Growth (5) (December)

Quah, D. T., (1996), "Converge Empirics Across Economies With (Some) Capital Mobility", Journal of Economic Growth (March

Sachs, J. D., (2003) "Institutions Don't Rule: Direct Effects of Geography on Per Capita Income", NBER Working paper 9490, (February)

Sachs, J., Warner, A. M., (1995), "Economic reform and the process of global integration", Brookings Papers on Economic Activity (1)

Sachs, J., Warner, A.M. (2001), "The Curse of Natural Resources", European Economic Review 45(4-6)

OECD Employment Outlook (2004)

Tanzi, V., Zee, H.H., , Fiscal Policy and Long Run Growth, IMF Working Paper 96/119

Temple, J., (1999), "New Growth Evidence", Journal of Economic Literature, (March)

Temple, J., (2001), "Growth Effects of Education and Social Capital in the OECD Countries", OECD Economic Studies, (3B)

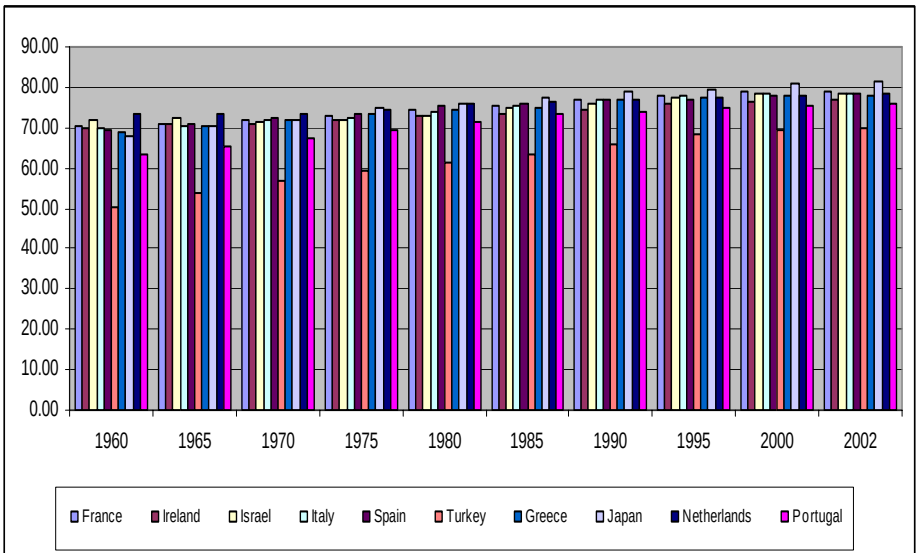
Temple, J., Johnson, P. A., (1998), "Social Capability and Economic Growth", Quarterly Journal of Economics (113) (August)

World Bank, World Development Report 2000/2001, <http://econ.worldbank.org/wdr>, 20.01.2002

On line Annex at the journal web site: Figures A1 and A2

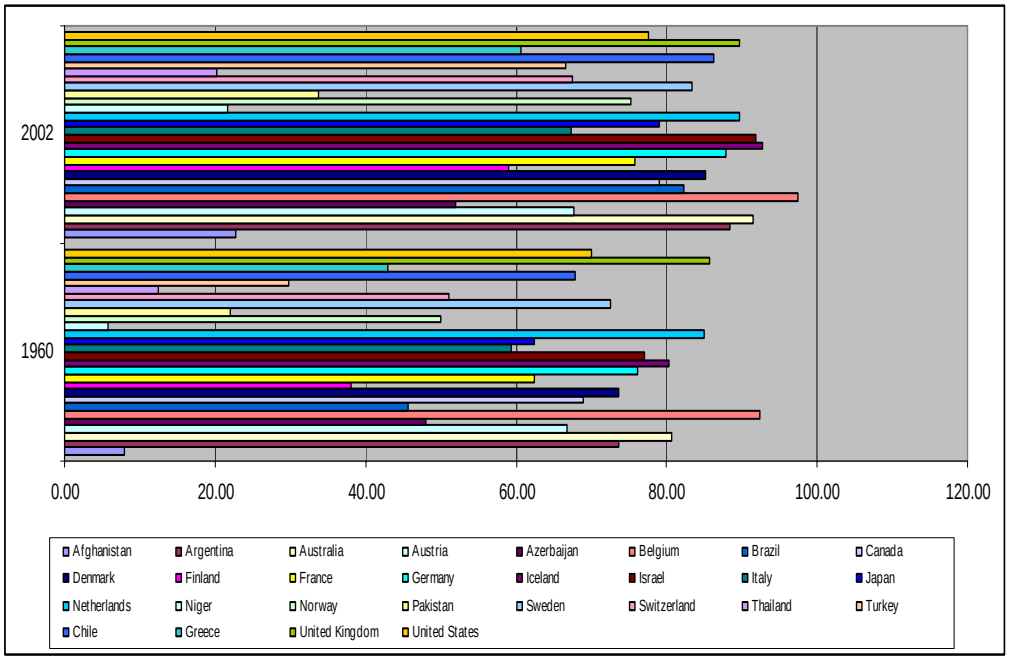
Annex

Figure A1. Life expectancy at birth, total (years)



Source: World Bank Database (1960-2003)

Figure A2. Urbanization rates in certain countries



Source: World Bank Database (1960-2003)