Markets and Growth

Štěpán Jurajda
CERGE-EI*
CEPR, IZA, WDI

Janet Mitchell
Facultés universitaires Saint Louis**
ECARES, CEPR, WDI

September 2001

Abstract

This paper studies key markets (financial, labor, natural resource, and product) to assess how they are facilitating or constraining growth. First, we draw on the body of existing theoretical and empirical literature to discuss the links between markets and growth. Second, we present four stylized scenarios of the process of growth, which summarize differences across six regions of the developing world. Financial market infrastructure and efficient factor reallocation in response to shocks appear to be among the most important growth determinants. We highlight the relative lack of research on the relationship between labor markets and growth, as opposed to the relationship between human capital production and growth. Finally, we combine suggestions of Topel (1999) and Pritchett (2000) to argue that country-specific markets should be a principal focus of future research on growth. This paper provides a framework for such studies.

Abstrakt

Tento článek zvažuje jak klíčové trhy podporují nebo brzdí růst. Nejprve diskutujeme vazby mezi trhy a růstem na základě existující teoretické a empirické literatury. Poté presentujeme čtyři stylizované růstové scénáře shrnující zkušenosti šesti světových regionů. Mezi nejdůležitější determinanty růstu patří infrastruktura finančních trhů a efektivní relokace výrobních faktorů v odezvě na ekonomické šoky. Zatímco vztah mezi lidským kapitálem a růstem je předmětem mnoha studií, my zdůrazňujeme relativní nedostatek výzkumu zaměřeného na vztah mezi trhem práce a růstem. Konečně kombinujeme návrhy studií Topel (1999) a Pritchett (2000) do závěru, že budoucí výzkum ekonomického růstu by měl vycházet ze studií zaměřených na specifické trhy jednotlivých zemí. Tento článek poskytuje rámec pro takovéto studie.

* A joint workplace of the Center for Economic Research and Graduate Education, Charles University, Prague, and the Economics Institute of the Academy of Sciences of the Czech Republic. Address: CERGE-EI, POB 882, Politickych veznu 7, Prague 1, Czech Republic; Tel.: (420 2) 24005 139; E-mail: stepan.jurajda@cerge.cuni.cz
** Address: Facultés universitaires Saint-Louis, 43 Blvd. du Jardin Botanique, B-1000 Brussels, Belgium; Tel: (32 2) 650 30 75; E-mail: jmitchell@fusl.ac.be

Acknowledgements: This work was supported by a grant from the Global Research Project of the World Bank. All opinions are those of the authors and should not be attributed to the World Bank or its staff. We greatly benefited from comments of participants at the GRP workshop held in Cairo in October 1999 and at the GRP conference in Prague in June 2000. In particular, we would like to thank Patrick Honohan, Gary Mcmahon, Martín Rama and Lyn Squire for their comments and suggestions.

1. Introduction

Markets are the mechanisms through which economic resources are channeled and where economic incentives are set. Hence, their functioning is critical to both static and dynamic efficiency as well as to the responsiveness of the economy to shocks. While both product and factor markets are important in allocating resources, factor markets also influence the rate of resource creation.[1] This paper will affirm that markets are crucial to growth and combine suggestions of Topel (1999) and Pritchett (2000) to argue that country-specific markets should be a principal focus of future research on growth.

We study key markets (financial, labor, natural resource, and product) to assess how they are facilitating or constraining growth. First, we draw on the body of existing theoretical and empirical literature to provide a framework for discussing the links between markets and growth. Second, we summarize the findings of the six regional papers produced in the thematic area of "Markets and Growth" for the Global Research Project (GRP) by presenting four stylized scenarios of the process of growth, relevant for some of the regions or phases of development.

1.1 Research agenda

Macro growth regressions, not to mention growth accounting, are, for the most part, uninformative about the mechanisms, by which the studied sources of growth are working.[2] They are a useful data description tool, but are presently less able to provide a causal interpretation for the estimated growth effects.[3] Growth regressions have serious econometric problems, starting with the usual suspects of measurement error and endogeneity, and ending with (dynamic) miss-specification.[4] While theory offers hypotheses about growth determinants and provides a

[1] Conditions in labor markets influence the extent of acquisition of human capital. Financial markets determine the amount of savings available to be transformed into domestic physical capital.
[2] To give one major example, it is not clear yet from the existing empirical work, whether human capital affects the level of output or its growth rate.
[3] The regressions are often specified ad hoc, without a link to an underlying structural model. Recently, however, Hall and Jones (1999) use variation in a country's colonization language to instrument for social infrastructure in a regression explaining the differences in levels of income. For a similar approach see Levine *et al* (2000).
[4] For example, (moderate) inflation may have positive effects on growth in the short run, but negative effects in the long run. More generally, growth can be decomposed into its steady state, transitional (off-steady-state), and cyclical components, which each may have different determinants (Pritchett, 2000).

description of some potential channels of effects, it is often surprisingly terse in many areas (see Sections 2 to 5).

We believe that this lack of knowledge and testing methodology makes inquiry into mechanisms of growth effects crucial for the growth research agenda. We would like to accent the suggestion Topel (1999) made in his survey work on labor markets and growth, namely that the most important and productive future research on growth entails "detailed empirical studies of the operation of labor markets and the impact of policies and institutions within individual countries". We see this objective much in line with the idea of the GRP project and would like to extend this suggestion to all factor and commodity markets. We propose that country-specific research can prove fruitful in distinguishing among existing growth theories and motivating new ones; it can provide a deeper perspective on growth: a perspective focused on mechanisms by which the determinants of growth affect the process of growth.[5]

Yet, there are many possible interrelated determinants of growth working at different time horizons and this curbs the use of a single-country experience for study of growth determinants. The GRP country studies, however, can overcome this limitation by analyzing external or internal shocks and episodes when growth patterns have been changed. Pritchett (2000) shows that periods with large shifts in growth (up or down) are characteristic for most developing countries and constitute the bulk of panel-data variation in growth rates; hence, they are likely to provide important insight into the process of growth. The country-specific GRP research can focus on such episodes and study what caused them (e.g., policies or institutions or politics) and why some countries have been able to overcome shocks with little impact on growth while others have been completely overwhelmed.

However, it is not clear how to cumulate knowledge from the country-specific studies. While theorists can model relationships that appear important in certain regions, systematically

[5] One avenue of research would first relate, e.g., markets infrastructure to measurable market-specific outcomes (i.e. labor reallocation), and second relate the measured ability of markets to support the hypothesized channels of growth to the aggregate outcome. This would allow for differentiating among competing hypotheses about growth mechanisms. For example, is the level of human capital causing the ability to implement R&D as in the imitation model of Rivera-Batiz and Romer (1990)?

relating case studies of growth-change episodes and of market functioning to the macro aggregate measures of growth may be an issue.[6] We find it useful to cumulate the preliminary evidence of the regional thematic papers into stylized *growth scenarios* of the process of growth (Section 6). These scenarios are linked to specific market mechanisms of growth (discussed in Sections 2 to 5) and are aimed to provide a tentative framework for country-specific research.

1.2 General Organizational Structure

As we motivate above, our discussion of markets and growth will evolve around mechanisms by which markets may affect the process of growth. Hence, each market-specific section will begin by identifying the relevant market-specific mechanisms. However, in order to provide a structure for our discussion of the ways in which markets can affect economic growth, and to support identification of variables for subsequent analysis, we will use a simple classification of market dimensions. Specifically, we focus on three dimensions: (1) *infrastructure*, which refers to the institutional underpinnings, including laws and courts; (2) *price wedges or distortions* due to policy interventions; and (3) *participants*, or the relevant players, which are determined by competition policy, ownership structure, etc. Market infrastructure aids processing of information and allocating resources. Removal of price distortions from policy wedges increases economic activity by eliminating deadweight losses. Finally, different types of participants in a given market may have differing incentives and objectives, and the differing objectives across types of participants can impact market outcomes (often through a political economy channel). In each market the three dimensions are interrelated (e.g., the market infrastructure may determine the type of participants); however, treating each dimension separately permits us to better distinguish between the effects of institutions and of policies on economic growth.[7]

[6] One way to cumulate knowledge is to use the country-specific studies to identify exogenous variation in the determinants of growth or detailed changes in policy, which can later be used in a regression framework.

[7] It also allows us to identify potential links between the types of actors in each market and the potential effects on economic growth, an issue which bridges the theme of markets and growth with that of the microeconomics of growth.

2. Financial markets

The positive association between financial-sector development and economic growth is now a well-documented stylized fact. Since Goldsmith (1969) found that the level of financial development, defined as financial intermediary assets divided by GDP, was positively associated with economic growth, numerous authors have reconfirmed positive correlations between differing indicators of financial development and growth, and several have included tests for causality.[8]

2.1 Growth Mechanisms

Links between financial systems and economic growth occur through one or more of three basic functions served by the financial sector in an economy: (1) the provision of adequate instruments for saving; (2) the channeling of resources from savers to borrowers (the resource allocation function); and (3) the reallocation of resources when their current uses are no longer the most profitable.[9]

2.1.1 Savings

Savings flowing into the financial sector may be increased by improvements in the liquidity and breadth of financial assets, reductions in information asymmetries between firms and outside investors, increases in the returns on financial instruments, and by reductions in transactions costs related to financial assets. An increase in savings can increase growth by permitting an increase in investment.

2.1.2 Channeling of funds

The efficiency with which the financial sector performs the allocation function—i.e., the selection and monitoring of firms and projects receiving external finance—will also affect a

[8] See, for example, Atje and Jovanovic (1993), Beck, Levine, and Loayza (2000), Harris (1997), King and Levine (1993), Levine (1997, 1999), Levine, Loayza, and Beck (2000), Levine and Zervos (1996, 1998), Rajan and Zingales (1998), and Wurgler (2000). Techniques used to test for causality consist of the use of instruments for variables whose values are believed to be determined simultaneously with growth.

[9] We focus here on the functions of the financial system that are most influential for growth. In reality, the financial sector performs more than these three functions; for example, the financial sector serves a critical role in the payments system and in risk transformation of assets. (For a broad description of the functions of financial systems, see Levine, 1997.)

country's growth rate. Theory offers some indications of the ways in which financial sector development could result in more efficient channeling of resources from savers to borrowers and in increasing growth. Diamond (1984) suggests that financial intermediaries can perform monitoring and screening at lower cost than individual investors. Greenwood and Jovanovic (1990) argue that financial intermediaries are better able to identify investment opportunities than are individuals. Harrison, Sussman, and Zeira (1999) assume that the costs of monitoring borrowers are a function of the distance between banks and their borrowers; therefore, as more banks enter the financial system, regional specialization occurs, monitoring costs fall, and investment increases. Bencivenga, Smith, and Starr (1996) show that a beneficial effect of the increase in liquidity of financial assets arising from the development of secondary securities markets, which allow transfer of financial assets across individuals, is to permit short-term savings to be directed into long-gestation production technologies, which may generate greater long-run returns than short-gestation technologies.

2.1.3 Reallocation of funds

Finally, the efficiency with which the financial system reallocates resources from unprofitable to profitable uses will affect economic growth. For example, the existence and terms of bankruptcy provisions can influence the degree of effort that firm managers exert, the point at which unprofitable firms are closed down, and the efficiency with which a liquidated firm's assets are channeled to more profitable uses.[10]

2.2 Market dimensions

Each of the dimensions of infrastructure, policy wedges, and participants in financial markets can influence economic growth through their impact on any or all of the three functions that the financial system performs. We consider each of the dimensions in turn.

2.2.1 Market infrastructure

Elements of financial market infrastructure that are important for financial sector

[10] See, for example, Aghion and Bolton (1995), Gertner and Scharfstein (1992)

development and growth include institutions such as courts that facilitate contract enforcement; accounting rules requiring firms to disclose adequate information to outside investors; and laws (such as bankruptcy laws) protecting the rights of outside investors. Well developed financial market infrastructure will increase the supply of savings flowing to firms by ensuring that financial contracts are honored and outside investors' rights are protected. Accounting rules requiring adequate information disclosure by firms should improve the efficiency of resource allocation. As suggested above, bankruptcy laws (and other guarantees of creditors' and shareholders' rights) could be expected to improve the efficiency of the reallocation of resources.

Little theory exists relating financial market infrastructure to growth. Numerous empirical studies involving cross-country growth regressions have, however, included variables representing infrastructure.[11] To the extent that the results of these studies capture causal relationships, infrastructure indeed appears to be important. Variables focused on in such studies include indicators of creditors' and/or shareholders' rights,[12] an indicator of the degree of law and order, an indicator of contract enforcement, an indicator of accounting standards, and indicators of corruption or government interference in financial markets. A variable indicating legal origin (constructed by La Porta *et al* (1997, 1998)) is also sometimes used as an instrument for infrastructure variables.

Whereas results of cross-country regressions suggest a potential role for legal and accounting institutions in increasing growth, it may be useful to distinguish—under the rubric of financial infrastructure—between general indicators of a commitment to the rule of law or to contract enforcement and more targeted measures, such as improvement of accounting standards or of shareholders' and creditors' rights. An important question is whether the general commitment to law and order (which may also represent the elimination of corruption) is a stronger determinant of financial sector development and of growth than are more specific

[11] See, for example, Demirguc-Kunt and Maksimovic (1998), Filer, Campos and Hanousek (1999), Levine (1999), Levine *et al* (2000), Rajan and Zingales (1998), Wurgler (2000).
[12] These variables were constructed and originally used by La Porta *et al* (1997, 1998).

measures aimed at protecting creditors' or shareholders' rights. The significance of the commitment to law and order is that it guarantees that the government will not expropriate the assets or profits of private owners and investors. Once a minimum commitment to the rule of law has been established, the implementation of more specific protections for shareholders and creditors may become more important.[13] Within-country analysis of data relating to the commitment to the rule of law versus specific infrastructure reforms would shed light on this question and could feed into cross-country analysis.

2.2.2 Policy wedges

Typical distortions created by financial sector policy relate to restrictions on interest rates and reserve requirements on bank deposits. Financial repression, which results in imposition of interest-rate ceilings on bank deposits or on rates charged on loans to certain sectors, can reduce savings and can also distort the allocation of resources. In addition, politically motivated directed lending represents an implicit form of policy wedge, which leads to "soft budget constraints" for firms benefiting from the lending and, therefore, to poor performance of the financial sector in reallocating resources.

Financial liberalization policies may eliminate the distortions created by financial repression. It is a well recognized theoretical result, however, that financial liberalization has an ambiguous effect on saving, due to the presence of income and substitution effects following an increase in the interest rate. There is also some evidence (Demirguc-Kunt and Detragiache, 1998, cited in Caprio and Honohan, 1999) that banking crises often follow financial liberalizations. Yet, this outcome may reflect more a weak financial market infrastructure, which leaves regulators ill-equipped to adequately supervise newly liberalized financial intermediaries.

2.2.3 Participants

Important participants in financial markets include financial intermediaries and individual investors providing outside finance to firms through stock markets. Recent cross-country

[13] Empirical evidence from economies in transition suggests that a commitment to law and order may be a precondition for financial development. See Filer *et al* (2000).

empirical research that attempts to assess the relative importance of financial intermediaries and stock markets concludes that the relative weight of each in the financial system does not appear to matter.[14] Since the typical path of financial sector development is for the banking sector to develop first, followed later by stock market development, we focus our attention here on financial intermediaries. Potentially important distinctions between types of financial intermediaries are state versus private banks, differences in the qualifications of owners of private banks, and foreign versus domestic banks.

The nature of bank ownership and management can significantly affect the efficiency of resource allocation and reallocation by the banking sector. Banks must have both the ability and the incentives to identify and invest in profitable firms and to halt lending to unprofitable firms. Conditions that would be expected to lower banks' incentives to allocate (or reallocate) resources efficiently include: (1) government pressure on banks to lend to particular firms or sectors for political reasons; (2) pressure on banks by governments to purchase government debt; (3) too few constraints on banks' activities, either because supervision is inadequate or restrictions on entry into banking are too lax; and (4) banks that are themselves in financial distress, in which case limited liability results in excessive risk-taking and hiding of bad loans. Conditions (1) and (2) may be more likely to hold when banks are state-owned. In any case, government interference in bank lending is common in developing countries (Caprio and Honohan, 1999).

Conditions (3) and (4) have a negative effect on the financial sector's resource allocation and reallocation functions through inefficient investment behavior on the part of banks. Banking regulations will influence the extent to which conditions (3) and (4) hold. Regulations that would be expected to guard against inefficient investment behavior include regulation of entry into the banking sector, capital adequacy requirements, rules relating to loan classification and

[14] Variables that appear in cross-country regressions to be more correlated with growth than the structure of the financial system *per se* include laws protecting stockholders and creditors, accounting standards, and overall financial system development. (See Beck, Demirguc-Kunt, and Levine, 2000, Levine, 2000, and Demirguc-Kunt and Maksimovic, 2000.)

loan-loss provisions, restrictions on bank activities, and adequate handling of banks with high levels of nonperforming loans.

A high rate of entry into the banking sector can sometimes cause more harm than good, despite the fact that entry increases competition.[15] Two sources of danger arising from lax entry policies are difficulties in regulating a larger versus a smaller number of banks and the increased riskiness of loans made by banks faced with competition-induced declining spreads between interest rates on loans and deposits. Banking sector problems arising from poor banking supervision or from excessive entry into banking by unqualified bankers are thus potentially harmful to growth. Several transition economies and Sub-Saharan African economies have suffered banking crises as a result of excessively lax restrictions on entry into the banking sector.

Research examining links between conditions such as (1) – (4) and growth is sparse. Some empirical evidence relating to state ownership of banks is offered by Barth, Caprio, and Levine (2000), who report preliminary results from an ongoing research project in which data on bank regulation and ownership have been collected from over sixty countries. They find that state ownership of banks is significantly and negatively correlated with financial sector development.[16] La Porta *et al* (1999) collect data on state ownership of the ten largest banks in over ninety countries, including twelve transition economies. They find that their measure of government ownership is significantly and negatively correlated with subsequent financial development, measured by the growth in the ratio of private credit to GDP.

3. Labor Markets

In contrast to financial markets, the role of labor *markets* in affecting growth has not yet become a major topic of empirical analysis. This is especially surprising given the (above surveyed) extended empirical research linking financial markets to growth performance.

[15] As we point out in Section 5, an increase in competition in product markets can also have ambiguous effects on growth.

[16] Perhaps surprisingly, Barth *et al* also find that restrictions on the range of bank activities, such as laws preventing banks from operating in real estate, insurance, or securities markets, have no beneficial effect on financial sector development and are even positively correlated with banking sector instability.

Furthermore, the existing empirical work, including a survey from 1999 on labor markets and growth by Robert Topel, studies only one aspect of labor markets: the effect of human capital accumulation on growth. This reflects the almost exclusive focus of labor-market-related growth theory on human capital (HC). We will take a broader view, building also on a large body of empirical literature on labor-market flexibility, which is, if only implicitly, related to growth.

3.1 Growth Mechanisms

The economic links from labor markets to growth are likely to occur through the allocation (and mass reallocation) function of labor markets and through their role in supporting the production and efficient use of HC. The links from growth to labor markets, on the other hand, are likely to occur though the build-up of infrastructure as a result of economic growth.

3.1.1 Production of Human Capital

Human capital is the "engine" of workhorse growth models and lies at the heart of the revival of growth economics. There are two important causal links from HC to growth in the theory: First, in the neoclassical growth models, increases in HC cause growth as HC is one of the main inputs to the production. Second, Nelson and Phelps (1966) suggest that higher stock of HC makes technological innovations and therefore growth more likely. The first channel suggests that an increase in HC leads to a one-time increase in production, while the second implies that the effect of increasing HC on output is permanent.[17] Neither theory implies how labor markets can impede or foster HC creation and use.

There is only limited empirical evidence on the *process* that relates HC and growth. At the micro level, schooling increases productivity when included in en estimated production function (see, e.g., Griliches, 1997, for references) and schooling is a causal determinant of individual income (Card, 1999). However, the definition of HC used in growth theory covers not only schooling, but also accumulation of knowledge or abilities to conceive and implement new ideas, labor-augmenting technology, and possibly even social capital. It is hard to measure these

[17] The second channel is supported by micro-evidence (e.g., Welch, 1966).

concepts and they do not differentiate the ability to apply knowledge in productive ways from technical progress. Still, the measure of HC used in macro empirical work is typically educational attainment, capturing only one form of knowledge.[18] The existing empirical results based on educational attainment measures of HC are mixed, at the best.[19] Yet, given the overwhelming (causal) evidence from micro studies, and the strong theoretical foundation of growth in HC, one is pressed to ask how HC is created (and what affects its use).

Is the tentative evidence of the regional papers on markets and growth consistent with the view that HC should be the centerpiece of growth research? The evidence is puzzling since school attainment measures grow consistently in most countries, but output does not. While in the East Asian countries and in some Latin American countries large investments in HC by the youth coincide with dramatic increases in growth rates, there are other countries (e.g., in the MNA region) where growing stock of HC was associated with little productivity growth. The ECA region has a highly educated work force and an enormous potential for technology adoption and imitation; yet, this potential is far from being realized in many of the ECA countries.[20]

Hence, at first glance, HC does not appear to be the main determinant of differences in growth rates across countries. At second glance, however, one can consider HC a necessary but not sufficient condition for growth and look at labor markets for an explanation why (growing) HC stock was not put to its best use in some countries. This perspective stresses the role of HC allocation as opposed to HC production. We take up this issue within the context of the following two subsections, focusing on labor allocation and reallocation.

3.1.2 Allocation of Labor

[18] Further, while increases in years of schooling at low levels of human capital in less-developed countries are likely to correspond to an actual increase in the amount of human capital, in developed economies additional human capital is often produced even if educational attainment grows only slowly (i.e. quality of education; e.g., use of computers). In fact, education policy in the more developed countries has recently turned attention toward pre-primary schooling, transition from school to work, and adult education. Indeed, Hanushek and Kimko (2000) recently show that human capital quality is strongly related to growth.

[19] However, Topel (1999) and Krueger and Lindahl (2000) recently find macro returns to schooling in line with those estimated in the Mincerian wage regressions.

[20] One explanation for the puzzle could be differences in HC quality, but this only appears potentially important in the ECA region where cognitive skills test reveal low ability of workers to process and analyze information.

The ability to allocate existing resources (i.e., labor, HC) across economic sectors, occupations, or regions is, at an intuitive level, crucial for static efficiency. Further, one can hypothesize that the apparent lack of explanatory power of HC for growth may be related to miss-allocation and therefore to the functioning of labor markets. The allocation function of labor markets would then be as important as the key theoretical role of HC in driving growth. The country-specific question is then not only how Korea increased its stock of HC, but how did it increase also its labor utilization, and non-agricultural labor force (Topel, 1999)? On the other hand, one must ask why are most degree holders entering the labor market in Egypt hired by the public sector and how much this affects growth.

The effect of misallocation is twofold: First, present-day efficiency of allocation is lower. Second, misallocation may lead to build-up of political economy obstacles to reallocation: pressure groups that benefited from misallocation rents will oppose efficiency-enhancing reforms and this opposition to reform may form a long-term obstacle to growth.

A strong effect on growth through allocation of resources probably comes through high labor taxation. This issue is of primary concern only in developed industrialized economies (see, e.g., Tabellini and Daveri, 1997, and the references therein) as direct labor taxation is low in most developing countries. Yet, labor taxation is important in many ECA post-communist countries where the welfare state commitments inherited from the communist era misallocation of resources result in high statutory contribution rates and excessive labor taxation.

3.1.3 Labor Reallocation

A tightly related issue is the labor markets' ability of massive reallocation, i.e. the ability to successfully deal with extensive (initial) misallocation or with external shocks. It is crucial for transitional growth of countries off the steady-state path. For example, extensive reallocation of labor appears to be needed in the ECA region as a result of communist misallocation, in the SAS region as a result of the doctrine of economic nationalism, or in the MNA region as a result of misuse of high oil revenues in the 1970s.

Large shocks occur often in less-developed countries and often appear to establish

turning points differentiating between multiple growth equilibria. For example, the initial misallocation of labor on communist labor markets resulted in workers moving from over-stuffed heavy industries to services, finance and trade in the European transition economies. In contrast, Russia and parts of the former Soviet Union were not that successful and the initial transition often resulted in an increase in agricultural employment, reversing the process of economic development. This distinction is likely to drive long-term growth prospects.

3.2 Market Dimensions

Let us now draw on the preceding discussion and on the GRP regional papers to consider the labor-market dimensions that may affect the three labor-market growth mechanisms.

3.2.1 Market Infrastructure

The important labor market *infrastructure* includes: (i) transportation, housing (and mortgage) market, and residency restrictions; (ii) schooling systems; (iii) market-clearing mechanisms such as channels of information on vacancies; (iv) protection against diversion; (v) labor code and regulations; and (vi) social security. While there is extensive empirical research on the effects of (v) and (vi) on many labor-market outcomes and some theoretical research on growth effects of (ii) and (iii), many of these issues appear not covered in length in the existing growth research agenda.

Functioning *housing market and transportation infrastructure* clearly improve the allocation function of labor markets; further, closely related mortgage markets improve the ability of workers to reallocate from regions with high unemployment to thriving areas. The latter is likely to be especially important in geographically dispersed (large) developing countries, for example in Russia, where massive misallocation under central planning led to non-viable industrialization of far-north isolated regions. (Note that the proposed growth effects lead to specific research questions. For example, to study whether territorial mobility restrictions curb growth through an effect on human capital allocation, one can relate region-time-specific labor-market outcomes such as unemployment, education-occupation match or productivity to variation in housing-market regulation and/or residential-permit policy.)

Schooling systems produce human capital; hence, their direct effect on the HC growth mechanism. Reforms promoting the quality and supplied quantity of education are likely to improve the chances of a country to grow. An important related issue of HC accumulation has to do with social returns to education being higher than private returns. Existence of positive externalities and spillover effects of education calls for government support of schooling.[21] Finally, the ability of schools to adjust focus (curricula) to market needs also affects the allocation of labor and HC on the labor market.

Poor quality of *market-clearing mechanisms* (such as information channels used in hiring) will clearly negatively affect the allocation function of labor markets. Labor market segmentation (along, for example, ethnic dimensions) also negatively affects market clearing. However, it also alters schooling and HC accumulation: Since students will expect their class status determine their labor-market careers, segmentation will also affect HC production. If innovative activity and social mobility play an important role in determining growth, policy should support equal schooling and innovations (entrepreneurs).[22]

Rule of law and protection against diversion are likely to play an important role in both creation and use of HC on labor markets: if the benefits of innovations are not protected by law, few will invest in research; if benefits of entrepreneurship are grabbed by either organized crime or state, few will become (innovative) entrepreneurs. The regional papers indeed suggest that extensive diversion (grabbing hand)[23] will preclude a rise in productive type of self-employment and force even well-educated (ECA) workers to self-subsistence agriculture.[24]

The ability to reallocate labor is likely to be related to the popular notion of labor markets flexibility (lack of rigidity). *Labor codes and regulations*, i.e. labor-market flexibility (and its

[21] Schooling is also affected by the difference between private and state schools (Glomm and Ravikumar, 1992), decentralized and centralized school finance, or segregation of students with heterogeneous ability (Benabou, 1996).
[22] E.g., Hassler and Mora (2000) focus on the interaction of intelligence (HC channel) and social mobility (allocation channel) in affecting growth. In their model, higher growth entails new technology adoption which makes intelligence more important (as opposed to social position of parents). As a result, growth makes intelligence better rewarded, which again feeds back into easier adoption of technology and more growth.
[23] See, e.g., Djankov, La Porta, Lopez-de-Silanes, and Shleifer (2000).
[24] This may be particularly important given that self-employed and small firms appear to be the driving force of growth in ECA (see, e.g., Jurajda and Terrell, 2000; or Selowsy, Mitra, et. al , 2001).

effect on worker mobility), has become a major object of empirical research.[25] Much of this research focuses on job security regulation (e.g., high firing costs and limited part-time or fixed-term contracts). While there are undisputed benefits to recipients of job protection, there is disagreement over the extent to which regulation is responsible for the difference in equilibrium (un)employment rates and worker mobility: Blank (1994) and Freeman (2000), among others, argue that regulations are not harmful, while, e.g., OECD (1994), Burgess (1994), and Michie and Grieve-Smith (1997) claim that they matter. Heckman and Pagés-Serra (2000) analyze the role of job security provisions using natural experiments from the recent history of Latin American countries and establish that such regulations have a substantial negative impact on the level of employment and especially on youth. Looking both across countries (Burgess, 1994) and U.S. states (Dertouzos and Karoly, 1993) the evidence is that employment protection legislation slows down structural adjustment and the reallocation of labor from declining industries to innovative, growing industries. To the extent that structural reallocation is an important growth ingredient, labor market regulation affects growth.[26] However, the evidence from the regional thematic papers appears to suggest that an important empirical question related to regulations in developing countries is the degree to which they are enforced.

While, e.g., labor market segmentation, impediments to labor mobility, and other rigidities have been recognized as obstacles to growth and studied in developing countries (e.g. Collier and Gunning, 1999; Agenor, 1996), there is relatively little research looking at the importance of social safety for massive reallocation and growth.[27] The ability to deal with large shocks may be improved if workers can rely on *social safety net* while searching for new jobs and do not plunge into poverty (and self-substance home plotting). On the other hand, social

[25] Yet, there appears little applied theoretical work on the issue, unless we note that reallocation also means transfer of innovation and/or organizational practices across sectors. In the Schumpeterian models (e.g., Romer, 1990) growth depends on the rate of innovation generated in the economy.

[26] A related issue is entry into self-employment/entrepreneurship and the amount of red tape. The issue of firm closings and startups is taken up in see Section 2.

[27] Much western research also suggests that the design of a country's unemployment system can have a major effect on the equilibrium level of unemployment (e.g., Mortenson and Pissarides, 1998a, 1998b). The issue of unemployment benefits disincentives and more generally welfare traps in developing countries is probably only relevant for the more successful ECA countries and we will not dwell upon it here due to space constraints.

safety nets require high levels of labor taxation, which appears harmful to economic growth. Finally, an important related ingredient of many recent growth stories is labor force participation. It is shaped by demography, but to a large extent also by incentives set in the labor market including social safety net and unconstrained wage setting (see below). Output per capita increases even if bad macroeconomic policies remain in place as long as participation increases.

3.2.2 Policy wedges

The most important price wedge on the labor market occurs through wage-setting distortions (minimum wage, centralized compressed wage structure, massive taxation and redistribution). Compressed wage distribution adversely affects HC accumulation in a stylized theoretical growth scenario: In the Lucas-Uzawa framework , recently surveyed by Topel (1999), HC is accumulated endogenously, as a result of individual optimal investment decisions sacrifying present consumption for future returns. Incentives to invest in HC are related to rewards to such investments, which are carried by a flexible wage structure.[28] In a market-driven scenario of (Kuznets) growth, exports propel the demand for industrial output, which in turn raises the demand for skilled labor and consequently the skill wage premium. This leads to investment in HC and consequently growth. This growth story requires, among other conditions, a flexible (regulation-free) wage structure and an elastic response of HC investment (see also Section 6.1).[29]

3.2.3 Participants

The relevant participants on labor markets are government-sector employment and other pressure groups as opposed to employment in small firms, home production, and the shadow economy.[30] The first type of participants (pressure groups, labor unions) is likely related to

[28] Hence, to verify the effect of wage-setting policy wedges on human capital production in a country-specific context, one can relate measures of returns to education to HC investment.
[29] Artificially high wages in the public sector represent another important growth-detrimental policy wedge, but this issue is discussed in Section 4 on natural resources.
[30] Another set of players are ethnic groups since market-clearing mechanisms, one of the components of market infrastructure, are affected by segmentation arising from ethnic or class identity of groups of workers/players.

political economy constraints on growth. If those who would lose from efficient restructuring block reforms, this surely affects the labor markets' ability to support efficient reallocation.

A strand of theoretical models called Optimal Speed of Transition theory (e.g., Aghion and Blanchard, 1994; Castanheira and Roland, 2000) relates to the political economy problems of massive reallocation. These models are motivated by the transition of post-communist economies, but are relevant for extensive reallocation in other regions, e.g. for a situation in which an over-staffed public sector puts a heavy burden on the private sector, which is thus incapable of creating large numbers of "good" jobs. They model the reallocation of labor (and capital) from an inefficient over-sized (state) sector to a growing efficient (private) sector. This strand of literature advocates gradual phasing out of the inefficient sector as optimal based on, in part, political economy constraints. Too fast a downsizing of the inefficient sector creates obstacles to successful reallocation and slows down growth.

Indeed, the tentative evidence from the regional thematic papers suggests that the establishment of pressure groups (as a result of initial misallocation of resources) is a major obstacle to successful reallocation.[31] Buying out workers who are harmed by first-choice economic reforms may be one solution to this obstacle to growth (e.g., in MNA).

4. Natural Resource Markets[32]

So far, we have discussed the factor markets for capital and labor. As it is common to view natural resources, including land, as an additional factor of production, we will consider the relevance of natural resource markets for economic growth.

The current consensus is that natural resource abundance depresses economic growth (e.g., Sachs and Warner, 1995). The main upshot of the literature is twofold: First, natural resources, if not well managed in well-built markets, will impede growth thorough rent seeking.

[31] E.g., in the MNA region. Supporting this observation, Forteza and Rama (2000) study the implications of labor market rigidity for the success of economic reforms and conclude that the political dimension of rigidity is important, i.e. the size of organized labor and public employment.

[32] This section draws heavily on the natural-resource part of the ECA "Markets and Growth" paper written by Thorvaldur Gylfasson and on McMahon (1997), both of which include an extensive list of references.

Second, abundance of natural resources leads to serious policy failures: the windfall from a natural-resource boom if misplaced, sometimes with long-run detrimental effects.

Natural-resource abundance tends to induce *rent-seeking* behavior that can take many forms, including corruption and looting and consequently increase the degree of diversion in the whole economy. The interaction of markets with this growth mechanism is very strong in that the ability to circumvent or thwart markets is often a precondition of rent seeking. A natural consequence of rent-seeking control of valuable resources (e.g., oil) is then buildup of interest (pressure) groups, which may further impede efficient allocation of resources and which often directly influence politics. Rent seeking is therefore both a consequence and a source of market failure. What fails is primarily market infrastructure: property-rights protection. Rent seeking appears present in all resource-rich areas, including ECA. In SSA it takes the extreme form of looting. For example, Collier and Hoeffler (1998) find that a dependence on natural resources strongly increases the risk of civil war.

An abundance of natural resources also often leads to *policy failures* and results, typically, in a serious misallocation of resources, high inflation, and build up of pressure groups:

When the windfall from natural resources is captured by the state, it is often used to (i) offer highly paid jobs in a bloated public sector (as for example in Cote d'Ivore or Egypt), (ii) finance extensive public projects or state-owned industrial enterprises (Nigeria or Trinidad and Tobago), and (iii) support import substitution policies and/or subsidies to non-natural-resource industries (Venezuela). Such increase in government spending is hard to reverse when oil prices drop as pressure groups lobby for their subsidies. Next, excessive foreign borrowing results in inflation and indebtedness. The country becomes highly dependent on the (fluctuation in) raw material prices in world markets, which results in large external shocks to the economy as it is difficult for the government to smooth revenues and even harder to cut down on spending programs started during natural-resource boom periods.

When the windfall is distributed to the population, wrong policies are often in place, such as restricted access to foreign capital markets. This leads to the windfall being invested in construction or other activities leading to little increase in productivity.

The market dimension playing an important role here is players: governments and public employment. One of the apparent reasons for policy failure is a false sense of security of governments of resource-rich countries. The country-specific research question is then why, given the high propensity to misallocate oil windfall, did Indonesia apparently manage its windfall well, while, e.g., Venezuela invested in growth-impeding import substitution (Gelb, 1988). The policy response to natural resource booms may have to do with market infrastructure before the boom, which is testable.

There are also other mechanisms potentially relating natural resources to lower growth, which consider the trade-off between manufacturing and natural-resource extraction. It is argued that manufacturing contributes larger positive externalities compared to the natural-resource sector. A reallocation of resources away from the manufacturing sector then impedes learning by doing, while, say, mineral-resource production occurs without any linkages to the rest of the economy. This argument is at heart of the Dutch-disease or the linkage theories. When the high-rent natural-resource-based industries thrive in presence of high real exchange rates and wages, other industries are smothered with the Dutch disease: this lowers the growth of high-tech capital-intensive or high-skill labor-intensive industries, which typically offer large growth externalities, such as learning, R&D and technology adoption. The disease is a consequence of a general market failure, not that of particular market dimension. An effective cure may involve distortion-free resource rent fees or subsidies to high-externality industries.

Finally, resource abundance in agriculture leads to an overemphasis on low-skill education. However, low-skilled labor is not versatile and becomes less useful in other industries; workers with few options tend to oppose reallocation when resource prices plummet and reallocation is needed (see Section 3).

5. Product markets

Product markets affect growth through the efficiency of the mix of goods and services produced, the rate at which productivity-enhancing innovation occurs, and the ease of firm creation. A mix of goods that does not reflect an economy's comparative advantage does not allow exports to grow at the rate that they otherwise would. Production of goods for which the production process generates positive externalities with respect to growth (such as learning by doing or acquisition of "tacit" knowledge) can also enhance growth.[33] The ease with which new firms may be created may also influence the amount of innovation in an economy and the ability of markets to reallocate resources from unprofitable to profitable sectors.

Market infrastructure: Important elements of market infrastructure with respect to product markets include public infrastructure, such as transportation and telecommunications networks, and the prevalence of patents. Adequate public infrastructure lowers transactions and production costs for firms and increases production. The quality of infrastructure may also influence the level of foreign investment. The prevalence of patents influences firms' incentives to innovate. The greater the ease of obtaining a patent for an innovation, the greater are firms' incentives to innovate and the higher the resulting rate of growth.

Policy wedges: Policies such as preferential taxes and subsidies to particular sectors, quotas or tariffs on imports, and laws governing export and import licensing may influence growth through their effect on the mix of goods produced. For example, import substitution policies adopted by South Asia have been cited as one of the key explanations for the low growth rates of this region from the 1960s to the 1980s.[34]

Participants: Elements of what was described above as financial market infrastructure, such as a commitment to private property rights and to contract enforcement, can influence the types of participants in product markets. The commitments to contract enforcement and to

[33] Schumpeterian models of growth (as discussed in Aghion and Howitt, 1998) emphasize growth as occurring through product (or capital) improvements via innovation. New capital or products render old technology or products obsolete (creative destruction).

[34] See Tendulkar and Sen (2001).

property rights ensure that firms' profits will not be seized by the government or corrupt officials. These commitments can affect the willingness of private and foreign firms to enter into differing markets.

Another element of infrastructure with a potential impact on the amount of innovation concerns restrictions on the creation of firms. If regulations regarding the formation of new firms are very strict, then innovative entrepreneurs may be discouraged from forming firms, thereby slowing the rate of innovation and economic growth. Regulations restricting entry and the formation of new firms will also affect the proportion of private firms in a market and the distribution of established versus new firms. Governments that implement restrictive entry policies may do so in order to protect state-owned firms or firms whose managers wield political influence.[35] The potentially negative effects of such policies on productivity, innovation, and growth are clear.

These observations lead to the question of whether an increase in product market competition promotes growth. The theoretical relationship between competition and growth is in fact ambiguous. On the one hand, increased competition lowers incentives for managerial effort or innovation because of the lower level of profit that can be sustained from the extra effort. On the other hand, increased competition motivates managers of inefficient firms to exert more effort in order to avoid being driven out of the market.

Several theoretical papers have played on the ambiguous relationship between product market competition and managerial effort. Hart (1983) and Scharfstein (1988) show that managerial effort is not only a function of the level of potential profit (or of competition) but also of the nature of firm managers' objectives. Aghion, Dewatripont, and Rey (1999) take this idea further and analyze a model where managerial objectives, combined with financial market efficiency, play a significant role in determining which effect dominates. When firm managers are profit-maximizers, an increase in competition will lower profit and, consequently, innovation

[35] Djankov et al (2000) collect data on the regulation of entry of start-up firms in 75 countries and find a correlation of entry restrictions with corruption.

and productivity (and growth). When firm managers care about their private benefits of control, competition will discipline the managers (by removing financial "slack") and force them to innovate more often, thereby increasing economic growth.[36] Given the prevalence in many developing economies of state-owned firms, firms benefiting from special government protection, and a generally weak legal protection of outside creditors and shareholders, we see these results as highlighting the important role that increased competition can play in disciplining firm management and enhancing growth.[37]

Openness, which represents a removal of policy wedges linked to international trade, can also influence the types and behavior of participants in product markets. Openness may generate benefits from any of the following: economies of scale (possibly arising from learning by doing) due to the increase in the size of the market; the disciplinary effect on inefficient firms due to the increase in competition; or more rapid diffusion of technology, as entry of foreign firms or products makes transfer of technology easier.

According to Ahn and Hemmings (2000), results from empirical studies on the impact of openness on growth are mixed, although recent studies seem to have confirmed a positive relationship between trade and growth. Two caveats to these results should be noted. First, causality probably runs in both directions; therefore, the question of causality needs to be addressed. Second, many studies make use of a binary openness indicator constructed by Sachs and Warner (1995), which includes a number of differing dimensions relating to policy wedges, nature of market participants, and market infrastructure.[38] Such an indicator makes it difficult to identify the exact mechanism by which openness might be affecting growth. For example,

[36] Note that the assumption that financial markets adequately perform the function of eliminating unprofitable firms is crucial to these results. This implies that the efficiency of financial markets, together with firm managers' objectives, plays a role in determining the effects of increased product-market competition on innovation and growth.

[37] Empirical studies that have reported a positive correlation between competition and productivity growth include Nickell (1996) and Blundell et al (1995). See Ahn and Hemmings (2000) for a discussion of studies reporting a negative relationship between market regulation and growth.

[38] Sachs and Warner define an economy to be open if all of the following conditions holds: 1) average tariffs less than 40%; 2) quotas and licensing cover less than 40 % of imports; 3) the black market premium is less than 20%; 4) non-socialist economy; 5) state does not have a monopoly in major exports.

Rodriguez and Rodrik, (1999) suggest that two of the components of this indicator (size of the black market premium and the existence of a state monopoly on exports) are primarily responsible for its statistical power. The black market premium could be an indicator of macroeconomic policy as much as of openness. Similarly, a negative relationship between the existence of a state monopoly on exports and growth may be more directly attributable to state ownership than to openness.

6. Four Growth Stories

In this section we present four "scenarios," or growth stories coming from the regional growth papers. Each relates to experience in some region during some period and highlights what seems to emerge as a key theme in explaining the growth performance. These scenarios should be interpreted as tentative and exploratory. We use them, first, as an expositional device in our discussion of regional growth experience. At the same time, the scenarios also embody hypotheses that could be explored in future country-level and regional research. Such focus is in line with the research agenda outlined in the introduction. By distilling patterns of growth from the past, we seek to identify both the past pitfalls and the future policy implications. Within each scenario, we highlight the involved market mechanisms of growth discussed above.

After discussing each scenario and the region(s) to which it applies, we raise caveats and unresolved questions. The four stories focus on the following themes: (1) Importance of openness policies; (2) Market flexibility in response to major shocks; (3) Influence of high natural resource endowments; and (4) Consistently low growth (the everything's wrong story). Scenario (1) identifies a theme arising from experience in EAP and SAS. Scenario (2) characterizes experience in ECA in the 1990s, in some MNA countries in the 1980s, in LAC in the 1980s, and possibly in some SSA countries in the 1970s and 1980s. Scenario (3) describes the MNA region and may tell part of the story in SSA. Finally, scenario (4) describes several countries in SSA that have exhibited consistently low growth rates over very long periods.

6.1 Openness

East Asian countries, which started with comparable rates of income per capita as South

Asia in the 1960s, consistently improved their growth rates from 1960-1997, whereas South Asia did not. East Asia switched from import substitution policies to export-oriented policies earlier. This, in short, motivates our first story.

The first scenario is essentially a story of market-driven Kuznets-type growth, in which openness policies raise the potential of a developing country to export and therefore attract investment into manufacturing. Rising exports then propel the demand for industrial output, which in turn raises the demand for skilled labor. A higher skill wage premium leads to investment in human capital (and/or a higher participation rate in a country with many educated non-participants) and movement of labor force from agriculture (villages) to manufacturing (cities). The story involves a significant increase in the level of human capital (of youth) and an expansion of employment in high-skill industries (manufacturing), accompanied by increasing technology adoption, positive externalities spilling from manufacturing into other industries, and the concurrent development of financial markets.[39] This process of growth also entails a large movement of labor force from rural to urban areas and an initial increase in inequality, which may later be reversed by a growing supply of degree holders. Real wages grow together with productivity (but not faster).

This success scenario hinges on (i) openness, (ii) the ability of a country to accommodate industrial production (perhaps including easy start-up procedures, little corruption and diversion), (iii) a flexible wage structure, and (iv) the ability of workers to move and to invest in human capital (alternatively, state support of such investment).[40] Governments' pro-export policies (a shift from import substitution to active export promotion) may trigger this scenario; hence, while international trade is a key element of this story, the trigger may deserve a separate political economy analysis.

Note that the 'openness' scenario is a market-driven story of growth: It starts with a

[39] We have little information on financial markets in the EAP and SAS regions, which motivate this scenario. Hence, it is hard for us to evaluate the role of financial markets in this process.
[40] I.e. an elastic response of investment in human capital to rising skill wage premium.

removal of a market barrier/wedge. To reap the benefits of this market opening, other factor market mechanisms must be invoked, including human capital production and labor reallocation. Market infrastructure must be able to support the accommodation of industrial production, etc. At a more fundamental level, this scenario regards openness (and its immediate implications for product markets) as the causal force behind growth. The causality may run in two directions. First and foremost, international trade expands the size of the local market, which may have growth promoting effects of fostering productivity and labor reallocation to manufacturing. Trade provides demand for manufacturing output in low-income labor-abundant countries and therefore fosters labor reallocation and schooling. The effect on productivity may come from technology adoption, returns to scale, positive externalities, and international competition's disciplinary effect. Second, in this scenario import substitution policies lead to product market distortions. These distortions (or the lack thereof) in turn feed into the workings of factor markets, thereby reinforcing the growth effect of openness.

EAP. Characteristic features of this region (and apparently that of the region's governments' long-term economic programs) are early export-oriented policies, high levels of human capital, and high rates of growth. The central hypothesis of the scenario is that the steady and high rates of growth of most of the countries of East Asia were a result of policies of export promotion (and technology adoption in some cases), perhaps combined with high levels of human capital which facilitated acquisition of tacit knowledge following from the adoption of foreign technology.[41] Related questions, however, are the importance to the EAP growth story of the role played by large-scale labor reallocation and the fact that political economy constraints did not prevent useful product market interventions. Both may have to do with a relative weakness of interest groups, in which case it would be interesting to study why protected

[41] Cross-country regressions show that the Sachs-Warner openness index is highly correlated with a regional dummy for East Asia; the countries of this region score high on this index relative to other developing countries. Yet, more country-specific investigation of performance along the individual dimensions of this index, together with description of the specifics of export-promotion policies, might provide a better idea of the potential relationship between openness and growth. For example, were there different implications for growth of the "technology policy" pursued by South Korea from the policies adopted by other countries. The South Korean government directed funds to particular firms for technology adoption in return for export production quotas.

industries and labor unions did not become important.

Another question concerns whether any *pre-conditions* are necessary to drive this scenario. This question comes to the fore upon comparison of EAP's growth with the low growth of the SAS region, which was characterized by anti-openness policies. Although openness policies represent a major difference between SAS and EAP, it appears that SAS countries also suffered from a number of other factor and product market distortions, which may have contributed to their low growth. Did EAP avoid these imperfections? To the extent that there do exist necessary pre-conditions for the success of openness policies, likely candidate on the basis of EAP experience would include: low levels of natural resources, which do not suffocate manufacturing and which may imply or coincide with weak labor unions and low corruption; a threshold level of initial human capital stock; high savings; and macroeconomic stability.

One dissenting view with respect to the description of EAP growth offered by this scenario is that the causality runs in the opposite direction: economic growth promoted exports (Rodrik, 1994). If the latter hypothesis is correct, the sources of the initial growth need to be identified. The above list of potential pre-conditions would appear to offer a natural point from which to begin searching. Alternatively, high savings and investment may have offered the original stimulus for the high growth rates.

SAS. This region may present a converse case of the EAP openness-and-success story. Here, governments favored inward-oriented policies: import substitution, not export promotion. This was apparently not optimal, as no South Asian country reported high growth in any decade from 1950 to 1980 (Reynolds, 1985). SAS governments implemented centrally planned public-sector oriented industrialization programs based on an economic nationalism doctrine. This raises the political economy question of how and why this ideology was conceived. In particular, were mistrust of markets and belief in state intervention related to the British colonial status of SAS?

The economic nationalism programs called for restrictive trade and exchange rate policies, which gave rise to overvalued exchange rates and product-market distortions (i.e.

protection of specific industries). Furthermore, public firms and publicly financed investment projects faced soft budget constraints; priority was given to basic, heavy industries; and employment in public sector expanded fast, without regard to productivity. The anti-export policies resulted in balance-of-payments deficits leading to a cycle of further import controls.

While even mild forms of central planning (mild in comparison to pre-transition ECA) beget misallocation of resources and low growth, the driving force of low growth in SAS may be related to the issue of openness. This conjecture, however, leads to a number of more specific questions related to openness in the SAS context. In particular, how important are product market distortions relative to factor market distortions in explaining SAS growth? For example, Tendulkar and Sen (2001) note that legislative restrictions on employers led to the hiring of contract labor and to adoption of capital-intensive technology. These authors also suggest that progress in SAS in the 1980s in eliminating trade distortions was not matched by liberalization in factor markets.

A second question relating to the importance of openness for SAS is whether inward-oriented policies such as trade restrictions inhibit growth through their negative effect on demand for exports (and hence investment), distortionary effect on product mix, or by encouraging rent seeking? Alternatively, do they hamper growth through the reduction in foreign direct investment, which would then imply less capital and less transfer of productivity-improving technology? Guha-Khasnobis and Bari (2000) report that trade restrictions in SAS countries actually correlated with higher growth, whereas the absence of foreign investment was associated with lower growth.

Additional, largely unexplored potential explanations for lower growth in SAS than in EAP are related to the importance of restrictions on the expansion of private enterprises, the apparent under-investment in human capital combined with high fertility rates, the quality of market infrastructure (corruption, commitment to contract enforcement, etc.), and the functioning of financial markets (e.g., the apparent attempts of the governments to control banks and/or interest rates). Initial conditions in SAS that could also be considered include a high proportion

of agriculture in GDP and a potentially lower initial level of human capital.

Finally, the persistence of inward-oriented policies in SAS is likely related to a political economy argument of path-dependence. (See the discussion of SAS in Section 6.2.)

6. 2 Responsiveness to Shocks

In this scenario a shock to the economic system either generates or reveals the need for a major reallocation of resources from low-productivity to higher-productivity firms or sectors. The extent to which the economy succeeds in reallocating resources will determine growth rates in the short and medium term and may also have a significant impact on long-term growth rates. Examples of such shocks include decreases in terms of trade for a country dependent upon commodity exports, a financial crisis, or a change in the political regime, such as the beginning of transition from a socialist to a capitalist economic system.

What is significant about this scenario is the need to reallocate massive quantities of resources from existing to new uses. The required reallocation often involves significant labor movement (across regions as well as industries), restructuring or closing of firms in low-productivity sectors, and creation of firms in high-productivity sectors. The new equilibrium to which the economy will move may either be a "high-growth" equilibrium, in which market imperfections are sufficiently low to permit an efficient reallocation of resources, or a "low-growth" equilibrium, in which market development is inadequate. Typical outcomes in a low-growth equilibrium include expansion of the public sector to absorb workers displaced by the shock (some MNA countries), retreat of displaced workers from industry to agriculture (some ECA countries), or movement of labor from the formal to the informal sector (SSA). Each of these outcomes may exert negative long-term effects on growth.

Market mechanisms that will determine the outcome of the shock are those that were cited above in Sections 2-5 as relating to the reallocation of resources in labor, financial, and product markets. In terms of market dimensions, whereas infrastructure, policies, and types of participants all play an important role, infrastructure is crucial to achieving efficient resource reallocation. Bankruptcy and collateral laws determine the likelihood that unprofitable firms are

liquidated or restructured, freeing capital to move to more profitable activities. Restrictions on hiring and firing affect both the probability that firms release redundant labor and the degree of labor mobility across regions. The ease with which new firms can be created influences the speed at which resources can be reallocated to profitable activities.

Although adequate market development appears to be a necessary condition for efficient resource reallocation in response to a shock, it may not be sufficient: political economy factors may also push the economy in the direction of the low-growth equilibrium. For example, groups benefiting from the existing allocation of resources (such as firm owners or workers in particular sectors) may put up strong resistance to reallocation. The degree of political will to tolerate (or compensate) losers may be important in determining the new equilibrium after the shock. In addition, government responses to the shock can influence the movement to a particular equilibrium by influencing agents' beliefs regarding government credibility: if agents believe, for example, that the government is not committed to reform, then entrepreneurs may be unwilling to create new firms, thereby slowing movement to the high-growth equilibrium or pushing the economy toward a low-growth equilibrium.

ECA. The countries of the ECA region have all faced the shock imposed by the transition from socialism to capitalism, initiated in these countries at the beginning of the 1990s.[42] The transition, which was motivated in part by a grossly inefficient allocation of resources during the socialist regimes, created the need for resource reallocation on a massive scale. This task, which would be enormous in any economy, has been made even more difficult in the ECA countries by the virtually complete absence at the beginning of transition of infrastructure in all types of markets and by the dominance of state participation in all markets.[43] The ECA countries have had to put into place market infrastructure while at the same time reallocating resources throughout the economy.

All of the ECA countries suffered a large fall in production at the beginning of the 1990s,

[42] The discussion of ECA countries draws heavily on Filer et al (2000).
[43] Private sectors accounted for less than 10% of total production in most ECA countries prior to the transition.

as a result of the dissolution of the Soviet Union, the abandonment of central planning, and, in some countries, macroeconomic stabilization policies. One market variable that appears to correlate with more rapid turnaround in growth rates following the declines is the commitment by government to the rule of law and to contract enforcement.[44] Commitments such as these foster financial sector development and encourage entry of private firms into product markets.

With respect to the response to the shock of transition, there is a marked contrast between most of the former Soviet republics (excluding the Baltic countries) and the countries in Central and Eastern Europe. The former have made noticeably less progress in developing markets and have suffered low growth rates and significant increases in poverty, forcing a retreat of much of the active population from industry to agriculture.

The distinction between the former Soviet Republics and Central and Eastern Europe also applies to financial markets, especially to the commitment to the rule of law, which is sorely missing in some of the former Soviet republics. These countries also exhibit smaller and more poorly developed financial sectors and weak banking regulation. At the same time, all of the ECA countries (with the exception of Hungary) have been slow to implement workable bankruptcy laws, although the countries in the former Soviet Union have moved even more slowly than other ECA countries. In addition, in all of the ECA countries newly created small and medium-sized firms have had difficulty obtaining bank finance. High quantities of inherited bad debt on state-owned banks' balance sheets and inexperience in lending on the basis of market criteria are features of banking sectors that have contributed to this problem.

Labor market imperfections that have affected labor mobility in the ECA countries include administrative restrictions on moves between regions, the tie of provision of social services to the employer, and under-developed housing markets, together with rent controls for much of the existing housing. As before, elimination of such barriers has proceeded much more slowly in the former Soviet Union than in the other ECA countries.

[44] Successful macroeconomic policies also appear to correlate with growth increases.

Product market imperfections that are likely to have played a role in differential responses to the shock of transition are barriers to entry of new firms and the form and pace of privatization of state-owned firms. Whereas rising self-employment has helped channel labor from previous to new uses and has lowered unemployment rates, high barriers to entry and corruption in Russia have translated into low self-employment rates.[45] Success in privatization has varied across countries, with the former Soviet republics still reporting much greater shares of the state-owned sector in GDP as late as 1999.

Interestingly, the degree of openness does not appear to explain much of the variation of growth rates across ECA countries (although the level of foreign direct investment does correlate with growth). Most of the ECA countries have adopted policies of openness, and many have reoriented exports to countries outside the region. The determinants of foreign direct investment appear to depend more on success in development of market infrastructure, commitment to the rule of law, and political stability.

One caveat that must be raised with respect to the argument that market infrastructure and market development are important for determining the growth performance of ECA countries is the observation that the commitment to the rule of law—in addition to representing development of market infrastructure—may also signal political commitment to the transition process. This political commitment may encourage foreign direct investment and the creation of private firms and, therefore, accelerate growth. The ECA countries that are lacking in a commitment to the rule of law have also exhibited lack of progress in virtually every dimension of the transition, suggesting the absence of political commitment.

A second caveat to our analysis of markets in ECA is the question of the role of initial conditions. ECA countries that have reported poor growth performance throughout the 1990s also faced weaker initial conditions, which included high proportions of agriculture and natural resource extraction activities in GDP, lower levels of human capital, high proportions of trade to

[45] Self-employment plays an important role in job creation in ECA countries; job creation in small newly established private businesses appears to be the driving force of successful transition (see, e.g., Jurajda and Terrell, 2000).

the Soviet block, smaller initial private sectors, and less historical experience with democracy or capitalism. The importance of initial conditions versus policies has been a continuing source of debate with respect to ECA countries.

SSA. While the long-term growth performance of most SSA countries has been poor in relation to that of developing economies in other regions, half of the SSA countries experienced reasonable growth rates throughout the 1960s but then suffered drastic falls in the 1970s (Ndulu and O'Connell, 1999, 2000, and Prichett, 2000). A question raised by this experience is whether the sharp declines in growth followed a major shock. Information regarding any shocks preceding the growth declines and the specific responses of different countries to the shocks could provide valuable insight into the fall in growth of these countries.

One observation that appears to hold at a very general level for all of SSA is that these countries have failed to develop their manufacturing sectors sufficiently to reallocate labor from agriculture to manufacturing or from the informal to the formal sector. Agricultural production remains a very high proportion of GDP. Furthermore, significant imperfections exist across all types of markets in SSA; therefore, it is difficult to point to any one area that might be responsible for the failure to develop the manufacturing sector. Our account (provided in the discussion of Section 6.4) of the many market imperfections in the SSA region does not allow us to distinguish between the SSA countries that experienced respectable growth rates in the 1960s and then suffered setbacks from those countries that have shown consistently weak growth since 1960.

MNA. Growth rates in MNA countries are more volatile than in other regions, and the growth trends appear to follow trends in oil prices. Much of the long-term growth experience of the MNA region is related to the theme of the natural resource scenario (Section 6.3); however, negative oil price shocks in the 1980s appear to have had different effects across countries within the MNA region.

For example, public sectors are disproportionately large in MNA countries, implying that the government is a major participant in labor markets. As the discussion of the natural resource

scenario suggests, the size of the public sectors may have contributed to a misallocation of human capital. Whereas some of the MNA countries responded to negative oil price shocks in the 1980s by drawing on foreign reserves to maintain government spending, countries that were more financially constrained were forced to limit government expenditures in response to the price shocks. An important question is whether the latter group of countries was forced to reduce public-sector wages or the extent of government hiring of skilled workers and whether there was an indirect, positive effect on the allocation of labor or capital through movement into the private sector. Did negative oil price shocks push financially constrained economies in the direction of a "high-growth" equilibrium in response to the shock?

SAS. While the SAS region has been characterized by policies of import substitution described in Section 6.1, recently, the region experienced a considerable reduction in inward orientation and a move toward product market liberalization. According to Tendulkar and Sen (2000), the liberalization was caused by the necessity of reacting to external shocks and economic crises, rather than by long-term strategy. Tendulkar and Sen (2000) argue that measurable progress in eliminating trade distortions has not been matched by liberalization in factor markets. This may be attributable to political economy problems originating in the past strategy of inward orientation: the bloated state-owned sector and the protected industries oppose reforms, which would curtail their rents. Market distortions introduced by inward-oriented policies may be reinforcing themselves beyond product markets.

LAC. Like a number of SSA countries, LA countries exhibited reasonable growth rates during the 1960s and 1970s but suffered severe declines in growth (exhibiting negative growth rates) during the 1980s. Several LA countries suffered financial crises during the 1980s, raising the question of the extent to which these crises constituted shocks that may have been followed by movement to a "low-growth" equilibrium. The growth rates of some LA countries have recovered in the 1990s, and observers have suggested that market reforms may have played a role in the recovery. The extent to which shocks to the financial sector in the 1980s exposed the need may have contributed to low growth and the extent to which reforms leading to

improvements in factor or product markets in the 1990s may have resulted in increases in growth rates remain open questions.

Market imperfections in LAC that have been suggested to have exerted negative effects on long-term growth include policies of financial repression, lack of openness, and low rates of human capital accumulation in some countries. The pervasiveness of financial repression and financial crises in LA suggests that financial markets may have had an important influence on growth in this region. However, as discussed in Section 2, the effect of financial repression on growth is ambiguous due to the uncertain response of savings to interest rate changes. In addition, some research has indicated that financial crises have followed financial liberalization in some LAC countries. Weak financial market infrastructure and banking supervision may have allowed newly liberalized banks to take on excessively risky investment, leading to a crisis.

The role of a lack of openness in explaining LA growth performance also remains an open question. Although many LA countries rated poorly on indicators of openness, some of these countries nevertheless exhibited relatively high growth rates. Again, the question of explanations for the sharp declines in LA growth rates in the 1980s arises. Information on terms of trade shocks or changes in openness would be useful for providing an answer to this question.

One caveat to the claim that market imperfections may have heavily influenced the growth performance of LA is that macroeconomic policy may be potentially important relative to market imperfections in explaining growth in this region. Poor macroeconomic policy has been reflected in very high inflation rates and has been cited as contributing negatively to growth in LA.

6.3 Natural-Resource Curse

In this scenario, motivated by the MNA region (and potentially also by LAC and SSA), high natural resource endowments are present in a developing country that exhibits weak markets or weak democracy or myopic governments. Comparative advantage leads to dependence on one sector of the economy: natural resource extraction; this in turn naturally makes economic policies and growth depend on commodity prices (and their volatility). A more

damaging problem, however, is that poor market infrastructure or bad governments interact with natural resources: Either rent seeking related to extraction becomes pervasive or high resource revenues are misallocated, typically into supporting bloated public sectors.

Rent seeking during natural-resource booms may be related to pre-boom quality of market infrastructure, which is a question for country-specific research. The policy failure of overstaffing the public sector may be a result of a false sense of security ensuing from high oil revenues. It leads to buildup of pressure groups opposing reallocation and negatively feeds back into growth (see the reallocation scenario in Section 6.2). This is where the growth mechanism of human-capital accumulation may break down because of extensive inefficient allocation of human capital.

While the above-mentioned market mechanisms appear important, the analysis of natural-resource policy failure is primarily a task of political economy. High natural resource endowments pose a significant policy challenge for governments of developing nations. Although it would appear relatively easy to propose appropriate growth-enhancing policy,[46] the political economy question that arises is why these policies are not being implemented.

MNA. The region is rich in its endowment of natural resources. High oil-export revenues have permitted the oil-producing countries to undertake significant public investment, including improvement in education. Yet, one of the key puzzles raised by the experience of this region is the observation that steady increases in human capital have not translated into increases in growth. Measures of total factor productivity reveal an average decline in TFP growth in the region during the period 1960-1990. [47]

One hypothesis explaining the weak link between human capital acquisition and growth in this region is that labor has been misallocated, as a result of swollen public sectors, which absorb a high fraction of the skilled work force and which jeopardize the ability of private

[46] For example, to prevent corruption, governments should allocate resources by market prices rather than by fiat.
[47] Comparing EAP and MNA should prove useful in explaining the puzzle: As we have noted in Section 6.1, high levels of human capital are often cited as contributing to the growth rates of East Asia. Contrary to the MNA region, it appears that human capital acquisition may well have contributed positively to growth.

sectors to attract skilled workers.[48] Public sector wages appear to be higher in this region than in any other region. This leads to difficulty for the private sector to create jobs, which further increases the pressure on the public sector to absorb labor market entrants. What is less clear is whether labor market infrastructure or labor market policies reinforce the misallocation of labor. Country studies could yield insight into this issue via the gathering of information on labor market infrastructure, policies, and the extent of government hiring.

While the dependence on oil is a consequence of comparative advantage, several of the countries of this region have maintained low degrees of openness, which would tend to strengthen the dependence on oil. A caveat to the natural-resource scenario therefore depends on the extent to which the lack of openness may have contributed to low growth rates independently of any effect via oil export dependence. A fruitful avenue of research along these lines would be a comparison of openness policies across the countries of the region, in relation to the presence of oil.

Just as human capital accumulation does not seem to have increased growth rates in the MNA region, high savings rates and investment ratios similar to those of East Asia do not seem to have translated into growth rates similar to those of the latter region. A potential explanation relates once again to the size of the public sector, the hypothesis being that investment has been directed to low-productivity projects, such as housing. Another potential explanation, however, is that financial systems are not attracting the savings or allocating them efficiently. Information relating to the infrastructure, policy, and the functioning of financial markets across countries of this region would be valuable for assessing the role that financial systems have played in attracting savings and directing them to their most productive uses.

Finally, initial conditions that have likely played a role, in addition to the endowment of oil, in explaining the historical growth performance of this region are low literacy rates, arising in part from the bias against educating females. Country-specific shocks that also may have

[48] In Egypt the government alone employs more than one half of the holders of university degrees in the economy.

contributed to variability in growth include civil and regional wars.

6.4 Consistently Low Growth

As noted above, roughly half of the SSA countries have exhibited low growth rates over very long periods of time. Market imperfections that could be expected to limit growth are severe and pervasive in the SSA economies. Yet, because so many problems exist, it may be difficult to identify one key explanation for low growth. Complementarities in market reforms may yield convexities in outcomes, which would imply that growth performance is significantly poorer in countries where problems exist in most market dimensions, as opposed to a few. Or, as Collier and Gunning (1999) suggest, initial low growth may lead to a self-reinforcing, low-growth trap.

A fruitful approach to understanding the poor growth performance of SSA countries would be to identify policy or institutional variables that differentiate the group of SSA countries that performed reasonably well during the 1960s from the group of low-growth countries. As was suggested in the shock scenario of Section 6.2, growth rates of the countries with initially good performance may have dropped as a result of a negative shock. A related question with respect to the consistently low-growth countries is whether these countries experienced a series of negative shocks. If not, market imperfections offer a potentially convincing explanation for the persistence of low growth rates.

Severe product market imperfections in SSA include lack of infrastructure and heavy use of policy wedges. Among the deficiencies in infrastructure are restrictions on entry of new firms, and weak transportation and communications infrastructure. Weak infrastructure leads to uncertain input supplies, to which firms respond by inefficiently producing their own inputs. For example, many firms react to uncertain electricity supply by producing their own electricity. (Collier and Gunning, 1999) Poor product market infrastructure has increased the costs of production and trade, thereby reducing the potential for growth.

Policy wedges in product markets include import substitution policies, protection for certain firms, heavy regulation of trade, overvalued exchange rates, and other trade barriers. In addition, an urban bias on the part of governments has resulted in heavy taxation of agriculture in

some countries.

With respect to the types of participants in product markets, few foreign firms are present and rates of foreign investment in SSA are very low. The proportion of global private capital flowing into SSA declined from the 1970s to the 1990s. Potential market explanations for the exceptionally low rates of FDI include policy wedges relating to international trade (i.e., lack of openness), as well as extensive corruption among public officials and lack of commitment to contract enforcement.[49] The latter two factors have also undoubtedly discouraged domestic investment. In 1995 SSA was ranked the riskiest region in the world for investors. Rates of return on private capital have been very low, probably reflecting the severe product market imperfections.

Labor markets are also fraught with problems.[50] Labor markets are highly segmented in SSA; formal and informal markets coexist, and informal markets are large. Informal and agricultural labor markets have served as the "sponge" for absorbing high numbers of otherwise unemployed. Unemployment rates among educated youth are high in SSA. Although the size of informal labor markets likely reflects weak demand for labor by the formal sector—itself a result of low rates of investment—an interesting question that could be pursued in country-specific studies is to what extent imperfections in labor markets limit labor mobility from the informal to the formal sector. For example, Adenikinju and Oyeranti (1999) argue that lack of formal information on job openings results in most of the hiring in the formal sector occurring primarily through relations with family and friends.

Government participation in labor markets in SSA has been extensive, with governments often serving as the employer of last resort. According to Adenikinju and Oyeranti (1999), public-sector employment accounts for as much as sixty to eighty percent of nonagricultural employment in several African countries. High levels of public-sector employment translate into

[49] An issue of debate relating to SSA performance has been the importance of openness relative to other market-related policies. See Collier and Gunning (1999) for an excellent discussion.

[50] Our discussion of labor and financial markets draws liberally from Adenikinju and Oyeranti (1999).

high levels of government expenditure and lower average productivity, as skilled labor is discouraged from moving into manufacturing. In addition, Adenikinju and Oyeranti (1999) suggest that declines in real wages in the public sector have contributed to corruption by government employees.

Financial market imperfections in SSA are severe, and they must certainly have contributed to low growth through the failure to stem the high flow of savings out of the region. Financial market infrastructure is extremely weak: legal institutions and credible means of enforcing contracts are severely lacking in many countries.[51] Informal credit markets characterize the financial sector in rural areas; formal financial intermediaries are concentrated in urban areas.

The appearance of informal credit markets may actually have a positive effect on growth, as an efficient response to costly information problems arising in rural lending. However, funds do not appear to flow from the formal to the informal sector; therefore, informal money lenders' funds are limited. This in turn limits the extent to which capital may be efficiently allocated in rural areas.

Costly policy wedges are prevalent in the formal financial sector: interest rates have been regulated; high requirements placed on banks' reserves; and much bank lending has been directed to state-owned or otherwise favored firms. Implicit taxation of unremunerated required reserves has been estimated to exceed banks' value-added in some SSA countries. Extensive use of directed lending has resulted in very high rates of loan defaults on banks' balance sheets; percentages of bad loans have reached as high as 40-95%. Directed lending and weak banking regulation have led to protracted or repeated banking crises in many countries. Nigeria and Kenya offer examples where banking crises resulted from weak regulation following financial sector liberalization. Both low interest rates and frequent banking crises have likely exacerbated

[51] For example, Adenikinju and Oyeranti (1999) report that bankruptcy procedures in Kenya are said to last from four to ten years.

the flight of capital from the region.[52]

Despite the plethora of market imperfections that could potentially lead to low rates of growth in SSA countries, an open question relating to the poor SSA performance and an issue of debate has concerned the role of initial conditions relative to policies. Initial conditions that have been linked to weak growth performance include a large agricultural labor force, high fertility rates, low levels of human capital, geography (a large number of land-locked countries), and a high degree of ethnic diversity (see Collier and Gunning, 1999).

7 Conclusion

We argue in this paper that market policies and institutions have a crucial impact on economic growth. We explore the dimensions through which product, labor, financial, and natural resource markets may affect growth, then we develop four growth scenarios through which we summarize the findings of six regional papers dealing with markets and growth.

Several observations emerge from our analysis. First, financial market "infrastructure" is important. Commitments to law and order and to contract enforcement are potentially significant determinants of financial sector development and economic growth. We speculate that other features of financial market development may be of only secondary magnitude in comparison. Financial market infrastructure can also affect the outcome of financial liberalization policies; liberalization in the face of weak banking regulation, for example, can result in a financial crisis.

A second observation relates to the lack of research on the relationship between labor markets and growth, as opposed to the relationship between human capital production and growth. We highlight the need to fill this gap, pointing to the importance of labor markets in the efficient allocation of human capital in addition to its production. Human-capital production may be a necessary condition for growth, while an efficient allocation of human capital (related, e.g., to political economy) may constitute a sufficient condition.

[52] Adenikinju and Oyeranti (1999) note that much of the capital flight involves money stolen from the government—another indication of the pervasiveness of corruption.

A third observation concerns the importance of efficient factor reallocation in response to shocks: unsuccessful reallocation following a shock can lead to a low-growth equilibrium with negative long-run effects. The presence of social safety nets and the strength of pressure groups may affect the speed and efficiency with which labor can be reallocated across sectors or regions.

Finally, our examination of financial and labor markets suggests that factor markets are important for growth. A question that nevertheless remains open is whether factor markets serve more as facilitators of product market reforms or of positive responses to shocks, or whether labor or financial market reforms alone can generate large increases in economic growth.[53]

The country studies of the GRP project have a unique opportunity to verify or reject important growth theories by focusing their detailed investigation on the relevant mechanisms of growth.[54] Finally, our growth scenarios also offer testable hypotheses about causality links that country-specific analysis can shed light on.

[53] For example, in the "openness" growth scenario, there are necessary conditions on the factor markets that support growth, but the sufficient stimulus is coming from product markets.
[54] They can also consider the dependence of policy choice (in product and factor markets) on initial conditions.

Bibliography

Agenor, P.R. (1996) "The Labor Market and Economic Adjustment," *International Monetary Fund Staff Papers* 43 (2) pp: 261-335.

Aghion, P. and O. Blanchard (1994) "On the Speed of Transition in Central Europe," NBER *Macroeconomics Annual,* pp. 283-320.

Aghion, P., and Bolton, P. (1997) "A Theory of Trickle-Down Growth and Development" *Review of Economic Studies* 64(2), pages 151-72.

Aghion, P., Dewatripont, M., and Rey, P. (1999) "Competition, Financial Discipline, and Growth," *Rev. Econ. Stud.*, Vol. 66:825-852.

Aghion, P. and Howitt, P. (1998). *Endogenous Growth Theory*. MIT Press, Cambridge, MA.

Ahn, S. and Hemmings, P. (2000) "Policy Influences on Economic Growth in OECD Countries: An Evaluation of the Evidence," *OECD Working Paper*.

Atje, R., and Jovanovic, B. (1993). "Stock Markets and Development," *European Economic Review*, Vol. 37: 632-640.

Barth, J., Caprio, G., and Levine, R. (2000) "Banking Systems Around the Globe: Do Regulation and Ownership Affect Performance and Stability?" *World Bank Working Paper*.

Beck, T., Demirgüç-Kunt, A. and Levine, R. "Financial Structure and Economic Development: Firm, Industry, and Country Evidence,"

Beck, T., Levine, R., and Loayza, N. (2000) "Finance and the Sources of Growth," *Journ. Finan. Econ.*, Vol. 58:261-300. *World Bank Working Paper* 2423.

Benabou, R., (1996) "Heterogeneity, stratification, and growth: Macroeconomic implications of community structure and school finance" *American Economic Review* 86: (3) 584-609

Bencivenga, V., B. Smith, and R. Starr (1996) "Equity Markets, Transaction Costs, and Capital Accumulation: An Illustration," *World Bank Econ. Rev.*, Vol.10: 241-265.

Blank, Rebecca, ed. (1994) "Social Protection Versus Economic Flexibility: Is there a Trade-Off?" *University of Chicago Press* for the NBER.

Blundell, R., Griffiths, R., and Van Reenen, J. (1995) "Dynamic Count Data Model of Technological Innovations," *Econ. J.*, Vol. 105:333-344.

Burgess, Simon (1994) "The Reallocation of Employment and the Role of Employment Protection Legislation." *London: London School of Economics, Centre for Economic Performance, Discussion Paper* No. 193.

Caprio, G. and Honohan, P. (1999) "Restoring Banking, Stability: Beyond Supervised Capital Requirements," *J. Econ. Per.*, Vol. 3: 43-64.

Card, D. (1999) "The causal Effect of Education on Earnings," in *Handbook of Labor Economics*, ed. O. Ashenfelter and D. Card. Amsterdam: North Holland.

Castanheira, M. and G. Roland (2000) "The Optimal Speed of Transition: A General Equilibrium Analysis," *International Economic Review*, 41(1): 219-39.

Collier, P. and J.W. Gunning (1999) "Explaining African Economic Performance" *Journal of Economic Literature*. 37 pp: 64-111.

Collier, P., Hoeffler, A. (1998) "On economic causes of civil war" *Oxford Economic Papers* 50: (4) 563-573 OCT 1998.

Demirguc-Kunt, A., Detragiache, E. (1998) "The determinants of banking crises in developing and developed countries" *International Monetary Fund Staff Papers* 45: (1) 81-109.

Demirgüç-Kunt, A. and Maksimovic, V. (1998) "Law, Finance, and Growth" *Journal of Finance*, 53 pp:2107-2137.

Demirgüç-Kunt, A. and Maksimovic, V. (2000) "Funding Growth in Bank-Based and Market-Based Financial Systems: Evidence from Firm-Level Data," *World Bank Working Paper*.

Dertouzos, James and Lynn Karoly (1993) "Employment Effects of Worker Protection: Evidence from the United States" In C. F. Büchtemann, ed. Employment Security and Labor Market Behavior: Interdisciplinary Approaches and International Evidence. Ithaca, *NY: Cornell University Press*.

Diamond, D. (1984) "Financial Intermediation and Delegated Monitoring," *Rev. Econ. Stud.*, Vol. 51, No. 3: 393-414.

Djankov, S., La Porta, R., Lopez-de-Siles, F., and Shleifer, A. (2000) "The Regulation of Entry," *Harvard Institute of Economic Research Paper* No. 1904.

Fershtman, C., Murphy, KM., Weiss, Y. (1996) "Social status, education, and growth" *Journal of Political Economy* 104: (1) 108-132.

Filer, R., Campos, N. and Hanousek, J. (1999) "Do Stock Markets Promote Economic Growth?" *CERGE-EI Working Paper*, Prague: CERGE-EI.

Filer, R., Jurajda, S., Mitchell, J., and Gylfason, T. (2000) "Markets and Growth in the Post-Communist World," *Paper prepared for the World Bank Global Research Project*.

Forteza, A. and M. Rama (2000) "Labor Market "Rigidity" and the Success of Economic Reforms Across more than One Hundred Countries," mimeo, Development Research Group, World Bank.

Freeman, R. B. (2000) "The US Economic Model at Y2K: Lodestar for Advanced Capitalism*?" Canadian Public Policy* 26(0, pages S187-200.

Gelb, A., and Associates (1988) "*Oil Windfalls: Blessing or Curse*?" Oxford University Press and the World Bank.

Gerthner, R., and Scharfstein, D. (1991) "A Theory of Workouts and the Effects of Reorganization Law"*Journal of Finance* 46: (4) 1189-1222.

Glomm, G. and B. Ravikumar (1992) "Public versus Private Investment in Human Capital: Endogenous Growth and Income Inequality" *Journal of Political Economy*, 100 (4): pp. 818-834.

Goldsmith, R. (1969). "Financial Structure and Development", New Haven, *C.T.: Yale University Press*.

Greenwood, J. and Jovanovic, B. (1990) "Financial Development, Growth, and the Distribution of Income," *J. Polit. Econ.*, Vol. 21, No. 1:1076-1107.

Griliches, Z. (1997) "Education, Human Capital, and Growth: A Personal Perspective," *Journal of Labor Economics*, 15 (1): S330-S334.

Hall, R., and Jones, Ch., I. (1999) "Why Do Some Countries Produce So Much More Output Per Worker Than Others?" *Quarterly Journal of Economics* 114(1), pages 83-116.

Hanushek EA., Kimko, DD. (2000) "Schooling, Labor-Force Quality, and the Growth of Nations" *American Economic Review* 90: (5) 1184-1208.

Harris, R. (1997) "Stock Markets and Development: A Re-assessment," *European Economic Review* 41 pp:139-46.

Harrison, P., Sussman, O., and Zeira, J. (1999) "Finance and Growth: Theory and New Evidence," *Manuscript*, *London Business School.*

Hart, O. (1983) "The Market Mechanism as an Incentive Scheme," *Bell Journ. Econ.*, Vol. 14:366-382.

Hassler, J., and Mora, J. (2000) "Intelligence, Social Mobility, and Growth" *American Economic Review* 90(4) pages 888-908.

Heckman, J. and C. Pagés-Serra (2000) "The Cost of Job Security Regulation: Evidence from Latin American Labor Markets," *Economia,* 1(1): 109-154.

Jurajda, S., and K. Terrell (2000) "Optimal Speed of Transition: Micro Evidence from the Czech Republic" William Davidson Institute Working Paper No. 355.

King, R.G. and R. Levine (1993) "Finance, Entrepreneurship, and Growth: Theory and Evidence" *Journal of Moneary. Economics* 32 pp: 513-542.

Krueger, A., and Lindahl, M. (2000) "Education for Growth in Sweden and the World" *Swedish Economic Policy Review* 6(2) pages 289-339.

La Porta, R., F. Lopez-de-Silanes, A. Shleifer, and R. W. Vishny. (1998) "Law and Finance," *Journ. Pol. Econ.*, Vol. 106: 1113-1155.

La Porta, R., F. Lopez-de-Silanes, A. Shleifer, and R. W. Vishny. (1997) "Legal Determinants of External Finance," *J. Fin.*, Vol. 52: 1131-1150.

Levine, R. (2000) "Bank-based or Market-based Financial Systems: Which is Better," *Mimeo, Univ. of Minnesota*.

Levine, R. (1997) "Financial Development and Economic Growth: Views and Agenda," *Journ. Econ. Lit.*, Vol. 35:688-726.

Levine, R. (1999) "Law, Finance, and Economic Growth" *Journal of Financial Intermediation* 8 pp: 8-35.

Levine, R., Loayza, N., and Beck, T. (2000) "Financial Intermediation and Growth: Causality and Consequences," *Journ. Mon. Econ.*, Vol. 46:31-77.

Levine, R. and S. Zervos (1998) "Stock Markets, Banks, and Economic Growth" *American Economic Review* 88 pp: 537-558.

McMahon, Gary (1997) "The Natural Resource Curse: Myth or Reality" World Bank, mimeo.

Michie, Jonathan and John Grieve-Smith (1997) "Employment and Economic Performance: Jobs, Inflation and Growth". *Oxford University Press.*

Mortenson, Dale and Christopher Pissarides (1998a) "Job Reallocation, Employment Fluctuations, and Unemployment Differences." Mimeo. Forthcoming in M. Woodford and J. Taylor, eds. *Handbook of Macroeconomics* Amsterdam: North Holland.

Mortenson, Dale and Christopher Pissarides (1998b) "New Developments in models of Search in the Labor Market," in O. Ashenfelter and D. Card, eds. *Handbook of Labor Economics*, Vol. 3. Amsterdam: North Holland.

Ndulu, B. and S. A. O'Connell (1999), "Governance and Growth in Sub-Saharan Africa," *Journal of Economic Perspective* 13(3): Summer: 41-66.

Ndulu, B. and S. A. O'Connell (2000), "Background Information on Economic Growth," Paper prepared for the AERC Explaining African Economic Growth Project, April.

Nelson, R. and E. Phelps (1966) "Investment in Humans and Technological Diffusions" *American Economic Review*, 56: 69-75.

Nickell, S. (1996) "Competition and Corporate Performance," *Journ. Pol. Econ.*, Vol. 104:724-766.

OECD. (1994) "The OECD Jobs Study: Evidence and Explanations, Part II: The Adjustment Potential of the Labour Market". Paris: The Organization for Economic Cooperation and Development.

Pritchett, L. (2000) "Understanding Patterns of Economic Growth: Searching for Hills among Plateaus, Mountains, and Plains," *World Bank Economic Review,* 14(2): 221-50.

Rajan, R. and Zingales, L. (1998) "Financial Dependence and Growth," *Amer. Econ. Rev.*, Vol. 88, No. 3: 559-586.

Reynolds, L.C. (1985) *Economic Growth in the Third World: 1950-1980*, Yale University Press, New Haven.

Rivera-Batiz, L. A., and Paul M. Romer (1991) "Economic Integration and Endogenous Growth" *Quarterly Journal of Economics* 106 pp: 531-555.

Rodríguez, R. and Rodrik, D. (1999) "Trade Policy and Economic Growth: A Skeptic's Guide to the Cross-National Evidence," *Mimeo, Harvard University.*

Rodrik, D., (1994) "Getting Interventions Right: How South Korea and Taiwan Grew Rich" *National Bureau of Economic Research Working Paper*: 4964, p. 46.

Sachs, F. and Warner, A. (1995) "Economic Reform and the Process of Global Integration," *Brookings Papers on Economic Activity,* Vol. 1:1-18.

Sachs, Jeffrey D., and Andrew M. Warner (1995) "Natural Resource Abundance and Economic Growth" *NBER Working Paper* No. 5398.

Scharfstein, D. (1988) "Product Market Competition and Managerial Slack," *Rand Journal of Economics*, Vol. 14:147-155.

Selowsy, Marcelo and Pradeep Mitra, et. al (2001) "Transition After a Decade: Lessons and Agenda for Policy," World Bank, forthcoming.

Tabellini, G., and F. Daveri (1997) "Unemployment, Growth and Taxation in Industrial Countries," Center for Economic Policy Research, Discussion Paper: 1681.

Topel, R. (1999) "Labor Markets and Economic Growth," in *Handbook of Labor Economics*, Vol. 3., ed. O. Ashenfelter and D. Card. Amsterdam: North Holland.

Welch, F. (1966) "Education in Production," *Journal of Political Economy*, 78:35-59.

Wurgler, J. (2000) "Financial Markets and the Allocation of Capital," *Journal of Financial Economics*, Vol. 58.