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Vietnam 2035: From Strategy to Action

Vibrant Vietnam
Forging the Foundation of a High-Income Economy
Main Report
May 2020



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Abbreviations

ASEAN	Association of Southeast Asian Nations
CPTPP	Comprehensive and Progressive Agreement for Trans-Pacific Partnership
EVFTA	European Union-Vietnam Free Trade Agreement
EVN	Vietnam Electricity
FDI	Foreign Direct Investment
GDP	Gross Domestic Product
GSO	Government Statistics Office
IMF	International Monetary Fund
IP	Intellectual Property
IPP	Independent Power Producer
IPR	Intellectual Property Rights
NTPs	Nationally Targeted Programs
O&M	Operations & Maintenance
OECD	Organization for Economic Co-operation and Development
PISA	Program for International Student Assessment
PPPs	Public-private Partnership
R&D	Research and Development
RONET	Road Network Evaluation Tool
SBV	State Bank of Vietnam
SEDP	Socio-Economic Development Plan
SEDS	Socio-Economic Development Strategy
SOEs	State-owned Enterprises
TVET	Technical and Vocational Education and Training
WTO	World Trade Organization

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EXECUTIVE SUMMARY

The growth framework for Vietnam during 2021–2030 must put productivity growth front and center. It has to be based on a balanced accumulation and efficient and productive allocation of different types of capital—private, public, human, and natural—as well as innovation, which in turn will be driven in large measure by deeper institutional and market reforms.

Vibrant Vietnam

Vietnam's development strategy requires an urgent upgrade. Past growth has been impressive. But as a favorable domestic and international environment changes, future growth must be productivity-driven—obtaining more and higher quality output from firms, infrastructure, workers and natural resources. The World Bank's Vibrant Vietnam report discusses priorities for an upgraded growth model based on extensive consultations, international experience and academic findings. This brief note summarizes the most important insights.

Vietnam has been a development success story. Over the past two decades median household income quadrupled and extreme poverty dropped from 50 percent to about two percent. Great strides have been made to increase life expectancy and expand schooling. These development outcomes have been the result of effective economic and social policy making, starting with the Đổi Mới reforms in 1986. But progress was also helped along by beneficial domestic and global trends. New agricultural technology propelled the structural transformation with a shift of 30 percent of the workforce out of the rural sector and into more productive jobs. A young population expanded the labor force. Vietnam also took advantage of the boom in global trade. Commodity exports were the first to take off thanks to a relative abundance of fertile land and water, followed by labor-intensive sectors like textiles, and, most recently, electronics. Vietnam's policy makers, entrepreneurs and workers saw opportunity and took advantage.

These favorable tailwinds may now turn into headwinds. The demographic dividend will fade as fertility rates drop and the population ages as it has in other East Asian countries. Automation and other disruptive technologies can offset a lower labor supply but could also eliminate precisely those jobs on which a large share of Vietnam's labor force currently depends. And the combination of rising pollution and climate change is affecting health, quality of life and, increasingly, output from both the rural and urban sectors. The external environment is also changing. Global trade has been declining over the last ten years. Vietnam's exports held up better than most, but rising trade tensions and trends like reshoring could spell danger for Vietnam's exporters.

The COVID-19 crisis could provide a seismic shock. It is still early days of the COVID 19 crisis, but each global crisis alone could permanently change the international system and balance of power as we know it. The short to long term implications for Vietnam are hard to predict. The coronavirus pandemic has already changed the way people live in Vietnam and in most countries around the world due to rising health concerns and restrictions in terms of mobility. While the magnitude of the health crisis appears limited in Vietnam, with only 250 infected people and no registered death

(as of early April 2020), the economic and social costs have been big and expected to grow bigger depending on the extent and the duration of the pandemic in the country and in the rest of the world. The GDP growth rate is forecasted to fall by 3-5 percent in 2020 compared to pre-crisis projections, with increasing pressure on the Government's budget and the balance of payment due to declining tax revenues, exports and capital inflows. The economy is, however, expected to resume faster growth in the second part of 2020 and in 2021 when the country and the rest of the world should get out gradually of the COVID 19 crisis.

The coronavirus pandemic could be an accelerator of several mega-trends that are discussed in this report. For example, it may undermine further the basic tenets of economic globalization. In recent years, China's growing economic and military power had already provoked a bipartisan determination in the United States to decouple China from U.S.-sourced high technology and intellectual property. Increasing public and political pressure to meet carbon emissions reduction targets had already called into question many companies' reliance on long-distance supply chains. Now, COVID-19 is forcing governments, companies, and societies to strengthen their capacity to cope with extended periods of economic self-isolation. Companies will now rethink and shrink the multistep, multi-country supply chains that dominate production today. Global supply chains were already coming under fire—economically, due to rising Chinese labor costs, U.S. President Donald Trump's trade war, and advances in robotics, automation, and 3D printing, as well as politically, due to real and perceived job losses, especially in mature economies. Another example is that the pandemic has also provided the incentive to make the best use of the digital age by linking people and firms virtually rather than physically. For Vietnam, this can translate into an acceleration of reforms in inclusive finance through the development of e-payments, in education by e-learning tools, and in the way the government does business by promoting e-government.

Vietnam therefore needs to upgrade its development model, if the aspirations of its people and government are to be met. The move from low to middle-income status has been quite swift. Reaching high-income status—Vietnam's declared goal by 2045 and the path taken by regional peers like South Korea—will be harder. Economic history has shown that factor accumulation and the associated structural transformation from agriculture to manufacturing can propel a country to middle income. But at some point, building more roads or adding more workers alone will not meaningfully raise average wealth. Pure investment becomes less important. How efficiently production factors are used becomes much more critical. The focus should now be on quality rather than quantitative economic growth.

An upgraded development model for Vietnam must put productivity growth front and center: *"Productivity isn't everything, but in the long run it is almost everything"* as Nobel Laureate Paul Krugman put it. An asset-based perspective is helpful. The wealth of a nation is determined by how well it manages its portfolio of assets—its produced capital embedded in firms (private capital) and infrastructure (public capital); its human capital shaped by education, skills, health, and opportunity; and its natural capital including land, water, forests and the ecological services on which life depends. Countries that augment the stock and continuously improve the quality of their capital endowments reap long-term growth that is widely shared and sustainable through generations.

What does a productivity-focused development strategy look like in practice? *Vibrant Vietnam* identifies priorities and proposes concrete policies to strengthen the country's productive assets:

- a. **Dynamic firms.** Encouraging competition and easing firm entry and exit ensures that resources will flow to the most innovative and productive firms. This can only happen in a supportive business environment that ensures access to finance, transparent regulations and legal protections.
- b. **Efficient infrastructure.** Vietnam has built up a large stock of infrastructure. What matters now is to improve the efficiency of financing and delivering additional construction, and, perhaps even more importantly, operations and maintenance. This will raise the quality of services that infrastructure provides.
- c. **Skilled workers and opportunities for all.** Vietnam scores well on basic education, but advanced university level and vocational-technical skills are under-supplied. Skill upgrading will raise wages and boost domestic consumption. And those facing barriers entering the labor market or suffering from limited information during their education and job search, including ethnic minorities, must get greater opportunities—not just for reasons of equity but also for economic efficiency as the labor pool shrinks.
- d. **Green economy.** Sustainable development involves a shift from liquidating natural assets for short-term growth to using natural resources—including land, clean air and water—far more efficiently. In wealthy countries, natural capital increases rather than declines. There are many opportunities for more effective natural resource management, stricter pollution control, and preparing for inevitable climate change impacts.

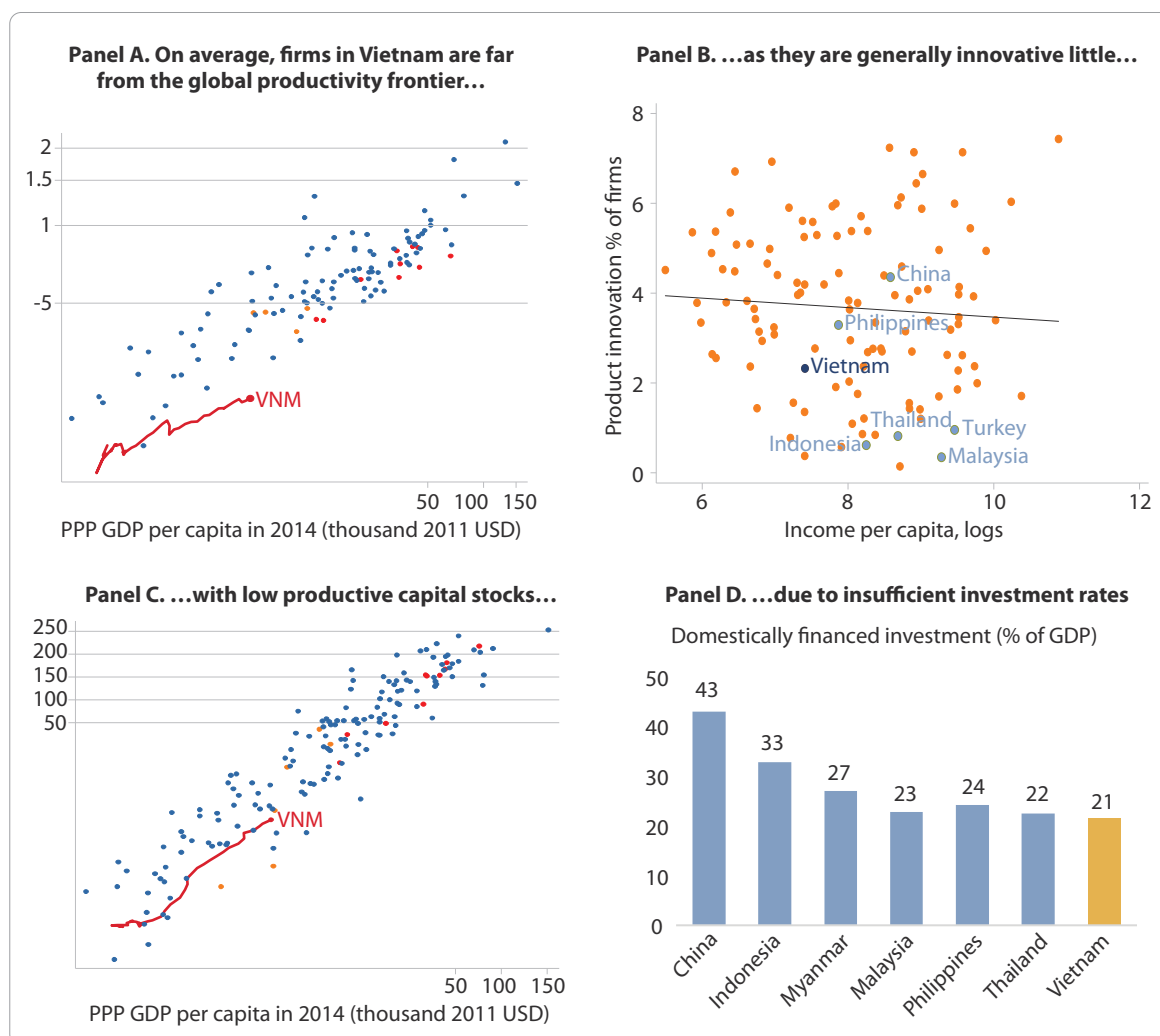
Government will continue to play the central role in shaping the upgrade of Vietnam's growth model. The goal is to build a high-income market-led economy over the next two decades. The new growth strategy must **embrace markets** that guide the most efficient allocation of resources by facilitating competition and deploying taxes and other price instruments that guide market behavior. It should **modernize institutions** including effective rules and regulations that avoid adding to existing distortions. And it can **rethink incentives** such as smart public support and investments where justified by social benefit. For governments at all levels to do so requires comprehensive skill and involves a considerable amount of discretion. Building stronger administrative capacity, including improvements in governance where Vietnam currently underperforms, must therefore be an essential component of an upgraded development strategy.

Dynamic firms

Vietnam's business sector is populated by firms that are young, dynamic and diverse. As anyone visiting Vietnam can confirm, the country has a buzzing business sector with small shops, workshops and farms seemingly everywhere. Every month about 10,000 new non-farm businesses register in Vietnam. Ninety percent of all firms are household businesses, most with three or fewer employees. Most of these firms are too small, too undercapitalized and too concentrated in traditional sectors (Figure ES.1). They rarely grow to a size where they can benefit from scale economies and easier access to finance and technology. At the other end of the firm size distribution, state-owned

enterprises (SOEs) and a few large domestic firms dominate their markets. SOEs control some strategic and utility sectors but are also active in markets that are typically served by more productive private firms such as banking, agriculture or telecoms. The final segment of Vietnam’s firm landscape consists of foreign-owned or FDI firms. They largely produce for export and tend to be far more productive than domestic firms of all types.

FIGURE ES.1. Overall, Vietnamese firms are weakly productive by regional and international standards



Government policies can help make the entire business sector more productive by removing obstacles to competition. Small businesses can absorb a lot of labor and provide opportunity to many. But a modern economy needs a more balanced universe of firms and stronger linkages across them. Many of the small firms should grow to mid-size covering regional and even national markets. And some firms across different sectors should be able to grow to larger size and compete nationally as well as internationally. For that to happen, they need to compete nationally as well as internationally and more resources must flow to the more productive and successful firms. Currently this is not happening to the extent necessary. International experience has shown that a lack of dynamism in the business sector is more often due to distortionary regulations and the overall business climate than because of limited technology or information access.

Significant shortcomings persist in Vietnam's business climate. There are barriers to competition that keep too many unproductive firms in business and hold more productive ones back. There are too few linkages that could generate beneficial spillovers between large and small firms and between domestic and international ones. And there are major obstacles in the business environment that impede access to financial capital, complicate administrative procedures, and inhibit innovation. All of these areas require reforms.

- **Embrace markets:** Mechanisms for an orderly entry and exit of firms ensure that uncompetitive companies will go out of business and resources can flow to more productive firms. A concrete step is to reform the insolvency framework. It is three times more costly and takes ten times longer to liquidate a nonviable firm in Vietnam compared to the global best performers. A continued commitment to an open and rules-based trading framework and regional economic integration will equally foster competition and knowledge flows. The most efficient firms will seek international markets which further encourages them to innovate, take advantage of scale economies, and build domestic supplier networks.
- **Modernize institutions:** Many firms in Vietnam complain that administrative and legal decisions are often not transparent; they seem not based on merit but on favoritism or outright corruption (at the provincial level, almost 60 percent of firms reported to have paid bribes in 2017). A business environment in which the most efficient, not the most connected, firms succeed requires a level playing field with clear and legally enforceable rights, rules and regulations. Simplification and digitization of administrative procedures will enhance public sector transparency and efficiency. A specific area for urgent reforms is the financial sector to enable more efficient channeling of savings into the most promising investments. To achieve more banking sector competition, direct state intervention and favoritism in directing credit needs to be reduced and the bank supervision and resolution framework strengthened. Innovative digital banking (notably through mobile phones) and the development of capital markets are two additional channels to foster inclusive finance. The goal is a more flexible and market-based capital market with a broad investor base.
- **Rethink incentives:** Where markets fail to provide what is needed, more direct government involvement is justified. Increased market-based competition could make useful cooperation between firms more difficult. But linkages between firms in complementary activities or between foreign and domestic firms can raise productivity and overall competitiveness. As experience from such countries as Costa Rica, Malaysia or South Korea show, public programs can support the emergence of such linkages through information programs, public-private partnerships, or well-managed industrial parks and business incubators. Firms may also underinvest in innovation or have difficulties acquiring technology especially when intellectual property rights (IPR) and management capacity are weak. Vietnam could emulate China which has strengthened IPR enforcement through specialized courts, and it could more directly invest in innovation support and management training.

Efficient infrastructure

Vietnam has made great progress in infrastructure development overall, even if performance varies across different sectors. It has been great in energy, where 98 percent of households had electricity access in 2018; good in transport, even if new construction is not always planned in an integrated way; less good in water supply where reliability has declined in recent years; and poor in wastewater collection and treatment where Vietnam is one of the worst performers in the region. Required infrastructure spending will continue to be vast. Estimates are as high as \$25-30 billion per year while funding capacity currently reaches only \$15-18 billion. More resources must be mobilized. But, more importantly, spending must also become much more efficient for infrastructure to contribute more to productivity growth.

There are several reasons why most infrastructure sectors have underperformed. Most public investment programs are the responsibility of local governments. These do not have the capacity and sometimes lack clear authority to efficiently plan and implement infrastructure projects. Least cost planning, which also considers such options as demand management alongside supply expansion, is not universally applied. Coordination of infrastructure planning across sectors or jurisdictions has led to ports that are poorly connected to roads or competition between districts for the same water resource.

Neglected maintenance is another barrier to efficient infrastructure. OECD estimates that each dollar spent on maintenance avoids \$1.50 in new investments. Too few infrastructure projects properly account for maintenance costs down the line. For transport, ten percent of capital investments have been allocated for maintenance of Vietnam's extensive road network—well below the 30 percent in OECD countries or 37 percent in Indonesia. In other cases, maintenance funds have been redirected to cover administrative costs as in the irrigation sector where the maintenance backlog is causing a deterioration of services.

More sustainable financing is a third critical area for making infrastructure provision more efficient. Vietnam has mostly used tax revenue, borrowing and donor-supported concessional financing to pay for infrastructure. User fees are significantly below supply costs (Figure ES.2). This has facilitated access for poor households and small firms but has created perverse incentives for providers who can run large operational deficits and for users who will overconsume infrastructure services. The disconnect between revenues and expenditures extends across administrative levels. Local governments are responsible for 60 percent of public expenditures but control only 30 percent of total revenue. Experience elsewhere shows that local spending will be highly inefficient if not accompanied by devolution of rights and responsibilities including in revenue collection.

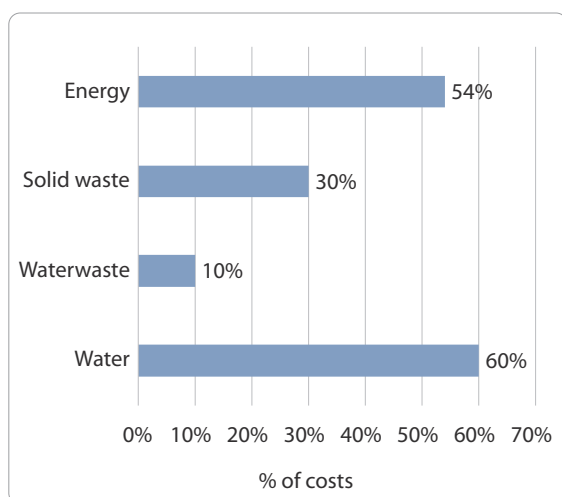
- **Embrace markets:** Both on the supply and demand side, a greater reliance on price signals and markets improves the efficiency of infrastructure provision. Competitive procurement should be the standard mechanism for awarding contracts. This requires effective audits, inspections and conflict resolution procedures. As 90 percent of infrastructure provision is currently public, there is also far more scope for private sector participation as has already been the case in the energy sector. This may be outright private provision where feasible, or public-private

partnerships based on clear rules and procedures. And as concessional financing options diminish, Vietnam could tap much more into emerging domestic and international capital markets for infrastructure financing. Again, the energy sector, including renewable energy, is showing the way. On the demand side, user fees should be adjusted to cover a greater share and eventually total supply costs through progressive tariff increases.

- **Modernize institutions:** Improving the capacity for planning, coordinating, financing and implementing infrastructure investments is a clear priority. The focus needs to be on local governments who can best assess demand and lead implementation. Devolution of responsibilities and revenue generation must be accompanied by extensive capacity building. Central government will still have a major role, especially in ensuring mechanisms for coordination between jurisdictions but also between sectors. Centrally compiled information such as the Ministry of Transport’s Vietnam Logistics Statistical System support coordination and rational decision making.
- **Rethink incentives:** Attempting to address equity objectives by providing infrastructure services well below supply costs is highly inefficient. The benefits of such subsidy schemes disproportionately benefit wealthier households. Lifeline tariffs such as block tariffs

where charges for a minimum amount of consumption are lower are one way to protect poorer households while reducing benefit leakage. Other approaches include supporting the poor to reduce, for instance, energy or water consumption by subsidizing more efficient appliances or better home insulation. A third approach is through social protection systems that directly provide support for utility payments to the poor, although this requires high administrative effort if it cannot be tagged on to existing programs. Either way, governments need to consider the distributional effects of utility price reforms and use smart incentives or subsidies to buffer their impact on the poor.

FIGURE ES.2. User fees are lower than supply costs in infrastructure sectors



Skilled workers and opportunities for all

Investments in human capital become more important as an economy moves from low-skill, labor-intensive production of goods and services to more complex and higher productivity tasks. Vietnam has done well in providing basic skills to most of its people. The country ranks higher in the World Bank’s Human Capital Index than many of its peers with higher incomes. Basic education and health services for an expanding population enabled a structural transformation and a boom in manufacturing, much of it for export. Making the next step, moving to a more productive and innovative economy, demands a larger pool of higher skilled labor and—in the face of a rapid demographic transition—drawing more people into the labor force as well as an education system

that is responsive to changing skill demands. Already, half of Vietnamese firms see a shortage of workers with advanced cognitive, technical and socio-behavioral skills as a major barrier to expansion. Younger cohorts are better educated. But at the current pace, average years of education would increase by only 1.3 years by 2050 – far from best performers in East Asia.

There are many aspects to human capital development in Vietnam. Two concerns seem most pressing. First, too few students advance to secondary and tertiary education or complete formal technical or vocational training. Too few enter university and too many do not finish. Cost is one reason. Government support for universities is only 0.5 percent of GDP, about half of that in China, Malaysia or South Korea. Students pay about 40 percent of the cost—more than in most countries. Quality of teaching and facilities may be an even bigger reason for low uptake. The share of students in technical or vocational training is also low at 6 percent compared to 27 percent in South Korea and 50 percent in some other OECD countries. On-the-job skill acquisition does not fill the gap as few firms provide formal training.

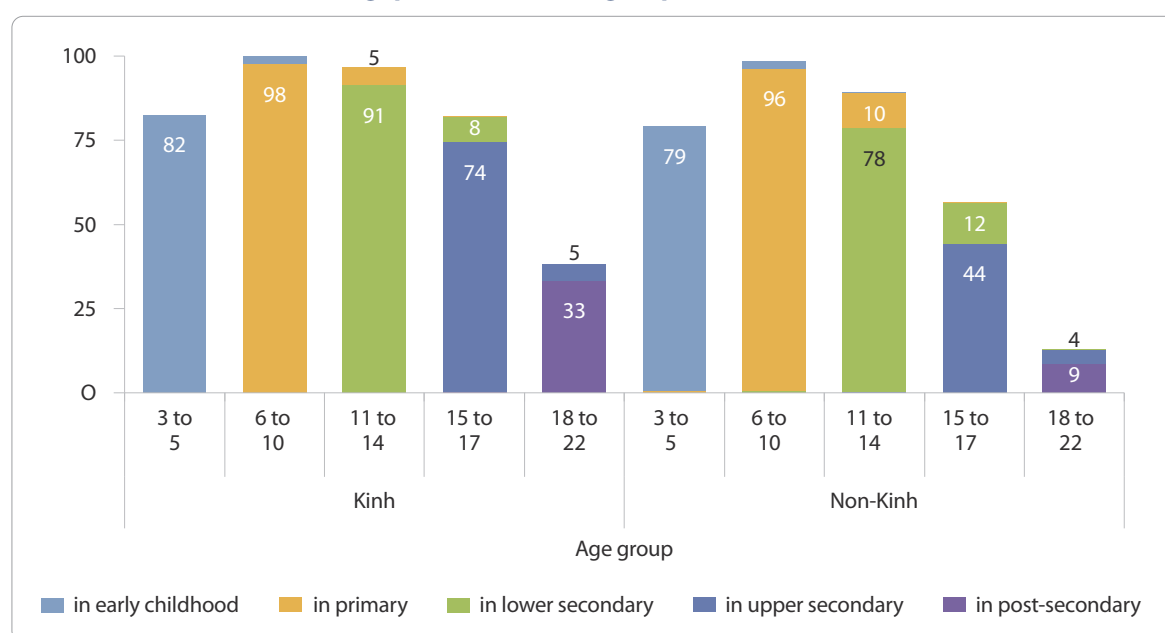
The second concern is that Vietnam has not been able to mobilize a significant share of its potential labor force. Many workers face barriers to entry as the job search is made difficult by inadequate training, limited information on the needs of firms, and insufficient mobility. These obstacles are most visible for ethnic minorities, many living in remote areas, and representing almost three quarter of Vietnam poor. But they apply just as much to other marginalized and poor segments of Vietnam’s population. Their access to basic health and education services has improved. Yet, welfare indicators are still low for these groups—especially for girls and women—and few have been able to attain secondary or tertiary education or move to advanced jobs (Figure ES.3). There is an ethical case for renewing efforts to close this welfare gap. But there is also an economic case as a shrinking future population must mobilize more available workers. There are a number of priority reforms that promote a more productive and more inclusive workforce.

- **Embrace markets:** Increasing participation and the responsiveness of the post-secondary education sector requires increasing the types of post-secondary education including non-university programs. This will require more resources but also strong engagement with private education providers. More private or public-private institutions could provide more of the advanced education opportunities Vietnam needs. Private universities must compete for students and tend to focus on subjects demanded by employers. They cannot replace comprehensive public universities but complement them. Firms should also be encouraged to provide more formal technical and vocational training. Private sector led initiatives such as the European Sector Employer Councils or Singapore’s Institute for Technical Education could be models for Vietnam to better match skills demand and supply.
- **Modernize institutions:** National Targeted Programs (NTPs) have been the main mechanism for addressing ethnic minority issues in Vietnam. These programs could better aid job market entry by easing migration to more dynamic parts of the country. Priorities for ethnic minorities include improving early child-development outcomes especially stunting, increasing access to secondary and post-secondary education, and removing barriers from labor market participation. Specific options include information systems that help job search and matching, transport vouchers to offset the cost of exploring opportunities, or encouraging seasonal work

as an entry point to formal work. Women’s participation in the labor market will be eased by expanding child and elderly care options and encouraging more flexible work arrangements. NTPs could also consider conditional cash transfer (CCT) programs that require school enrollment in return for payouts. They will get more kids into school and will raise demand for higher quality and ongoing education. Any such initiatives need to be designed in close consultation with ethnic communities and will require streamlining fragmented programs and policies (currently there are 23 for education and training and seven for healthcare).

- **Rethink incentives:** Increasing resources and greater private sector involvement in education requires coordination, monitoring and oversight. Especially for post-secondary education it will also require changes in how education is financed and budgeted. Currently, financing is input-based building on historical budgets. In the medium term, more output-based funding could link financing with performance on well-defined criteria. Further in the future, voucher-based systems can be considered with preferences given to priority occupations and to need-based support.

FIGURE ES.3. **The enrollment gap between ethnic groups increases with level of education**

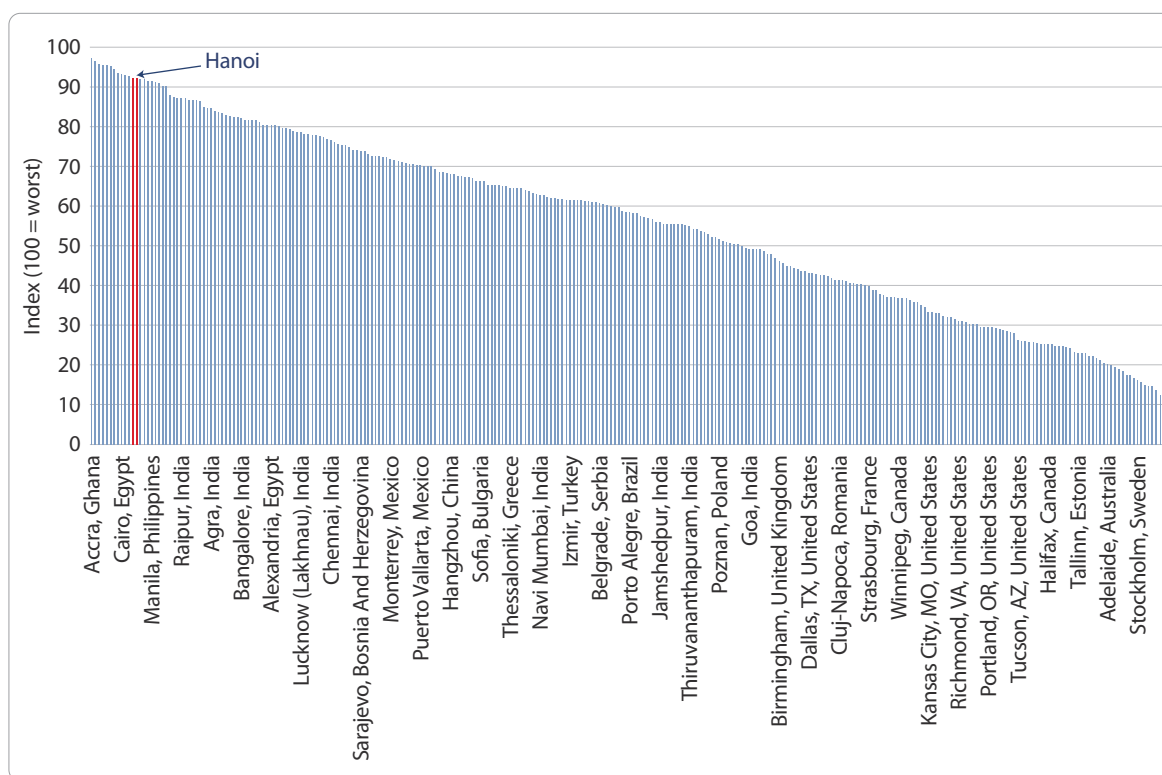


Green economy

Vietnam’s economy has shifted from agriculture towards manufacturing and services over the last two decades, but natural resources remain important. Agriculture, forestry and fishing still account for about 15 percent of the total economy, natural resources are an important input to export-oriented industries such as furniture making, and stunning landscapes and beaches draw rising numbers of tourists to the country. Furthermore, clean air and water are essential for human health and well-being. For nature to continue to provide these important services, resources must be used more carefully and efficiently.

Current environmental performance is weak. Agriculture consumes more land and water than would be necessary combined with a widespread overuse of chemical inputs. The economy is very energy-intensive, consuming twice the amount of energy per unit of GDP compared to the East Asian average. Urbanization has led to a massive increase in waste generation and much of it remains untreated and improperly discarded. Hanoi is now among the global cities with the highest air pollution (Figure ES.4). All of these problems are compounded by the rising impacts of climate change. Vietnam’s carbon footprint is growing, and the country is also one of the worst-affected by climate-related natural hazards.

FIGURE ES.4. **Most air-polluted cities in the world, selected cities, 2019 midyear**



Both, market failures and government shortcomings contribute to these problems. Those overusing or polluting natural resources benefit without paying for the consequences. Climate change mitigation creates immediate costs, while the benefits are in the future. The government has created many rules and regulations, but implementation and enforcement are weak, in part because of a fragmentation of environmental decision making. Local governments lack the incentives to improve environmental performance, and sustainability is not systematically considered in public investments. Vietnam needs to improve its environmental governance to maintain the quality and productivity of natural resources, promote good health, and prepare for inevitable climate change impacts.

- **Embrace markets:** Market failures are the cause of many environmental problems, but well-designed markets and price instruments can help solve such problems with greater efficiency than regulations or public investments alone. Most importantly, the total cost of natural

resource consumption and of environmental services needs to be reflected in their prices. This includes the cost of provision, but also the “external” costs such as the health burden caused by air pollution from fossil fuel use. Fees for energy, water use, or waste disposal all need to gradually increase to encourage efficiency and pay for remediation. A carbon charge or trading system, perhaps modeled on the existing HCFC tax, could increase Vietnam’s contribution to global climate change mitigation. Undue burden from price increases on the poor should be addressed with separate social policies.

- **Modernize institutions:** Environmental rules and regulations will still be required but must be well-designed and transparently enforced. Capacity for environmental management needs to increase and government should lead by example by greening its own operations. Environmental performance by local governments could be rewarded through such incentives as ecological fiscal transfers. Greater stakeholder participation, including the ability to use environmental courts, will help hold polluters to account. Strengthening environmental education and more efforts to collect and disseminate natural resource information support all these actions. An ultimate goal could be the incorporation of natural capital into national accounts as some countries have started to do.
- **Rethink incentives:** Where should government direct its own scarce resources to promote environmental goals? Investments in social safety nets will buffer price shocks from environmental policies for the poor. Incentives or subsidies for environmental investments such as renewable energy or carbon mitigation have been used in many countries but should be a modest complement to more effective policy instruments. Many climate change adaptation measures, on the other hand, will require significant government investments because of their public goods characteristics.

Vietnam has been growing at a fast pace for the last twenty years. This is no cause for complacency, because both the domestic conditions for continued growth and the external environment are bound to change. The time to act is long before the current growth model runs out of steam. Vibrant Vietnam proposes reforms in four main areas corresponding to Vietnam’s principal assets: its private sector, its public stock of infrastructure, its people, and its natural environment. There is a lot the government can do to prepare the country for the next phase of development which must significantly raise the productivity of all assets. Markets need to be given more freedom to guide the most efficient allocation of resources, guided by supportive institutions, and complemented by judicious incentives where social benefits are high.

Vibrant Vietnam – Policy Matrix

	Embrace markets	Modernize institutions	Rethink incentives
Private capital: Dynamic firms	<ul style="list-style-type: none"> • Ensure resources go to the most productive firms by reforming the insolvency framework to facilitate firm exit and entry; • Renew commitment to the rules-based trading framework to foster competition and knowledge flows. 	<ul style="list-style-type: none"> • Create a level playing field through transparent and legally enforceable rights, rules and regulations; • Reform the financial sector by eliminating direct state intervention and favoritism and strengthening the bank supervision and resolution framework as well as encouraging digital banking and the development of capital markets. 	<ul style="list-style-type: none"> • Use information programs, public private partnerships and similar instruments to strengthen linkages among domestic firms and between domestic and foreign firms; • Promote innovation by strengthening intellectual property rights and by supporting management and research capacity development.
Public capital: Efficient infrastructure	<ul style="list-style-type: none"> • Increase the productivity of the infrastructure sector by making competitive procurement standard, allowing more private sector participation, and broadening financing options; • On the demand side, raise tariffs and fees to recover cost of provision. 	<ul style="list-style-type: none"> • Improve planning, coordination, financing and implementation capacity, especially at local levels where more responsibility and revenue authority should be granted; • Build more comprehensive information systems to support planning and monitoring. 	<ul style="list-style-type: none"> • Buffer the impacts of utility fee increases on the poor, not through universally low fees but through instruments like lifeline tariffs, subsidizing efficiency investments, or direct financial support through social protection systems.
Human capital: Skilled workers and opportunities for all	<ul style="list-style-type: none"> • Engage with the private sector to increase the types of post-secondary education available in order to increase enrollment and ensure skill formation is responsive to changing demand. 	<ul style="list-style-type: none"> • Balance increased private involvement in education with better public oversight, monitoring and coordination; • Move towards output-based education financing including voucher-based models. 	<ul style="list-style-type: none"> • Use National Targeted Programs (NTPs) to remove ethnic minority barriers to human capital focusing on: <ul style="list-style-type: none"> - children’s first 1000 days and especially stunting - increased access to quality secondary and post-secondary education - integration into the labor market • Strengthen child and elderly care to increase women’s participation in the labor force and consider conditional cash transfers to raise enrollment.

	Embrace markets	Modernize institutions	Rethink incentives
Natural capital: Green economy	<ul style="list-style-type: none"> • Adjust prices to reflect the social costs of air pollution and other negative externalities to optimally allocate natural assets; • Use environmental taxes, fees and carbon pricing to reduce carbon emissions and pollution, pilot solar auctions to promote renewable energy; • Complement market pricing with ambitious targets, regulation and monitoring. 	<ul style="list-style-type: none"> • Upgrade information systems by developing natural Capital Accounts and strengthening geospatial data systems; • Adopt open data initiatives to accelerate the usability of data and so foster innovation and partnerships; • Strengthen environmental education to promote greener habits. 	<ul style="list-style-type: none"> • Align sector and green growth policies; • Incentivize decision-makers (e.g., with ecological fiscal transfers); • Foster innovations that enhance productivity of natural assets and lower waste (e.g., IoT); • Embrace a circular economy approach (e.g., through eco-industrial park, co-incineration, reuse of wastewater, material management).



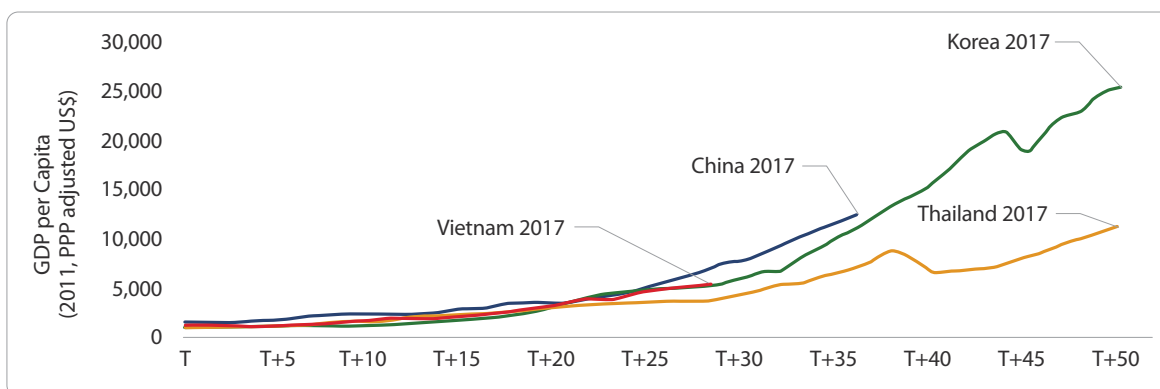
MAIN REPORT

Well begun, but half done

Vietnam, while still a middle-income country, is arguably one of the greatest development success stories of our time. Today, most Vietnamese enjoy living conditions that would have been hard to imagine 30 years ago when the country was on the brink of economic, social, and humanitarian collapse. The launch of *Đổi Mới* in 1986 catapulted the nation from the ranks of the world's poorest to one of its most celebrated success stories.¹ Not only did the median income of households quadruple between 1990 and 2018, this expansion has translated into a spectacular reduction in extreme poverty—from 50 percent to around 2 percent during this period. Social improvements have been equally impressive, as average life expectancy has increased from 61 years in 1975 to 76 years today, and the average schooling years has more than doubled.

Despite unprecedented success, Vietnam's development journey remains incomplete. The country's per capita income today is only 40 percent of the global average, 20 percent of the Association of Southeast Asian Nations (ASEAN) average, and a mere 5 percent of high-income economies' average. It will take about 30 years for Vietnam to reach the Republic of Korea's current gross domestic product (GDP) per capita and 10 years to reach China's (figure M.1). Because of increasingly complex challenges (a rapidly aging society, brisk changes in global production networks, and the long-term impact of climate change), Vietnam will need to be ahead of the game and, accordingly, upgrade its capabilities to ensure sustainable and inclusive growth. Its policy makers have therefore set their sights firmly on making Vietnam a modern and industrialized nation, moving toward becoming a prosperous, creative, equitable, and democratic society by 2035.²

FIGURE M.1. **Vietnam is growing fast but has still some catching up to do**



Source: World Bank.

Note: PPP = purchasing power parity.

- ¹ *Đổi Mới* is the name given to the economic reforms initiated in 1986 with the goal of creating a socialist-oriented market economy.
- ² World Bank 2017a.

Vietnam’s new growth vision is expected to be unveiled in the forthcoming Socio-Economic Development Strategy (2021–30). Vietnam has a tradition of preparing a 10-year strategy, the Socio-Economic Development Strategy (SEDS), and a five-year plan, the Socio-Economic Development Plan (SEDP), at the beginning of each decade. The SEDS and SEDP identify broad development goals and key principles and breakthroughs (interventions), which then inform the 10-year strategy and five-year plan for all ministries and provinces. While most countries have dispensed with such planning documents or pay them only lip service, Vietnamese policymakers continue to attach great importance to the process and the products involving their national strategy. Over time, these documents have become less prescriptive and more consultative. For example, the current SEDS drafting team, which comprises academics, former ministers, and other knowledgeable individuals, have held hundreds of consultation events in-country and abroad including conferring with economists at the Brookings Institution, International Monetary Fund (IMF), Harvard’s Kennedy School of Government, National University of Singapore, Korea Development Institute, Stanford University, and the World Bank, to name a few. The catalytic role played by the SEDS and SEDP in shaping Vietnam’s growth process cannot be overemphasized.

This Report, *Vibrant Vietnam*, which comprises a main report and five background papers, is intended to be an input into the SEDS. Three things make this Report different from other inputs received by the government. First, World Bank economists have worked closely with the SEDS team over the past year on the main messages, key findings, and major policy recommendations, making this Report the culmination of a highly consultative process. Second, using the comparative advantage of the World Bank, the Report brings international experience from more than 150 countries, including countries that have graduated or are in the process of graduating from lower- to upper middle- or even higher-income status. Finally, the Report focuses on both general principles and specific policy ideas, making it relevant for the national strategy and for the sectoral strategies to be prepared in the coming months.

The Report strives for a whole that is greater than the sum of the parts. The five background notes that accompany the main report describe the global and domestic context and offer a range of policy recommendations, with specific attention to productivity and innovation, quality infrastructure, human capital development and the green economy. This collective effort amounts to more than a discussion of specific policy prescriptions in different domains of economics. There are overarching themes and commonalities that, taken together, provide a coherent overall vision for economic policy that could help Vietnam move closer to its ambitious objective of becoming a high-income economy by 2045.

Because this Report builds on the comprehensive study, “Vietnam 2035 – Toward Prosperity, Creativity, Equity, and Democracy,”³ prepared jointly by the government and the World Bank Group in 2016, it will be selective. The Vietnam 2035 report identified a series of priorities for Vietnam’s success over the next 15 years, including a shift toward qualitative rather than quantitative growth sustained by a change in doing business, skill development, new technologies and innovation, adaptation and mitigation of climate changes, and stronger institutions. The Vietnam 2035 report paved the way for further research, justifying the policy notes that collectively constitute the chapters

3 World Bank 2017a.

in this report. These policy notes do not attempt to cover all the areas identified in the Vietnam 2035 report, but rather propose a deeper analysis in a subset of areas associated to productive, human, and natural capital. It will address some of the structural challenges that the country will face (such as urbanization, institutional reforms, and fiscal policy and management) indirectly through these three lenses. These policy notes complement a number of other World Bank reports such as the ongoing urban review assessment, the recently published study on connective infrastructure and value chains and clusters, the 2019 report on the national science and innovation strategy, a Public Expenditure Review completed in 2017, the 2017 job diagnostic, and several recent notes on the financial system.⁴ This collection of policy notes should therefore be viewed as a subset of our effort to provide analytical and technical assistance to the government for the preparation of the SEDS 2021–30.

The rest of the report is organized as follows. It begins by discussing in greater detail the motivation behind the project and the necessity for Vietnam to modify the course of its policies even if they have been so successful over the past 25 years. It then discusses the broad themes and the connecting narratives that emerge from it. These include the business landscape, infrastructure efficiency and financing, human capital development, and moving toward a green economy.

Imperatives for renewing the growth mode

Vietnam needs to change because its historical drivers of growth (that is, demographic dividends and structural transformation) are waning and its external sector is exposed to the rising uncertainty in global production and trade, and to the emergence of disruptive technologies. The impacts of global climate change are visible on the country's stock of natural capital. All these changes add urgency to Vietnam's quest for a new growth model.

Vietnam is at a turning point where some of its traditional drivers of growth are gradually weakening, while the new drivers are not yet fully formed. The country has transitioned relatively quickly from a low-income to a lower middle-income economy. Yet, catching up with more advanced economies will require a change in strategy for at least two reasons. First, the drivers of growth are generally not the same between a country's first and second phases of development, and second, Vietnam's export sector may be permanently affected by changes in world production patterns and rapid technological progress.

Weakening of traditional growth drivers

Transition from a low- to middle-income country generally involves the combination of two key factors: favorable demography and sectoral transformation. Sectoral transformation is defined as a reallocation of the labor force from less to more productive sectors.⁵ As expected, Vietnam greatly relied on these two factors, which on average counted for approximately three-fourths of its per capita output growth during 1996–2012.⁶ The big decline in the fertility rate from 5 children to

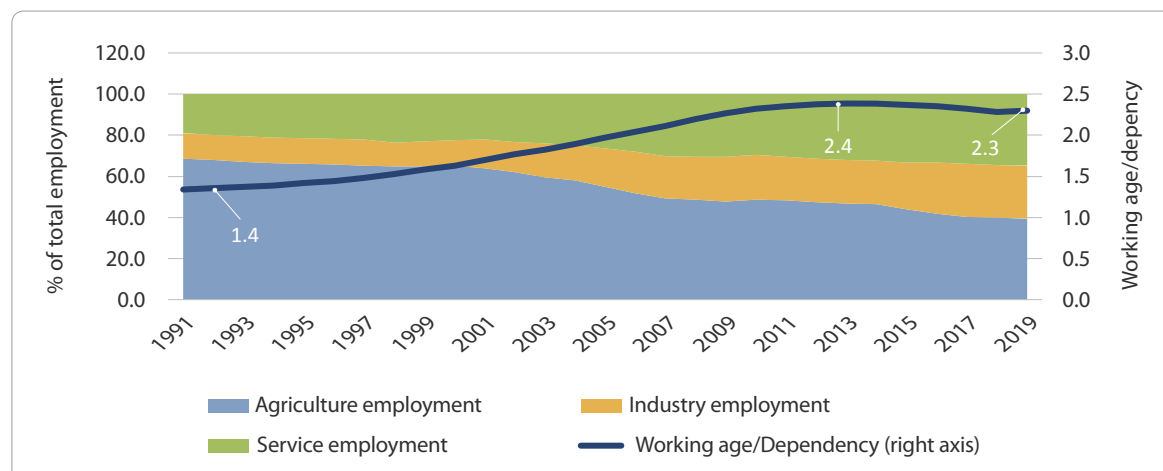
⁴ All useful references can be found in the background papers of the main report.

⁵ Rodrick 2013; Diao, McMillan, and Rodrik 2017; World Bank 2018.

⁶ For details, see Byiers (2015). The contributions of the demography and cross-sector productivity gains on economic growth are derived from the Shapley decomposition of per capita GDP growth in Vietnam during 1996–2012.

2.5 children per mother led to an increase in the share of working-age people relative to dependents from 124 percent in 1985 to 238 percent in 2015 (the peak), and to 228 percent in 2018 (figure M.2). So long as these new workers were able to find jobs, the arithmetic of more workers than dependents provided a window of opportunity to accelerate growth before the workers start to age, contributing on average 1.7 percentage points of GDP per capita growth per year over the past 25 years.

FIGURE M.2. **Demography and labor reallocation have been two key drivers of growth in Vietnam**



Source: World Bank.

Over the past two decades, Vietnam also benefited from the reallocation of its labor force away from agriculture, which is a key stylized fact observed in most dynamic low-income countries.⁷ In Vietnam, approximately 30 percent of the total workforce shifted from low productive agriculture to relatively more productive manufacturing and service jobs, generating intersectoral productivity gains equivalent to about 3.4 percentage points of GDP per year during 1996–2012 (figure M.2). This shift was encouraged by the initial productivity gains in the agricultural sector as fewer workers were required per output—the push factor. It was also enhanced, on the pull side, by the rapid industrialization process, as many new workers were absorbed by the manufacturing industry, which has been a traditional source of relatively well-paid wage employment.⁸ Today the employment structure in Vietnam looks very different; respective shares of agriculture, industry, and services in total employment are 39.5 percent, 25.8 percent, and 34.7 percent, compared to 68.6 percent, 12.3 percent, and 19.1 percent in early 1990s.

These two traditional drivers of economic growth, however, will weaken as a country graduates from its low-income status. According to a recent World Bank study, about 80 percent of labor productivity growth in low-income countries comes from the reallocation of labor, while this contribution is only 36 percent and 32 percent in lower- and upper middle-income countries, respectively.⁹ Similarly, the demographic dividend tends to diminish in more mature economies.¹⁰

7 This transformation from farm to non-farm activities was emphasized as the first step toward economic emergence by pioneers, like S. Kuznets and A. Lewis, of the structural change theory of economic development in the late 1950s.. It has been (re) emphasized by Rodrik (2013) and others in more recent papers.
 8 See OECD (2019) for further evidence.
 9 World Bank 2018a.
 10 Bloom and Luca 2016.

In line with the above cross-country empirical evidence, both the demographic dividends and the speed of the structural transformation are projected to slow in Vietnam. Driven by a rise in life expectancy and declining birth rates, Vietnam's population is aging rapidly, leading to a substantial decrease in the ratio of working-age people to dependents from about 230 percent today to 200 percent in 2030 and only 165 percent in 2050.¹¹ Similarly, while the shift of the labor force toward industry and services should continue, the magnitude of these intersectoral labor movements (and their associated productivity gains) should decrease. The capacity of nonagricultural sectors to absorb all the released workers will diminish with the greater deployment of skills-intensive technologies. The declining trend in productivity of receiving domestic sectors, mainly the informal service sector in urban centers, already points in that direction.¹²

Global megatrends hold opportunities and risks

The expected but irreversible decline in the contribution of the demographic dividend and of labor reallocation will occur when another major driver of growth is also at risk. Over the past three decades, Vietnam has followed the export growth model initially experienced by other East Asian countries, with great success. Using two of its main comparative advantages—agriculture and cheap labor—the country's exports have expanded at an average of about 12 percent per year, transforming the country into one of the most open economies in the world (in terms of the ratio of trade to GDP) and creating millions of productive jobs for the fast-growing population. In short, the export sector has been at the heart of Vietnam's rapid and inclusive growth, through the export of agriculture (rice) in the 1990s, low-skilled manufacturing like textiles and footwear in the 2000s, and electronics in the 2010s fueled by the arrival of many foreign investors.

The challenge for Vietnam is to continue with such an export-led model when the global trade and financial flows have, since 2010, shown signs of decline, exacerbated by trade tensions around the world.¹³ Although Vietnam's exports have continued to expand faster than the rest of the world and East Asian countries, they grew by only 9 percent in 2019 (and only 3 percent in non-U.S. markets), in line with the declining trend observed worldwide (figure M.3).¹⁴

It is safe to assume that the global tailwind that propelled Vietnam's economy in the past three decades is likely to be weaker in the 2020s. While rising uncertainty may continue to negatively affect merchandise trade and investment flows, further opportunities may emerge through increased diversification of products and markets. For example, trade in services is projected to expand due in part to digital technologies and people movements that have made many services more tradable, although barriers to services trade remain high, especially in Asia. The rapid growth of tourism services is a good illustration of Vietnam's capacity to adjust to new trends. In terms of

11 UNDP population database; <https://population.un.org/wpp/DataQuery/>.

12 While non-farm jobs remain more productive on average than farm jobs, the gap between them has been reduced over time (De Vries et al. 2014). This means that the motivation for workers to move out of agriculture is diminishing over time (in line with the prediction of the Harris-Todaro approach), and that the overall labor productivity gains derived from this shift are declining over time.

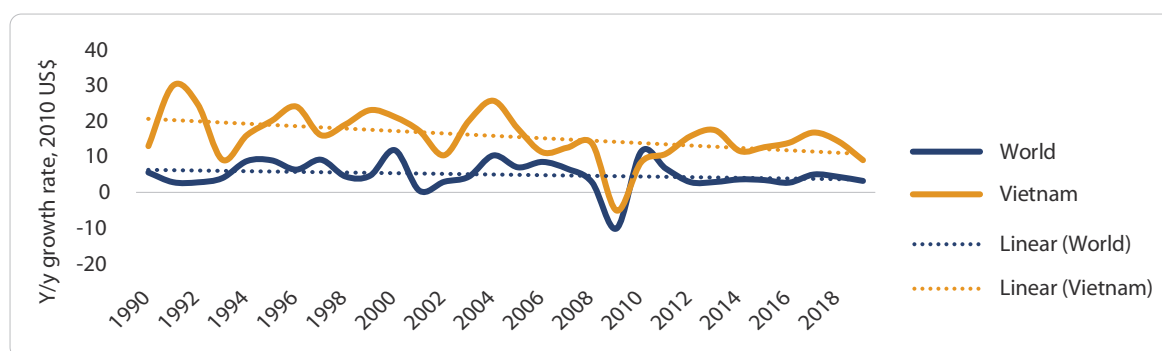
13 For a description of recent trends in the global economy, and their impact on the East Asian economy, see World Bank (2019a).

14 Vietnam's exports to the United States boomed by almost 30 percent in 2019 as the result, to a large extent, of the diversion effect of Chinese exports penalized by higher tariffs imposed by the United States.

markets, Vietnam could develop trade within the ASEAN region, which has a combined GDP of more than US\$2.7 trillion. Being at the center of this dynamic region could help offset the general slowdown, especially in more traditional markets in advanced economies. In any case, Vietnam's economy is not fully isolated from external shocks. In fact, we find that a decrease in (net) exports growth by 5 percentage points would reduce GDP growth by an estimated 1.5 percentage points in the short term.

Not only does Vietnam's external sector appear to be exposed to rising uncertainty in the global economy, but shifting global trade patterns and disruptive technologies in the manufacturing sector are also creating new opportunities and risks. Today, Vietnam's exports are highly concentrated in manufacturing (about two-thirds of total exports) and in one subsector (electronics, which accounts for half the country's exports). These industries have seen the advent of artificial intelligence and advanced technologies such as robotics, and 3D printing, which should reduce the importance of cheap labor in the location decision of multinationals, which has been Vietnam's main comparative advantage, including with China, where those costs have been on the rise. In recent years, manufacturing companies in Organization for Economic Co-operation and Development (OECD) countries have been starting to transfer activities back to their home country (back-shoring) or to a neighboring country (near shoring), partly due to the cost reduction brought about by technology advancement.¹⁵ There is also some evidence that emerging markets are starting to deindustrialize at lower levels of income and earlier stages of development than was the case in now high-income economies.¹⁶ In other words, there is an increasing risk for Vietnam that foreign direct investment (FDI) inflows toward manufacturing could gradually decline, leading to a possible deindustrialization process except if the country can scale-up its production capacity by adapting to these new technologies.

FIGURE M.3. **The rate of expansion of Vietnamese exports is higher than in the world but declining over time, 1990–2019**



Source: World Development Indicators.

While the growing uncertainty in global trade and new technologies are two of the most important mega-trends that can impact the Vietnamese economy, other shocks cannot be dismissed. Among them are the rising global debt; massive monetary easing by the central banks

15 OECD 2019.
16 Rodrik 2016.

in high-income economies (which is putting pressure on emerging market currencies), and the social discomfort in many countries (including middle-income countries) in response to increasing inequalities and frustrations in the middle class. So far, Vietnam has been relatively isolated from these shocks as the country's debt declined by about 8 percentage points of GDP from the highest point in 2016, thanks to the government's fiscal consolidation. Similarly, despite an impressive expansion over the past few years, Vietnam's capital markets have not benefited from a large inflow of foreign investors due to the remaining weaknesses in the legal and institutional framework.¹⁷ Thanks to impressive results achieved in poverty reduction over the past two decades, Vietnam has benefited from a relatively stable social contract in recent years. The situation remains fluid, however, as the Vietnamese economy could still be affected by these shocks (or others) in the coming years.

The good news for Vietnam is that its growing domestic market can partially complement or even counterbalance the dependence on exports and foreign markets. Today, almost one out of six Vietnamese has already joined the global middle class (with per capita spending of more than US\$15 per day) and, at the current pace, 1 million more Vietnamese will be added to this category every year. This emerging middle class will consume not only more, but also better-quality, products and services that will require domestic firms to upgrade their capacities through better use of their resources and innovation. Because this demand will be mainly concentrated in cities, it can help create agglomeration effects, which has been one important source of productivity gains for firms and labor in many countries over time. Cities tend to have higher productivity due to economies of scale and clustering of firms, allowing for knowledge spillovers, innovation, and dense ecosystems of service providers, suppliers, and thick labor markets in which firms can flourish. However, without effective and integrated urban planning and adequate investment in urban infrastructure and service delivery, Vietnam could see these positive impacts of urbanization reverse course. Vietnam's major cities are already experiencing unprecedented traffic congestion, and pressure on core municipal services and the urban environment.

Looking forward, Vietnam will need to navigate the changing terrain in global and domestic markets where increasing pressures on the environment will have to be managed. The extensive use of natural resources (land, water, mines, forests), and the rapid industrial process, have generated significant costs for the economy. These costs are difficult to quantify, but were tentatively estimated at around 6 to 10 percent of GDP in a recent World Bank study.¹⁸ They have also translated into high levels of air and water pollution, affecting the quality of life of millions of households.¹⁹ Recently, the impact of global climate change has exacerbated the pressure on the environment as Vietnam has been ranked as the ninth most vulnerable country in the world.²⁰ The projected increase in temperatures is likely to have a negative impact on soil fertility and agricultural productivity. Likewise, a rising sea level is a major concern, especially in the south of the country, which is home to close to one-third of the population and around 40 percent of agricultural activities. While part of these costs will become visible only in the longer term, they require immediate attention, otherwise there is a risk that current economic growth will be built at the expense of future generations.

17 For fuller details, see World Bank (2019b).

18 World Bank (2019b).

19 A recent survey in Hanoi has shown that people are more concerned about air pollution than about securing a job.

20 World Bank 2019b.

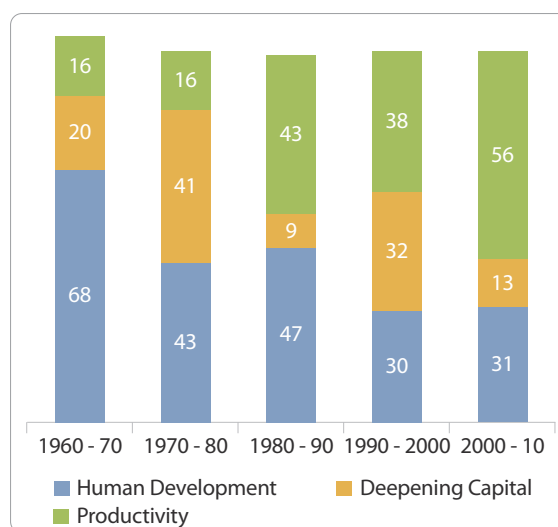
Framing a new growth strategy: Greater accumulation with better use of all forms of capital

Building the foundation for a high-income Vietnam will require a pivot in strategy toward more qualitative than quantitative growth. The objective of accumulating more physical and human capital will need to be accompanied by a quest for better efficiency. Both economic theory and empirical evidence have demonstrated that an economy becomes more resistant to shocks and more dynamic when it learns how to manage its resources more efficiently rather than simply accumulating them over time.

In light of the ongoing and future changes inside and outside of Vietnam, the government has already started to adjust its new strategy for the next 10 years by emphasizing the need to move toward more qualitative rather than quantitative growth. For example, while the expansion of exports remains a strategic objective, further attention will be given to diversification in terms of both new markets and new products. The development of more value-added products in the traditional sectors of agriculture and manufacturing is at the center of the government's agenda, as is the emergence of new activities such as tourism and personal services (health care, tertiary education). The shift toward more quality should also be achieved by introducing a specific pillar on the environment, and by upgrading productive and human capital through innovation and skills developments. In short, the government has already started to internalize the need to produce not only more output, but better output, by maximizing efficiency gains.

This push toward a qualitative rather than a quantitative growth model is consistent with the experience of countries that have succeeded in avoiding the middle-income trap. The best example is certainly Korea, which after reaching by 1972 the level of per capita income observed in Vietnam today, was able to double its median income per capita in only 10 years and multiplied it fivefold in 20 years. Such rapid achievement was the result of a combination of more investments in physical and human resources and, above all, an increasing reliance on efficiency gains. This can be illustrated by the rising contribution of productivity (as measured by total factor productivity) to the country's per capita output growth that surged from 16 percent during the 1970s to 43 percent during the 1980s and 56 percent during the 2000s (figure M.4). It can therefore be argued that Korea succeeded in its transition from a middle- to high-income economy by learning how to more efficiently manage its existing resources rather than by accumulating more resources.

FIGURE M.4. **Productivity has gradually become the main driver of growth in Korea**

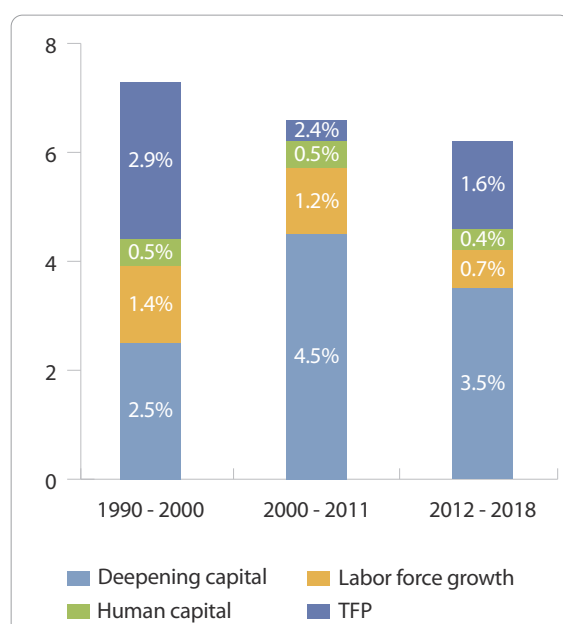


Source: Jeong 2017.

Unlike Korea, Vietnam has yet to switch to a growth model where investments in human and physical capital are exhibiting increasing rates of return over time, let alone a productivity-led growth model. Growth accounting confirms that the total factor productivity contribution to per capita output growth was only 20 percent during 2012–17, which is more than during 2000–11 but significantly lower than in the 1990s when the “green” revolution allowed a significant increase in agricultural productivity (figure M.5). Consequently, recent economic growth has been mainly driven by the accumulation of resources but, here too, investment growth has slowed markedly, partly as the result of the decline in the public investment program, which explains why the contribution of physical capital decreased from 4.5 percentage points of per capita output during 2000–11 to 3.4 percentage points during 2012–17. The contribution of labor—through both the expansion of the labor force and improved human capital—has also declined over time. While significant progress was made during the initial stage of the reform process (notably in primary education),²¹ the quality of the overall labor force remains subdued because skill levels are not yet commensurate with the demands of a rapidly developing economy.

For Vietnam to even match Korea’s transformational pace of the 1980s, it needs to move toward productivity-led growth with a sense of urgency. Only such an orientation would enable Vietnam to catch up with the per worker income in Korea, which was 16 times higher in 2017. Using the approach proposed by Jones (2016), it can be shown that the per worker differential would be reduced by 90 percent if Vietnam were reporting the same level of labor productivity as Korea. To

FIGURE M.5. Productivity has accounted for only 20 percent of Vietnam’s per capita GDP growth in recent years



Source: World Bank.
Note: TFP = total factor productivity.

further illustrate the importance of productivity, the current gap in income per worker between these two countries would only be reduced from 16 percent to 14.3 percent if Vietnam had reported the same ratio of physical capital to GDP as Korea today. The contribution of human capital would be bigger but still modest, as the income per worker differential would decline to 12.7 percent (down from 16 percent) if these two countries had the same level of average years’ schooling.

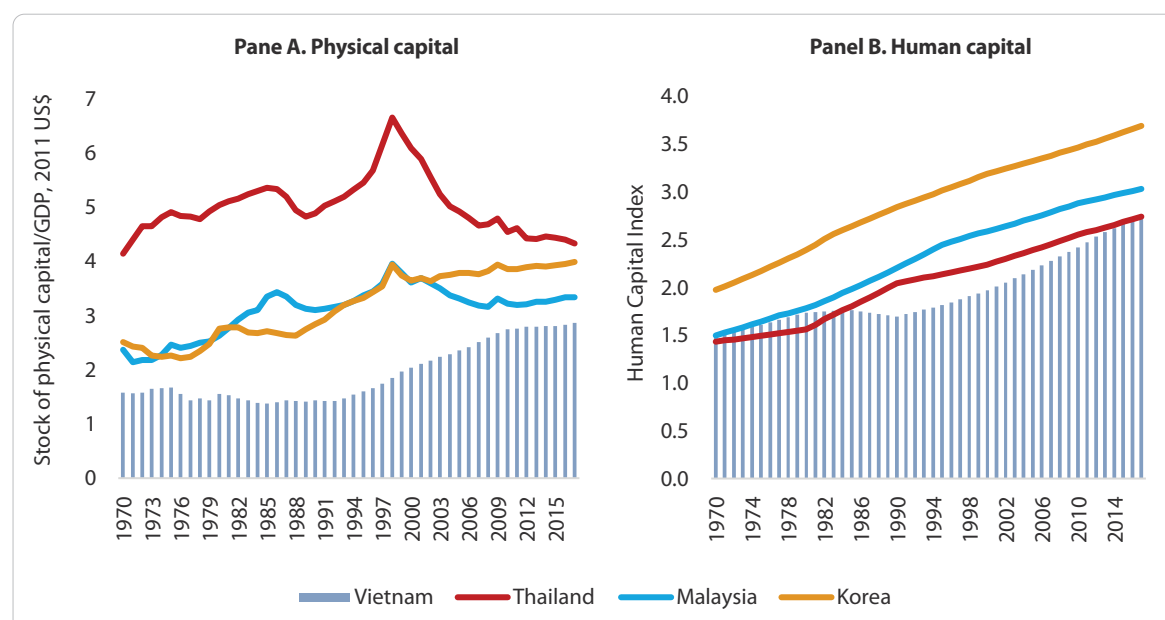
Looking forward, Vietnam will need to achieve productivity gains that have not yet been reported in the country’s development over the past two decades. International experience, (again, Korea is a good example), shows that these gains can emerge from good management of the urbanization process, through the optimization of agglomeration effects. This must be

21 Vietnam ranked 48th out of 157 countries on a recent World Bank Human Capital Index (HCI), higher than any other lower middle-income country and above many countries at multiples of Vietnam’s income level.

supported by a gradual move of employment toward services, after the initial push in manufacturing away from agricultural jobs. Such a structural change appears necessary as both Korea and Malaysia, which reported approximately the same employment structure in the early 1980s as Vietnam's today, moved toward their goal of becoming high-income economies by having two out of three workers employed in the service sector 20 years later. As Vietnam aspires to move up the value chain, the demand for skilled labor and more sophisticated technologies will likely increase. The wage premium is already high at the top end of the education distribution, where the number of college graduates has expanded significantly but not enough to keep up with demand. These graduates are not always ready for the job market, as reflected by their rising unemployment rate, suggesting a skill mismatch between what is demanded by the market and what is being offered in the educational system. The formulation of effective skill development and technologies and innovation strategies will become more important for Vietnam than they were in its first phase of development.

While the move toward productivity-led growth will be essential for Vietnam in the next decade, the country will have to continue to rely on the accumulation of both human and physical capital. Despite impressive progress since the early 1990s, the country has lower physical and human capital stocks than more advanced economies in East Asia (figure M.6). In 2017, the level of physical capital (relative to GDP) accumulated by Vietnam was approximately equal to the one reported by Korea and Malaysia in the mid-1980s, while its human capital development corresponded to that achieved by Korea in the early 1980s and by Malaysia in the late 1990s. Of course, the further accumulation of capital will have to be smart, as it should contribute to improved efficiency while preserving the country's stock of natural capital.

FIGURE M.6. **Vietnam is still lagging more advanced East Asian economies in terms of physical and human capital accumulation**



Source: World Penn Tables.

The next decade offers Vietnam a unique opportunity to achieve higher output together with economic, social, and environmental sustainability. Because Vietnam is still a relatively capital-scarce economy, private and public capital accumulation is expected to remain a major driver of growth, but higher productivity growth will be needed to ensure optimal use of existing resources. This complementarity between the accumulation of factors of production and their efficient use should be at the center of policy making in Vietnam in the coming years. Growth will also need to continue to be inclusive, enabling all citizens to contribute to and participate in Vietnam’s rising prosperity. And finally, growth should not come at the expense of the depletion of Vietnam’s natural resources, while adapting to the increasing impacts of climate change. In sum, this means shifting from a strategy focused primarily on the pace of growth to one that simultaneously improves the quality of growth.

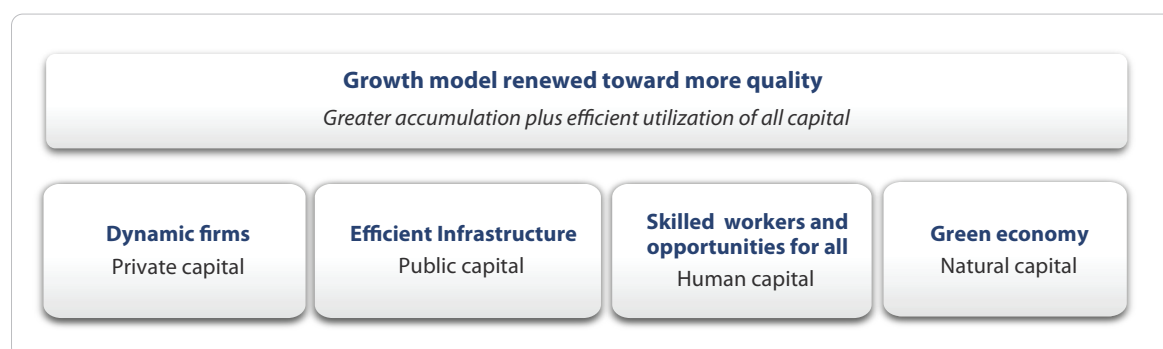
Four deep dives

Moving toward qualitative growth and generating efficiency gains will require Vietnam to optimize its wealth through improved management of the country’s physical, human, and natural capital. With this objective in mind, four deep dives will explore how these categories of capital, as well as their combination, could contribute to the country’s quest for upper middle- and high-income status. Specific recommendations are derived for each individual category but also for maximizing the potential synergies across them.

There are multiple ways to analyze how the Vietnamese economy can become more efficient.

We adopt the asset or wealth framework recently proposed by the World Bank Group in its report, *The Changing Wealth of Nations* (2018b). National income and well-being are underpinned by a country’s assets or wealth—measured comprehensively to include private capital, public capital, human capital, and natural capital.²² The inclusion of natural capital allows monitoring the sustainability of development, an urgent concern today for all countries, including Vietnam. Of course, the impact of these three assets on GDP growth will also depend on the way they are efficiently managed, that is, their productivity (figure M.7).

FIGURE M.7. **A basic accounting framework**



22 World Bank 2018b.

In this framework, a country’s level of economic development is strongly related to the composition of its national wealth. For Vietnam, human capital is the largest component of wealth and accounted for approximately half of its wealth in 2014, followed by natural capital (33 percent), and productive capital (19 percent) (figure M.8). This composition has remained relatively stable over the past two decades, in line with what has been found in most low- and lower middle-income countries. It is, however, different from what has been observed in East Asia and in upper middle-income countries (figure M.9). Such comparison suggests that Vietnam will have to rely more on productive and human capital and less on natural capital in its future economic development strategy. As emphasized earlier, the country will also need to use its existing resources more efficiently.

Our collection of background papers explores how efficient gains can be produced in each category of capital defined in the above framework. It starts by examining the role of firms in generating more private capital through improvements in the business environment and innovation. The second paper discusses why the country’s infrastructure (public capital) will require greater attention to quality and to the need to identify new sources of funding, especially through partnerships with the private sector. The third study deals with human capital development by focusing on its contribution to the inclusive growth agenda by enabling all citizens to contribute to and participate to Vietnam’s rising prosperity. The fourth and last paper emphasizes that economic growth should not come at the expense of the depletion of Vietnam’s natural resources while adapting to the impacts of climate change.

FIGURE M.8. **Wealth composition in Vietnam, 1995–2014**

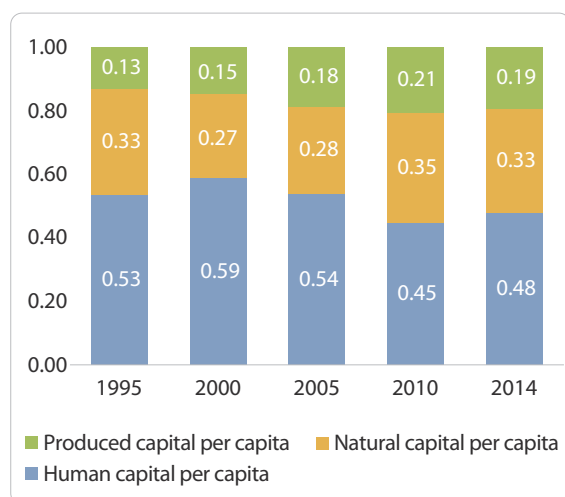
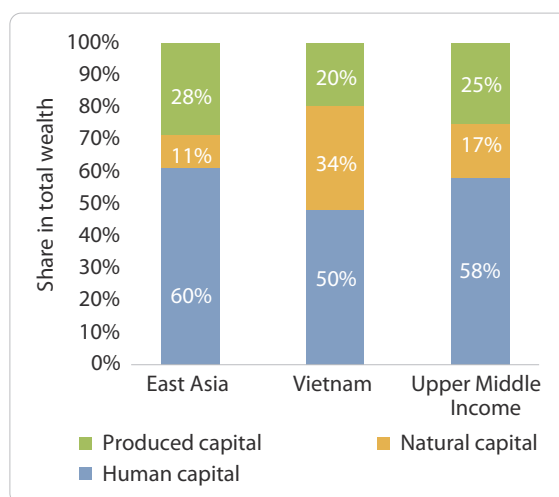


FIGURE M.9. **Comparison of wealth composition, 2014**



Source: World Bank.

What does a productivity-focused development strategy look like in practice? This Report, *Vibrant Vietnam*, identifies priorities and proposes concrete policies to strengthen the country’s productive assets and include:

- **Dynamic firms.** Encouraging competition and easing firm entry and exit ensures that resources will flow to the most innovative and productive firms. This can only happen in a supportive business environment that ensures access to finance, transparent regulations, and legal protections.

- **Efficient infrastructure.** Vietnam has built up a large stock of infrastructure. What matters now is to improve the efficiency of financing and delivering additional construction, and, perhaps even more importantly, operations and maintenance. This will raise the quality of services that infrastructure provides.
- **Skilled workers.** Vietnam scores well on basic education, but advanced university level and vocational-technical skills are undersupplied. Skill upgrading will raise wages and boost domestic consumption. And those facing barriers entering the labor market or suffering from limited information during their education and job search, including ethnic minorities, must have greater opportunities—not just for reasons of equity but also for economic efficiency as the labor pool shrinks.
- **Green economy.** Sustainable development involves a shift from liquidating natural assets for short-term growth to using natural resources—including land, clean air, and water—far more efficiently. In wealthy countries, natural capital increases rather than declines. There are many opportunities for more effective natural resource management, stricter pollution control, and preparing for inevitable climate change impacts.

The main recommendations derived from these deep dives are summarized in table M.1.

All of the recommended actions aim at helping Vietnam shift from a strategy focused primarily on the pace of growth to one that simultaneously improves the quality of growth. Further granularity will be found in the remainder of this main report and, of course, in each of the background papers. It is worth underscoring that not all recommendations are new. They have become, however, more important because of the above-described changes in the domestic and external contexts. As an illustration, the need to enhance the development of domestic firms is now central to employment as FDI inflows are unlikely to create as many jobs as they did in the past due to the current trend toward automation in the electronic and textile sectors (the two main manufacturing sectors). The reform of technical and vocational education and training (TVET) and university education has been advocated before but must receive urgent attention if the country wants to move toward greater value-added products. Many recommendations are, we believe, new because they have not received sufficient attention from policy makers in the past. Among these recommendations are those related to the necessity to adjust incentives in several infrastructure services by taking into account their impacts on the environment and income distribution. The recommendation to accelerate the development of a digital economy is also essential as Vietnam is now lagging not only more advanced countries but also those with approximately the same level of income per capita. Such development appears central to streamline the relationship between government and businesses, to improve data reporting and transparency, and simulate business development (mostly small and medium-sized enterprises) through inclusive finance.

TABLE M.1. **Summary of recommendations from the deep dives**

Objectives	Actions
Deep Dive 1: Firms productivity and capacity	
Better allocation of resources from low to highly productive firms	<ul style="list-style-type: none"> a. Remove barriers to firms' entry and exit by (a) establishing a level playing field in sectors dominated by state-owned enterprises (SOEs), and (b) strengthening the legal framework for facilitating the efficient exit of unsuccessful firms b. Open services to more foreign competition through international and regional trade agreements c. Encourage backward and forward linkages between FDI and domestic firms by (i) smart use of incentives and development of joint private-public partnership programs, and (ii) improved intellectual property rights protection d. Enhance partnerships between large and small firms and between small firms by enhancing supplier and distributor value chains
Remove obstacles in the business environment	<ul style="list-style-type: none"> a. Improve access to finance by developing banking and capital markets b. Promote an even playing field by digitalization, simplification, and enforcement of rules c. Encourage innovation through legal protection and financial incentives
Deep Dive 2: Infrastructure quality and financing	
Improve efficiency of spending	<ul style="list-style-type: none"> a. Improve planning across jurisdictions and sectors by better coordination within ministries at the central level (horizontal) and between central and local governments (vertical) b. Promote the use of competitive procurement in infrastructure contracts c. Do not forget maintenance by allocating sufficient financial resources in both national and local government budgets d. Improve the "soft dimensions" of connectivity infrastructure by streamlining control and inspections
Broaden financing	<ul style="list-style-type: none"> a. Rebalance the financial burden of infrastructure services from taxpayers to users by adjusting tariffs toward supply costs (and eventual externalities) b. Increase the revenue collection responsibility of local governments so they will be aligned with their spending responsibilities c. Enhance partnerships with private firms for money and competencies as well as transparency by adopting public-private partnership regulations in line with international best practice d. Unlock capital markets' potential by allowing the government and SOEs to tap into private savings
Deep Dive 3: Human capital development for jobs for all	
Upgrade skills	<ul style="list-style-type: none"> a. Reduce the fiscal burden for students in tertiary education by increasing public allocations to universities b. Promote quality enhancing through collaboration with private firms by adjusting the curriculum to the needs of the job market c. Focus on technical and vocational training in line with the private sector's needs
Boost opportunities for all	<ul style="list-style-type: none"> a. Improve the efficiency of national programs by better coordination, local capacity building, monitoring, and targeting b. Focus actions on nutrition and jobs that are key areas for the well-being of minority ethnic groups c. Consider conditional cash transfers as a way to incentivize behavioral changes in households

TABLE M.1. **Summary of recommendations from the deep dives (Cont.)**

Objectives	Actions
Deep Dive 4: Toward a cleaner economy	
Pricing mechanisms	<ul style="list-style-type: none"> a. Gradually adjust prices of public services to cover supply costs and environmental externalities b. Support vulnerable groups by using differentiated tariffs and/or direct financial assistance c. Allocate additional revenues collected from higher tariffs to targeted green investment projects and initiatives
Direct government interventions	<ul style="list-style-type: none"> a. Influence individual and collective behaviors by diffusing relevant information (labels), adopting norms, and enforcing regulations b. Improve the design of environmental strategies by better coordination across sectors and jurisdictions c. Develop incentive mechanisms in the public sector by adopting explicit rules in favor of environmental management (public investment, human resource management, transfers)
Information and engagement	<ul style="list-style-type: none"> a. Build good databases on the environment to enable informed policy making b. Make data available to all stakeholders for transparency and accountability c. Allow stakeholders to participate in decision processes by giving them access to reporting mechanisms and institutions.

The proposed four deep dives are all important individually, but it is their combination that will shape the country’s future development. For example, improvement in the provision of quality infrastructure would boost firms’ expansion only if they can find skilled labor and enough capital to finance the acquisition of new technologies. Similarly, the need to develop climate-resilient crops will require not only a change in farmers’ competencies and behaviors, but also innovative technologies. These synergies are at the center of the economic development process, as demonstrated by Acemoglu and Zilibotti (2001), who explained the productivity differential across countries by the combination of their technology and skill levels and not only by one of these factors. That is why the most important contribution of our notes might be in their cross-cutting policy recommendations as illustrated by the following three examples:

1. ***Moving from machines to mind-led development.*** So far, Vietnam has made access to infrastructure relatively cheap by charging user fees well under supply costs. Concurrently, the cost of postsecondary studies has been extremely high for poor families. At the time when the demand for infrastructure services must be adjusted to account for its negative impact on the environment, and when there is an urgent need to upgrade the skills of the labor force, the government may want to shift the existing incentives structure by raising infrastructure fees and reducing tuition.
2. ***Promoting environmentally friendly technologies.*** Since Vietnam aims at encouraging the adoption of cleaner technologies, the authorities should support firms that are ready to use them through smart incentives and greener financing.

3. **Enhancing forward linkages for job creation.** Today, FDI firms account for 20 percent of total employment in (formal) enterprises and about three-fourths of the country's total exports. Yet, almost none of them is currently serving the domestic market. This is a lost opportunity at a time when local demand for their products is on the rise due to the fast-growing middle class. The development of forward linkages by allowing the sale of a fraction of the production by FDI firms on the domestic market would help create distribution channels within the country and boost demand through the emergence of well-known multiplier effects on jobs and economic activities. For example, the availability of electronic and designer products in Vietnam could boost tourism, as it has smartly done in Mauritius and Singapore.

Before summarizing the main takeaways of each background paper, a final word of caution regarding the role of institutions. As explained earlier, the economic literature has long debated the importance of strong institutions to a country's development path, which was one of the priority areas identified by the Vietnam 2035 report.²³ Institutions will be needed to guarantee that decisions will continue to be implemented in a way that maximizes the country's welfare in both the short and longer term. At this stage, despite recent progress and being one of the best performers among low and low-middle income countries, Vietnam does not rank favorably in most dimensions of governance, especially in terms of corruption control, regulatory quality, and voice and accountability (table M.2). The question of building strong institutions is a complex one as there is no single solution; rather, solutions need to be adapted to the history and people of each country. For that reason, each of the background papers will give attention to the role of institutions. Building stronger institutions in Vietnam is a cross-cutting issue that has been accounted for in our analysis and recommendations on how (a) to make private firms more dynamic and innovative, (b) to upgrade infrastructure, (c) to ensure equal opportunities for all through human capital development, and (d) the development of a greener economy. This approach has been preferred to having one special policy note devoted to institutions even if, as explained in the conclusion, this issue should receive more attention in the future.

Government will continue to play a central role in shaping the upgrade of Vietnam's growth model. The goal is to build a high-income, market-led economy over the next two decades. The new growth strategy must embrace markets that guide the most efficient allocation of resources by facilitating competition and deploying taxes and other price instruments that guide market behavior. It should modernize institutions, including creating effective rules and regulations that avoid adding to existing distortions. And it can rethink incentives such as smart public support and investments where justified by social benefit. For governments at all levels to do so requires comprehensive skill and involves a considerable amount of discretion. Building stronger administrative capacity, including improvements in governance where Vietnam currently underperforms, must therefore be an essential component of an upgraded development strategy.

23 For a summary, see, for example, Acemoglu and Robinson (2008).

TABLE M.2. **Governance Indicators: Vietnam is lagging peers in East Asia, 2018**

Indicator	Vietnam	China	Korea, Rep.	Malaysia	Japan	Thailand
Control of corruption	38.0	45.7	72.1	63.9	89.4	40.9
Government effectiveness	53.4	69.7	84.1	81.3	94.2	66.8
Political stability	53.8	36.7	66.19	54.3	88.1	19.5
Regulatory quality	36.5	48.1	82.2	74.0	88.0	59.6
Rule of law	54.3	48.1	86.1	74.5	90.4	54.8
Voice and accountability	9.4	8.9	73.9	41.4	80.3	20.2

Source: World Bank.

Dynamic firms

Non-farm businesses in Vietnam are multiplying fast, but it appears that they operate far from regional and global productivity standards. Most of them innovate and invest little because of constraints that include difficult access to finance, burdensome administrative procedures, and little support for innovation. However, some firms are competitive, most notably foreign-owned companies exposed to external competition, and large domestic champions that benefit from economies of scale. The recommendations are twofold: (a) improve the allocation of existing resources by removing barriers to entry, increasing foreign and domestic competition, and developing linkages between high and low performers; and (b) remove obstacles preventing the growth of more dynamic enterprises.

Businesses are proliferating in Vietnamese cities. Every month, more than 10,000 new shops and firms are registered with the government, reshaping the country's economic landscape. However, first impressions can be misleading. A closer look at official statistics reveals that most of these firms are small, undercapitalized, and operate in non-modern sectors. As a result, the median domestic firm in Vietnam is weakly productive and seriously lagging its competitors in other middle-income and more advanced economies.

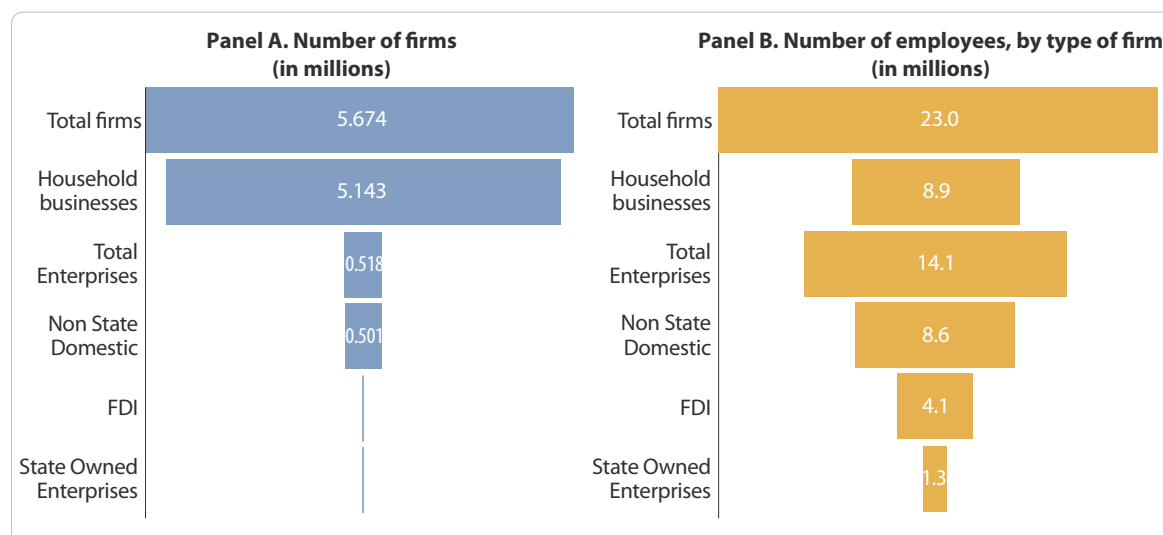
As described in the first background note, the challenge for the government is to take a series of smart actions that would help support the development of a dynamic and productive non-farm sector. The note proposes two main recommendations. The first recommendation emphasizes the development of linkages between highly and relatively low-productive firms, as there is a big variance in performance across the productive sector in Vietnam. Lagging firms can catch up with more advanced firms through the development of skills transfers and supplier financing programs. The second recommendation is to remove the most important bottlenecks that prevent small domestic firms from growing. To be effective, these recommendations need to be not only targeted to address the main obstacles, but also tailored to key sectors, as not all firms face the same constraints or, at least, not with the same force.

The business landscape in Vietnam

The non-farm business sector is characterized by the predominance of a large number of households and small enterprises. According to the 2017 World Bank Enterprise Survey, over 5.7 million non-farm businesses were operating in Vietnam, employing approximately 23 million people (figure M.10). In line with what is observed in low-income countries, almost 98 percent of these firms

are household businesses and small enterprises operating in the informal sector.²⁴ The median firm has three workers (when including household businesses) and is most likely to operate in traditional sectors (construction, repairs, food preparation). It is largely inward oriented; that is, it serves the domestic market. Only about 17 percent of domestic private sector firms are directly engaged in export activities. Altogether, domestic non-state firms account for about a quarter of the country's value-added output and report extremely low profits and return on assets.

FIGURE M.10. **The universe of firms in Vietnam, 2017**



Source: Government Statistics Office.

As a result, it is not surprising to find that the median enterprise in Vietnam remains distant from the productivity frontier attained in most advanced economies or even in countries with approximately the same income per capita (figure M.11). Most Vietnamese firms do not use new technologies or invest enough in physical capital. The percentage of Vietnamese firms that commercialize innovative products is only half that reported in China today. At around 26 percent, Vietnam's gross capital formation remains higher than the average of lower middle-income countries but has fallen below Vietnam's long-term average. It is also markedly lower than investment rates reported by aspirational benchmark fast-growing economies that invested around 31 percent of their GDP when they were at the level of income Vietnam is today. Furthermore, the quality of investment remains low in Vietnam, partly reflecting diminishing returns, but also pointing to inefficiencies in the allocation of capital. This is evidenced by the high incremental capital output ratio in Vietnam, even if some progress has been reported in recent years.

In contrast to most developing countries, Vietnam exhibits two particularities. The first particularity is a large presence of FDI firms and the dominance of large domestic enterprises, most notably (but not only) state-owned enterprises (SOEs), in a few strategic sectors. According to the

24 According to Vietnam's Government Statistics Office, the number of household businesses that were registered at the tax office was only 1.6 million in 2017 (or only 30 percent).

Government Statistics Office, there were approximately 15,000 foreign-owned firms in 2017. While these firms accounted for only 2 percent of total businesses in the country, they employed over 4 million people, or the equivalent of 20 percent of non-farm sector labor.

The second particularity is that many strategic sectors are dominated by local champions.

As a heritage of socialism, there were more than 2,600 SOEs in 2017, including in transportation (64 percent of total activities), water (83 percent), energy (81 percent), banking (50 percent), agriculture (46 percent), and mining (46 percent).²⁵ In recent years, a new phenomenon has emerged with the rapid expansion of non-public domestic conglomerates. While the information on these companies is relatively scarce, some of them are listed on the local stock exchange, including Vinamilk (dairy products with an annual turnover of US\$1.5 billion), Vingroup (real estate, cars, and hospitals, with an annual turnover of over US\$3 billion), and Masan (food and beverage products with an annual turnover of about US\$4.2 billion in 2016).

Both FDI and large domestic firms appear more productive than the average small firms in Vietnam. Foreign-owned enterprises report labor productivity that is almost five times higher than in private domestic firms (figure M.12). They are also more profitable as their returns on assets and the ratio of (before tax) profits over turnover are 4.9 and 3.5 times higher than for domestic private firms.

While SOEs report on average higher labor productivity than the median private domestic firms, their workforce is only half as productive as foreign-owned companies. Their returns on assets are also lower. It can also be argued that the relatively high labor productivity of SOEs is biased by the fact that they operate principally in capital-intensive sectors. When controlling for capital intensity, their average labor productivity is about 40 percent lower than the domestic private sector.

Among domestic private firms, size appears to be positively correlated with productivity. For example, the labor productivity of the 100 largest companies listed on the Ho Chi Minh City Stock Exchange index is approximately 10 times higher than the average, and almost double that reported by FDI firms.²⁶ Most domestic firms simply lack the scale to access technology and invest in fixed capital, so remain weakly productive.

25 Some SOEs operate in sectors that could be commercialized and made viable by the private sector. For example, Viettel, which is wholly owned by the Ministry of Defense, is Vietnam's largest mobile network operator. Vinalines, which is wholly owned by the Ministry of Transport (currently undergoing initial public offerings), operates 14 ports, ships 25 percent of the total tonnage of Vietnam's shipping market, and provides logistics services through nine associates and affiliates. Likewise, Vietnam Airlines, a limited liability company with the state holding a majority stake, owns 100 percent of Vietnam Air Service Company and 70 percent of the low-cost carrier Jetstar Pacific Airlines, and 49 percent of the Cambodian national airline Cambodia Angkor Air. Vietnam National Chemical Group (Vinachem), a 15-company group, produces and trades basic chemicals, raw materials for fertilizer and chemical production, phosphate fertilizers, and pesticides. Vietnam Cement Industry Corporation manufactures and sells cement through a network of dealers in Vietnam. Vietnam Pharmaceuticals, a parent Joint Stock Company with three affiliated units, four subsidiaries, and nine joint ventures, manufactures and commercializes pharmaceuticals.

26 Binh 2018.

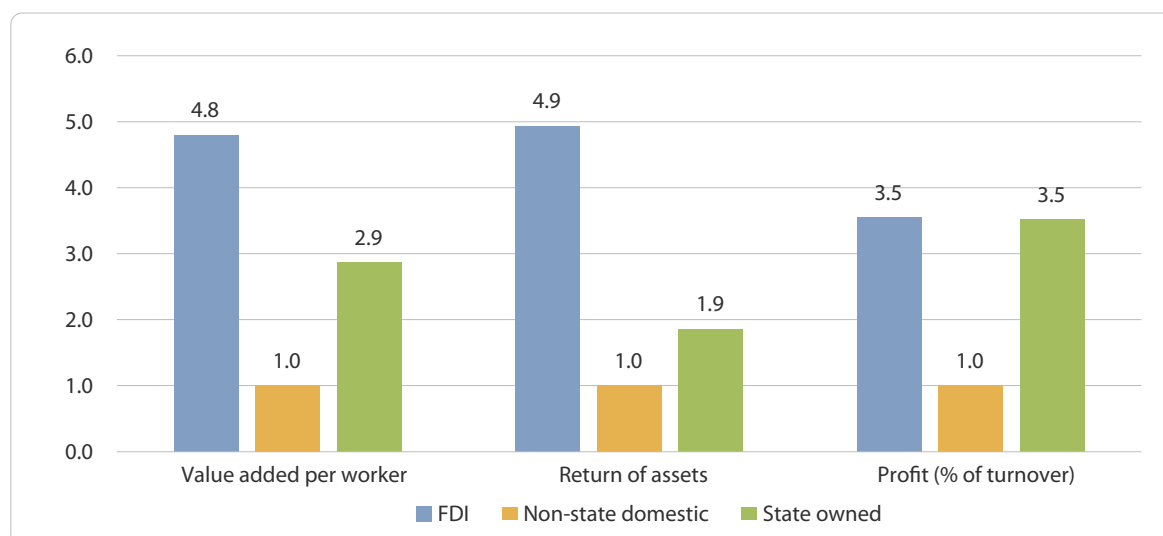
FIGURE M.11. Overall, Vietnamese firms are weakly productive by regional and international standards



Note: PPP = purchasing power parity; TFP = total factor productivity.

The large variations in performance across firms suggest significant opportunities for boosting productivity through reallocation of resources. In a well-functioning market, economic resources will be reallocated to the most productive use. This process tends to reduce the dispersion of total factor productivity as well as returns to capital and labor. Disentangling the specific causes of misallocation is difficult in Vietnam. Recent work by David and Venkateswaran (2019) comparing China and the United States suggests that misallocation stems less from technological differences and informational frictions than from institutional or policy-related distortions that systematically disincentivize investment by more productive firms. These opportunities will be further explored for Vietnam in the last section.

FIGURE M.12. **Significant variations in firms' performance depending on their ownership, 2017 (benchmarked on the value for domestic private enterprises = 1)**



Source: GSO and OECD (2019).

What prevents dynamic firms from becoming more productive?

Vietnam's relative weak overall productivity and significant differences in firms' performance reflect a combination of internal and external factors. The higher productivity of FDI firms can, for example, be attributed to their use of new technologies and their better management capacities. Most SOEs often have public service obligations and are therefore not able to maximize returns. In addition, overlapping responsibilities in the management of SOEs and weak corporate governance can undermine efficient use of resources in the state-owned sector. Domestic private firms are generally of limited size, preventing economies of scale and explaining why many of them are undercapitalized and rarely invest in new technologies.

Firms are also sensitive to the quality of the external environment. While Vietnam has improved its ranking in the World Bank's Doing Business report (from 90th in 2010 to 70th in 2020), it is still lagging in some sub-indicators such as taxes, cross-border procedures, and disclosure. The 2016 Enterprise Survey also revealed that severe obstacles remain, including access to credit, corruption, connectivity, and taxes. In line with the differentiated performance by categories of enterprises, not all firms are equal with regard to the external environment, as small domestic firms are most likely to face more serious obstacles than large FDI firms and SOEs that have the human and financial resources to overcome these barriers.

Because the responses are not trivial, the background paper focuses on a selected set of obstacles that are viewed as playing a key role in Vietnam. It argues that firms are penalized by an uneven playing field, corrupt practices, limited access to credit, and weak incentives to innovate. This selection was based on the results of the above-mentioned indicators and recent analytical work. The absence of skill development and infrastructure was justified as these two topics are covered in other background papers.

Many firms complain that they operate on an uneven playing field. Data from the Provincial Competitiveness Index suggest, for example, that only 30 percent of enterprises consider legal decisions and decrees to be transparent. Over three-fourths of surveyed firms agree with the statement that “Contracts, land, and other economic resources mostly fall in the hands of enterprises that have strong connections to local authorities.”²⁷ A cross-province regression during 2013–16 indicated that firms’ performance is strongly correlated to land rights security, transparency of legal documents, and perception of biased treatment by the province or provincial courts. In other words, the quality of the overall contractual environment, including formal procedures and the ways they are applied, appear to be key determinants of firms’ performance.

Firms also point to corruption in public administration as an area of concern. According to the 2016 Enterprise Survey, nine out of 10 business expected to give gifts to public officials to get things done, while only 52 percent of firms had the same expectation in the East Asia and Pacific region. More recent data show that the incidence of corruption has declined in recent years, but its level remains exceptionally high. The Provincial Competitiveness Index shows that 59 percent of firms continued to pay bribes in 2017.

Access to finance remains the most severe constraint, especially for small private enterprises in Vietnam. According to the 2016 Enterprise Survey, only 29 percent of the smallest enterprises (those with 1 to 20 employees) have an active line of credit compared to 57 percent of large firms (those with more than 100 employees). Paradoxically, financing constraints emerge in an environment of high credit growth and ample liquidity but, as in many other developing countries, the credit market is highly segmented. On the one hand, access to external financing is relatively easy for large operators (including SOEs) and for those who can provide collateral (such as real estate developers). On the other hand, it is almost impossible for operators with no history or collateral to obtain a line of credit. About 90 percent of banking credit requires collateral with an estimated value 2.5 times higher than the line of credit. As a result, credit growth to the SME sector has been anemic at around 3 percent annually, or four to five times slower than the average expansion of total credit to the economy. Consequently, SME investment is subdued and is largely internally financed.

Finally, there is some evidence that suggests Vietnam’s innovation capacity remains constrained. Investment in research and development (R&D) remains low with Vietnam, with spending at about 0.4 percent of GDP, compared to Australia (2.2 percent), Singapore (2.2 percent), China (2.1 percent), and Malaysia (1.3 percent). Perhaps more importantly, these investments remain highly dependent on the public sector (56 percent), compared to China (22 percent) and Singapore (37 percent), which rely primarily on the private sector. Equally, while growth in patent applications has been increasing (from 196 to 560 over a decade), granted patents²⁸ in Vietnam are one of the lowest compared with the number of applications. While within-firm productivity growth, especially

27 Provincial Competitiveness Index statistics are only available at the provincial level. We report the average across provinces here.

28 Apart from patents, special types of contracts enabling the enforcement of industrial secrets through nondisclosure and noncompete contracts can stifle innovation. Due to the nature of these contracts (that is, they are hidden), there are no publicly available data to capture this.

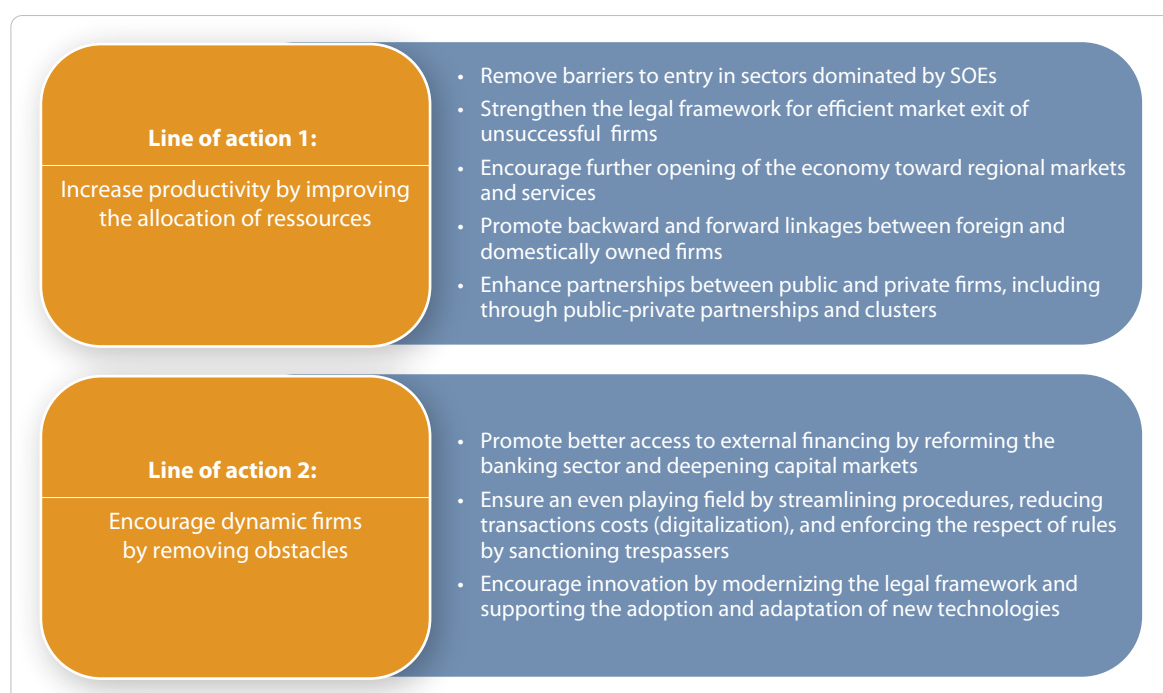
among the private sector enterprises, has been positive, self-reported innovations also seem to be lower than its level of development would suggest, particularly in terms of product innovation.²⁹

Recommendations: How to make firms more dynamic

Overall, firms in Vietnam are lagging their competitors that operate in not only more advanced countries, but also economies with approximately the same level of income per capita. However, there are significant variations in productivity across firms, with niches in the FDI sector and some large domestic conglomerates. While Vietnam’s overall relatively weak performance can be explained by a variety of factors, many firms are being penalized by a poor and uneven application of regulations and property rights, corrupt practices, limited access to credit, and an unfavorable environment for innovation.

Building on this diagnostic, two main recommendations have been formulated. The first recommendation is to encourage a better allocation of resources between low- and high-productive firms, and the second is to remove the main obstacles described above. These details of these recommendations are summarized in figure M.13.

FIGURE M.13. **Summary of main recommendations**



²⁹ Innovation measures used in this science, technology, and innovation note—sourced from the World Bank Enterprise Survey and the Fostering Innovation through Research, Science and Technology-National Agency for Science and Technology Information (FIRST-NASATI) survey data sets—are all self-reported, and self-reported data can be subject to measurement bias. For example, different firms may have different interpretations of what constitutes “innovation.” In fact, firms in developing countries tend to overestimate innovation rates (see Cirera and Muzi 2016). Because of this, care is needed in interpreting the data.

Line 1: Improved productivity through better allocation of resources

As argued above, Vietnam can accelerate its convergence toward more advanced economies by relying on catch-up growth. Vietnam is still far from the global productivity frontier and, within the country, there are large and growing productivity gaps between leading and lagging firms across sectors and within sectors. This suggests that Vietnam could gain significant productivity growth from focusing on technology transfer and adoption of existing knowledge, and from the reallocation of **resources to more productive firms**.

The first series of measures should focus on removing barriers that prevent the reallocation of existing resources to the most efficient firms. One priority area would be to improve competition in domestic markets by removing barriers to entry in specific sectors, notably those where SOEs dominate. While state ownership itself does not necessarily lead to lower productivity, it limits competition. Unless there are clear institutional safeguards, state ownership can be associated with distortions that may favor SOEs at the expense of private sector competitors, especially if the state is both an active market participant and a regulator.³⁰ This may not only deter more efficient private sector entry and growth, but also stifle incentives for SOEs themselves to maximize efficiency. Domestically, greater competition is crucial for inducing businesses to increase their productivity and efficiency. This will require comprehensive institutional and policy changes that would facilitate firm restructuring and exit of less efficient firms while promoting entry of new efficient firms, and easing the most binding regulatory, institutional, and financial bottlenecks to allow successful firms to invest and expand.

BOX M.1. Ensuring an effective and efficient market exit

By facilitating the efficient business exit and liquidation of nonviable companies, an insolvency framework supports the efficient reallocation of resources across the economy. Despite some progress especially in terms of providing a more adequate legal framework and an increase in the number of filed insolvency cases, some weaknesses persist. Vietnam ranks 133rd out of 190 economies on the World Bank Doing Business Indicator on Resolving Insolvency. It costs 15.7 percent of the value of the insolvency estate to resolve an insolvency case in China, almost five times more than in the Republic of Korea. It takes five years to work out an insolvency case, almost 10 times longer than the global best performer (Ireland).

Vietnam's recovery rate is estimated to be 21.3 cents on the dollar, less than a third of the recovery rate in Japan (global best performer). This is one of the areas where Vietnam has advanced through reforms, but areas for improvement remain. Reinforcing the insolvency framework could include easing of commencement rules to provide incentives to initiate cases early on; strengthening creditors' rights, including in the appointment of insolvency administrators and in the divestiture of assets; building stronger national professional standards for insolvency administrators; and enhancing the role of commercial courts.

30 Non-state enterprises may find themselves in a disadvantaged position even before entering competition in the product market, for example, bidding for a contract, when SOEs enjoy the supply of state equity that does not require a market rate of return, allowing them to undercut their competitors. Competitive neutrality, therefore, requires capital in SOEs operating in a commercial and competitive environment to earn rates of return like comparable businesses. According to the Provincial Competitiveness Index, 41 percent of entrepreneurs believe that provinces privilege SOEs, causing difficulties for firm's business. Provinces with a high density of SOEs provide less credit to private firms and require more time to issue land-use rights certificates than other provinces. Easier SOE access to credit, land, and export quotas in the garment and textile sector reduces private firms' profitability and viability.

Externally, sustaining and deepening Vietnam’s integration in global markets and supply chains would ensure that firms in Vietnam continue to converge to the global productivity frontier through greater competition and knowledge flows embedded in investment and trade. So far, Vietnam has successfully leveraged integration into global and regional markets to boost growth and development through the exchange of products, services, and ideas. As a result, the export sector, dominated by foreign-owned enterprises, has been by far the most productive as it benefited from technology and competencies transfers. These enterprises are also continuously confronted by the competition of external markets.

Looking forward, Vietnam’s policy makers should resist the temptation to escalate trade conflicts and establish protectionist measures, as there is significant potential for rationalizing non-tariff measures and barriers in the following three areas:

- ***Maintaining commitment to an open and rules-based trade and investment system.*** Working with international partners, Vietnam should support the continued enforceability of World Trade Organization (WTO) commitments through the WTO dispute settlement system. Decisive steps to ensure greater openness to trade and investment in goods and especially services, along with the Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP) and the European Union-Vietnam Free Trade Agreement (EVFTA) commitments, not only help to diffuse risks of trade disputes but also contribute to boosting Vietnam’s competitiveness. Aside from tariff reductions and measures to improve market access and infrastructure connectivity, Vietnam could focus more on behind-the-border issues (including independent power producers, trade in services, public procurement, and non-tariff measures). Continuing to remove barriers to cross-border investment would bolster productivity growth through greater competition and access to foreign technology, especially in financial services, professional services, and telecommunications, which remain subject to higher levels of restrictiveness.
- ***Fostering regional integration.*** Given the growing economic importance of Asia, there are significant long-term benefits to advancing stronger regional integration. In addition, in the possible event that trade and investment relations with Western countries continue to be strained, integration in the Asian region will be of great strategic value for Vietnam to prevent isolation from important world markets. Vietnam’s participation in the CPTPP and the Regional Comprehensive Economic Partnership offers great opportunities to advance this agenda toward lowering tariff and non-tariff trade barriers to regional trade. Strategic investments in cross-border connectivity in the region could also contribute to lowering logistics and trade costs.
- ***Advancing trade facilitation to further reduce trade costs.*** In the past two-and-a-half decades, under the effects of multilateral and bilateral free trade agreements signed and implemented by Vietnam, tariffs on international trade have been reduced. This has contributed to significantly reducing trade costs, and has substantially boosted international trade, making Vietnam one of the most open economies in the world. However, with lower tariffs, the room for continued tariff reduction is narrowing, so in the future, further reductions in trade costs can only be achieved by reducing the costs of non-tariff measures and logistics costs. In contrast,

and despite some initial progress, Vietnam's non-tariff trade costs for both imports and exports remain relatively high and above the ASEAN-4³¹ average. These costs are driven by compliance with regulations, border clearance procedures, port handling, transport, and logistics. There is hence great potential to cut the cost of trade by rationalizing measures and procedures related to cross-border trade transactions; expanding the use of risk-based management, especially in specialized inspection agencies involved in border management; and applying electronic service systems, particularly a National Single Window.

Beyond removing barriers, the second set of measures would be to encourage linkages between high- and low-performing enterprises. It has been well-publicized that enterprises in Vietnam are operating in silos. Foreign firms, for instance, are mostly oriented toward global markets, with little interaction with domestic firms.³² Similarly, domestic firms rarely export. Economic theory and empirical evidence have demonstrated that developing linkages between foreign and domestic firms can be effective in promoting the diffusion of new technologies and skills.³³ Countries like Costa Rica, Korea, and Malaysia have developed successful backward linkages, programs where multinationals were working closely with domestic suppliers. A complementary idea would be to encourage forward linkages by enabling the distribution of goods produced by foreign-owned firms into the domestic market, as experienced by Mauritius (where duty-free shops are complementing the promotion of tourism as visitors are attracted by cheap electronics and brand name clothes). Today, ironically, Vietnamese consumers must go to Singapore or the United States to purchase smart phones or other electronic products that are made in Vietnam.

Backward and forward linkages can be developed not only between foreign and domestic firms but among domestic firms themselves. Relationships between large and small domestic firms are almost nonexistent, except in a few sectors such as the food industry. The development of public-private partnerships has been an instrument used around the world to upgrade technologies and competencies in infrastructure sectors. Another effective instrument is to encourage cross-collaboration between dynamic firms through clustering them in associations or industrial parks. Such an approach can help them realize economies of scale and thus invest more in technology and modern equipment. Business incubators could also provide a protected environment for startups in a specific location, and include access to financial assistance, advisory services, subsidized workspace and administrative assistance, and access to business networks.

Line 2: Improved productivity by removing obstacles

Dynamic firms require the removal of major obstacles standing in the way of the growth of Vietnamese businesses. This is no small undertaking, as in Vietnam's case these obstacles are formidable. These obstacles, or the ways to address them, might differ across different types of

31 The ASEAN-4 countries comprise Indonesia, Malaysia, the Philippines, and Thailand.

32 According to a Japan External Trade Organization (JETRO) survey, Japanese firms, one of the largest foreign investors in Vietnam, source 32.4 percent of inputs from local suppliers, of which only 13 percent was from domestically owned firms. Their reliance on local suppliers is much lower than what is reported in several neighboring countries (67.8 percent in China, 57.1 percent in Thailand, and 40.5 percent in Indonesia).

33 Markusen and Venables 1997; Javorcik 2004, 2018.

businesses. For instance, the skills needed for productive non-farm businesses and exporters are not the same. The acquisition of needed skills also varies depending on location, activity, and initial levels of education of business owners and workers. This principle also applies to other factors such as access to infrastructure, land, and equipment. Policy recommendations require some degree of specificity to be effective.

While these proposed actions cannot cover all constraints faced by firms in Vietnam, they provide a much-needed sense of priority. They aim at improving access to external financing for firms, ensuring a more even playing field for all firms, and create the conditions for innovation and technology adoption.

Enhancing efficient financial intermediation

A stable and efficient financial system is crucial for allocating Vietnam’s high national savings—31 percent of GDP in 2018—toward productive investment. Further advancing banking sector reforms should take center stage in the coming years.

In the short to medium term, the banking sector will remain the main channel for mobilizing savings and intermediating them to investment and other uses. The banking sector has been reasonably successful at mobilizing savings but has fallen short in productively allocating credit for uses that demonstrate the highest financial and economic returns. Much of the lending in the past, especially by state-owned banks, has gone to SOEs. This has often crowded out lending to more productive segments of the domestic private sector that frequently face challenges related to access and cost of financing. The government should focus on (a) promoting greater competition by further lowering barriers to entry and ensuring equal treatment of non-state-owned entities, and (b) reducing direct state intervention in the banking system by moving away from assigning specific credit growth limits for each commercial bank and replacing them with a credit growth target as guidance for the entire banking system. Consideration should be also given to removing the interest cap on short-term deposits. The State Bank of Vietnam (SBV) applies an interest rate cap of 5.5 percent for short-term deposits of one to six months. The rates for longer tenors are floating but benchmarked to the six-month rate.³⁴ Interest rates can be set through monetary policy instruments and in the process strengthen the transmission mechanism of monetary policy to the economy.

The parallel strengthening of bank supervision and resolution would create the conditions to allow greater entry and competition without increased financial sector risks. Banking sector soundness has improved on the back of strong macroeconomic performance and recent reforms undertaken to address the resolution of bad assets and improve oversight. However, some vulnerabilities remain, as capital buffers, at least in some banks, remain thin. The following recommendations aim at improving the efficiency of the financial sector while preserving its stability:

34 The cap regulation was imposed in 2010 when commercial banks, especially ailing ones with poor liquidity, increased deposit interest rates to attract deposits. This led to a sharp rise in lending interest rates and precipitated the 2012 turbulent period. Now that the macroeconomic situation is stable, the cap could be removed as inflation remains low and liquidity in the banking system is favorable.

- **Establish a bank recovery and resolution framework**, based on international good practice. The authorities should establish an effective mechanism in the legal framework that would allow for an orderly exit of weak or failing financial institutions. Resolution of individual cases of poor liquidity or solvency should be done in a manner that ensures burden sharing and contains contagion.
- **Improve the capital adequacy of weak credit institutions.** The current capital base of many banks is low, while credit has increased rapidly over time, particularly in the past four years. Given the timetable to adopt Basel II standards by 2020, many banks will need to raise capital to meet the minimum requirements. The government should develop a comprehensive strategy to recapitalize the banking sector.
- **Ensuring sound corporate governance of state-owned financial institutions** would reduce risks of related party lending, excessive risk taking, and misallocation. Banks should clearly assign and enforce corporate governance responsibilities, including appropriate board committees, with effective SBV oversight.
- **Consistently apply international standards on accounting and auditing for financial reporting.** Current accounting methods based on Vietnam Accounting Standards are not in line with International Financial Reporting Standards, and their financial statements should reflect net asset values and their economic position. The annual balance sheets, income statements, and disclosures of state-owned commercial banks should be audited by independent auditors in accordance with International Standards on Auditing and published by the banks.
- **Increase the role of the market and market discipline in resource allocation.** This approach would be consistent with the objectives of the Development Strategy of the Vietnam Banking Sector to 2025. Banks should take full responsibility for managing their loan portfolios based on risk instead of adhering to allocating credit to priority sectors. The regulatory and supervisory role should remain the core role of SBV's mandate to ensure healthy operations in the banking sector and the protection of consumers as it seeks broader autonomy as part of the medium-term development strategy.

Looking ahead, the creation of a more market-based financial sector is expected to improve the mobilization of savings, the diversification of risks, and the allocation of resources in the economy, all of which are critical for Vietnam's future growth trajectory. Alongside further steps to enhance banking sector soundness, developing domestic capital markets would increase the availability of long-term financing for investment while at the same time provide more diversified savings options for households. Vietnam's capital market remains relatively small compared to other ASEAN member countries. The areas that will require more attention over the coming years are summarized as follows:

- **Modernization of the legal foundation for the capital markets.** Strengthening the regulatory foundation and enforcement, including the Securities Law and the implementing regulations, will be key. Areas of improvement include disclosure and market transparency, conduct of market participants, institutional and operational arrangements, and market structure. Supervisory and enforcement capacity will need to be enhanced to ensure market integrity and efficiency.

- **Broaden the investor base.** A broader and diverse investor base, especially non-bank investors, is important not only to sustain market growth, but also to increase liquidity and reduce volatility. In this regard, the Vietnam Social Security Fund should be allowed and encouraged to expand its investment expertise and diversify its investment beyond government securities. The development of private pension funds would also be important as long-term saving vehicles for individuals, and simultaneously as a long-term funding mobilization tool for capital markets. Meanwhile, because foreign investors can provide substantial liquidity for the capital markets in Vietnam, working toward the inclusion of Vietnam in the global emerging market equity and bond indexes catalyzes the necessary reforms.
- **Improve governance, information dissemination, and market infrastructure.** A significant challenge in Vietnam is to build a robust credit culture where risks are measured and priced objectively through a high standard of information disclosure. High-quality analysis, such as that provided by credit rating agencies, is needed to ensure that financial markets can function adequately, and bond issuances can be rated and priced accordingly. Meanwhile, accessible and reliable information regarding the markets and securities is necessary to increase investor confidence.

Enhancing administrative and regulatory reforms to boost competition and productivity growth

A high-quality regulatory environment will be crucial to reinvigorate productivity growth in Vietnam. Overall, Vietnam has made significant progress in simplifying its bureaucracy, even though firms continue to face cumbersome procedures in some specific areas such registration, tax payments, and customs. Further improvements in these areas will be important in the next few years.

Looking forward, the new reform agenda will have to address more difficult, long-term weaknesses in the overall quality of institutions, especially those related to legal enforcement and property rights. For Vietnam to make a tangible impact through further business environment reforms, a paradigm shift in its approach to private sector regulation may be required.³⁵ Based on international experience, some principles could be pursued by the authorities.

The first principle is to simplify many of the existing administrative procedures by eliminating redundancies and streamlining special regimes. For example, due to their accumulation over time, exceptional tax incentive regimes have become the rule as most enterprises are using them to avoid the excessive burden of the general tax law. Like Malaysia a decade ago, Vietnam could rationalize its exceptional regimes because firms tend to value simplicity and predictability when they take their decision to invest or expand.

The second principle is to reduce the transaction costs associated with administrative procedures. The ongoing effort to develop electronic payments of taxes as well as critical

35 In some areas, such as land administration or e-governance, reform efforts are already ongoing, including with support from the World Bank Group.

information systems, databases, and delivery of public services, are most welcome.³⁶ Building the foundation for a “one government” approach vis-à-vis citizens and businesses by investing in unified databases on citizens and firms could be the next step. Unified databases on individuals and firms allow for effective monitoring of economic activity and evidence-based policy formulation, increase regulatory predictability, and reduce bureaucracy.³⁷ Firms do not have to submit similar information in different formats to multiple authorities. Unified databases also facilitate compliance monitoring and enforcement by authorities through automatic cross-checks across connected registries.

The third principle is to ensure the fair application of the rules. The discretionary interpretation and enforcement of rules by government authorities, particularly at the local level, is often tilted to benefit state-owned enterprises and discourages private sector entry and expansion. The government’s commitment to a policy of competitive neutrality—which is also enshrined in the commitments of the CPTPP—is therefore of prime importance. Fair competition reviews could be undertaken to cover not only new regulations but also existing ones, including existing rules of public procurement, tendering and bidding, and land use and taxation, to identify those that confer undue competitive advantage to some market participants. Within that vision, the use of clear risk-based criteria in the design and implementation of regulations is important as it helps ensure that authorities allocate their (often limited) resources effectively where they are most needed. In the absence thereof, often combined with heavy and complex compliance requirements, there is a greater risk and likelihood that officials resort to discretionary behavior. Such an approach is also particularly relevant for the regulation of new and emerging sectors such as in the shared economy or information technology (IT) space. Another area to achieve fairness is to facilitate contract and debt enforcement through improved regulation and training of professionals.

The fourth principle is to guarantee consistent implementation of the rules by strengthening the justice system. In fact, where legal institutions are ineffective, improvements in the law have limited impact. Effective enforcement mechanisms are essential for supporting a competitive business climate by providing predictability in economic transactions, ensuring property rights, and creating a level playing field among firms. As important as the regulatory framework for investment is the quality of the judiciary system. Efficient contract enforcement is essential to economic development and sustained growth. Economic and social progress cannot be achieved without respect for the rule of law and effective protection of rights, both of which require a well-functioning judiciary that resolves cases in a reasonable time and is predictable and accessible to the public. Economies with a more efficient judiciary, in which courts can effectively enforce contractual obligations, have more developed credit markets and a higher level of development overall. A stronger judiciary is also associated with more rapid growth of small firms. Overall, enhancing the efficiency of the judicial system can improve the business climate, foster innovation, attract foreign direct investment, and

36 Following Prime Minister’s Decision 714/QĐ-TTĐ dated 22 May 2015, on development of priority databases, including a land database, the Ministry of Natural Resources and Environment/General Department of Land Administration prepared a roadmap entitled “Comprehensive Program for the Development of Vietnam’s Multi-Purpose Land Information System” (February 2016). The roadmap recommends the development of a Multi-Purpose Land Information System (MPLIS) and a National Land Database by pursuing a centralized model for data storage based on modern technology and a build-up of institutional capacity to meet longer-term requirements for better land administration and management.

37 World Bank Group 2011.

secure tax revenues. High-quality legal institutions are correlated with robust FDI inflows,³⁸ while weak contract enforcement raises the cost of borrowing.³⁹

Fostering innovation

As Vietnam emerges as a middle-income country, innovation capacity will become an ever more important driver of productivity growth. Vietnam can continue to reap significant productivity gains from prioritizing technological catch-up through adoption of the existing global knowledge pool rather than trying to push innovation at the frontier as a key element of its enterprise-centric innovation strategy. Equally, as shown in the diagnostic section, there is also significant potential to reap gains from enabling a greater diffusion of knowledge between the frontier and lagging firms within Vietnam while simultaneously allowing productive resources to flow to the most productive and innovative enterprises. The significant presence of FDI offers the potential for domestic firms in Vietnam to integrate and move up the global value chains and thereby realize productivity and growth gains. The following additional steps could be taken to foster greater innovation and technology adoption:

- **Revamping public innovation support to focus on building firm (management) capabilities:** Current innovation and technology programs, including tax incentives and research grants, are overly focused on promoting technological innovation and R&D. Instead, a broader view of innovation that recognizes the importance of incremental innovation for productivity growth should underpin public support. Promoting access to new technologies and the diffusion of improved production processes enabled by better management capabilities should be a priority for the government. There should be an emphasis on the role and importance of investing in improving government competencies and processes to generate effective policies. Chief among these competencies and processes is the importance of monitoring and evaluation and learning for designing and implementing effective policies and improving managerial practices as core innovation capabilities. Private sector firms should be at the center of innovation strategies, and programs should be designed to facilitate university-industry collaboration and linkages. Implementing such reform in science, technology, and innovation policies requires attention to the sequencing of these changes, especially to allow time to improve existing agency competencies.
- **Strengthening intellectual property rights:** Enforceable intellectual property rights (IPR) plays a critical role in fostering innovation and technology adoption. This is specifically important to encourage multinational corporations to share their technologies with local firms and to conduct R&D in Vietnam without fearing economic losses from property rights infringement. Vietnam does not fare well in IPR ranking compared to its competitors; according to the 2018 Global Competitiveness Report, Vietnam is ranked 105th out of 140 countries, behind Singapore (3rd), Malaysia (24th), Indonesia (44th), China (49th), and the Philippines (52nd). This is a priority agenda for Vietnam as it deepens its regional integration through new trade agreements like the CPTPP, EVFTA, and the Regional Comprehensive Economic Partnership,

38 Bénassy-Quéré, Coupet, and Mayer 2007.

39 Bae and Goyal 2009.

and tries to capture supply chains relocating from China. Improved intellectual property (IP) protection would also help attract venture capital and private equity, which in turn can help scale-up startups in Vietnam.

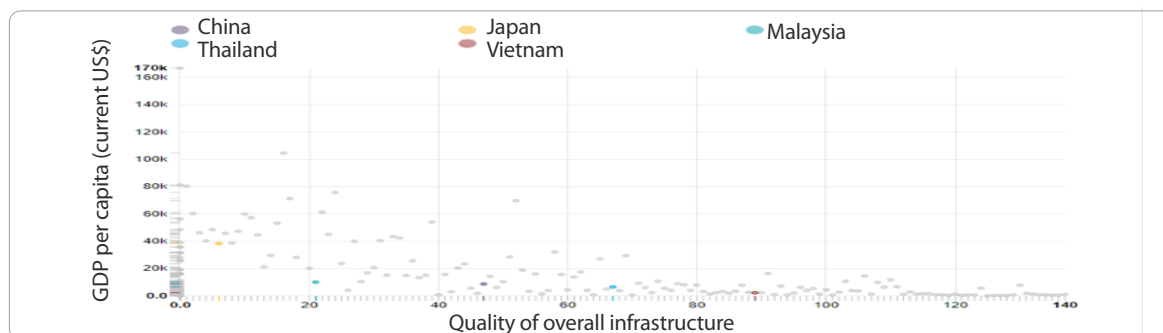
- ***While IPR laws exist on paper, the main issue is lack of adequate coverage of online enforcement of copyright and weak enforcement of IP rules, leading to rampant violation of IPRs.*** Vietnamese law allows for IP criminal lawsuits, but implementation faces numerous obstacles due to a lack of specific rules and procedures to guide investigations, prosecutions, and adjudications of criminal proceedings in IPR infringement cases. This has posed challenges for IPR criminal enforcement, and copyright piracy remains rampant. Vietnam should improve IPR enforcement standards and related procedures as well as IP dispute resolution to make them simpler and more accessible to motivate enterprises to use them. China, facing similar challenges, has strengthened IP enforcement through the launch of specialized IP courts. Among other things, this entails adjustments to IP court procedures, such as strengthened specialized enforcement units, and applying more significant fines and sanctions for noncompliance.
- ***Improving start-up financing: In step with the broader financial sector reforms outlined in the previous section, specific steps could be taken to enhance the availability of start-up financing for innovation.*** Firms require different means of financing as they move from one phase to the next in their life cycle. While Vietnam is becoming increasingly attractive as an emerging market destination for venture capital and private equity, its promise is far from realized. Reform of the Insolvency law and the Secured Transactions law should explicitly enable movable collateral to be used by small and medium-sized enterprises and startups.

Efficient Infrastructure

Quality infrastructure is central to economic development. Despite spectacular progress over the past two decades, Vietnam will need to invest more and better to catch up with more advanced countries in terms of infrastructure development. This will require spending existing resources more efficiently by improving the planning and execution of projects, including procurement, and greater attention to maintenance spending, which has been neglected. This effort should include local governments, which have the responsibility for over 70 percent of the country's public investment program. Another area for improvement will be to adjust tariffs closer to supply costs so that the government could allocate more resources to other priority sectors, and customers could adapt their behaviors toward more efficient use of infrastructure services. The development of partnerships with the private sector could enhance the transfer of technologies and competencies and could complement public funding.

The success of a country is often measured by the quality of its infrastructure. Prosperity requires connective infrastructure (physical and, increasingly, virtual) and good access to services such as electricity and water. All high-income countries are unambiguously among the economies with the best infrastructure (figure M.14). The strong and positive correlation between infrastructure level and economic growth (as well as poverty alleviation) has been well evidenced by a number of empirical cross-country studies, which have estimated that a 1 percent increase in physical infrastructure stocks, given other variables, temporarily raises GDP growth by as much as 1 to 2 percentage points, although the growth acceleration gradually tapers off as the economy approaches its long-term per capita income.⁴⁰

FIGURE M.14. **The close and positive correlation between infrastructure quality and economic development, 2017**



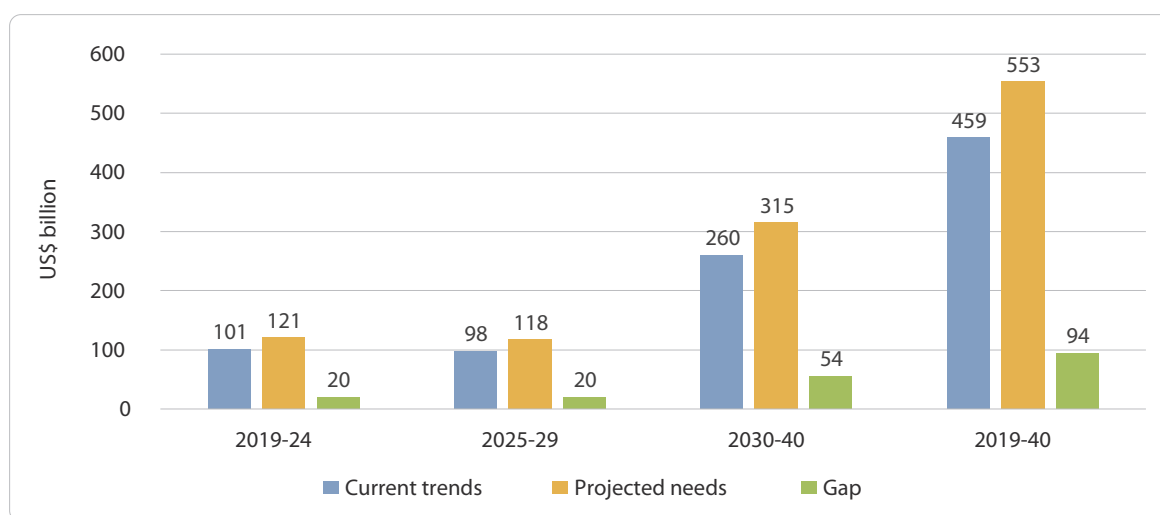
Source: World Economic Forum.

40 Calderón and Servén 2014.

Vietnam has made spectacular progress over the past two decades, building roads and ports and making access to electricity almost universal. However, the country will have to respond to the fast-growing demand for infrastructure services due to the rapid economic growth and demographic transition. For example, current demand projections for electricity show a dramatic increase from 47.9 gigawatts of installed capacity in 2018 to 60 gigawatts in 2020 to 129.5 gigawatts in 2030. Vietnam will also have to invest more and better as it still lags more advanced comparators in most infrastructure indicators. According to the World Economic Forum’s Global Competitiveness Index, the quality of Vietnam’s infrastructure ranks about 80th out of 137 economies worldwide, ahead of some neighboring countries such as Cambodia, the Lao People’s Democratic Republic, and the Philippines, but behind other regional peers such as China, Indonesia, and Thailand.

To deliver more and better infrastructure, Vietnam is facing several strategic decisions. In an ideal world, infrastructure should be provided to everyone and everywhere. Yet, countries are facing difficult budget constraints that force them to make choices. For Vietnam, infrastructure needs are estimated at US\$25 billion to US\$30 billion per year over the past decade, which is greater than the government’s financing capacity, which has been about US\$15 billion to US\$18 billion per year in recent years (or around 7 percent of GDP, which is 3 percentage points higher than the world average). While these projected figures are debatable, they strongly suggest that improving the efficiency of spending, and ensuring adequate financing, will be critical in the coming years (figure M.15).

FIGURE M.15. **Investment needs and financing, 2019–40**



Source: Global Infrastructure Outlook, <https://outlook.gihub.org/countries/Vietnam>

This note discusses a few strategic directions for policy makers in Vietnam by focusing on two key questions: (1) how to select, implement, and maintain the best investment projects; and (2) how to finance them. International experience has demonstrated that it will be hard for Vietnam to achieve success in infrastructure development without an adequate level of efficiency in planning and implementation and in the absence of a clear financing strategy. Yet, these two questions are not exhaustive, as the authorities will also need to determine in which sectors and where they should invest the most in the future. They will also have to decide what will be the role of

state-owned enterprises in these sectors, which should be gradually opened to competition. When investing, the authorities will also need to account more and more for the impact of their projects on the environment and human capital.

Because the list of questions is long and the challenges complex, this note should be viewed as one element of the country's strategy in terms of infrastructure development.

Why is improving efficiency a priority?

Efficiency is defined as “a situation in which a person, company, factory, etc. uses resources such as time, materials, or labor well, without wasting any.”⁴¹ In reality, efficiency depends on a number of relationships, and this is obviously true for infrastructure. The capacity of a country to invest in and deliver infrastructure will depend on several parameters on both the supply and demand sides. It will also be influenced by the state of the economy and the country's economic, social, and geographic characteristics.

There is abundant evidence that Vietnam's infrastructure investments are not as efficient as they could be. If the government has spent a large proportion of its budget on infrastructure—as much as 10 percent in 2010 and an average of 7 percent in recent years—the results have not been positive in all sectors. Benchmarking Vietnam's utilities across other Asian economies shows that Vietnam has done relatively well in the energy sector, with good coverage of domestic needs, even though the transmission network still suffers from underinvestment and poor maintenance. The performance of the transport sector is also viewed as reasonably good, with major improvements reported in roads, ports, and airports during the last decade. Weak planning and coordination across jurisdictions have, however, contributed to lower efficiency. For example, highway projects that provide access to inland container depots, marine ports, and airports are seldom planned and implemented as integrated systems.⁴² By contrast, reliability of the water supply has declined in recent years as more customers are experiencing water outages (from 3.2 percent to almost 10 percent) and suffer from a deterioration of quality. The performance on wastewater collection, treatment, and reuse is one of the worst in the region, with only 4 percent of urban households having piped sewerage, and only half of the wastewater collected being treated.

The uneven performance of the infrastructure sector in Vietnam is rooted in two major causes. The first cause is the selection and implementation of infrastructure investment projects that are not always adequately screened, well prepared with alternative analysis, coordinated to ensure their economic viability, or implemented at least cost. The second cause is the systematic shortfall in infrastructure maintenance, which increases lifecycle costs.

41 Cambridge Dictionary.

42 Blancas et al. 2014.

Weaknesses in the selection and implementation of projects

There is an unequal application of least-cost planning approaches in Vietnam. The selection of efficient projects is generally achieved through least-cost planning, which is a process in which demand is estimated and the most cost-effective interventions for meeting that demand are systematically identified. Ideally, demand management approaches should be considered alongside supply expansion as alternative ways of achieving supply-demand balance. Least-cost planning calls for strong local capacities to examine all available options in a comprehensive and even-handed manner. Good sector data and modeling tools provide a solid basis for least-cost planning. The analysis should use whole life cost accounting to ensure that solutions are found that are cost-effective to build and operate.

While such approaches are applied in the power sector, they are not used with consistency in other sectors. The main reason appears to be in the fragmentation of the decision processes between the central and local governments. Today, despite recent efforts to rationalize processes, the planning system in Vietnam is characterized as institutionally complex with overlapping and overproduction of plans—around 20,000 plans, guided by more than 70 legal documents and 70 decrees. These plans are prepared by different ministries or departments, often based on different schedules, and use inconsistent data and projections for planning. There are virtually no effective mechanisms for interprovincial, intercity, or inter-district coordination, resulting in over-competition for resources and duplication of infrastructure such as ports, airports, and industrial parks.⁴³

Another reason for the inefficiency in the infrastructure sector lies in the limited capacity of local governments and the lack of coordination among the different levels of governments. Local authorities are now responsible for 60 percent of total public expenditures, up from 35 percent in 1996 and well above the average of 25 percent in developing economies. While local autonomy and competition contributed greatly to the dynamic economic and social progress at the local level in Vietnam, it also exacerbated the need to strengthen planning and management capacity at the local level and to improve coordination across regions and between the local and national levels. Unfortunately, as recognized by top policy leaders, little progress has been realized in Vietnam.⁴⁴

Institutional fragmentation and limited local capacity greatly complicate the infrastructure planning process, and failures to coordinate across spatial or sectoral jurisdictions can lead to costly mistakes in project selection. This problem is particularly salient when it comes to transportation networks, because, while the transport network needs to function as a national multimodal integrated system, the division of institutional responsibility further prevents the relevant decision makers from optimizing and planning infrastructure accordingly. Vietnam has recently advanced its decentralization agenda, with a focus on planning and programming of infrastructure investments to the provincial level. However, recent studies suggest a significant disconnect between planned investments and effective demand.⁴⁵ Individual provinces tend to identify and undertake

43 World Bank 2019c.

44 For fuller details, see World Bank (2016).

45 World Bank 2017b.

their own infrastructure plans and projects, which end up competing against each other rather than being strategically coordinated. Worse, there is rarely adequate coordination of planning between port facilities and critical connecting infrastructure such as road and rail. In water supply, where cross-province solutions are required, the legal, regulatory, and institutional frameworks to share water resources are also lacking. Similar challenges arise in the planning of urban infrastructure and even irrigation, which is explained below.

Even when the right projects are selected, many suffer from long delays and excessive costs during implementation. These inefficiencies arise from different sources, but a problematic area appears to be procurement.⁴⁶ Competitive procurement is legally the default mode of public procurement in Vietnam, but it is not typically adhered to. For example, in 2017, almost 70 percent of all public contracts were directly contracted, accounting for about 13 percent of the total value of public contracts. The preliminary results of an ongoing World Bank study on a sample of contracts indicate that even when competitive bidding was used, the level of competition was low due to a limited number of accepted bids.⁴⁷ Furthermore, some legal documents issued for specific sectors still allow wide use of direct selection, which explains why direct selection accounted for 69.2 percent of the total number of contracts awarded, while the saving percentage from this procurement method is only 2.62 percent, much lower than the average of 6.98 percent.⁴⁸ Another practice that compromises the value for money is the manipulation of evaluation criteria or choice of inappropriate contract types to allow adjustment of unit prices. While the application of e-Procurement (e-Bidding and e-Shopping) has generated some savings (on average 8.2 percent), the volume of contracts subject to competitive procurement was only 28 percent in 2018.

Insufficient maintenance spending of existing projects

Operational efficiency is achieved when the costs of running an infrastructure service are kept close to the technically feasible minimum. Once capital investments have been made, the resulting assets are used to deliver a variety of infrastructure services, typically incurring additional costs to operate the system. In the case of infrastructure, a major component of operating costs is asset maintenance. Good maintenance generates substantial savings, reducing the total life-cycle cost of transport and water and sanitation infrastructure by more than 50 percent, and also increases the lifetime of assets.⁴⁹ As an illustration, a recent study by the OECD suggests that each additional US\$1 spent on road maintenance saves US\$1.5 in new investments, making better maintenance a very cost-effective option.⁵⁰

46 Among other concerns are the late transfers of resources from the center to implementing ministries and agencies, which has been a major source of delay in the execution of the investment budget. Rigid ceilings on externally funded projects have also contributed to slow execution. In June 2019 (to be effective by January 2020), the government revised the Public Investment Law to address these concerns.

47 The study, conducted under the World Bank Advisory Services and Analytics (ASA), is called "Assessing the procurement impact of disclosing ceiling budgets in the bidding documents for procurement of works, China and Vietnam.", draft, available upon request.

49 In 2017, US\$16.84 billion was awarded through open competitive bidding (including Official Development Assistance-financed contracts), representing about 72.84 percent of the total contract value awarded.

50 Rozenberg and Fay 2019..

Despite high levels of infrastructure investment in Vietnam, maintenance budgets have typically not been adequately funded. Every time a new infrastructure asset is built, an ongoing maintenance liability is created, which is not factored in during procurement. The rule of thumb is that maintenance needs are approximately half of investment needs in the water and transport sector, which is far from reality in Vietnam. For example:

- **Water.** In inland waterways, despite the recent increase in the level of Vietnam Inland Waterways Administration operations & maintenance (O&M) funding allocated through the state budget,⁵¹ the backlog is significant and falls well short of the sector's needs.,^{52,53} Similarly, the irrigation systems in Vietnam are servicing well below their designed capacities in part due to deferred maintenance. In fact, about 70 percent of the total O&M budget provided by the government is currently used to cover the administrative costs of irrigation management entities, and only the remaining 30 percent is used for maintenance activities, which is inadequate.⁵⁴
- **Transport.** While Vietnam has a complete road network with a relatively high road density of about 0.87 kilometers of road per square kilometer, the full potential of such a network is hindered by its poor condition due to low levels of maintenance and maintenance financing. The current level of maintenance expenditures is estimated at around 10 percent of capital investments in this sector, far from the 22 percent in Bangladesh, 30 percent in OECD countries, and 37 percent in Indonesia.⁵⁵ This maintenance shortfall exists despite the dedicated Road Maintenance Fund in Vietnam established in 2012.

Creating an enabling environment for efficient services over infrastructure networks

The productivity of infrastructure investments is often dependent on a supportive and enabling regulatory, administrative, and institutional environment. Nowhere is this more evident than in the transportation sector, where service delivery depends not only on the public infrastructure provided, but in the way that other actors provide services across those infrastructures. Vietnam is handicapped by poor performance on trade logistics, ranking well below regional peers such as China, Malaysia, and Thailand.⁵⁶ Moreover, the costs of logistics are exceptionally high in Vietnam at 20 percent of GDP, about twice as high as for many relevant comparator countries. The higher logistics costs hinder trade competitiveness and overall value for money of infrastructure investments. Two important sources of high logistics costs are customs facilitation and the trucking industry:

- **Customs.** Currently, Vietnam operates a hybrid customs system that involves two models operating in parallel: an electronic system (completing documentation and applying for a Vietnam Customs entry number via the Vietnam Customs portal), and the manual system

51 It increased by nearly 80 percent during 2013–17.

52 World Bank 2018c.

53 The average budget allocation to the road network is between 15 and 20 times higher per ton-kilometer carried than for the waterways network, even though waterways carry 80 percent of the scale of traffic task handled by road transport and have much lower adverse external costs of congestion, environment, and accidents.

54 World Bank 2019d.

55 These findings are based on recent pilot projects using Road Asset Management Systems (RAMs), such as the Vietnam Provincial Road Network Evaluation Tools (RONET), in five provinces.

56 World Bank 2019e.

(physical documents hand-delivered to Vietnam Customs officials for signature). As a result, there is inconsistent interpretation, implementation, and enforcement of government regulations across provinces and among government officials, making customs clearance a relatively time-consuming and unpredictable process, especially for imports, and motivating facilitation payments to prevent more lengthy delays.⁵⁷

- **Trucking.** In Vietnam, the structure of the trucking industry is a source of significant inefficiencies. There has been a proliferation of small and medium-sized enterprises each owning only a few trucks, as well as owner-operators with a single truck, which they drive themselves. This fragmentation not only hampers scalability and lowers service quality and efficiency of operations, but also lowers the proportion of heavy trucks that can move more freight and help lower congestion, costs, and emissions.

Raising new financial resources

Vietnam has been relying primarily on public investment to finance infrastructure expansion, with private investment in infrastructure limited to less than 1 percent of GDP over the last decade, which was captured almost entirely by the energy sector. The government has justified its reliance on public investment on the grounds that it has a strong commitment to improve infrastructure and, thus, meet the basic needs of the population. It has also justified its reliance on the large amount of concessional financing made available by development partners, representing up to half of public financing in these sectors during the past decade.

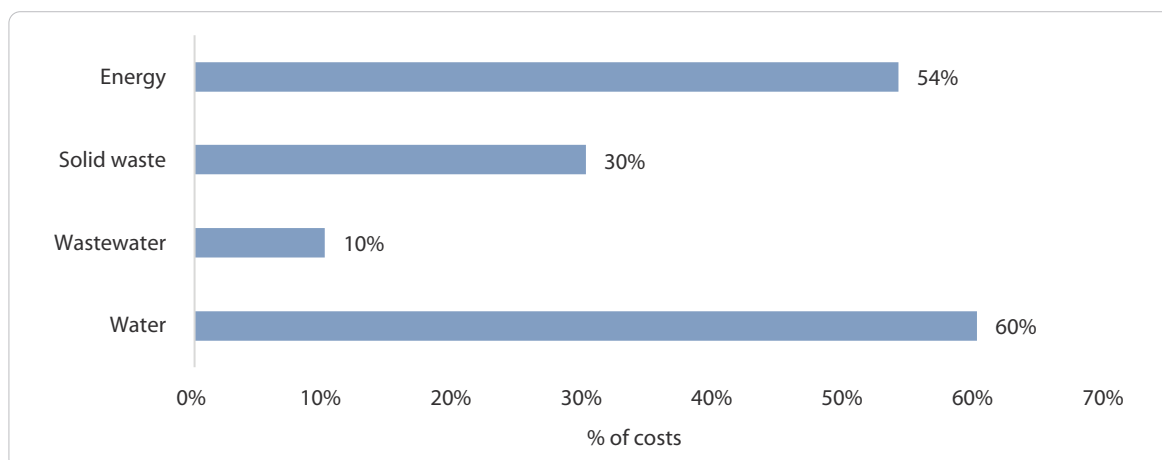
However, this reliance almost exclusively on public financing may have reached its limits, for at least two reasons. First, the authorities have opted to disproportionately favor current users at the expense of taxpayers and future generations, by applying low tariffs and by subsidizing them. Second, concessional financing has almost disappeared for Vietnam as the result of its graduation from the World Bank and Asian Development Bank concessional lending programs. Going forward, the authorities will have to pay market rates to finance their investment program in capital markets.

Who should pay?

In Vietnam, there has been a strong preference for taxpayer financing or borrowing over user charges for infrastructure. The authorities have therefore applied relatively cheap fees in almost all sectors (below supply costs) with the aim at enhancing access to basic services such as electricity and water by poor households and small firms (figure M.16). This inclusive strategy has functioned well as, today, almost all households in Vietnam have access to electricity (98 percent), and substantial improvements were achieved in distributing water. It has not led, however, to good results in solid and wastewater management.

57 The report projects that the extra time involved in clearing international shipments in Vietnam cost Beneficial Cargo Owners an estimated US\$96 million in 2012 and will cost US\$182 million in 2020 in avoidable logistics costs. In addition, facilitation payments add approximately 15 percent to the cost of an imported 40-foot container and about 13 percent to the cost of an exported container of general merchandise cargo.

FIGURE M.16. **User fees are lower than supply costs in infrastructure sectors**



Source: World Bank staff calculations based on government data.

In Vietnam, the state is responsible for regulating user charges for infrastructure, with a view to safeguarding affordability and access. The model for user charges differs across sectors. For infrastructure that is planned and regulated by national line ministries, such as transport and energy, the user charges are set by their regulatory bodies, such as the Electricity Regulatory Authority of Vietnam in the Ministry of Industry and Trade. For sectors like water supply and sanitation, and solid waste management, fees are set by provinces or large cities. Whichever is the responsible agency, user charges are today systematically lower than supply costs in all the main infrastructure sectors by as much as 90 percent for liquid waste collection and 70 percent for solid waste collection.

The use of low fees means that the financing gap is covered by the government through subsidies. In other words, the financial burden is on taxpayers and/or future generations (when infrastructure projects are funded by borrowing). Such a system has also generated more perverse effects on the behavior of both suppliers and consumers. Infrastructure providers are less accountable as they benefit from the explicit or implicit guarantee from the Treasury, which explains why they usually run high operational deficits. On the demand side, customers are encouraged to consume more, which may create undue pressure on the environment and on the stock of natural resources.

Another inefficiency of the current system arises from the disequilibrium between the responsibilities allocated to local governments in terms of expenditures and revenue collection. One basic principle of public finance is that spending agencies must rely on their own source of financing as it is the best way to ensure their accountability. This rule does not apply to local governments in Vietnam, which are, on average, responsible for almost 60 percent of total public expenditures, but only 30 percent of total public revenues (with little autonomy in designing their own taxes). As a result, they are largely dependent on central government transfers, meaning that many local infrastructure projects are financed by national rather than local taxpayers (those who are more likely to use them). Under these conditions, local authorities are arguably under less pressure to provide public goods at lower costs. One recent study concludes that local spending can become inefficient if not matched with the devolution of responsibilities on revenue

collection.⁵⁸ Local policy makers may fail to fully internalize the cost of local spending when they can finance their marginal expenditures with central transfers or shared revenues that are funded by taxpayers in other jurisdictions.

Not enough private financing?

Approximately 90 percent of all infrastructure projects in Vietnam are financed by the public sector. This includes direct fiscal support, balance sheet financing from SOEs, guarantees by the central government for borrowing by SOEs, Official Development Assistance, and the publicly owned Vietnam Development Bank. Among these instruments, concessional financing has played a significant role, as it funded close to half the infrastructure budget between 2010 and 2015.

Vietnam’s relatively easy access to cheap public financing is one of the reasons why the private sector has played a marginal role in infrastructure. Since 1990, according to the World Bank’s Private Participation in Infrastructure (PPI) database, only 116 public-private partnership (PPP) projects for a total value of US\$19.4 billion have been approved in Vietnam, which is equivalent to less than 10 percent of total infrastructure spending during this period. Approximately 75 percent of PPPs has been in the energy sector, with another 6 percent in the gas sector and 5 percent in the ports sector. In the road sector, there have been a few PPPs or concessions for national roads awarded on a direct contracting basis. However, many of these road projects had to be renegotiated, leading to the state ultimately bearing most of the risk.

The context has obviously changed since the country graduated from concessional financing in late 2016. Since then, the government has attempted to encourage more participation from the private sector by introducing Decree 15/2015/ND-CP, which was a marked improvement over previous legislation as it provided a single legal framework for private investment in public infrastructure sectors. It sets out more clearly the procedures that need to be followed by the authorities when procuring a PPP project and removed the 30 percent cap on government support for a PPP project. Decree 30/2015/ND-CP was also introduced in 2015 to provide guidance on the procurement framework for PPP projects. However, these changes have not yet produced the expected results as none of the projects procured has had more than one qualified or interested investor, even though reportedly 18 PPP projects (out of 53) have been “competitively” procured.⁵⁹ The new requirements have appeared excessively burdensome as they include preparation of feasibility studies and the running of a competitive tender when most ministries and line agencies do not have these capacities. More importantly, the decrees do not support a comprehensive government risk management framework, especially for Fiscal Commitment and Contingent Liabilities arising from PPP projects.

The government is undertaking a comprehensive review of the existing PPP framework and is also drafting a new Law on PPP Investment to address the shortcomings of Decree 63 and other relevant PPP regulations. In reviewing the legal framework, the authorities should

58 Sow and Razafimahefa 2017.

59 Dũng 2018.

keep in mind that many projects are often bid out as part of a broader package of support, wherein investors are provided land to develop infrastructure. Such projects will require a stronger oversight mechanism to maximize the performance of the assets including valuation of stripped assets (such as selling off land identified for water systems).

Another option to draw more private capital into the infrastructure sectors is to tap into both domestic and international financial markets. This can be done by the central government as part of its overall financing strategy and by utilities that have the capacity to raise equities and bonds. Over the past few years, the central government has used the first approach by raising bonds on the domestic market, taking advantage of favorable conditions. As a result, the level of domestic borrowing increased from 33 percent of GDP in 2014 to 35.1 percent of GDP in 2018. The emphasis here is on corporate financing or the capacity of existing companies to seek complementary commercial financing and so secure the large amounts of investment needed. Such strategy is under preparation in the power sector, where Vietnam Electricity (EVN) obtained a credit rating in June 2018, yielding an Issuer Default Rating (IDR) of “BB” with a “Stable Outlook” for long-term foreign currency by Fitch Ratings. EVN was the first government-linked nonfinancial corporate rated by Fitch in Vietnam. Similarly, as of April 2019, the National Power Transmission Corporation received a BB/Stable Rating by Fitch. Petro Vietnam (PVN) and EVN’s Power Distribution Companies have also initiated their credit rating process. The credit rating will allow these companies to issue corporate bonds in overseas markets to attract international financiers.

However, currently, there is insufficient financial capacity or suitable products in the domestic financial system to meet the financing needs for infrastructure. Constraints on the banking sector necessitate finding alternatives to loan-based infrastructure financing. Local banks have limited space for infrastructure loan portfolio growth due to the long-term tenors required for infrastructure financing and limited financing available for new and smaller private sector developers. In infrastructure, capital market products that could be developed include project bonds (or revenue bonds), partially guaranteed corporate bonds, or infrastructure funds. The overall market of corporate bonds remains relatively small, at around 6.9 percent of GDP. It is also illiquid, highly collateralized, and bank-centric, and functions largely as a quasi-credit market. It is hampered by cumbersome procedures for bond issuance, high transaction costs, and lack of transparency and information for investors.⁶⁰ Most corporate bonds have been issued through private placements, some of which are resold among retail investors (beyond 100 individual investors), a practice that is risky for both banks and retail investors given the presence of implicit guarantees. Underdeveloped equity and bond markets prevent institutional investors from financing infrastructure investment. Institutional investors are also constrained by the instruments they can invest in by law. For example, institutional investments are unable to buy infrastructure-specific products (such as project bonds) due to regulatory restrictions and tax differentials. Institutional investors are essential for market development due to the long-term nature of infrastructure projects, which matches the long-term liabilities of institutional investors, such as pensions funds, and insurance companies.⁶¹

60 Gerner et al. 2019.

61 World Bank 2018d.

Summary of recommendations and next steps

Vietnam has performed relatively well in most infrastructure sectors over the past two decades, providing access to basic services for the majority of the population. However, fast-growing demand due to rapid economic transformation and demographic transition, coupled with the end of concessional financing for the government, will require a shift in the current strategy.

This note has advocated for improved efficiency in infrastructure spending, which is to get more bang for the buck, or, conversely, to achieve similar outcomes while spending less. The second line of action is to improve financial sustainability. These two objectives could be met with the following eight actions.

Improve cross-sectoral planning

Going forward, it is recommended that infrastructure spending efficiency be optimized through better planning and coordination across geographic and sectoral jurisdictions. Building on Vietnam's successful experience of power planning, similar planning capabilities are needed for other priority infrastructure sectors. This is particularly true for wastewater systems, which need be considered as part of a complete process, including household connections, sewerage, pumping stations, and wastewater treatment and resource recovery facilities. Failure to acknowledge the importance of any of these components will lead to project ineffectiveness and unsustainability.

Similarly, transportation requires an integrated, national, multimodal planning framework to rationalize investment decisions across provincial jurisdictions and coordinate efforts across different transport modalities. Transport planning and investment strategies need to be informed by spatial analysis, to promote robust, trade-oriented connectivity policies and investments. At present, the objectives of enhancing trade competitiveness are not explicitly linked with the objectives of improving connectivity. Trade information, especially on value chains, is rarely used in policy formulation. Therefore, there needs to be systematic collection of relevant trade and transport data in addition to other economic statistics, a system where such data are consolidated and analyzed, and procedures by which the analytical outputs have tangible influence over the planning and investment decision processes. It is advisable that relevant trade and transport data are also shared with the private sector, which can then make their business decisions based on the overall economic trends and public sector investments, such as strategically locating along their relevant value chain linkages or deepening their participation in certain value chains. The ongoing efforts by the Ministry of Transport to establish the Vietnam Logistics Statistical System is an important step in the right direction.⁶²

Encourage coordination across jurisdictions

Where decentralization has taken place, the relevant subnational authorities should be involved in the planning process. There is a need to overcome the institutional fragmentation

62 World Bank 2019e.

(or lack of clear hierarchy and assignment of roles and responsibilities), both within the central government and between the center and the provinces, which has led to inertia and inefficiencies in formulating and implementing policy and which led to decisions that are suboptimal from a societal point of view.⁶³ In the case of large cities, as evidenced by the small spatial range of positive agglomeration economies, there is a need for infrastructure to facilitate transactions over a broad area, across jurisdictions. The need is most pressing in large economic poles, especially the Southeast and Red River Delta regions. The government has established Regional Steering Committees to coordinate various regulations and investments, and they have been active in resolving some interprovincial issues, such as water resources. It would be useful to consider measures to make the Regional Steering Committees function as true cooperatives in regional issues. As such, the committees may draw up cooperative economic development plans, to turn the focus of local economic planning and investment from competing with neighboring provinces for similar investments toward specialization and interprovincial cooperation. This would necessitate a pact for sharing some local revenues.

Make competitive procurement the rule, not the exception

The efficient implementation of projects is generally achieved through competitive procurement. Bidding firms are encouraged to reveal their true costs, making this typically the most effective method for achieving value for money. The government should therefore consistently apply competition across all infrastructure sectors, including O&M service contracts. Standard documents can also be introduced that would make the contracting process more transparent and prevent tender specifications from being tailored to favor particular bidders. Clear procedures should also be established for addressing unsolicited bids in the context of private sector participation. Efforts should also be made to enforce competitive bids.⁶⁴ In addition, there is a need for a more independent mechanism to deal with procurement complaints, improving transparency of procurement information, and enhancing contract management. The proper implementation of procurement rules will require strengthening inspection, examination and audit of procurement, and sharing the results of these controls. Further accountability will be built if the provisions on procurement sanctions are consolidated in a single instrument rather than scattered in various texts such as the Criminal Code, the Law on Anticorruption, and numerous decisions and decrees. Information campaigns should be organized to ensure the law is properly understood by users.

Identify maintenance needs and their financing

Across all sectors, greater efforts should be made to estimate maintenance requirements of infrastructure assets and align the necessary budgetary allocations at the design stage. Numerous engineering tools exist for making such calculations, including the Road Network Evaluation Tools (RONET) model for road networks and other Geographic Information System (GIS) tools. Technological innovations driven by infrastructure network digitalization are also increasingly facilitating the process of maintenance through real-time monitoring. For sectors able to levy user fees

63 World Bank 2019e.

64 In several wastewater/health projects financed by the World Bank in Vietnam, competitive bidding was piloted for O&M services, and the results have been promising along with achieving reduced prices for O&M.

(such as irrigation, water supply, and inland waterways), it is important to ensure that such charges provide the revenue needed to sustain prudent maintenance, while for sectors that do not have user fees, the use of maintenance funds have often proved to be valuable. These funds, however, require careful design to ensure that revenue sources are commensurate with expenditure needs and good governance mechanisms so that resources do not get diverted to other fiscal purposes.

Improve the “soft dimensions” of connectivity infrastructure

Vietnam should redouble its efforts to fully automate the customs clearance process. This will significantly reduce human intervention and paperwork and provide a consistent, predictable, and transparent clearance process. A further step would be to electronically connect not only traders and customs officials, but all agencies involved in international trade through an online single window, allowing traders to file standard information and documents through a single entry point to fulfill all import, export, and transit-related regulatory requirements, and allowing cross-sharing of data with related private and public participants such as banks and insurance companies, and with immigration and vehicle registration authorities.

Vietnam should also take measures to consolidate and modernize its trucking fleet. A possible approach for achieving greater consolidation might be to introduce regulations on the minimum capital required to establish a trucking company. Support could also be provided to set up cooperatives for owner-operators that would enable the smaller players to pool resources and achieve scale efficiencies. The fleet could also be improved through growth-based lending schemes that provide preferential lending rates for more fuel-efficient and bigger-sized trucks. In addition, it would be important to introduce a truck fleet modernization program with incentives for truck owners to scrap their older vehicles (such as registration tax waivers, scrap values rebates, and higher road user charges for older trucks).

Rebalance the financial burden from taxpayers to users

Vietnam should consider rebalancing the financial burden from taxpayers to users of infrastructure services. This could be achieved by aligning charges to supply costs, reducing or even eliminating the need for subsidies. This would reduce the pressure on the government’s budget, which could reallocate resources toward more productive or social expenditures. Alternatively, the government could reduce other taxes. As argued in the note on the clean economy, charges could also be increased to account for externalities, such as reducing pollution by influencing the demand for energy.

Because the existing gap between charges and supply costs is extremely high in most infrastructure sectors, the proposed realignment should be implemented in a phased manner through progressive tariff increases. It will be important to accompany this policy with a careful assessment of where genuine affordability problems may exist, in order to implement targeted support to these households through suitable design of financial support. A communications strategy is also important to encourage public acceptance of higher user charges. Regulatory agencies play an important role in estimating the revenue requirements of different infrastructure service providers for the purposes of tariff-setting. At present, provincial governments are beholden to tariff decisions taken

at the national level, which may bear little relation to local costs and do not allow local authorities to find an adequate balance between tax finance and user charges.

Align local government responsibilities on expenditure and revenue collection

Reducing the gap of responsibilities between expenditures and revenue collection should be a priority at the provincial level. While the decentralization of the investment program creates proximity between local authorities and beneficiaries, such advantage is lost to a large extent because the cost of many projects is supported by national rather than provincial taxpayers. As a result, the local authorities might not have the incentives to select the most cost-effective projects and to monitor them properly over time. They also become excessively dependent on the decisions at the central level, which may opt to allocate the use of the funds.

One recommendation would therefore be to increase the tax revenue collection of local governments. This can only be done gradually as it should be accompanied by a strengthening of local capacities. It should also not be done for all taxes, as some are more efficient when collected at the central level, including the value-added tax. However, there is room for improvement through the following approaches. First, local governments may be given discretion to set rates (within a band) for a closed list of selected taxes and user fees. Surcharges, or piggybacking on central taxes, may provide additional subnational revenue. For example, surtaxes could be imposed on the personal income tax (which is small now but likely to grow) or on excise taxes. Second, the full introduction of modern property taxation could be considered over the long term. Local authorities have a comparative advantage in identifying and valuing properties because they are familiar with the housing and land availability within their jurisdictions.

It is also possible to revise revenue-sharing arrangements between central and local governments by moving to sharing centrally collected taxes on a formula basis rather than on a derivation basis. This can be done through individual taxes or a general pool of shared taxes (including the value-added tax, the corporate income tax, and the personal income tax) at the central level and applying the same sharing principles for the pool as a whole. These reforms should improve accountability, spending efficiency, transparency, and equity of the revenue arrangements, while promoting fiscal responsibility, spending efficiency, and eventually local economic performance and revenue efficiency.⁶⁵

Think about partnerships with the private sector

There is scope to diversify financing sources by enhancing partnerships with the private sector. Building on recent reforms, the government needs to provide a transparent, predictable, and competitive legal and institutional basis so that all investors will feel secured. This will require the following steps: (a) adopt a well-grounded and consistent contractual framework for all independent power producer/public-private partnership projects; (b) in order to establish a track record for PPPs, it may be necessary for the government to provide contractual support in the initial phases of the

65 Rab et al. 2015.

program to encourage participation and build investor confidence, which can be gradually phased down as the market becomes more confident in investing in PPPs; (c) speed up the preparation of the PPP law, identifying the clear roles and responsibilities of entities including risk allocation, procurement, and risk-sharing responsibilities; and (d) identification of a pipeline of priority projects.

Unlock the potential of capital markets

Going forward, Vietnam could rely more on capital markets to finance its infrastructure program. As done in recent years, this can be achieved by the central government through the issuance of bonds on the domestic or international markets, and then redistributing those funds toward infrastructure sectors.

Another option is to have the companies operating in these sectors directly tapping into capital markets. Several companies in the energy sectors have moved in that direction by establishing credit ratings, which is a first step toward establishing creditworthiness. Concurrently, the development of a nongovernment bond market requires regulatory reforms, policy incentives, and market infrastructure building development. This includes promulgation of a new Securities Law, policy incentives for investors in the form of tax incentives, amendments to investment limits, and adjusted rules for banks holding listed corporate bonds and improvements to the regulations of corporate bond placements. In addition, there is a need to define a suitable model and capital structure of credit rating agencies, and to broaden the base of investors and issuances for corporate bonds. Finally, the government might consider establishing new instruments in the near to medium term, such as green bonds, infrastructure-related capital market instruments, and securitization.

As mentioned in the introduction, these recommendations address only a limited, albeit important, set of the challenges facing the infrastructure sectors in Vietnam. Some of them will require further thinking on the allocative efficiency of investment programs, which is to identify the priority projects by sectors and by locations. It will also require clarification of the future role of SOEs operating in most of these sectors, which are not only the most important players but are also more likely to be the partners of private investors if the government opts to encourage more private sector involvement in the future.

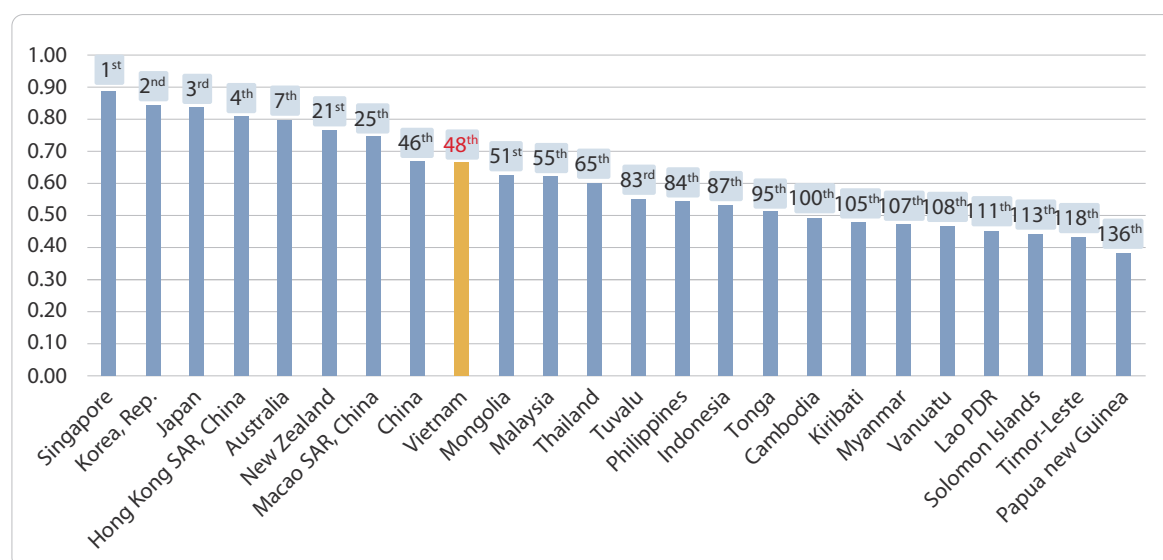
Skilled workers and opportunities for all

Vietnam has started to build the foundations of its human capital by providing basic education and health services to the majority of its population. Yet, moving up the ladder of valued-added production will require more sophisticated skills from the labor force. For that reason, reforms of both technical and vocational education and training and university education have become priorities. To achieve both equity and efficiency, it is also important that those opportunities be made available to all, including ethnic minorities that have been systematically disadvantaged along the steps of their life cycle.

Human capital development not only enhances the future of the individual, but it is a determinant of a country’s economic prosperity. People feel better when they are healthy and learning, and countries with more human capital generally report both faster and more inclusive growth, especially in the longer term.⁶⁶

On these two fronts, Vietnam has performed extremely well. It achieves one of the highest scores in the East Asia and Pacific region on the World Bank’s Human Capital Index (figure M.17). This reflects significant improvements in general education and health over the past two decades. As a result, human capital development is estimated to have accounted for about one-third of GDP per capita growth during 2000–17.

FIGURE M.17. **Human Capital Index by ranking, East Asia and Pacific countries**



66 Barro and Lee 2013.

Past success is, however, not a guarantee of future success. Looking forward, as argued in the introduction of this main report, Vietnam wants to climb the value-added ladder by producing more sophisticated goods and services. This will require a set of skills that the domestic labor force does not yet possess. One key ingredient of Vietnam's success has been its capacity to offer opportunities for the vast majority of its population, as progress in education and health indicators has been almost universal. However, about 9 million people still live in extreme poverty, mostly because they suffer from discrimination in access to education and health services based on their ethnicity.

After explaining why the labor force in Vietnam needs to be upgraded and illustrating the magnitude of existing discrimination against ethnic minority groups, this note proposes a series of recommendations, which are summarized below. The emphasis is on revamping the education system by creating a true partnership between private firms, including foreign-owned ones, and the government so that the country's youth can rely on efficient technical and vocational training as well as an affordable university education that can meet the evolving demand from the private sector. Concurrently, to avoid the risk of exclusion of disadvantaged minorities, a comprehensive and multidimensional approach is needed to offer them support in all steps of their life cycle, starting with nutrition during infancy to jobs during adulthood.

Skills wanted for the future

Vietnam is in the enviable position of being one of the middle-income countries with the highest human capital development. According to the World Bank, a Vietnamese child today is most likely to graduate from primary school with a high proficiency in reading and mathematics, and has a 63 percent chance of reaching his or her potential in the job market. A Vietnamese child's life expectancy is about 75 years, approximately 15 years more than his or her parents two decades ago. This provides a good basis for the future.

The next step for Vietnam is to further improve its population's prosperity by increasing labor income. Not only is this the most direct way to improve household income, but jobs generate a sense of belonging, social identity, self-esteem, and personal satisfaction.⁶⁷ To increase labor income, workers will have to find productive jobs, and to secure productive jobs, they need skills, or what is often called productive human capital. In Vietnam, as everywhere else, skills are increasingly important, because the nature of work has evolved in response to global megatrends, including technological change. Establishing or maintaining a national competitive edge in the global market requires workers with high levels of human capital, including physical and mental well-being and advanced cognitive, technical, and socio-behavioral skills.

Today, private firms in Vietnam have already shifted toward this new generation of jobs. They are increasingly requiring jobs that are becoming more sophisticated, and are ready to pay a significant premium to attract workers who can meet their expectations. Almost half of employers who responded to a 2015 Enterprise Survey identified "skills" as an obstacle to firm performance, which is 20 percentage points more than in the rest of developing East Asia and Pacific. Exporting firms are also

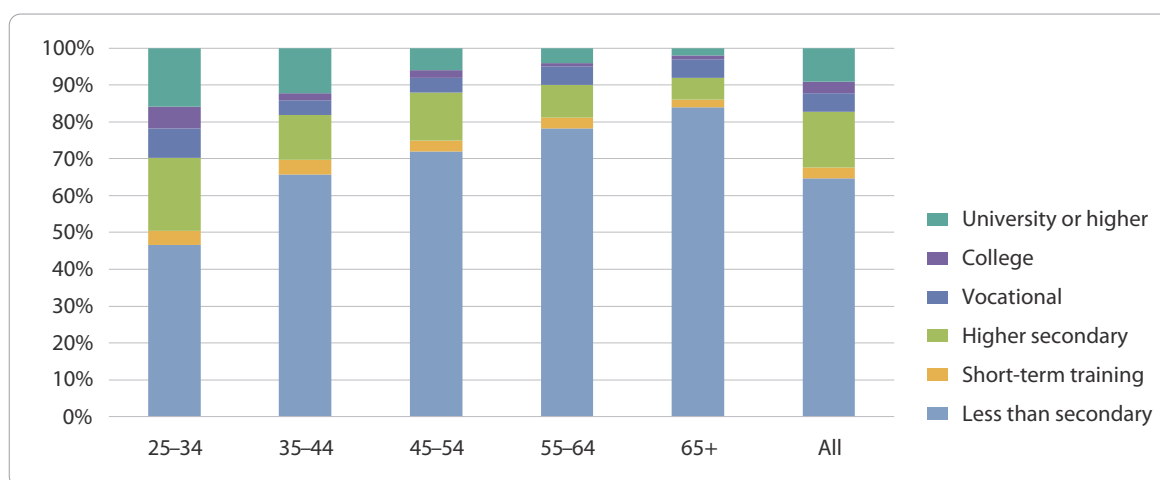
67 See, for example, IFC (2013).

three times more likely as non-exporters to identify missing skills as a constraint. The 2014 and 2017 Labor Force Surveys show a reduction in jobs that require simple skills (subsistence farmers and street vendors). In contrast, eight of 10 of the fastest-growing occupations require higher-level knowledge and a broader range of skills, including in manufacturing and modern services (telecommunication, finance, transport). Employers have therefore valued the best-prepared workers, who are able, for example, to perform nonroutine analytical work, by paying them a 25 percent premium over the income received by those who cannot.⁶⁸

While it is not easy to define what kinds of skills will be needed for the future, they will almost surely be those that are generally acquired through the development of technical and vocational training and a university education. There is indeed a strong and positive correlation between technical and vocational training and a university education and labor income in most countries in the world. The success of fast-growing economic in East Asia, such as Japan and Korea, is often explained by the quality of their technical and postsecondary education. As in many countries, the rates of return associated to education in Vietnam increase exponentially with the number of years spent by the worker in school. The return for each year of additional education is estimated at around 5 percent, meaning that a university graduate earns on average 43 to 66 percent more than a worker with lower secondary education, and is more likely to secure a wage job.

As expected for a country with a per capita income of less than US\$2,000, the education level of Vietnam’s labor force remains relatively low (figure M.18). According to the 2017 Vietnam Labor Force Survey, two out of every three workers in Vietnam have no more than a lower secondary education. Vietnam is still lagging most of its peers in East Asia in terms of technical and university education. The enrollment rate in tertiary education was only 28 percent in 2016, the third lowest in the region, and approximately 15 percentage points behind Thailand (figure M.19). Equally troubling is that only one-third of those enrolled students completed their tertiary education by age 25.

FIGURE M.18. **The education level of the labor force in Vietnam is still relatively low, even if progress is manifest across generations**

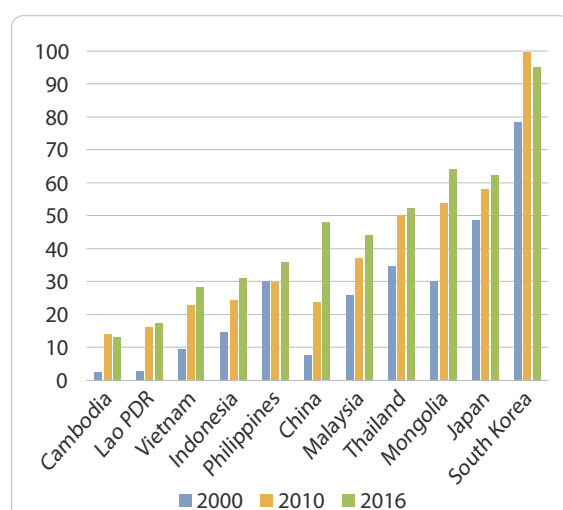


68 Bodewig and Badiani-Magnusson 2014.

Vietnam’s education system is improving, as each new generation is more likely to reach a more advanced level of education than the previous one. The quality of education, at the general level, is also well-recognized worldwide after that the country ranked sixth in the world in the 2016 Program for International Student Assessment (PISA) test. Yet, at the current pace, the average years of education of the labor force will only increase from 8 years of education today to 9.3 years of education by 2050, and the share of the labor force with tertiary education will only increase from 11 percent today to 15 percent by 2050. As a comparison, the current average years of schooling is equal to 16.5 in Korea, 14.7 in Thailand, and 13.7 in Malaysia.

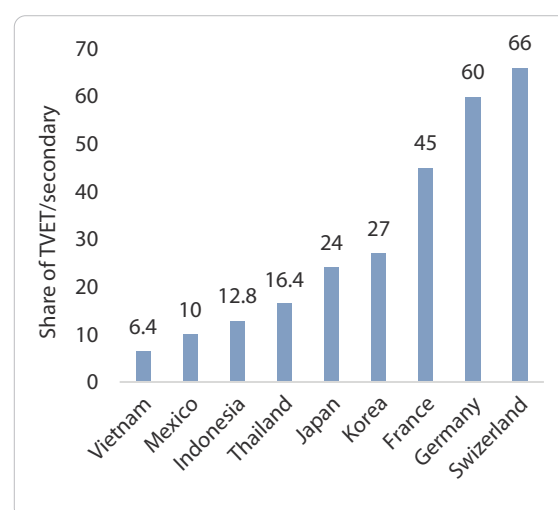
Building on this diagnostic, and with the recognition that more needs to be done, the note examines the current state of development of university education, technical and vocational training, and on-the-job training in the country. The analysis does not aim at being comprehensive but rather at highlighting some of the key weaknesses. At the university level, the key question is to understand why, despite high returns, only a limited number of students are opting to complete their studies. One answer is that Vietnam is on the right trajectory, but it will take time because only 60 percent of students are able to finish their low secondary education today. The train of education is moving sequentially, but it is moving in the right direction.

FIGURE M.19. **The (net) enrollment rate in universities is one of the lowest in East Asia**



Source: World Bank.

FIGURE M.20. **Only one of six students is in a TVET program in the upper secondary level**



Source: Asian Development Bank and OECD.

Note: TVET = technical and vocational education and training.

Another, less positive, answer is that many students and their families are not getting what they expect from university studies today. The cost of these studies is high, as government financial support has been relatively limited. Table M.3 emphasizes that student fees are above 40 percent of the unit cost, while government funding is less than 0.5 percent of GDP (and less than 0.25 percent when excluding scholarships). The financial burden is therefore on students, as in Mongolia, but far from the model chosen in China, Korea, and Malaysia. Those countries allocate more than 1 percent of GDP to tertiary education, and students pay only 20 to 40 percent of unit costs. In Argentina and Brazil, students pay less than 20 percent of the costs.

Disproportionate costs are only part of the equation. After all, students and their families are increasingly willing to pay for postsecondary education in private universities. The reason is that quality also matters. Most (public) universities in Vietnam suffer from deficiencies in the quality of teaching and materials as reflected by their relatively poor ranking in international indicators. It is beyond the scope of this note to examine these issues in detail, but it is worth underscoring that the low quality of education services is rooted in the lack of coordination across institutions, weak monitoring by the authorities, and limited collaboration with the private sector.

TABLE M.3. **The financial burden of tertiary education is on students as public financing is relatively low in Vietnam**

	Public funding as a share of GDP (%)			
		<0.5	0.5–1	>1
Tuition fees as share of unit cost in public institutions (%)	>40	Vietnam, Mongolia	Chile	
	20–40		Korea, Rep., Thailand	China, Indonesia, Malaysia
	<20	Peru	Argentina, Brazil, Colombia, Mexico	

Source: World Bank.

Another problematic area has been technical and vocational training. One can argue that the next step for Vietnam is to develop a semiskilled labor force, capable of performing more sophisticated jobs but not necessarily on top of all new technologies. This sequencing has been followed by countries like Japan and Korea, which have focused their efforts on, first, technical education, then on university education. During the 1980s and 1990s, Korea implemented an ambitious TVET program in close coordination with the private sector, which contributed financially to this development. The emphasis on TVET is still a priority in industrial countries such as Germany, Switzerland, and the Nordic countries. Unfortunately, today, Vietnam is seriously lagging in terms of secondary students involved in technical and vocational training. As shown in figure M.20, in 2017, only 6.4 percent of students in Vietnam were enrolled in TVET, while 27 percent were enrolled in Korea, 45 percent in France, 60 percent in Germany, and 66 percent in Switzerland. The low figure for Vietnam reflects the existence of many small-scale initiatives (or pilots), but the absence of a comprehensive and ambitious national program by the government and private sector.

The acquisition of skills by the labor force is not a one-point-in-time event but rather an evolutionary process during a worker’s lifetime. Within this vision, on-the-job training becomes very important. Again, Vietnam is lagging as, in 2015, only 22 percent of firms reported that they provide formal training to their employees compared to almost 40 percent in East Asia.⁶⁹ The respondents report that when they do train, most instruction is limited to job-specific technical skills. However, the lack of formal training was often compensated by informal practices, as informal on-the-job learning appears to be a significant source of skills development. A 2011 survey of workers found that 35 percent of low-skilled workers learned something new in their jobs in the last three months, and more than 90 percent of high skilled workers reported learning.⁷⁰

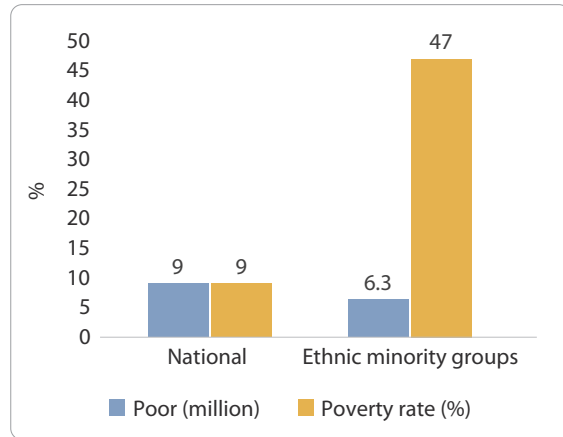
69 World Bank 2015 Enterprise Survey; <https://microdata.worldbank.org/index.php/catalog/2664>.

70 Bodewig and Badiani-Magnusson 2014.

Barriers to human capital formation for Ethnic Minorities

Upgrading labor force skills is an accelerator for economic prosperity. Workers with more skills are generally more likely to secure productive jobs and to get higher labor income. Such reasoning assumes, however, that all workers can acquire skills and get better jobs. Today, despite Vietnam’s equitable growth, pockets of poverty and human capital disparities remain. As of 2016, ethnic minorities make up 73 percent of the number of poor people nationally (9 million), even though they comprise just 14 percent of the total population (figure M.21).⁷¹ The average per capita consumption of ethnic minorities is less than 45 percent of the majority Kinh and Hoa. These minority groups are poor because they are facing unequal access to human capital development and jobs.

FIGURE M.21. **The unequal distribution of poverty in Vietnam, 2017**



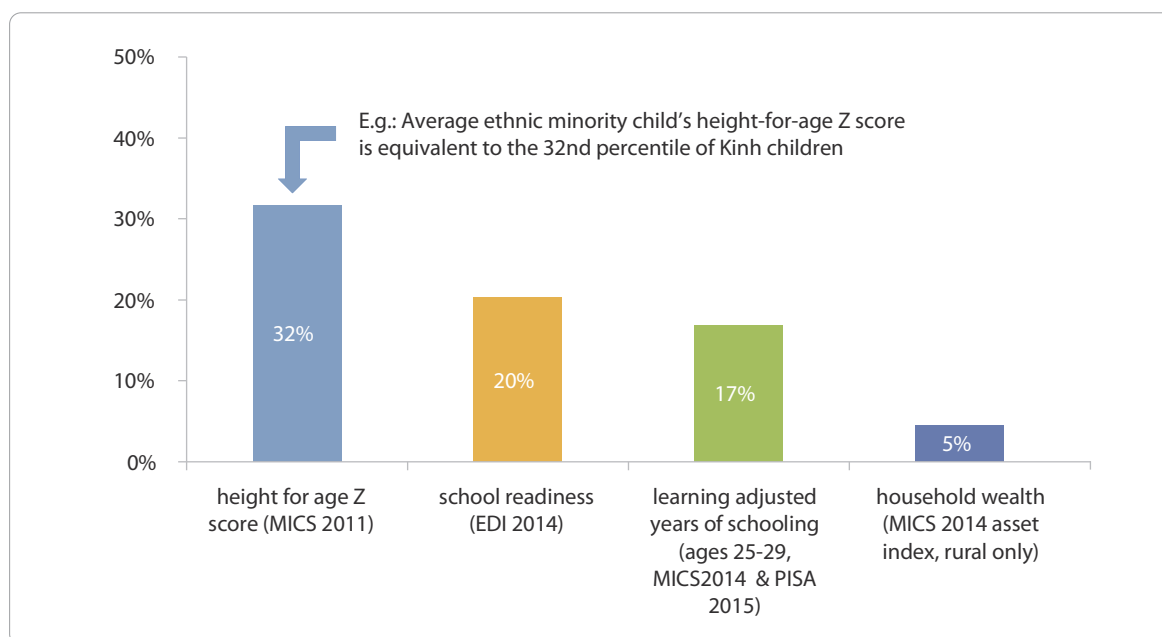
Source: World Bank.

Note: PPP = purchasing power parity.

The rationale for investing in human capital is to ensure that all children arrive at school well-nourished and ready to learn, their classrooms are places that facilitate real learning, and they are given a chance to grow up to live and work as healthy, skilled, and productive adults. The cumulative effect of lifelong human capital development is the ability to remain productive and age in a dignified manner in “the golden years.” Figure M.22 illustrates the disadvantages ethnic minority groups face compared to the majority Kinh group at different points in life. For example, within the same age category, the average ethnic minority child is 1/3 shorter than the average Kinh child. By age five, the average ethnic minority child’s school readiness, measured by cognitive, socioemotional, and physical development, is equivalent to only the 20th percentile of Kinh children’s school readiness. At early adulthood, the average Learning-Adjusted Years of Schooling acquired by ethnic minorities is equivalent to a Kinh adult in the 17th percentile. Finally, in rural areas, average measures of household wealth of ethnic minorities are equivalent to the fifth percentile of the Kinh population.

71 There are 53 ethnic groups in Vietnam with distinct cultures and languages, of which 75 percent live in 13 provinces in the northern mountain and central highland regions. Ethnic groups can be divided into the five language families of Southeast Asia: Austroasiatic, Austronesian, Hmong-Dao, Sino-Tibetan, and Thai-Kadai. The largest group are Kinh, who account for 86 percent of the population. The Hmong, Hoa (ethnic Chinese), Khmer (ethnic Cambodian), Muong, Tay, and Thai constitute 10 percent of the population, and the remaining smaller groups make up roughly 4 percent (Dang 2012).

FIGURE M.22. **Life cycle accumulation of disadvantages: Kinh percentile of average ethnic minority (selected indicators)**



Source: World Bank.

Note: EDI = Early Development Instrument; MICS = Multiple Indicator Cluster Surveys; PISA = Program for International Student Assessment.

The existing disadvantages of and discrimination against minority groups can be further evidenced by a closer look at several sub-indicators of human capital development. Among them, stunting appears to be one of the most critical, as the prevalence of under-five stunting was 35 percent in mountain provinces compared to 24 percent at the national level in 2017 (figure M.23). Only 32.7 percent of ethnic minority women and 38.6 percent of women in the poorest quintile had four or more prenatal care visits compared to 67 percent of women in the second-poorest quintile and 96 percent in the richest quintile.

Although food security is not a problem in Vietnam, ethnic toddlers aged 6 to 23 months are less likely to have the minimum dietary diversity and acceptable diet compared with Kinh toddlers (figure M.24). The probable underlying causes of such disparities range from food supply and storage to lack of caregiver knowledge about optimal toddler feeding practices, sociocultural beliefs related to child feeding, and lack of parental/caregiver time for optimal childcare. An important cause has been poor access to clean water, sanitation, and hygiene, as a disparity of approximately 25 percentage points is observed in access to hygienic handwashing conditions between ethnic minorities and Kinh and Hoa. There is a 30-percentage-point gap in access to hygienic toilet facilities, with conditions being particularly dire for the Hmong people, of whom only 3 percent use hygienic facilities, and up to 79 percent of whom are without toilet facilities (figure M.25). Poor water, sanitation, and hygiene conditions can result in chronic diarrhea, which prevents children from getting nutrients even from the food they do consume.

Ethnic minorities and those living in poor, remote, and mountainous provinces have substantially worse health service access and outcomes. In 2016, the child mortality rate in rural areas (26 per 1,000 live births) was more than double that in urban areas (12.7). The proportion of births assisted by trained staff was 68.3 percent among ethnic minority women and 73.4 percent among the poorest quintile, compared to over 95 percent among women in the remaining quintiles.

While relative parity is observed in access to primary and lower secondary education among ethnic groups, a sharp divergence occurs in upper secondary and tertiary education enrollment. As depicted in figure M.25, enrollment rates based on 2014 household survey data diverged noticeably after age 15, corresponding to the upper secondary and postsecondary age ranges. For example, 74 percent of Kinh were attending upper-secondary schools and 29 percent were attending postsecondary schools, while the enrollment rates were only 44 and 4.4 percent, respectively, for minority groups. Minority group children (defined as those speaking languages other than Vietnamese at home) were also less likely to learn, as they were less likely to attain minimum proficiency on the PISA in each of the three subjects because of the lower quality of teaching. Both demand- and supply-side constraints explain why ethnic minorities drop out at higher rates than Kinh during the transition from lower to upper secondary education, but an important factor appears to be that students were more likely to report being needed for agricultural work.

The level of discrimination in access to human capital is magnified for girls, notably in terms of education. One reason appears to be early marriage and adolescent pregnancy, as 23.1 percent of ethnic minority women aged 20 to 49 were married before age 18.⁷² They are also at risk of higher incidences of intimate partner violence.⁷³ Not surprisingly, adolescent girls who marry early achieve less education and subsequently less earning capacity. Women, especially those with young children, are less likely to engage in non-farm work. They are also more likely to shift to agriculture in response to marginal increases in crop prices. Ethnic minority women who do hold wage jobs earn 17 percent less than ethnic minority men, 35 percent less than Kinh or Hoa women, and 50 percent less than Kinh or Hoa men.⁷⁴

72 UNICEF and UNFPA 2018.

73 Le et al. 2014.

74 Cunningham and Pimhidzai 2018.

FIGURE M.23. **Stunting is higher in ethnic minority groups**

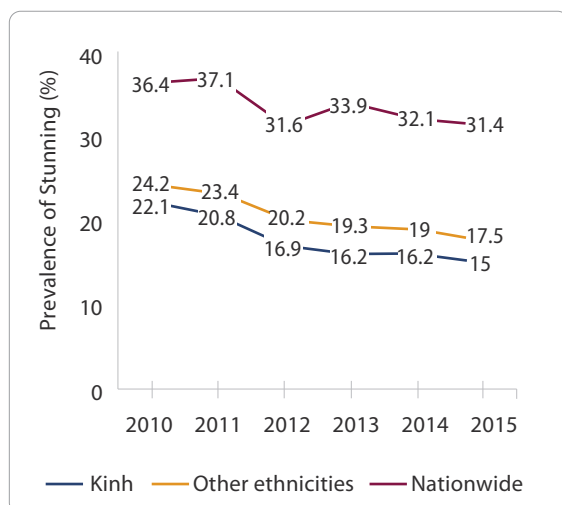


FIGURE M.24. **Dietary habits are worse among ethnic minority groups**

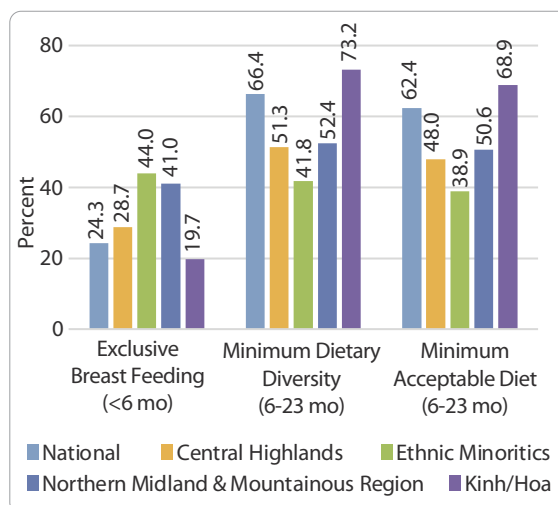
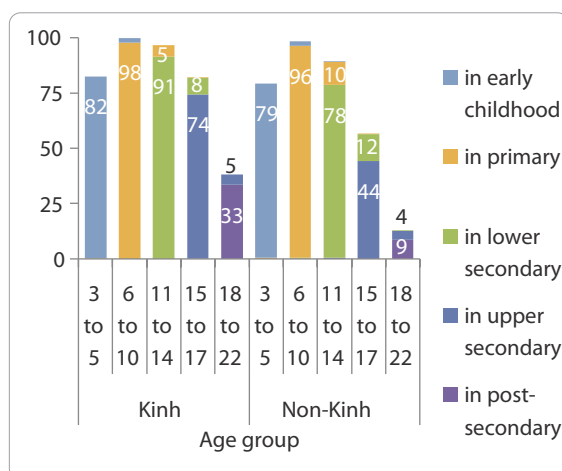


FIGURE M.25. **The enrollment gap between ethnic groups increases with level of education**



Source: World Bank staff calculations based on official data.

FIGURE M.26. **Lower access to hygienic toilets**

Ethnic Group	Hygienic toilet facilities (%)	Nonhygienic toilet facilities (%)	Non toilet facilities (%)
Entire country	53	39	8
Kinh	59	36	5
Tay	21	67	12
Thai	11	75	14
Muong	15	76	8
Khmer	27	55	18
Hmong	3	27	70

Source: UNFPA 2011.

Recommendations

Improving human capital development is important for individual and collective development. It requires a variety of interventions along the life cycle of each individual so they can perform in the job market and increase their potential income. These interventions need to be designed in a way that they will offer equal opportunities for most of the population. These two conditions must be met for rapid and inclusive growth.

Vietnam has been successful in improving the well-being of the majority of its citizen over the past two decades. The recommendations proposed below aim at enhancing the acquisition of skills by the labor force and ensuring that existing discrimination against ethnic minorities will be addressed to ensure fair access to human capital opportunities by all.

Demand-driven workforce development system

Building worker skills for today's and tomorrow's jobs will require radical reforms to the education and training systems, notably in the upper and postsecondary levels. The reforms should be designed around two main objectives: (a) to increase the responsiveness of the post-secondary education sector to demand for skills including the number of post-secondary graduates and the types of skills taught, and (b) to promote equity in access to post-secondary programs.

First, to respond to future demand for skills and increase graduates of overall tertiary education in an equitable way, more diversification is needed in the types of post-secondary education available. This includes developing more cost-effective, non-university options (VET institutions); promoting good quality private tertiary education institutions by allowing equal access to compete for government funded service and/or research contracts; scaling up cost-effective alternative modalities including open university and massive open online courses (MOOCs); promoting closer linkages with the world of work; undertaking administrative reforms to access the current incentives that are provided by law for better tertiary education-private sector engagement; and articulating policies to build bridges and pathways to allow for transfer between VET institutions and universities. A wider range of post-secondary education options not only promotes a more responsive post-secondary skill development sector but also increases access to post-secondary education.

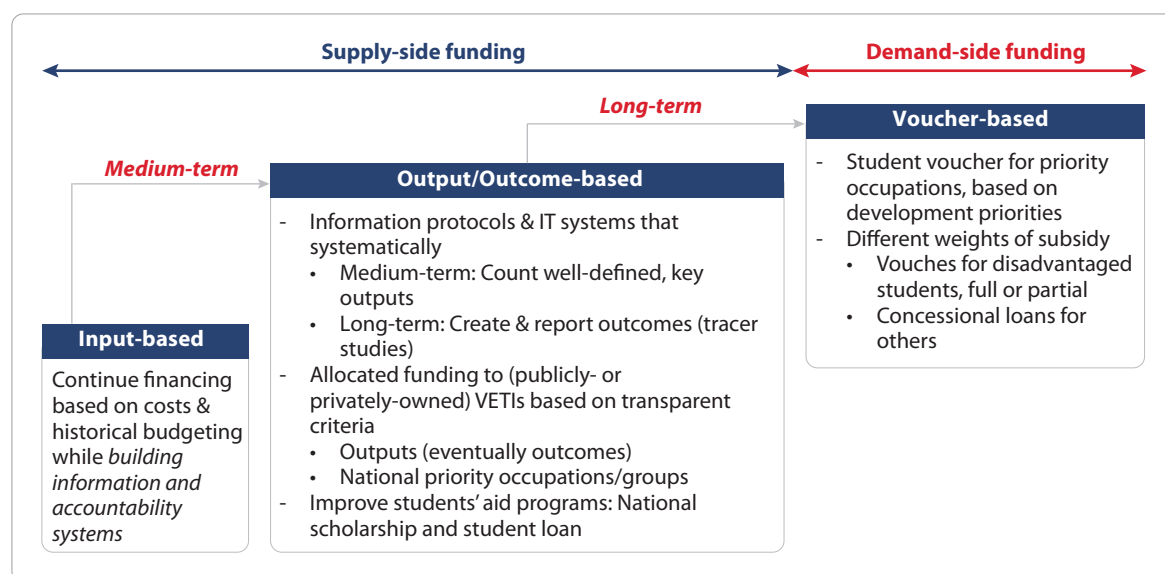
Second, the public tertiary education system cannot solve this problem alone, it will need to crowd-in industry and leverage private education providers to address the workforce skills challenges. Successful systems require a high degree of coordination and partnership between government agencies and the private sector, as well as giving the businesses a strong voice in determining training policy. The government provides the oversight by monitoring data on program quality, encouraging autonomy and accountability, and ensuring efficiency and a results-orientation in government financing. Building demand-side buy-in from employers is a key challenge. The UK and some other European countries provide useful insights for setting up sector employer councils, while East Asian countries have established independent apex training authorities, such as Singapore's Institute for Technical Education, with strong partnerships with employers and other stakeholders. The government can contract private providers to deliver training services to workers in transition.

Closer cooperation with the private sector can also incentivize technology transfer, by providing more dedicated funding for applied research (for example, matching grants), capacity building to set up technology transfer and enterprise linkage promotion offices within tertiary education institutions (and/or within relevant line ministries), and a clear definition of intellectual property and distribution of revenues. Technology can also be harnessed to improve skills development itself, for example, using more sophisticated adaptive learning using big data to move toward personalized learning that meets students where they are in the learning process and then progresses with them as they gain more competencies.

Third, results-based governance including setting targets and financing is needed to ensure incentives of post-secondary education actors are aligned with skill-development

goals. Setting clear results-based targets for the next ten year is critical. Results-based aspirations that move beyond the usual inputs-based approach could include (a) improvements in access and equity: that is, improving the overall gross enrollment rate and equity index (educational attainment of the highest compared to the lowest income quintiles, and ensuring that different demographic groups have access to tertiary education in the context of an aging society); (b) improved quality: that is, the proportion of accredited programs internationally and nationally, and student satisfaction; (c) relevance: student employability, employer satisfaction, availability of shorter, module-based training programs that respond to reskilling needs; (d) research: volume and impact of publications; and (e) innovation technology transfer: volume of patents and startups. Results-based financing would involve transition from a budgetary allocation mechanism based on inputs to outputs and then to vouchers (figure M.27).

FIGURE M.27. **Vision for results-based (and later demand-based) financing**



Note: VETiS = Vocational Education and Training in Schools.

Making growth inclusive: Improving human capital outcomes for Ethnic Minorities

International evidence suggests that reaching ethnic minorities requires a multidimensional approach, as exclusion takes various and multiple forms and is rooted in several causes. Smart programs also require a strong partnership with and ownership by ethnic minorities for both program design and implementation. A large body of literature has established, for example, the importance of mother-tongue instruction, including improved reading outcomes in national languages later in school, when reading is first learned in mother-tongue languages.⁷⁵ The recommendations below therefore take a holistic approach to closing the gaps in human capital disparities between the ethnic minorities and the rest of the population. They also advocate for a spatially integrated approach, as only half of ethnic minorities are living in regions where those ethnic groups dominate.

75 Lopez and Küper 2000.

In Vietnam, the main instrument used by the government to address the challenge of ethnic minorities has been the so-called Nationally Targeted Programs (see box M.2). The main proposal is therefore to reform these programs by (a) improving coordination and leadership, (b) strengthening incentive mechanisms for better prioritization, (c) using more results-based indicators and efficient reporting, (d) improving monitoring and controls, and (e) increasing the participation of beneficiaries in decision mechanisms. Specifics include:

1. **Leadership at all levels and coordination across programs.** There are currently 23 policies to support development of education and training and seven policies on health care provision for ethnic minorities. Policy and program fragmentation can lead to inefficiently scattered resources. One specific recommendation to improve nutrition programming is to reconvene the high-level national intersectoral nutrition steering committee with appropriate representation by provinces with high stunting rates and/or designate specific agencies to monitor and evaluate nutrition-specific and nutrition-sensitive outcomes vis-à-vis allocated resources.
2. **Strengthening the incentive mechanisms for local decision makers to prioritize investments in poorer communes.** Currently, provinces must meet the target of “no communes achieving less than five criteria,” which is not an ambitious minimum achievement target. Instead, the budgeting process should account for higher unit costs as well as lower capacity in remote and poorer communes and ensure that provinces that target the poorest communes are rewarded with adequate financing. The worst-performing ethnic minority groups and the 16 very small minority groups comprising less than 10,000 people will require more resources to help them catch up.
3. **Strengthening local capacity.** Together with incentive mechanisms and stronger monitoring and controls, it is important to motivate local authorities by providing them training on both content and processes.
4. **A results-based funding mechanism, paired with more effective monitoring, would ensure a closer linkage between the allocated budget and outcomes.** Budget reporting and accounting requirements at the local level can be strengthened to ensure equitable distribution of resources and assess efficiency and effectiveness in achieving household-level outcomes. Stronger mechanisms are needed to ensure consistent reporting of expenditures and program outputs across provinces, districts, and communes, for example, by linking disbursements to reporting. Over time, budget allocation should incentivize provinces to improve use of nutrition-specific and nutrition-sensitive interventions, enroll more students, offer full-day schooling to more children, and rationalize the teacher/health workforce. This would enhance both autonomy and accountability at the provincial level and below, and link budget allocation to outcomes.
5. **The monitoring and evaluation framework for the NTPs should be strengthened** by using more rigorous mechanisms to measure not only outputs but the impact of outcomes, as well. This can be done by adopting external mechanisms for measuring such outcome impacts, for example, through surveys by the Government Statistics Office, which have been critical in recent years.

6. ***Ethnic minority communities should be consulted to ensure that programs are culturally and linguistically sensitive to their needs.*** Involving ethnic minorities in the design of interventions and including mechanisms for incorporating feedback during implementation increases the chances of success. For interventions to reach ethnic minorities, literacy constraints, language preferences, gender norms, and cultural values should be considered. Program managers and service delivery staff in health, education, and social assistance provision will need capacity building in cultural competencies to better serve the needs of ethnic minorities.

BOX M.2. **The Nationally Targeted Programs in Vietnam**

The government's key strategy to address rural development with a focus on ethnic minorities and poor families since 2011 has been through the National Targeted Programs (NTPs). The first wave of NTPs included 16 programs that focused on specific sectors through different line ministries, which resulted in fragmentation. In 2015, the government consolidated the NTPs into two programs: (a) an NTP for New Rural Development, implemented by the Ministry of Agriculture and Rural Development; and (b) an NTP for Sustainable Poverty Reduction, implemented by the Ministry of Labor, Invalids and Social Affairs.

While both NTPs have ambitious targets for poverty reduction and income growth, the focus on meeting the New Rural Development criteria (50 percent of communes by 2020) can bias budget allocation toward the communes already close to meeting the target. There is also a tendency for provinces to allocate more spending to infrastructure. Thus, there is a need to rebalance allocation for human capital interventions under the NTPs. The government approved a new Ethnic Minority Master Plan and, relatedly, the Committee for Ethnic Minority Affairs has been requested to submit a detailed implementation plan for the new NTP focused on ethnic minorities.

Beyond reforming the governance mechanisms of NTPs, the interventions should be targeted to areas where results are most effective for ethnic minorities. One priority should be nutrition interventions during the first 1,000 days of life, from the first day of pregnancy until the child's second birthday, as undernutrition during this period could lead to extensive and largely irreversible damage to physical and cognitive development. These interventions should include improved access to a high-quality diet, effective maternal and childcare services, and access to water and sanitation and personal hygiene. Another priority should be access to full-day schooling as it helps incentivize school attendance and better nutrition.⁷⁶

Another area of intervention should be at the other end of the spectrum, which is to facilitate the integration of minority groups into the labor market. Supporting the transition of ethnic minorities into household enterprise and wage employment is key to the country's long-term prosperity, but it will require reducing their economic distance to markets. There are three key entry points to reduce the economic distance: (a) integrate lagging areas into the network economy to expand their market potential, (b) create a secondary economy supporting industries based on the regional absolute advantages, and (c) reduce the cost of migration to increase long-distance migration domestically. These three points will require upgrading skills, in line with the recommendations made in the preceding section.

76 Dang and Glewwe 2017.

Improving access to better jobs for ethnic minorities requires a broad range of interventions that are complementary to skills development. One way is to create a Labor Market Information System by collecting special surveys to identify labor demand, and produce and disseminate user-oriented, regionally specific, gender-disaggregated information. Another would be to design an integrated job search strategy that builds on private initiatives, directing public resources to incentivize employment of hard-to-employ populations, including ethnic minorities. Incentives to food-processing industries, for example, to invest close to the agricultural production base, could generate more jobs for Vietnam's ethnic minorities.

Encouraging long-distance migration domestically will be important to increase access to off-farm opportunities, especially for ethnic minorities and people in low-density economies. In Vietnam, housing issues were the most cited challenge faced by migrants (43 percent), followed by no income (38 percent), and inability to find a job (34 percent), among migrants surveyed in 2015.⁷⁷ One set of interventions could be aimed at addressing the social barriers to people's movement, namely unequal access to public services for temporary residents and improving elderly care services in rural areas.⁷⁸ Complementary infrastructure improvements include better connectivity, both broadband and transport. Transportation vouchers could facilitate seasonal wage work in other provinces. Regulatory reforms should be undertaken to facilitate online commerce and transactions and equalize access to services for temporary residents. Finally, given the culture of strong social cohesion within some ethnic minority groups, support that relies on social networks, such as business development loans to a group of individuals with joint repayment responsibilities, might be appropriate.

An important area of focus to move women into better jobs is to reduce the burden of child and elderly care and increase the availability of and returns from opportunities offering flexible working arrangements. These objectives can be achieved by (a) expanding childcare facilities; (b) promoting participation in the digital marketplace, including peer-to-peer accommodation offering and niche, home-produced goods such as handcrafts and embroidery; and (c) ensuring that women are named on both agricultural and residential land use rights certificates. For the elderly, who will continue to rely on agriculture as a main source of income, overarching land reform will also be particularly important. Such reforms should include strengthening land security, reducing agricultural land use restriction, and broadening land consolidation beyond rice farming.

To stimulate demand for more and better human capital services, the government could consider conditional cash transfers to targeted groups, something not used today.⁷⁹ Such programs have proved to be effective in many countries as they help improve access to human capital services when the main constraint is the behavior of households (such as early marriage, nutrition habits). Conditional cash transfers could be a complementary measure to help stimulate the demand

77 GSO and UNFPA 2016.

78 The need to take care of the elderly discourages migration for both men and women and contributes to reverse migration. Adult children with elderly parents in rural Vietnam are less likely to migrate (Jiles and Huang 2018).

79 Registration and enrollment for social assistance transfers that include education and health remain relatively low among ethnic minorities, while payments are not conditional and often irregular. A pilot is underway using e-payment mechanisms, which should improve the transparency, accuracy, and timeliness of payments.

side, incentivizing households to make use of both education and health care services and providing them with sufficient income to invest in the education and health of their children. Providing cash to targeted, vulnerable families while requiring them to enroll their children in school is likely to increase demand for better-quality educational services. Demand-stimulating programs such as conditional cash transfers must work hand in hand with improving the supply and quality of services, which could be financed through the reformed NTPs, as discussed above.

Green economy

Vietnam is in a state of emergency when it comes to damage to its environment. Today there is a collective sense of urgency that the current model of growth, which is based on the simple accumulation of production factors, must be changed. Because of market failures, the government has an important role to play in influencing individual and collective behavior. The priority should be on pricing policies, regulations, and direct investment, and on information sharing and participatory decision mechanisms.

“Vietnam is beautiful from afar but far from beautiful.” This harsh assessment is not surprising in a country where the main cities are becoming among the most polluted in the world and where the damage caused by poor waste management is visible to everyone almost everywhere. After 25 years of uninterrupted rapid growth, Vietnamese citizens have started to worry about their future. One recent survey in Hanoi revealed that residents are more concerned about pollution than about securing a job.⁸⁰ According to several estimates, the destruction of forests, land overexploitation, water mismanagement, and pollution together cost 6 to 8 percent of GDP every year.⁸¹ This loss does not account for the long-term irreversible damage to the stock of natural resources, and the damage is likely to be exacerbated by global climate change.

The government is not insensitive to these concerns. An increasing number of strategies and plans have been approved that should help propel the country toward a green growth pathway, including the existing National Climate Change Strategy, the Vietnam Green Growth Strategy, and Vietnam’s Nationally Determined Contribution. Perhaps the best signal of the government’s commitment is the inclusion of a new pillar on the environment in the design of its national development strategy for the next decade.

This note builds on both the sense of urgency and the government’s engagement to address the degradation of the environment in Vietnam. After reviewing the main causes behind Vietnam’s environmental damage, it argues that moving toward a clean economy will require a major shift in policy making due to the existence of both market and government failures. A series of recommendations are offered to promote the required change in mindset of major stakeholders, including the government, the private sector, and households.

80 <https://www.google.com/amp/s/www.voanews.com/east-asia-pacific/food-safety-pollution-top-vietnams-latest-survey-public-concerns%3famp>.

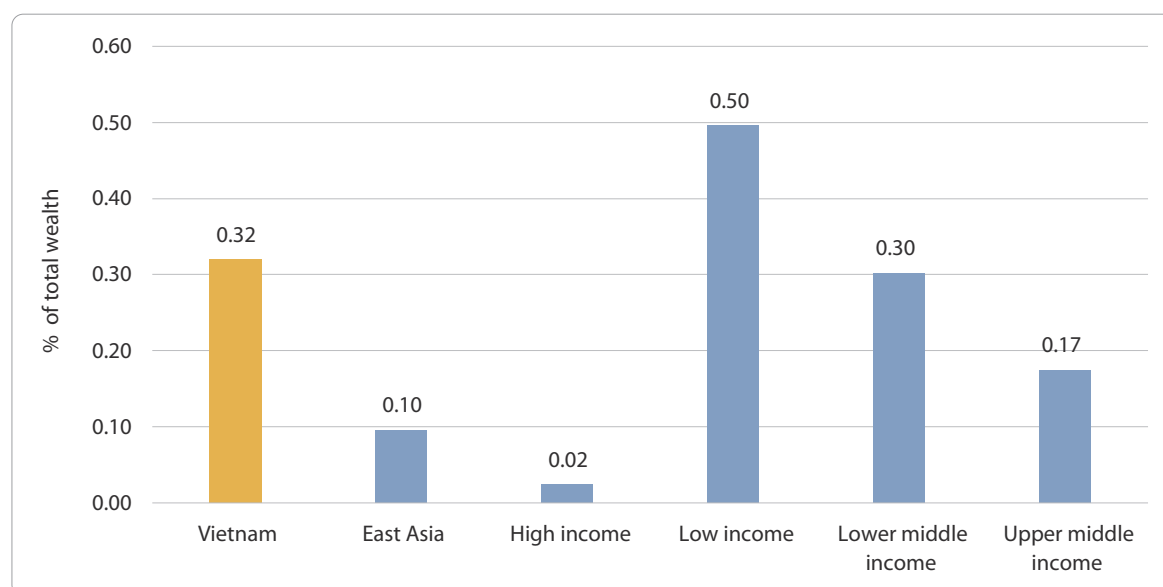
81 <https://www.adb.org/sites/default/files/institutional-document/33916/files/viet-nam-environment-climate-change.pdf>.

Why is the current growth model unsustainable?

The recent economic literature argues that the wealth of a nation is a combination of productive, human, and natural capital. Over the past 25 years, Vietnam has been effective in increasing the value of each of these categories of capital. Since the first two categories have been discussed in other notes, the focus here is on natural capital.

As in most low-income countries, Vietnam has relied heavily on its natural resources, using its extensive stocks of agricultural and mineral resources to enhance its economic development over the past two decades. As depicted in figure M.28, the estimated value of its stock of natural capital accounted for about one-third of the country's wealth during 1990–2014, compared to 10 percent in East Asia and 17 percent in upper middle-income countries. This comparison indicates that Vietnam will have to shift toward more human and productive capital-intensive growth in the future. This move will be even more justified in view of the rapid degradation of the country's natural resources in recent years.⁸²

FIGURE M.28. Vietnam has relied heavily on its natural capital for creating wealth, 1990–2014



Source: World Bank.

There is nothing wrong with Vietnam using its natural advantages to enhance rapid and inclusive growth during its first phase of development. After all, the country is blessed with abundant agricultural land, water resources, and mineral reserves. However, such a model has gradually become unsustainable over time. Part of the reason is that the expansion of these natural resource-based sectors has been extremely rapid. For example, the production of paddy rice, covering two-thirds of the agricultural land, surged from 19 metric tons in 1990 to 40 metric tons in 2010 and 44 metric tons in 2017. Another reason is that this expansion, albeit spectacular, has been relatively wasteful as producers often use more land, water, wood, and other inputs to produce a given amount

82 For a review, see World Bank (2017a).

of output in Vietnam than in other countries. The increase in the production of food was to a large extent achieved while overusing such inputs as fertilizers or pesticides.

As a result, this quantitative growth model based on a few natural resource-intensive sectors has led to overexploitation of soil and water and the progressive degradation of the environment, as illustrated by the following examples (which are further detailed in the background note). While Vietnam has become the second- and third-largest exporter of rice and fisheries products in the world, it is today widely recognized that domestic production levels are not sustainable, as illustrated by decreasing yields and lower catches in recent years. The vulnerability of regions to ecological disasters, such as the Mekong region (where over half of the country's rice production is located), is visible through soil degradation and the pollution of water resources. Nationwide, competition for water has intensified as the needs of a growing urban population conflict with those in agriculture. Sand and gravel (aggregates) are the second-largest natural resources extracted but, at the current speed, the domestic supply of natural sand will soon be fully consumed.

Concurrently, environmental concerns have been aggravated by the development of industrial activities that are heavily energy consuming and sources of rising pollution. Today, the industrial sector accounts for 48 percent of the country's final energy use. Lack of attention and often outdated technologies have made Vietnam a highly energy-intensive country as its economy requires twice as much energy for each unit of produced GDP as the average in East Asia. Furthermore, coal-fired power accounts for approximately one-third of the primary energy supply for the domestic market, even though it is one of the least clean sources of energy. While the use of hydropower (35 percent of energy generation in Vietnam) is in principle a clean source of energy, poor planning and lack of coordination have produced unexpectedly large effects on the hydrology of the Mekong delta that are not even fully understood.

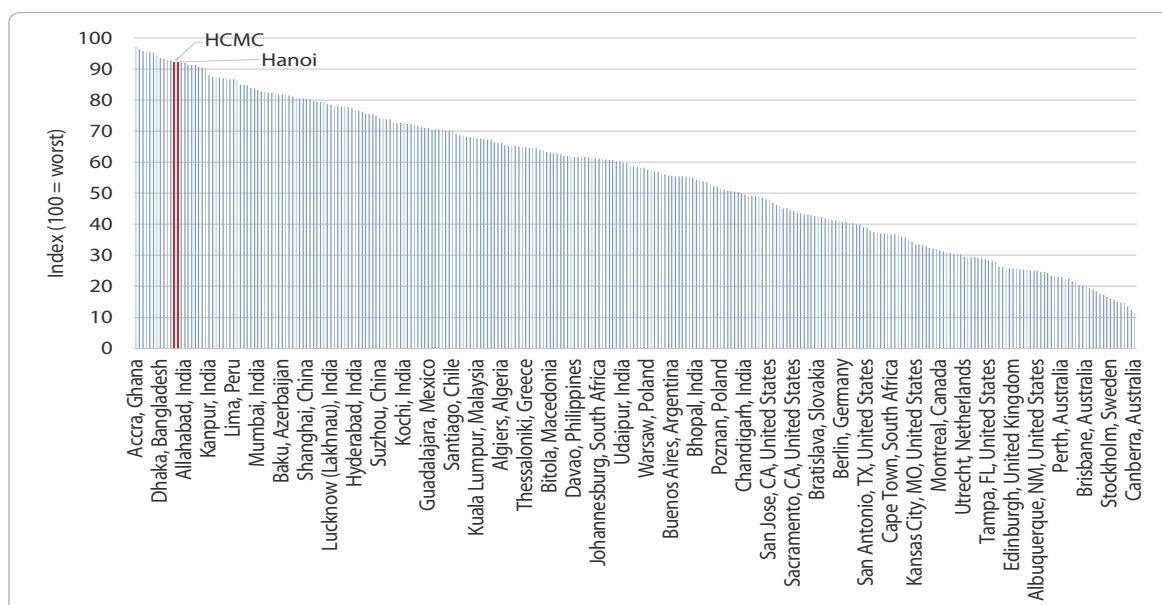
Vietnam's environmental problems are being exacerbated by the relatively rapid increase of the population living in cities, from 15 million in the early 2000s to 34 million in 2018 and perhaps as many as 50 million in 2035. The total amount of waste generated by cities is estimated at over 27 million tons per year and is projected to reach 54 million tons nationally in 2030.⁸³ In 2014, the country produced 12 million tons of solid waste, and it is estimated that urban areas alone will be dumping 22 million tons per year by 2020, according to the Ministry of Natural Resources and Environment.⁸⁴ At the same time, Vietnam is also struggling to collect its waste. Only 40 to 60 percent of waste ends up in dumps, while the rest is discharged into canals and rivers that flow into the sea. Growing cities have raised the level of CO₂ emissions, and Hanoi, as well as Ho Chi Minh City, are now among the urban centers worldwide that are most affected by air pollution (figure M.29). Water contamination has resulted in "dead rivers" in and around major cities.⁸⁵

83 World Bank 2018e. The actual amount of waste generated by households and industry is not known. There is no regular waste sampling and analysis, and there is insufficient information on the exact waste generation, collection coverage, and waste disposal in the different geographic areas.

84 According to Jambeck et al. (2015), Vietnam is the fourth-worst country globally in terms of its plastic waste problem, based on indicators measuring, among other things, the levels of plastic waste generated, the share of this waste that is mismanaged, and the degree to which the waste flows as debris into the marine environment.

85 Only 10 percent of municipal and industrial wastewater is treated, and countrywide, most sewage, industrial effluent, and solid waste find their way into waterways. While water quality remains fair upstream, the downstream and estuary zones tend to be heavily polluted.

FIGURE M.29. **Most air-polluted cities in the world, selected cities, 2019 midyear**

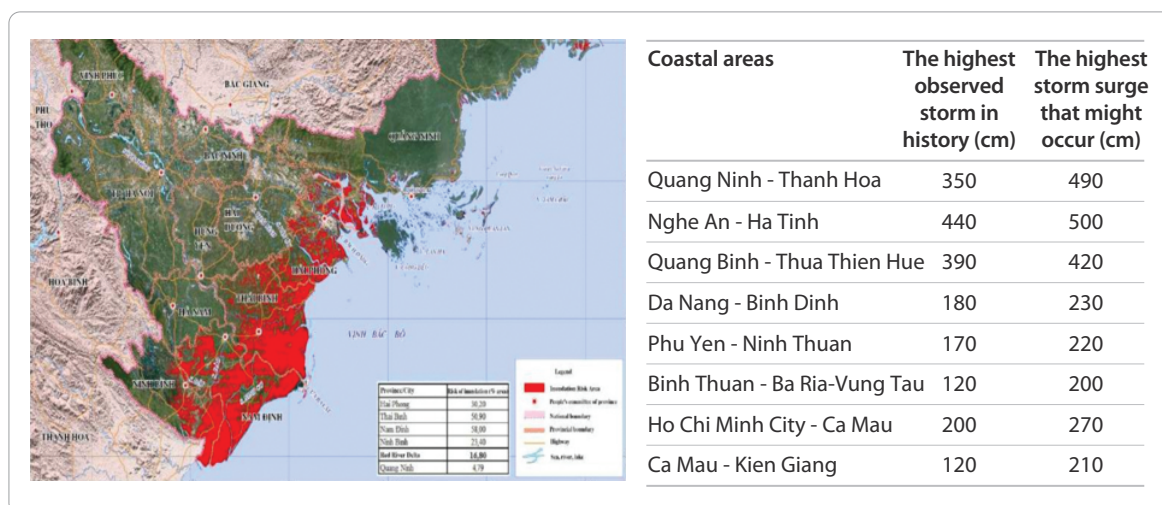


Source: <https://www.numbeo.com/pollution/rankings.jsp>.

Climate change will further compound the impact of environmental and natural asset degradation in Vietnam.

The country is highly vulnerable to climate change, including chronic impacts such as saltwater intrusion in low-lying areas of the country (that is, the Mekong Delta), which affects cultivation and groundwater. With projected rising sea levels, more than 50 million people are at risk, especially in the south of the country. It is estimated that the country might lose 5,714 million hectares if the sea level rises by 12 centimeters (figure M.30). Total losses could amount to almost 20 million hectares if the sea level rose by 17 centimeters. Higher temperatures will reduce soil fertility, increase forest fire frequency, and generate more energy demand for air-conditioning. Variable and unpredictable rainfall will affect both agricultural productivity and living conditions in cities. For all these factors, Vietnam is the ninth most exposed country to climate risk in the world.

FIGURE M.30. **The impact of a rising sea level and climate change**



Source: World Bank.

Changing the mindset of both individuals and the state

Vietnam needs to determine whether future growth should continue along the current pathway or shift toward greener, climate-resilient growth. The above brief description provides a sense of urgency as the country is witnessing the rapid degradation of its natural resources, together with waste management, air pollution, floods, and higher temperatures. This explains why the value of the country's natural wealth has been greatly and negatively affected, which will in turn reduce economic growth in both the short and longer terms.

These losses do not account for all indirect costs of environmental degradation on the economy, which can take various forms. Human capital can deteriorate as poor air quality and pollution of rivers and coastal waters have a negative impact on human health. According to a global study of disease burdens, in 2017, air pollution was the sixth leading cause of death in Vietnam.⁸⁶ In addition to days lost due to illness, reduced health can place a higher burden on the health system and on government finances.⁸⁷ A recent economic analysis suggests that if wastewater remains untreated, labor productivity would be 7 percent lower in 2035 than in 2012, which will translate into a 3.5 percent loss in national income. Pollution also has more subtle impacts. Since the consequences of exposure to toxic substances can be severe, people may invest or change behavior to avoid them. People respond to pollution by investing in protection, such as costly air filters or home insulation. Or they may change behavior such as avoiding being outside during times of high pollution. In the longer term, pollution can have more persistent impacts, including the effects from early life exposure or the impacts of mothers' health at birth.

The country's productive capital is also deeply affected by the degrading environment, including in sectors such as tourism and transport. One of the most exposed sectors is agriculture. Agricultural production growth has already fallen from 57 percent per year during 2001–10 to about 40 percent more recently. Those figures are relatively low compared to those reported by China, Malaysia, and Thailand (over 80 percent). While farms indicate that water supplies are reliable—only 8 percent of farms experience water outages—a more concerning issue is poor water quality. Fourteen percent of firms report that poor water quality is a major or very severe obstacle to business. Recent studies predict that the impact of pollution on irrigated rice production could reduce production by approximately 18 percent in 2035.

Today, there is less and less controversy about the existing and potential costs associated to rising environmental damage. It is commonly agreed that environmental policy and economic growth are not substitutes but complements. However, individual behavior is likely to change only gradually because of several market failures. These are relatively well-known but are at the heart of the policy dilemma in Vietnam and elsewhere.⁸⁸ The most obvious is time inconsistency in the sense

86 World Bank and IHME 2016.

87 Pollutants from agriculture (nitrogen, phosphorus, and pesticides, among others) and pollutants from industrial waste, which include metals, arsenic, and a variety of other toxins, are also a major threat, but there is a lack of information on the exposure to and treatment of these pollutants.

88 For a good summary on the impact of market failures on environmental policies, see "STERN REVIEW: The Economics of Climate Change," N. Stern; <http://siteresources.worldbank.org/INTINDONESIA/Resources/226271-1170911056314/3428109-1174614780539/SternReviewEng.pdf>.

that the benefits of interventions will increase over time, while their costs are immediate. For example, most of the impacts of emissions do not fall on those conducting the activities; instead, they fall on future generations, and this future cost is not reflected in prices. The adverse effects of greenhouse gases are therefore “external” to the market, which means there is usually only an ethical, rather than an economic, incentive for businesses and consumers to reduce their emissions. As a result, the market fails by overproducing greenhouse gases, and individuals maintain the status quo or postpone their decisions, especially when the cost of inaction is still uncertain.⁸⁹ In a poor country, many individuals may not invest upfront in new and cleaner technologies because of financial constraints.

Another market failure is that individuals are likely to invest less than what is required from a collective perspective because private benefits are lower than social ones. For example, a household will not invest in solar energy because its own benefits are lower than the benefits for the broader public. Alternatively, the same household can wait for others to move first and invest in these new technologies so it can also benefit from cleaner air. Because environmental challenges do not stop at a country’s border, (for example, trashed plastics travel across the oceans), there is also an international dimension to the green economy. An obvious related market failure is that many individuals have limited access to public information or may lack the capacity to analyze it. In short, all these market failures justify government intervention because the management of natural resources and the environment is both a public and a global good.

These market failures call for a package of public interventions. The government is not exempt from its own failures. Today, Vietnam arguably has most of the necessary legal framework to ensure that its nonrenewable resources are managed, protected, exploited, and used rationally, economically, and efficiently to meet the requirements of the industrialization and modernization of the country (see box M.3). However, implementation of the environmental policy, which is adopted at the national level and implemented at the regional and local levels, is lagging, and trespassers are rarely sanctioned. The government does not systematically evaluate the environmental effects in most of its investment projects. Furthermore, the use of the taxes and fees charged on natural resources and other environmental goods and services is not transparent, which makes it difficult to ensure that the revenue is reinvested in human, infrastructure, and natural capital.

These failures are generally rooted in larger institutional inefficiencies that will have to be addressed. Those include the fragmentation of decision-making process, as environmental policies often require close collaboration across ministries at the central level and between central and local authorities. The slow and uneven implementation of reforms is linked to weak public investment management and (internal as well as external) controls. Finally, the unequal enforcement of rules is partly the consequence of corruption and the weaknesses of the judicial system.

⁸⁹ Baranzini, Chesney, and Morisset 2003.

Over the past few years, the government has adopted a number of strategies and plans to strengthen the legal and institutional environment for a greener economy. In addition to national strategies and commitments at the international level, seven ministries and 34 provinces have already issued their Green Growth Action Plans. There are also ongoing efforts to reduce the intensity of greenhouse gas emissions from industry, agriculture, transportation, and construction, and to develop clean energy sources through policies to promote investment in renewables. The latter includes the Vietnam Renewable Energy Development Strategy until 2030, with a vision to 2050, and preferential policies on the purchase price of wind, small hydro, biomass, and solar power producers and waste treatment facilities.

The authorities have also encouraged efforts to green production by reviewing and adjusting existing sectoral plans, and supporting increased productivity and pollution abatement, and investments in the development of natural capital. In parallel, there are also efforts to promote green cities and sustainable consumption. These are promoted through the Vietnam Urban Green Growth Development Plan to 2030, and 24 out of 59 cities have already issued documents to direct and implement urban green growth.

The government has allocated some funds for green growth projects, including public transport investment programs, and the State Bank of Vietnam has integrated and developed credit solutions and programs to create favorable conditions for organizations and individuals to implement projects that contribute to environmental protection and that support green growth and sustainable development.

Recommendations: Placing the environment at the center of the reform agenda

There are many ways to move toward implementing greener and climate-resilient growth, but all will require a change in the mindset of both individuals and the state to overcome the market and government failures described in the preceding section. A shift to a green economy involves more than marginal improvements. It requires rethinking how technologies, products and services, management practices, rules and regulations, partnerships, and business models are developed and implemented. New pathways for greener growth can tap into the emerging and established markets of key green economy sectors—renewable energy, energy conservation, clean water provision, sustainable forestry and fisheries, plastic and solid waste recycling, green infrastructure, and sustainable cities—making them a source of high-tech, value-added growth and job creation. When policy objectives and commercial opportunities reinforce each other, the transition to greener growth can be rapid.

One priority is to move from treating the environment as a separate sector to bringing sustainability considerations into everything the government, the private sector, and individual households do. Sustainable sector practices, whether in industry, agriculture, waste management, or water supply, are compatible with important social and economic growth objectives. This “whole economy approach” should be at the center of the Vietnam’s reform agenda as short-term considerations should be smartly balanced with the long-term objective to preserve the country’s natural stock to a sustainable level.

The government has a central role to play in maximizing the country's wealth over time.

This note proposes three complementary policy instruments that authorities can use to influence individual and collective behavior: (1) pricing policies, which have proved to be effective in influencing the supply and demand of nonrenewable resources, (2) direct public interventions through regulations and investments, and (3) the need to ensure easy access to information and decision-making processes for all stakeholders.

Pricing policies

The basic principle is to rely on price instruments as much as possible, so firms and households find the most efficient way to achieve greener practices. So far, the Government of Vietnam has used pricing policy to enable access of households and firms to basic resources such as energy and water. This strategy was justified to the extent that, historically, only a limited proportion of final users had access to these basic services or had the financial resources to pay for them. As a result, current prices are low, raising demand to perhaps unnecessary levels. Prices also do not reflect the true cost of supply, which explains why existing systems are also relatively inefficient, with large technical and commercial losses that need to be covered by taxpayers.

The government should therefore consider realigning prices to supply costs and, when necessary, using them to account for externalities such as health impacts. For greener growth, it will be important to align prices with the social cost of carbon emissions, air pollution, and other negative externalities. This is illustrated below by a few examples on energy, water, and waste (other examples can be found in the note on land, forest, and the financial sector).

- **Energy:** In the energy sector, there is ample room to use market instruments to generate more positive environmental and social outcomes. Current tariffs cover the current cost of supply but may not be adequate to cover the future investments of Vietnam Electricity (EVN) and do not reflect social costs (for example, from pollution). The promotion of renewable energy, such as solar,⁹⁰ would also have positive environmental and social outcomes. For Vietnam to achieve its ambitious targets for renewable energy, it will have to go beyond the feed-in tariff deployed to attract private developer investment. One option would be to use a system of reverse auctions, which has proved effective in reducing costs in other countries.⁹¹ The adoption of renewable energy systems can be incentivized by concessional credit lines or a guarantee facility, which would promote access to much-needed financing for industrial enterprises.
- **Carbon pricing, such as a carbon tax or an emission trading system, is an important tool for the government to promote cost-effective greenhouse gas mitigation.** Explicitly pricing carbon helps internalize the societal costs of greenhouse gas emissions while leveling the playing field between polluters and nonpolluters. Firms with low-carbon technologies benefit from past and current mitigation investments, while high-emitters are incentivized to efficiently reduce emissions to avoid carbon payments, such as a carbon tax or a penalty under

90 Solar power is becoming increasingly attractive because of recent cost reductions and quick construction rates.

91 Auctions, with a fair risk allocation present in power purchase agreements, are usually the best way to foster competition in the market and decrease the cost of solar generation. The government should develop and announce a solar auction roadmap that includes regular auctions, starting with a series of initial pilots, and scaling up in future years. Providing some certainty of the short- and medium-term capacity targets, and the likely timing of future auctions, will allow early lessons to be incorporated and will help build investor confidence.

an emission trading system. By April 2019, 40 countries and economies had adopted some form of carbon pricing, either through direct taxes on fossil fuels or through cap-and-trade programs.⁹² Currently, Vietnam has a tax that is narrowly focused on hydrochlorofluorocarbons (HCFCs). This could be broadened to include other fluorinated greenhouse gases, even though the country is not yet compelled to do so under the Montreal Protocol. Vietnam could draw insights from countries like Spain, which has adopted a broad tax on fluorinated greenhouse gases in which the tax rate for each gas is indexed to the global warming potential of the individual gases. A successful carbon pricing instrument can force actors to mitigate emissions, stimulate clean innovation, create wider economic benefits through raised revenues and investments, and reduce technology costs as firms allocate their various assets and resources to optimize their investment to mitigate emissions.

- **Water:** In the case of water, pricing based on principles of full cost recovery and “whole of water cycle management” can be effective if implemented together with improved service delivery. Experience has shown that user willingness to pay and to use limited water resources more efficiently is closely correlated with the quality of services. In 2017, the Law on Hydraulic Works reintroduced irrigation service fees to be paid by users in Vietnam that are expected to be aligned on management costs, O&M expenses, depreciation charges, and other reasonable actual expenses.
- **Waste:** Often the most effective way to stimulate efficient resource use and lower waste generation is through prices. Currently, the tariff paid by households for solid waste is very low (less than 0.5 percent of spendable income, while international practice is 1 to 1.5 percent). Vietnam currently has an environmental tax, although low, on importers and producers of shopping bags. This tax generates revenue but is yet to stimulate much-needed behavior change.

While few will disagree with the effectiveness of using pricing environmental policies to change behavior, raising prices or taxes can be politically and socially challenging in the short term. There have sometimes been strong negative reactions by consumers around the world against the introduction of carbon taxes or the reduction of subsidies that were going to increase fuel and gasoline prices for the final consumer.⁹³ For that reason, such policies should be introduced gradually, with smart information campaigns explaining the longer-term benefits. The government can also consider reducing other taxes and thus alleviate the overall fiscal burden on firms and households. The use of targeted subsidies on most vulnerable groups, partly cross-subsidized by the revenues of environmental taxes paid by more affluent groups, is also an option that has been implemented by Germany and Sweden to reduce energy prices for certain households.⁹⁴ Similarly, in the water sector, there are several examples of tariff structures and subsidies to avoid undue burden

92 In the United Kingdom, coal use dropped significantly after the introduction of a carbon tax in 2013. In Colombia, the carbon tax came into force in 2017 and applies to the sales and imports of all fossil fuels except coal. The tax covers 16 percent of Colombia’s total emissions and 50 percent of the emissions from the fossil fuels. Revenues from the tax are used to support the Sustainable Colombia Fund. In Mexico, a carbon tax is imposed on fossil fuels (gasoline, petroleum coke, carbon coke, propane, butane, kerosene and other jet fuels, fuel oil, and coal) and covers 40 percent of Mexico’s emissions.

93 Attempts at fuel price reform in Indonesia, which spent between 1 and 4 percent of GDP annually on energy subsidies in the past 20 years, shows that such reforms need to be embedded in a long-term process that builds political support and buffers the social consequences of price hikes.

94 http://www.socialplatform.org/wp-content/uploads/2014/01/Environmental-taxes-and-equity-concerns_Definitive-Version.pdf.

on the vulnerable and the poor. Singapore provides a credit line for poor households that can be used for their water and wastewater bill. When deploying these policy instruments, the government should also consider the interactions between prices and public investments. For instance, when individual motor vehicle transport is made more expensive or difficult through fuel taxes, viable alternatives must be available in the form of an efficient public transit system.

Regulations and investment policies

Market pricing is more effective when complemented by smart regulations and strategic public investments. Regulations are also necessary when prices alone do not have the desired effect. And in some cases, the government needs to invest more directly to achieve desired goals, especially on adaptation or preventive measures.

The purpose here is not to present a long list of the potential regulations and investments that the government could consider in Vietnam (the note proposed a number of them) but rather to emphasize a few guiding principles based on international practices. These principles suggest that smart policy should include (a) balancing the use of soft and hard constraints, (b) closely coordinated actions toward the development of a circular economy, and (c) the internalization of environmental issues in public finance management.

- **Balancing soft and hard constraints.** To formulate regulations, the authorities should combine a soft and hard approach. The soft approach focuses on sharing information as a channel to modify behavior and encourage negotiations.⁹⁵ Labels with information on the energy efficiency of appliances, cars, buildings, and organic food are common in OECD countries. Countries like Australia, Israel, and the Netherlands have also introduced labels on water-using devices. The authorities could also use harder measures by introducing targets or ceilings on, for example, the quality of water or gasoline. They could also control or prohibit the use of products that are detrimental to the environment (through, for example, permits for the use of pesticides and chemicals). In terms of land management, zoning has been an effective tool, when enforced, to prevent housing and industrial development in areas vulnerable to flooding. It is important to find the right balance between carrots and sticks, and, when sticks are used, to strengthen monitoring and enforcement capacities.
- **Coordinated actions.** Coordination across sectors and stakeholders is key because most environmental regulations have cross-cutting, and multidimensional impacts. Their implementation is also generally not restricted to one administrative boundary. However, these co-benefits and trade-offs are often not internalized in decisions regarding natural asset management, as illustrated by a few examples that are further detailed in the note (see box M.4). When considering forestry regulations, the authorities should balance between productive purposes in one specific area (for example, production of sawn wood or wood chips for energy generation) and climate change mitigation co-benefits for the entire economy.

95 According to the Coase theorem, in the face of market inefficiencies resulting from externalities, private citizens (or firms) are able to negotiate a mutually beneficial, socially desirable solution as long as there are no costs associated with the negotiation process.

BOX M.4. **An example of cross-cutting effects: Protection of environmental and cultural assets**

Environmental and cultural asset preservation must be a key element of Vietnam's tourism strategy. On the policy front, the designation of specific natural/cultural sites and attractions as protected or heritage areas will need to be a key principle. Complementing such policies should be monitoring measures that identify or establish institutions and systems to track key risks to destinations' natural, cultural, and social assets, and identify growing pressure points (for example, the proliferation of single-use plastic).

Financial resources to support asset preservation, protected area management, and proper enforcement of regulations is key to maintaining and, where possible, optimizing, natural capital services. Charging visitor access fees is one approach for ensuring revenues for preservation grow commensurately with visitor demand, thus contributing to sustainability. Another approach is establishing partnerships with private foundations or enterprises to help co-manage and co-finance preservation efforts.

These interconnections are also central to efforts to increase the climate resilience of cities where the authorities have to consider urban development together with its potential impact on marginal areas, such as delta floodplains, coastal zones, riverbanks, or other natural buffers. In agriculture, co-benefits should justify sustainable irrigation approaches coupled with the widespread use of water-saving technologies (including sensors) as they would jointly cut production costs for farmers and help address global environmental issues, including reducing greenhouse gas emissions and water pollution. Similarly, sequestering carbon in soil through better soil management is a natural way of removing carbon dioxide from the atmosphere and of improving farm productivity. Coordination should also be central for managing negative externalities or trade-offs such as those stemming from efforts to maintain year-round flood-sensitive agricultural production systems in the floodplain of the Mekong delta area having flood impacts downstream. Similarly, maintaining freshwater agricultural production systems in coastal areas of the Mekong delta are increasing dependence on groundwater, which in turn is a cause of land subsidence (the sinking of land as severe as 5 centimeters per year), which results in a higher probability of flooding and saltwater intrusion. Combined with sea level rise and reduced sediment deposition, the effects of continuing subsidence could be grave and require urgent coordinated interventions not only at the central and regional levels in Vietnam, but also between neighboring countries.

The recognition that an environmental policy implies multiple relationships should motivate Vietnam to accelerate its transition toward a circular economy approach that integrates climate, natural resources, and environmental considerations in sector strategies. In a circular economy, the raw materials used in the production processes are carefully selected to reduce any nonrecyclable waste, and where there is waste, energy is recovered from it, so that simple waste disposal is avoided where possible. To move toward a full circular economy, Vietnam could start with policies and plans focused on waste management and boosting markets for secondary products. This would help tackle part of the environmental challenge related to plastic waste. Such measures would need to be quickly followed by policies and plans that promote ecological design and consider material flows, as well as policies focused on extended producer responsibility.⁹⁶ Such a transition will

96 Extended Producer Responsibility is a policy approach under which producers are given significant financial and physical responsibility for the treatment and disposal of post-consumer waste products (<https://www.oecd.org/env/tools-evaluation/extendedproducerresponsibility.htm>).

require strong government leadership and commitment to move toward a greener growth pathway, promote collaboration with and among diverse groups (research, private sector, public sector), and foster innovation.

Internalizing environmental concerns in government processes. The government can also lead by example and internalize environmental concerns in its management processes. As is done in an increasing number of countries, environmental criteria can be incorporated into the selection of investment projects (tourism, energy, agriculture). This would include mandating and conducting ex-ante policy reviews to ensure they are green, climate-resilient, and low carbon (for example, by extending the application of strategic environmental assessments to policies). It would also require capacity building, especially at the local level, and the introduction of proper incentives in human resources management to further motivate civil servants to think green.⁹⁷

Despite the known benefits of green growth, stronger incentives for local leaders will be important to accelerate greener and climate-resilient growth. Vietnam could adapt results-based or specific-purpose fiscal transfers to incentivize local leaders to better manage and use natural assets and the environment. Performance-based transfers require robust and easy-to-monitor parameters that can be tracked and against which payments are made. Performance-based fiscal transfers have been used in Brazil, France, Germany, Portugal, and other European Union countries. In Brazil, where protection of forests is an important public service, ecological fiscal transfers were made to municipalities to compensate them for the opportunity costs associated with a protected area that is subject to land-use restrictions.

Finally, the government can also adjust its financing strategy by using instruments specifically designed to support its environmentally friendly investment program. Several countries, including Vietnam, have issued so-called green bonds with success (in the sense that they have been oversubscribed).⁹⁸ Partnerships with the private sector can be effective as an increasing number of private enterprises are ready to invest in green investment programs.

Improve access to information and the decision-making process

Government action is also required to improve the information base for designing policies and monitoring their achievement. At the macro level, natural resources could be considered in national accounts, as many countries have done. This would emphasize the fact that natural capital is an economic asset on a par with human or physical capital. It would also allow Vietnam to better monitor whether its natural asset base is being depleted, remains constant, or is increasing, as is the case in many high-income countries. At a more operational level, specific information systems need to support sector planning and policy making. An important consideration must be to make these data available to a broad range of stakeholders, so the significant investment in their creation yields the highest possible return.

97 For example, the performance of managers of natural assets (for example, lands) in government agencies could be explicitly evaluated with regard to environmental sustainability in the longer term.

98 The Philippines' Ayala Corporation, with support from the International Finance Corporation, recently issued green bonds to finance renewable energy investments in Vietnam.

Decision makers need access to modern, up-to-date data that are consistently used across sectors. Reliable information should include data on key parameters for greening growth.⁹⁹ High-quality and timely data and information must underpin plans, policies, and investments. These systems should include processes for data collection, data management, data visualization, and data sharing that are robust, transparent, and cost-effective.

Data systems, such as the System of Economic and Environmental Accounts, will help make better decisions regarding the use of natural assets. The System of Economic and Environmental Accounts is an extension of the System of National Accounts, which incorporates natural capital accounting, providing a broader picture of wealth and development progress than standard measures such as GDP. It is readily possible to extend the System of National Accounts to a System of Economic and Environmental Accounts that includes Natural Capital Accounts for fisheries, forest, land, and water, as was recently done in several countries. For example, Australia uses its water accounts to inform suitable policy measures to tackle drought. Costa Rica has energy accounts that provide evidence for choosing efficiency strategies that have the largest impact on people, the economy, and the environment. Botswana reports macroeconomic indicators, including on mineral revenues and public finance. This has supported Botswana's efforts to invest its mineral revenues into physical and human capital assets.

There is also a need to invest in sector-specific information systems to support policies, plans, investments, and implementation. For example, investments in land information systems will facilitate environmentally sustainable rural land-use planning. Land consolidation efforts will trigger demand for much better information about land resources to support valuation through computerized mass appraisal of plots. Comprehensive land information systems that provide spatially detailed information can also serve other purposes. They increase transparency, help reduce possible corruption in land markets, improve integrated land management, help ensure land-use rights—for instance, for vulnerable populations—and form the basis for rural planning. In developing those systems, it will be important to ensure that they are fully integrated into Vietnam's National Spatial Data Infrastructure, include comprehensive information for assessing the environmental and climate change implications of land-use reforms, and that relevant data can be accessed by all stakeholders.

Open data initiatives can accelerate the usability of data to foster innovation, partnerships, and greener growth. Open data are data freely available online, in machine-readable format, and covered by a legal license that allows anyone to use and reuse it for any purpose, including commercial purposes.¹⁰⁰ Governments, including the Government of Vietnam, are collecting and storing large amounts of data, which, if opened to the public as open data, could bring significant economic and social benefits¹⁰¹ Evidence has shown that open data can have the following benefits: (a) direct and indirect benefits to the economy, (b) improved efficiency and effectiveness of public services,

99 The parameters should include measurements related to pollution, asset use, and emissions of carbon dioxide or other greenhouse gases. Data on stocks and flows of natural assets, their economic value, and the potential impact of climate change on these assets are also important.

100 <http://opendatatoolkit.worldbank.org/docs/world-bank-open-data-support.pdf>.

101 Most readers of this chapter use open data platforms to get information on weather, fastest routing to avoid traffic, low costs for airfare, or pricing of property.

(c) government transparency and accountability, and (d) better information sharing and decision making within governments.¹⁰² Vietnam could significantly strengthen planning and policy making by accelerating the open data efforts that are currently underway and by prioritizing those initiatives that grant access to data on the environment, natural assets, and climate change. In the Philippines, the Department of Transport built an integrated transport database for Metro Manila, and leveraged the resulting open data sets to build a series of information apps and prepare a transit efficiency plan that could reduce greenhouse gas emissions by 23 percent.

The Government of Vietnam should also consider strengthening environmental education to promote greener habits and create opportunities to promote research and development on topics such as green technology. Education, at multiple levels, on subjects such as greener habits, green engineering, and green technology will be important to increase the locally available competencies to assist with greening growth. Information on greener habits, can help increase the awareness of citizens regarding their right to clear air, water, and soil, as well as their responsibility for maintaining them. Building local constituencies can take time. Local constituencies, however, will outlast changes in administration and foster continuous environmental mainstreaming.

Greening growth will require the engagement of many stakeholders, and firms have a major role to play in providing solutions to greening growth. Firms can identify ways to control the costs of green development by innovating and adjusting their production processes. Greening growth will also require the engagement of citizens and nongovernmental groups as behavioral change is a critical element of greening growth. These stakeholders can assist with collecting and disseminating information on actions for greening growth, help with tracking progress and measuring performance, and help ensure accountability for delivering green growth. Local stakeholders should be given a greater voice in local planning processes. It is often ordinary citizens and civic institutions that encourage better management of natural assets and the environment because they are directly affected by pollution, resource degradation, and the effects of climate change. In many countries, environmental courts have also been an effective way to hold polluters to account. Besides policy, regulatory, and economic incentives, a critical task for the Government of Vietnam will be to support collaborations among all these stakeholders.¹⁰³

102 <http://opendatatookit.worldbank.org/docs/world-bank-open-data-support.pdf>.

103 There are several collaborative initiatives that show the value of such efforts in accelerating achieving greener growth. Examples include RE100, a global, collaborative initiative of influential businesses committed to using 100 percent renewable electricity. RE100 provides innovators with information on the size and direction of the market for renewables and helps speed up the innovation cycle by lowering the transaction cost of identifying likely customers. Similarly, Sustainable Energy for All has Energy Efficiency Accelerators that support different opportunities: appliances and equipment, industrial energy efficiency, lighting, building efficiency, district energy, and transport and motor vehicle fuel efficiency. Its aim is to double the rate of improvement in energy efficiency worldwide by 2030. The accelerators bring together companies and public actors and generate and disseminate information, encourage new business models, and help develop new market segments (file:///C:/Users/wb277499/Downloads/World%20Green%20Economy%20Report%202018.pdf).

Conclusion

Smart policy making is about learning from others' successes and failures and adjusting the lessons to one's own context. So far, Vietnam has used the path followed with great success by a few other East Asian countries during 1980s and 1990s, and more recently by China. The key message of this collection of notes is perhaps that Vietnam should continue to be inspired by the countries that have successfully managed to escape the middle-income trap, especially Korea, and to adjust these lessons to the country's and the global contexts, which have rapidly evolved in recent years.

Both economic theory and empirical evidence have shown that efficiency gains become more important when a country moves up the ladder of economic development. Not only does it become more difficult to accumulate human and physical capital because of decreasing returns, but the impact of such accumulation could negatively affect the country's stock of natural resources. The focus should, therefore, be on the quality rather than on the quantity of economic growth. In the case of Vietnam, this strategic shift is further required because of the decline in its traditional drivers of growth (demography and structural change) and the uncertainty surrounding global and regional markets, which may affect its external sector as well as the projected impact of climate change.

Several specific recommendations have been derived from our four deep dives that should lead to more dynamic domestic firms, improved quality infrastructure, more developed skills, and the adoption of more environmentally friendly policies. All are summarized in the introduction and are essential for rapid, inclusive, and sustained economic growth in Vietnam.

Beyond these recommendations, our approach advocates for the use of market-based instruments to encourage the necessary shift from cheap access to nonrenewable resources to skill development. One big success of Vietnam is the use of such market-based instruments to incentivize the necessary changes to its economic development and an optimal allocation of resources. In the 1980s, agricultural price reforms were adopted to encourage farmers to produce more as they could increase their profits from exports. Similarly, over the past two decades, the demand for infrastructure services (such as electricity and water) was enhanced through user fees that were significantly lower than supply costs. The reliance on such market instruments should remain a priority for the government, but these instruments should align with the country's emerging new priorities. Among those new priorities are the need to further promote the skills of the labor force, which is a precondition for upgrading the country's productive capacity. Concurrently, the use of nonrenewable resources must be better controlled to manage the potential damage to the environment. The policy recommendation should, therefore, be to reduce the price of tertiary education (one of the highest in

the region in terms of income per capita) while increasing the charges on the use of energy and water. Such cross-cutting strategies should also be at the center of balancing the need for innovation and climate-friendly investments.

Using market-based instruments to influence behavior and optimize the allocation of resources in line with national priorities will require well-functioning markets. The state will have to accelerate its transformation from a services/goods provider (notably through reform of many state-owned enterprises) to a regulator so it can ensure that all market players are well-informed and play by the rules. Otherwise, markets either do not exist or perform poorly. Stronger institutions will also be required to build greater resilience to shocks and to facilitate socially acceptable burden sharing in response to such shocks. Therefore, adjusting the existing institutional framework to new emerging realities should be one priority area for reforms in Vietnam.

Although the challenge of building strong institutions has been implicitly discussed in our deep dives, it has not benefited from a comprehensive analysis. This gap calls for future research as institutions in Vietnam suffer from several weaknesses, including limited coordination across ministries at the central level and between local and central authorities. There are also several management deficiencies in the allocation and execution of capital expenditures. The role of the government, notably in priority sectors dominated by SOEs, is also poorly defined, with conflicts of interest and lack of transparency. These weaknesses are relatively well-known, as they were highlighted in the World Bank's Vietnam 2030 report and in the recent OECD multi-diagnostic, but few concrete recommendations have been proposed so far. One major question will be to determine whether (and how) these institutional changes could emerge endogenously from the current system, or if they will need to be enhanced by exogenous shocks.

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