Development of global investment and saving up to 2030;

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-Introduction;

-The gradual acceleration of growth in developing countries is a defining feature of the past two decades. This acceleration came with major shifts in patterns of investment, saving, and capital flows. W.B studies analyzes these shifts and explores how they may evolve through 2030.

-Average domestic saving in developing countries stood at 34 percent of their GDP in 2010, up from 24 percent in 1990, while their investment was around 33 percent of their GDP in 2012, up from 26 percent. These trends in saving and investment, along with higher growth rates in developing countries, have resulted in developing countries' share of global savings now standing at 46 percent, nearly double the level of the 1990s.

-Developing countries’ share in global investment has grown from less than 20 percent to almost one-half in the past 15 years. A similar pattern is observed for saving.
-The main objective of this report is to identify emerging trends of investment and saving.

-the world population will grow from around 7 billion in 2010 to more than 8.5 billion in 2030. The addition of more than 1.4 billion people will occur almost exclusively in developing countries.
-there will be a significant shift in the age structure of both developing and advanced countries. Aging in high-income countries, emerging East Asia, and the transition economies of Europe and Central Asia will affect both saving and investment behavior.

- **Modeling the global dynamics of investment, saving, and capital flows;**

- A global dynamic general equilibrium Framework

-The global CGE model—which is a modified version of the World Bank’s Linkage model, a dynamic model—comprises 17 country-regions, 7 sectors (encompassing agriculture, manufacturing, and services), and 3 factors of production (capital, and skilled and unskilled labor).

- Linkage model is a neoclassical model with aggregate growth, saving, investment endogenously determined and predicated on assumptions regarding key exogenous determinants such as productivity changes, demographic shifts, financial market development, and institutional improvement. Unlike simpler growth models, however, Linkage has considerably more structure:

- **First**, it is multisectoral. This allows for
more complex productivity dynamics, including
differentiating productivity growth between agriculture,
manufacturing, and services and picking
up the changing structure of demand (and therefore
output) as growth in incomes leads to a relative
shift into manufactures and services.

- **Second**, it is linked multi-regionally, allowing for the influence
of openness—via trade and finance—on
domestic variables such as output and wages.

- **Third**, Linkage includes a set of equations for
capturing saving and investment behavior.

- the key exogenous determinants are productivity and demographics.

- Agricultural productivity is assumed
to be factor-neutral and exogenous and is set to
estimates from empirical studies

- Productivity in manufacturing
and services is labor-augmenting
(Harrod-neutral technical change); it is skill-neutral
but sector-biased, with productivity growth
higher in manufacturing than in services. This
gives rise to a long-term rate of total factor productivity
(TFP) growth in the range of 0.1–0.2
percent for the high-income countries in the
gradual convergence scenario

- The range for developing countries is somewhat wider:
0.7–3.5 percent until 2015 and constant thereafter.
There is significant variation in TFP growth across developing
countries, ranging from above 3.5 percent in
China to around 1.5 percent in Sub-Saharan Africa.

- The other dynamics of the model deal with the accumulation of physical capital, which results from the interaction of global saving supply, domestic investment demand, and international capital allocation (figure O.6), as follows:

• In each country, *saving* behavior, in accordance with a standard life-cycle approach, depends on demography and per capita income growth; additional determinants include financial development and social protection systems.

• *Investment demand* is obtained from capital demand, which, in turn, is derived from sector-specific production functions in a setting of perfectly competitive profit-maximizing firms. Investment demand thus relates positively to output and negatively to rental rates.

• The global pool of saving is allocated across countries following a function representing the global *financing of investment*. This responds to relative rental rates but also to country-specific economic growth and structural factors such as financial development and the quality of institutions. The global financing of investment also captures home bias by including a lagged term.

- For each country, net capital flows make up the difference between the level of financing and domestic saving.

- Summing up, in the Linkage model, saving, investment, output, and income as well as relative factor and good prices are simultaneously determined.

- economies with older populations
tend to save less.
-It develops two scenarios of investment, saving, and
capital flows through 2030, based on alternative
paths of productivity and fundamental drivers of
structural change.
-By 2030, developing countries will account
for around two-thirds of every dollar saved and
invested (compared with about half today), and
around half of the stock of global capital will
reside in the developing world, compared to less
than one-third today. This implies a huge challenge
for financial intermediation in developing
countries.
-Major structural transformations
under way in the global
economy.

-developing countries' domestic saving,
up from 21 percent in 1970,stood at 34
percent of their GDP in 2010,
and their investment, up from 22 percent,
was around 33 percent of their GDP in 2012.

-developing countries' share of global
saving now stands at 46 percent, nearly double
the level of the mid-1960s.

What is behind these trends?
-What are the key economic and structural drivers that affect
saving and investment decisions over the next
two decades?

-There are two scenarios The main differences
between the two scenarios are
(a) the speed of convergence between
the developed and developing worlds in per capita
income levels (due to productivity catch-up), and
(b) the pace of structural transformations in the
two groups (such as financial development and
improvements in institutional quality). In the
first scenario, this *convergence is gradual*, while in
the second, *convergence is more rapid*.

-In the gradual convergence scenario, the average
per capita income of the developing world
will rise from about 8 percent in 2010 to about 16 percent by
2030.

-the developing world's growth will average
an annual rate of 4.8 percent in the gradual convergence
scenario and 5.5 percent in the rapid one.

-With gradual convergence, the contribution
of developing countries to global growth will rise
from 73 percent around 2015 to 87 percent by
2030; with rapid convergence, developing countries'
contribution will reach 93 percent by the
end of the period.

-The increasing global weight of investment
activity in developing countries require two conditions:
first, productivity growth and sectoral shifts will have to
create enough investment opportunities. Second,
both domestic and international investors will
have to be willing to finance these investments
and allocate two-thirds of global savings to developing
countries.

-Outlooks under the two scenarios;

The main findings of the report are summarized below*:*

1)-Under the gradual convergence scenario,
the saving rate of the developing world will be
down from 34 percent in 2014 to 32
percent in 2030, while the saving rate for high-income
economies will fall from 20 percent to 16
percent over the same period.

-by 2030, developing countries will
account for 62–64 percent of total world saving,
up from 45 percent in 2010.

2) The distribution of the global stock of capital
will shift toward the developing world, but
wealth may remain concentrated among high-income
households in developing economies

-by 2030, half of the global stock of capital—$
158 trillion (in 2010 dollars)—will reside
in the developing world.

3) Sub-Saharan Africa will be the only region
not experiencing a decline in its saving rate,
because of its young and growing population.
while East Asia and Eastern Europe and
Central Asia will record the largest reductions

-Figure O.2 Developing countries will represent more than half of global capital stocks by 2030 in the gradual convergence scenario, compared with about a third in 2010

-In aging economies, labor becomes scarcer with respect to capital, thus raising real wages relative to the return to capital.

-Indonesia, Japan, and the Russian, will experience sharp reductions in the working-age share of their populations and thus will see their saving rates fall significantly through 2030.

-Brazil and Mexico will experience a more gradual decline.

-The aging of the population will bring increases in age-related expenditures such as pensions and health services, putting pressure on public finances.

-China and India will account for the majority of global investment, and investment will shift toward the services sector, especially in infrastructure.

-for saving, China and India will be the largest investors among developing countries—the two countries combined will represent 38 percent of the global gross investment in 2030, versus 40 percent in all high-income countries combined.

-The future patterns of investment will entail not only geographic shifts but also sectoral ones. demand shifts toward services.

4) Developing countries will account for 47–60 percent of global capital inflows in 2030, up from 23 percent in 2010

-By 2030, no single country will attract as great a share of global inflows as the United States or the Euro Area does today.

-developing countries accounting for nearly half or more of both global gross inflows and outflows under both scenarios, the South-South component of gross capital flows will grow.

-Developing countries' financial markets will play a much greater role in intermediating capital flows than they do today.

The Emerging Pattern of Global Investment;

-The definition of "investment" used here is gross capital formation, including purchases of physical structures, plants, machinery, and equipment, together with inventory accumulation, but gross of depreciation.

-It is important to be aware that measurement difficulties mean that the reported sectoral marginal products of capital (MPKs) should be regarded as indicative, rather than definitive. It is also important to keep in mind that calculated MPKs capture the *mean* of a distribution of firm efficiencies, and so the most productive firms in a country or sector may still be highly efficient.

• Since 2000, there have been three notable changes in the pattern of global investment activity: a shift in global investment toward the developing world, a shift toward greater manufacturing investment globally, and a slow, but definitive, redistribution of capital stocks toward the developing world.

• The future structure of production will imply also a global shift toward investment in services.

• The overall relationship between economic growth and investment is strong and significant, and developing countries' growing share of global investment since 2000 has been due in large part to robust growth in those countries.

• One major area of concern in developing countries regards infrastructure needs.

• Despite many common changes in investment patterns, the patterns themselves can significantly differ across countries.

• Despite the rising share of developing countries, the global investment rate is expected to remain relatively stable.

• In a scenario where convergence between developing and high-income economies occurs more rapidly, total investment at the global level will be 7 percent higher than in a scenario where convergence follows recent historical trends and is far more gradual.

• Policy makers seeking to support investment activity in their economies should concentrate their efforts on establishing a favorable investment climate that supports private sector investment activity.

2) **Global Saving in 2030**

-This section outlines two of the main challenges:
first, the potential pressure of old-age-related public expenditures on government finance, and
second, the concentration of saving, in terms of both amounts and rates, within a restricted segment of the population.

• *Changes in saving rates in developing countries over time will be driven by three main factors: aging populations, economic growth rates, and the deepening of financial markets.*

• *The evolution of saving will differ significantly by region.*

• *The rise of developing countries will support global saving rates.*

• *Saving in developing countries appears to be concentrated among high-income households*.

• *Changes in household structure will increase the importance of financial markets in providing for income support during old age.*
• *Demographic change will challenge the sustainability of public finances*.

<u>3) **Capital Flows in the Third Age of Financial Globalization;**</u>

-coming change s in the patterns of investment and saving, as described in the first two chapters of this report, raise several imperative questions.

- what may be the most dominant trend in international finance in the coming decades.

- this section finds is that developing countries will become more important as both sources and destinations of capital through 2030, and for the first time in history they seem poised to play a significant role in global intermediation of capital.

- this section focuses on the interplay of three key long-term structural forces: economic convergence, demographic transition, and financial globalization.

- Third Age of Financial Globalization, the first era was dominated by Great Britain through the 1930s, and the second, which began after World War II and now appears to be concluding, has been dominated by the United States.

• Investment demand and saving are likely to remain more or less in balance at the global level, causing no substantial changes in global rates of return over the coming decades. At the country level, however, trends in investment and saving may result in significant tensions and current account imbalances.

• Developing countries are poised to account for a growing share of global gross capital flows in the decades ahead.

• As developing countries become more deeply integrated into the global financial system and account for a larger share of the world's gross capital flows, they will also have a greater impact on financial and monetary policy making.

• Policy makers will need to prepare for a greater role of capital markets in international financial intermediation and promote the development of domestic capital markets.

- Eight main policy messages stem from the three Chapters in this report:

1) National policy makers seeking to support investment activity in their economies should concentrate their efforts on establishing a favorable investment climate.

2) Policy makers will have to recognize the forthcoming increasing demand for services and facilitate the needed accompanying investment.

3) For developing countries over the next 20 years, the issue of financing for infrastructural projects will pose a major challenge.

4) Government will have to sustainably manage public finances with an eye toward the forthcoming demographic changes.

5) Demographic shifts due to changes in household structure will increase the importance of financial markets in providing for income support during old age.

6) Policy makers in developing countries have a central role to play in boosting private saving through policies to raise educational attainment, especially for the poor.

7) The course of global monetary and financial policy making will need to be adjusted as developing countries become responsible for an expected half or more of the world's capital outflows.

- South-South monetary policy coordination will become more critical in promoting stable financial and macroeconomic conditions in these countries.

- greater regional monetary policy spillover from large emerging economies such as Brazil and Russia.

- At the global level, greater use of the renminbi could considerably strengthen the impact of China's monetary policy on the rest of the world, partially eroding the dominance of U.S. and Euro Area monetary policy.

- a multipolar currency arrangement.

- because liquidity shocks will be more diversified, but it could also become more difficult to assess the timing and extent of monetary policy spillovers, requiring greater monetary policy coordination.

8) Policy makers will need to prepare for a greater role of capital markets in international financial intermediation and promote the development of domestic capital markets.

- capital markets will intermediate a growing share of flows in the future and that banks will account for less. Bank lending tends to be highly procyclical and generally less supportive of risk sharing than FDI or equity portfolio investment.

- domestic financial markets will have to compete globally in terms of both their structure and their depth.

- authorities should monitor the composition of capital flows; they should develop regulatory institutions to be forward-looking and ready to adapt to potentially destabilizing changes in the composition of capital flows.

-The presence of developing countries on the global stage will continue to expand over the next two decades. Analysis presented in this report projects that by 2030, China will account for 30 percent of global investment activity, far and away the largest share of any single country, while India and Brazil (at 7 percent and 3 percent, respectively) will account for shares comparable to the United States (11 percent) and Japan (5 percent). The complex interaction among aging, growth, and financial deepening can be expected to result in a world where developing countries will contribute 62 of every 100 dollars of world saving in 2030, up from 45 dollars in 2010, and where they account for between 47 percent to 60 percent of global gross capital flows, rising from 23 percent in 2010.

-Trends in investment, saving, and capital flows
through 2030 will affect economic conditions from
the
household level to the global macroeconomic level,
have implications for national policy makers.
Policy makers preparing for this change will
benefit from a better understanding of the unfolding
dynamics of global capital and wealth in the future.

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